

MP attributes backends bit **bit32** blobs  
boolean buffers builders caches **callback**  
callbacks catcodes characters chemistry  
commands containers context converters  
**coroutine** ctxrunner **debug** dir directives  
document documentdata environment **epdf**  
experiments figures **file** floats **font**  
**fontloader** fonts functions global graphics  
**gzip** **img** interactions interfaces **io** jit job  
**lang** languages layouts **lfs** libraries lmx  
logs lpdf **lpeg** **ltn12** **lua** luatex lxml **math**  
mathematics mbox **md5** metapost **mime**  
moduledata modules mp **mplib** **newtoken** noads  
**node** nodes number **os** **package** pagebuilders  
parametersets **pdf** pdfscanner physics  
**profiler** publications regimes resolvers  
sandbox scripts set **socket** sorters  
statistics **status** storage streams **string**  
structures **table** **tex** **texconfig** **texio**  
thirddata tokens tracers trackers  
typesetters **unicode** url userdata utilities  
vf visualizers xml **zip** **zlib**

# ConT<sub>E</sub>Xt MkIV

# global (alias: \_G)

|                |          |              |          |
|----------------|----------|--------------|----------|
| MP             | table    | file         | table    |
| _LUAVERSION    | number   | floats       | table    |
| _MAJORVERSION  | number   | font         | table    |
| _MINORVERSION  | number   | fontloader   | table    |
| arg            | table    | fonts        | table    |
| assert         | function | frozen       | boolean  |
| attributes     | table    | functions    | table    |
| backends       | table    | gcinfo       | function |
| beginpage      | function | getfenv      | function |
| bit            | table    | getmetatable | function |
| bit32          | table    | getpos       | function |
| blobs          | table    | getvpos      | function |
| boolean        | table    | global       | table    |
| buffers        | table    | graphics     | table    |
| builders       | table    | gzip         | table    |
| caches         | table    | img          | table    |
| callback       | table    | inspect      | function |
| callbacks      | table    | interactions | table    |
| catcodes       | table    | interfaces   | table    |
| characters     | table    | io           | table    |
| chemistry      | table    | ipairs       | function |
| collectgarbage | function | jit          | table    |
| commands       | table    | job          | table    |
| containers     | table    | lang         | table    |
| context        | function | languages    | table    |
| converters     | table    | layouts      | table    |
| coroutine      | table    | lfs          | table    |
| ctxrunner      | table    | libraries    | table    |
| debug          | table    | lmx          | table    |
| dimen          | function | load         | function |
| dir            | table    | loadfile     | function |
| directives     | table    | loadstring   | function |
| document       | table    | logs         | table    |
| documentdata   | table    | lpdf         | table    |
| dofile         | function | lpeg         | table    |
| endpage        | function | ltn12        | table    |
| environment    | table    | lua          | table    |
| epdf           | table    | luatex       | table    |
| error          | function | lxml         | table    |
| experiments    | table    | math         | table    |
| figures        | table    | mathematics  | table    |

|                              |          |                     |          |
|------------------------------|----------|---------------------|----------|
| <b>mbox</b>                  | table    | <b>setmetatable</b> | function |
| <b>md5</b>                   | table    | <b>socket</b>       | table    |
| <b>metapost</b>              | table    | <b>sorters</b>      | table    |
| <b>mime</b>                  | table    | <b>statistics</b>   | table    |
| <b>module</b>                | function | <b>status</b>       | table    |
| <b>moduledata</b>            | table    | <b>storage</b>      | table    |
| <b>modules</b>               | table    | <b>streams</b>      | table    |
| <b>mp</b>                    | table    | <b>string</b>       | table    |
| <b>mplib</b>                 | table    | <b>structures</b>   | table    |
| <b>newproxy</b>              | function | <b>swiglib</b>      | function |
| <b>newtoken</b>              | table    | <b>table</b>        | table    |
| <b>next</b>                  | function | <b>tex</b>          | table    |
| <b>noads</b>                 | table    | <b>texconfig</b>    | table    |
| <b>node</b>                  | table    | <b>texio</b>        | table    |
| <b>nodes</b>                 | table    | <b>thirddata</b>    | table    |
| <b>number</b>                | table    | <b>toboolean</b>    | function |
| <b>optionalrequire</b>       | function | <b>tokens</b>       | table    |
| <b>os</b>                    | table    | <b>tonumber</b>     | function |
| <b>outputpagestree</b>       | function | <b>tostring</b>     | function |
| <b>package</b>               | table    | <b>tracers</b>      | table    |
| <b>pagebuilders</b>          | table    | <b>trackers</b>     | table    |
| <b>pairs</b>                 | function | <b>type</b>         | function |
| <b>parametersets</b>         | table    | <b>typesetters</b>  | table    |
| <b>pcall</b>                 | function | <b>unicode</b>      | table    |
| <b>pdf</b>                   | table    | <b>unpack</b>       | function |
| <b>pdfscanner</b>            | table    | <b>url</b>          | table    |
| <b>physics</b>               | table    | <b>userdata</b>     | table    |
| <b>print</b>                 | function | <b>utf</b>          | table    |
| <b>profiler</b>              | table    | <b>utilities</b>    | table    |
| <b>publications</b>          | table    | <b>vf</b>           | table    |
| <b>rawequal</b>              | function | <b>visualizers</b>  | table    |
| <b>rawget</b>                | function | <b>xml</b>          | table    |
| <b>rawlen</b>                | function | <b>xpcall</b>       | function |
| <b>rawset</b>                | function | <b>zip</b>          | table    |
| <b>regimes</b>               | table    | <b>zlib</b>         | table    |
| <b>require</b>               | function |                     |          |
| <b>resolvers</b>             | table    |                     |          |
| <b>resolvestoredfunction</b> | function |                     |          |
| <b>sandbox</b>               | table    |                     |          |
| <b>scripts</b>               | table    |                     |          |
| <b>select</b>                | function |                     |          |
| <b>set</b>                   | table    |                     |          |
| <b>setfenv</b>               | function |                     |          |
| <b>setinspector</b>          | function |                     |          |

# attributes (context)

## colorintents table

- N attribute
- D data
- F enable
- F handler
- F register
- D registered

## colors table

- N attribute
- F cmyk
- F cmyktogray
- F cmyktorgb
- F colorcomponents
- B couple
- D data
- N default
- F defineintermediatecolor
- F definemultitonecolor
- F defineprocesscolor
- F definesimplegray
- F definespotcolor
- F definetransparency
- F enable
- F filter
- F forcedmodel
- F forcesupport
- F formatcolor
- F formatgray
- F getpagecolormodel
- F gray
- F graytohsv
- F handler
- F hsvtorgay
- F hsvtorgb
- F iccprofile
- F isblack
- N main
- S model
- D models
- F mpcolor
- F mpnamedcolor

- F mpoptions
- U none
- F pgfxcolorspec
- F popset
- F processcolorcomponents
- F pushset
- F register
- D registered
- F registerspotcolor
- F rgb
- F rgbtocmyk
- F rgbtorgay
- F rgbtohsv
- N selector
- F setlist
- F setmodel
- F setpagecolormodel
- D sets
- F spec
- F spot
- F spotcolorname
- F spotcolorparent
- F spotcolorvalue
- B supported
- F transparencycomponents
- B triggering
- F usecolors
- F value
- D values
- B weightgray

define

effects

function

table

- N attribute
- D data
- F enable
- F handler
- F register
- D registered
- D values

handlers

list

table

data table

|                       |            |                          |
|-----------------------|------------|--------------------------|
| <b>names</b>          | data table | F define                 |
| <b>negatives</b>      | table      | F definedlayoutcomponent |
| N attribute           |            | F enable                 |
| D data                |            | F forcesupport           |
| F enable              |            | F handler                |
| F handler             |            | B hasorder               |
| F register            |            | D listwise               |
| D registered          |            | F register               |
| F set                 |            | D registered             |
| <b>numbers</b>        | data table | F resolve_begin          |
| <b>ofnode</b>         | function   | F resolve_end            |
| <b>private</b>        | function   | F resolve_reset          |
| <b>public</b>         | function   | F resolve_step           |
| <b>restore</b>        | function   | D scopes                 |
| <b>save</b>           | function   | F setfeatures            |
| <b>showcurrent</b>    | function   | F start                  |
| <b>states</b>         | table      | F stop                   |
| F disabletriggering   |            | B supported              |
| F enabletriggering    |            | D values                 |
| F finalize            |            |                          |
| F initialize          |            |                          |
| F process             |            |                          |
| F selective           |            |                          |
| F stacked             |            |                          |
| F stacker             |            |                          |
| <b>system</b>         | function   |                          |
| <b>transparencies</b> | table      |                          |
| N attribute           |            |                          |
| D data                |            |                          |
| F enable              |            |                          |
| F forcesupport        |            |                          |
| F handler             |            |                          |
| U none                |            |                          |
| F register            |            |                          |
| D registered          |            |                          |
| B supported           |            |                          |
| B triggering          |            |                          |
| F value               |            |                          |
| D values              |            |                          |
| <b>unsetvalue</b>     | number     |                          |
| <b>viewerlayers</b>   | table      |                          |
| N attribute           |            |                          |
| F cleanup             |            |                          |
| D data                |            |                          |

# backends (context)

**codeinjections** table

**current** string

**defaults** table

T codeinjections

F gethpos

F getmatrix

F getpos

F getvpos

F hasmatrix

T nodeinjections

T registrations

D tables

**install** function

**nodeinjections** table

F restore

F save

F transform

**nothing** function

**pdf** table

T codeinjections

F addbookmarks

F attachmentid

F clonefield

F definefield

F definefieldset

F defineviewerlayer

F embedfile

F enabletags

F exportformdata

F getbookmarks

F getdefaultfieldvalue

F getfieldcategory

F getfieldset

F getformatoption

F gethpos

F getmatrix

F getoutputfilename

F getpos

F getpreviewfigure

F getvpos

F hasmatrix

F insertrenderingwindow

F mergebookmarks

F mergereferences

F mergeviewerlayers

F prerollreference

F presetsymbol

F presetsymbollist

F processrendering

F registerdocumentcloseaction

F registerdocumentopenaction

F registeredsymbol

F registerpagecloseaction

F registerpageopenaction

F registersymbol

F setfieldcalculationset

F setfigurealternative

F setfigurecolorspace

F setfiguremask

F setformat

F setformsmethod

F setpagetransition

F setupcanvas

F setupidentity

F setxmpfile

F startlayer

F stoplayer

F supportedformats

F unicodetoactualtext

F useviewerlayer

F validfield

F validfieldcategory

F validfieldset

S comment

T nodeinjections

F addtags

F annotation

F attachfile

F changestackedlayer

F cmykcolor

F comment

F destination

- F effect
- F graycolor
- F injectbitmap
- F insertmovie
- F insertsound
- F insertswf
- F insertu3d
- F knockout
- F negative
- F overprint
- F positive
- F reference
- F rgbcolor
- F spotcolor
- F startlayer
- F startstackedlayer
- F stoplayer
- F stopstackedlayer
- F transparency
- F typesetfield
- T registrations
  - F cmykindexcolor
  - F cmykspotcolor
  - F getspotcolorreference
  - F grayindexcolor
  - F grayspotcolor
  - F rgbindexcolor
  - F rgbspotcolor
  - F spotcolorname
  - F transparency
- T tables
  - D vfspecials

**registrations**      table

**tables**              table

## bit (context)

|                |          |
|----------------|----------|
| <b>arshift</b> | function |
| <b>band</b>    | function |
| <b>bnot</b>    | function |
| <b>bor</b>     | function |
| <b>bswap</b>   | function |
| <b>bxor</b>    | function |
| <b>lshift</b>  | function |
| <b>rol</b>     | function |
| <b>ror</b>     | function |
| <b>rshift</b>  | function |
| <b>tobit</b>   | function |
| <b>tohex</b>   | function |



## bit32 (basic lua)

|                |          |
|----------------|----------|
| <b>arshift</b> | function |
| <b>band</b>    | function |
| <b>bnot</b>    | function |
| <b>bor</b>     | function |
| <b>btest</b>   | function |
| <b>bxor</b>    | function |
| <b>extract</b> | function |
| <b>lrotate</b> | function |
| <b>lshift</b>  | function |
| <b>replace</b> | function |
| <b>rrotate</b> | function |
| <b>rshift</b>  | function |

## blobs (context)

|                    |          |
|--------------------|----------|
| <b>append</b>      | function |
| <b>dimensions</b>  | function |
| <b>dispose</b>     | function |
| <b>new</b>         | function |
| <b>pack</b>        | function |
| <b>strdp</b>       | function |
| <b>strhd</b>       | function |
| <b>strht</b>       | function |
| <b>strwd</b>       | function |
| <b>tohpack</b>     | function |
| <b>tohpackfast</b> | function |
| <b>tonodes</b>     | function |
| <b>tovpack</b>     | function |
| <b>tovpackfast</b> | function |
| <b>write</b>       | function |

## boolean (context)

**tocontext** function

**tonumber** function

## buffers (context)

|                       |          |
|-----------------------|----------|
| <b>append</b>         | function |
| <b>assign</b>         | function |
| <b>collectcontent</b> | function |
| <b>erase</b>          | function |
| <b>exists</b>         | function |
| <b>getcontent</b>     | function |
| <b>getlines</b>       | function |
| <b>loadcontent</b>    | function |
| <b>parallel</b>       | table    |
| F define              |          |
| F hassomecontent      |          |
| F next                |          |
| F place               |          |
| F reset               |          |
| F save                |          |
| <b>prepend</b>        | function |
| <b>raw</b>            | function |
| <b>undent</b>         | function |

# builders (context)

## kernel table

- F hyphenation
- F kerning
- F ligaturing
- F mlist\_to\_hlist
- T originals
  - F hyphenate
  - F kerning
  - F ligaturing

## paragraphs table

- T constructors
  - N attribute
  - F define
  - F disable
  - F enable
  - F handler
  - T methods
    - F basic
    - F default
    - F oneline
  - D names
  - D numbers
  - F set
  - F start
  - F stop
- T expansion
  - F trace
- F kepttogether
- F registertogether
- T solutions
  - T splitters
    - F define
    - F optimize
  - T registered
    - F reset
    - F set
    - F split
    - F start
    - F stop
- F tag

## vspacing table

- F analyze
- D categories
- F collapsevbox
- T data
  - D map
  - D skip
  - D snapmethods
- F definesnapmethod
- B fixed
- F pagehandler
- F resetprevdepth
- F setmap
- F setskip
- F snapbox
- F tocategories
- F tocategory
- F vboxhandler

## cache (context)

|   |          |
|---|----------|
| <b>ask</b>                                | boolean  |
| <b>base</b>                               | string   |
| <b>collapsecontent</b>                    | function |
| <b>configfiles</b>                        | function |
| <b>contentstate</b>                       | function |
| <b>defaults</b>                           | table    |
| <b>define</b>                             | function |
| <b>direct</b>                             | boolean  |
| <b>force</b>                              | boolean  |
| <b>getfirstreadablefile</b>               | function |
| <b>getfirstreadablefile_TEST_ME_FIRST</b> | function |
| <b>getreadablepaths</b>                   | function |
| <b>getwritablepath</b>                    | function |
| <b>hashed</b>                             | function |
| <b>is_writable</b>                        | function |
| <b>loadcontent</b>                        | function |
| <b>loaddata</b>                           | function |
| <b>more</b>                               | string   |
| <b>relocate</b>                           | boolean  |
| <b>savecontent</b>                        | function |
| <b>savedata</b>                           | function |
| <b>setfirstwritablefile</b>               | function |
| <b>setluaname</b>                         | function |
| <b>tree</b>                               | string   |
| <b>treehash</b>                           | function |
| <b>usedpaths</b>                          | function |

## callback (basic tex)

**find**        function  
**list**        function  
**register**   overloaded function

## callbacks (context)

|                 |            |
|-----------------|------------|
| <b>freeze</b>   | function   |
| <b>known</b>    | function   |
| <b>list</b>     | data table |
| <b>pop</b>      | function   |
| <b>push</b>     | function   |
| <b>register</b> | function   |
| <b>report</b>   | function   |



## catcodes (context)

**names** data table

**numbers** data table

**register** function

# characters (context)

|                       |            |              |          |
|-----------------------|------------|--------------|----------|
| <b>activeoffset</b>   | number     | S ai         |          |
| <b>adobename</b>      | function   | S al         |          |
| <b>bidirectional</b>  | data table | S b2         |          |
| <b>blockrange</b>     | function   | S ba         |          |
| <b>blocks</b>         | data table | S bb         |          |
| <b>casemap</b>        | table      | S bk         |          |
| <b>categories</b>     | data table | S cb         |          |
| <b>category</b>       | function   | S cj         |          |
| <b>categorytags</b>   | data table | S cl         |          |
| <b>collapsed</b>      | data table | S cm         |          |
| <b>combined</b>       | data table | S cp         |          |
| <b>contextname</b>    | function   | S cr         |          |
| <b>csletters</b>      | data table | S ex         |          |
| <b>data</b>           | data table | S gl         |          |
| <b>decomposed</b>     | data table | S h2         |          |
| <b>description</b>    | function   | S h3         |          |
| <b>descriptions</b>   | data table | S hl         |          |
| <b>directions</b>     | table      | S hy         |          |
| <b>encodes</b>        | data table | S id         |          |
| <b>entities</b>       | data table | S in         |          |
| <b>fallbacks</b>      | data table | S is         |          |
| <b>filters</b>        | data table | S jl         |          |
| <b>fromnumber</b>     | function   | S jt         |          |
| <b>fschars</b>        | data table | S jv         |          |
| <b>fscodes</b>        | data table | S lf         |          |
| <b>getrange</b>       | function   | S nl         |          |
| <b>graphemes</b>      | data table | S ns         |          |
| <b>hangul</b>         | data table | S nu         |          |
| <b>initialize</b>     | function   | S op         |          |
| <b>is_character</b>   | data table | S po         |          |
| <b>is_command</b>     | data table | S pr         |          |
| <b>is_letter</b>      | data table | S qu         |          |
| <b>is_mark</b>        | data table | S ri         |          |
| <b>is_punctuation</b> | data table | S sa         |          |
| <b>is_spacing</b>     | data table | S sg         |          |
| <b>lcchars</b>        | data table | S sp         |          |
| <b>lccode</b>         | function   | S sy         |          |
| <b>lccodes</b>        | data table | S wj         |          |
| <b>lettered</b>       | function   | S xx         |          |
| <b>lhash</b>          | data table | S zw         |          |
| <b>linebreaks</b>     | table      | <b>lower</b> | function |

|                              |            |
|------------------------------|------------|
| <b>math</b>                  | table      |
| <b>mathpairs</b>             | data table |
| <b>mirrors</b>               | table      |
| <b>otfscripts</b>            | data table |
| <b>ranges</b>                | data table |
| <b>registerentities</b>      | function   |
| <b>remap_hangul_syllable</b> | function   |
| <b>setactivecatcodes</b>     | function   |
| <b>setlettercatcodes</b>     | function   |
| <b>shape</b>                 | function   |
| <b>shaped</b>                | function   |
| <b>shash</b>                 | data table |
| <b>shchars</b>               | data table |
| <b>shcodes</b>               | data table |
| <b>showstring</b>            | function   |
| <b>specialchars</b>          | data table |
| <b>specials</b>              | data table |
| <b>splits</b>                | table      |
| T char                       |            |
| T compat                     |            |
| <b>subscripts</b>            | table      |
| <b>superscripts</b>          | table      |
| <b>synonyms</b>              | data table |
| <b>tex</b>                   | table      |
| D accentmapping              |            |
| D commandmapping             |            |
| F defineaccents              |            |
| F safechar                   |            |
| F toutf                      |            |
| F toutfpattern               |            |
| <b>textclasses</b>           | table      |
| <b>tonumber</b>              | function   |
| <b>ucchars</b>               | data table |
| <b>uccode</b>                | function   |
| <b>uccodes</b>               | data table |
| <b>uhash</b>                 | data table |
| <b>unicodechar</b>           | function   |
| <b>upper</b>                 | function   |

# chemistry (context)

|                       |            |
|-----------------------|------------|
| <b>component</b>      | function   |
| <b>define</b>         | function   |
| <b>definitions</b>    | data table |
| <b>format</b>         | string     |
| <b>inlinechemical</b> | function   |
| <b>instance</b>       | string     |
| <b>method</b>         | string     |
| <b>molecule</b>       | function   |
| <b>moleculeparser</b> | userdata   |
| <b>start</b>          | function   |
| <b>stop</b>           | function   |
| <b>structures</b>     | number     |
| <b>undefine</b>       | function   |

## containers (context)

|                   |          |
|-------------------|----------|
| <b>cleannname</b> | function |
| <b>content</b>    | function |
| <b>define</b>     | function |
| <b>is_usable</b>  | function |
| <b>is_valid</b>   | function |
| <b>read</b>       | function |
| <b>usecache</b>   | boolean  |
| <b>write</b>      | function |

## converters (context)

|                           |          |                          |            |
|---------------------------|----------|--------------------------|------------|
| <b>A</b>                  | function | <b>maxchr</b>            | function   |
| <b>AK</b>                 | function | <b>minute</b>            | function   |
| <b>Alphabetic</b>         | function | <b>month</b>             | function   |
| <b>Character</b>          | function | <b>nicenumber</b>        | function   |
| <b>Characters</b>         | function | <b>nofdays</b>           | function   |
| <b>Characters:es</b>      | function | <b>number</b>            | function   |
| <b>I</b>                  | function | <b>numbers</b>           | function   |
| <b>KA</b>                 | function | <b>octnumber</b>         | function   |
| <b>KR</b>                 | function | <b>octstringtonumber</b> | function   |
| <b>R</b>                  | function | <b>ordinal</b>           | function   |
| <b>RK</b>                 | function | <b>r</b>                 | function   |
| <b>Romannumerals</b>      | function | <b>rawcharacter</b>      | function   |
| <b>Sloviannumerals</b>    | function | <b>romannumerals</b>     | function   |
| <b>Spanishnumerals</b>    | function | <b>second</b>            | function   |
| <b>Word</b>               | function | <b>sequences</b>         | data table |
| <b>Words</b>              | function | <b>sloviannumerals</b>   | function   |
| <b>a</b>                  | function | <b>spanishnumerals</b>   | function   |
| <b>abjadnodotnumerals</b> | function | <b>textime</b>           | function   |
| <b>abjadnumerals</b>      | function | <b>toabjad</b>           | function   |
| <b>alphabetic</b>         | function | <b>tochinese</b>         | function   |
| <b>character</b>          | function | <b>toroman</b>           | function   |
| <b>characters</b>         | function | <b>uchexnumber</b>       | function   |
| <b>characters:es</b>      | function | <b>uchexnumbers</b>      | function   |
| <b>chineseallnumerals</b> | function | <b>upper</b>             | function   |
| <b>chinesecapnumerals</b> | function | <b>verbose</b>           | table      |
| <b>chinesenumerals</b>    | function | D data                   |            |
| <b>chr</b>                | function | F translate              |            |
| <b>chrs</b>               | function | <b>weekday</b>           | function   |
| <b>cn</b>                 | function | <b>word</b>              | function   |
| <b>cn-a</b>               | function | <b>words</b>             | function   |
| <b>cn-c</b>               | function | <b>year</b>              | function   |
| <b>convert</b>            | function |                          |            |
| <b>define</b>             | function |                          |            |
| <b>hexstringtonumber</b>  | function |                          |            |
| <b>hour</b>               | function |                          |            |
| <b>i</b>                  | function |                          |            |
| <b>isleapyear</b>         | function |                          |            |
| <b>lchexnumber</b>        | function |                          |            |
| <b>lchexnumbers</b>       | function |                          |            |
| <b>leapyear</b>           | function |                          |            |
| <b>lower</b>              | function |                          |            |

## coroutine (basic lua)

|                |          |
|----------------|----------|
| <b>create</b>  | function |
| <b>resume</b>  | function |
| <b>running</b> | function |
| <b>status</b>  | function |
| <b>wrap</b>    | function |
| <b>yield</b>   | function |

# ctxrunner (context)

|                     |            |
|---------------------|------------|
| <b>load</b>         | function   |
| <b>preparedfile</b> | function   |
| <b>prepfiles</b>    | data table |
| <b>resolve</b>      | function   |



## debug (basic lua)

|                     |          |
|---------------------|----------|
| <b>debug</b>        | function |
| <b>getfenv</b>      | function |
| <b>gethook</b>      | function |
| <b>getinfo</b>      | function |
| <b>getlocal</b>     | function |
| <b>getmetatable</b> | function |
| <b>getregistry</b>  | function |
| <b>getupvalue</b>   | function |
| <b>getuservalue</b> | function |
| <b>setfenv</b>      | function |
| <b>sethook</b>      | function |
| <b>setlocal</b>     | function |
| <b>setmetatable</b> | function |
| <b>setupvalue</b>   | function |
| <b>setuservalue</b> | function |
| <b>traceback</b>    | function |
| <b>upvalueid</b>    | function |
| <b>upvaluejoin</b>  | function |

## dir (context)

|                       |          |
|-----------------------|----------|
| <b>collectpattern</b> | function |
| <b>current</b>        | function |
| <b>expandname</b>     | function |
| <b>found</b>          | function |
| <b>glob</b>           | function |
| <b>globfiles</b>      | function |
| <b>globpattern</b>    | function |
| <b>ls</b>             | function |
| <b>makedirs</b>       | function |
| <b>mkdirs</b>         | function |
| <b>pop</b>            | function |
| <b>push</b>           | function |

## directives (context)

|                 |            |
|-----------------|------------|
| <b>data</b>     | data table |
| <b>default</b>  | function   |
| <b>disable</b>  | function   |
| <b>done</b>     | table      |
| <b>enable</b>   | function   |
| <b>list</b>     | function   |
| <b>name</b>     | string     |
| <b>register</b> | function   |
| <b>report</b>   | function   |
| <b>reset</b>    | function   |
| <b>show</b>     | function   |
| <b>value</b>    | function   |

# document (context)

|                           |            |
|---------------------------|------------|
| <b>arguments</b>          | data table |
| <b>files</b>              | table      |
| <b>getargument</b>        | function   |
| <b>getfilename</b>        | function   |
| <b>options</b>            | table      |
| T commandline             |            |
| D environments            |            |
| D modes                   |            |
| D modules                 |            |
| T ctxfile                 |            |
| D environments            |            |
| D modes                   |            |
| D modules                 |            |
| <b>setargument</b>        | function   |
| <b>setcommandline</b>     | function   |
| <b>setdefaultargument</b> | function   |
| <b>setenvironments</b>    | function   |
| <b>setfilename</b>        | function   |
| <b>setfilenames</b>       | function   |
| <b>setmodes</b>           | function   |
| <b>setmodules</b>         | function   |
| <b>variables</b>          | data table |

## environment (context)

|                               |            |                      |            |
|-------------------------------|------------|----------------------|------------|
| <b>argument</b>               | function   | <b>texfile</b>       | function   |
| <b>arguments</b>              | data table | <b>texmfos</b>       | string     |
| <b>basicengines</b>           | data table | <b>texos</b>         | string     |
| <b>currentrun</b>             | number     | <b>texroot</b>       | string     |
| <b>default_texmfcnf</b>       | string     | <b>truefilename</b>  | function   |
| <b>definefilefallback</b>     | function   | <b>useluatmodule</b> | function   |
| <b>definefilesynonym</b>      | function   | <b>usemodules</b>    | function   |
| <b>engineflags</b>            | data table | <b>validengines</b>  | data table |
| <b>filename</b>               | string     |                      |            |
| <b>files</b>                  | table      |                      |            |
| <b>filesynonyms</b>           | data table |                      |            |
| <b>forcedruns</b>             | number     |                      |            |
| <b>getargument</b>            | function   |                      |            |
| <b>homedir</b>                | string     |                      |            |
| <b>initex</b>                 | boolean    |                      |            |
| <b>initializearguments</b>    | function   |                      |            |
| <b>initializefilenames</b>    | function   |                      |            |
| <b>inputfilebarename</b>      | string     |                      |            |
| <b>inputfilename</b>          | string     |                      |            |
| <b>inputfilesuffix</b>        | string     |                      |            |
| <b>jobfilename</b>            | string     |                      |            |
| <b>jobfilesuffix</b>          | string     |                      |            |
| <b>kindofrun</b>              | number     |                      |            |
| <b>loadexamodes</b>           | function   |                      |            |
| <b>loadluafile</b>            | function   |                      |            |
| <b>luafile</b>                | function   |                      |            |
| <b>luafilechunk</b>           | function   |                      |            |
| <b>maxnofruns</b>             | number     |                      |            |
| <b>originalarguments</b>      | data table |                      |            |
| <b>outputfilename</b>         | string     |                      |            |
| <b>ownbin</b>                 | string     |                      |            |
| <b>ownmain</b>                | string     |                      |            |
| <b>ownname</b>                | string     |                      |            |
| <b>ownpath</b>                | string     |                      |            |
| <b>prerollrun</b>             | boolean    |                      |            |
| <b>rawarguments</b>           | data table |                      |            |
| <b>reconstructcommandline</b> | function   |                      |            |
| <b>relativepath</b>           | function   |                      |            |
| <b>setargument</b>            | function   |                      |            |
| <b>splitarguments</b>         | function   |                      |            |
| <b>suffix</b>                 | string     |                      |            |

## epdf (extra tex)

|                            |                     |
|----------------------------|---------------------|
| <b>Array</b>               | function            |
| <b>Attribute</b>           | function            |
| <b>AttributeOwner_Type</b> | function            |
| <b>Attribute_Type</b>      | function            |
| <b>Dict</b>                | function            |
| <b>Object</b>              | function            |
| <b>PDFRectangle</b>        | function            |
| <b>StructElement_Type</b>  | function            |
| <b>open</b>                | overloaded function |
| <b>type</b>                | function            |

## experiments (context)

|                 |            |
|-----------------|------------|
| <b>data</b>     | data table |
| <b>default</b>  | function   |
| <b>disable</b>  | function   |
| <b>enable</b>   | function   |
| <b>list</b>     | function   |
| <b>name</b>     | string     |
| <b>register</b> | function   |
| <b>report</b>   | function   |
| <b>reset</b>    | function   |
| <b>show</b>     | function   |
| <b>value</b>    | function   |

# figures (context)

|                         |            |                         |            |
|-------------------------|------------|-------------------------|------------|
| <b>applyratio</b>       | function   | <b>F totable</b>        |            |
| <b>badname</b>          | function   | <b>F types</b>          |            |
| <b>bases</b>            | data table | <b>F write</b>          |            |
| <b>bitmapimage</b>      | function   | <b>include</b>          | function   |
| <b>boxnumber</b>        | number     | <b>includes</b>         | data table |
| <b>cachepaths</b>       | data table | <b>initialize</b>       | function   |
| <b>check</b>            | function   | <b>loaded</b>           | data table |
| <b>checkers</b>         | data table | <b>localpaths</b>       | data table |
| <b>converters</b>       | data table | <b>magics</b>           | data table |
| <b>current</b>          | function   | <b>mergegoodies</b>     | function   |
| <b>defaultdepth</b>     | number     | <b>nofprocessed</b>     | number     |
| <b>defaultheight</b>    | number     | <b>order</b>            | data table |
| <b>defaultsearch</b>    | boolean    | <b>paths</b>            | data table |
| <b>defaultwidth</b>     | number     | <b>patterns</b>         | data table |
| <b>done</b>             | function   | <b>pop</b>              | function   |
| <b>dummy</b>            | function   | <b>preferquality</b>    | boolean    |
| <b>exists</b>           | data table | <b>programs</b>         | data table |
| <b>exists</b>           | function   | <b>push</b>             | function   |
| <b>formats</b>          | data table | <b>registerpattern</b>  | function   |
| <b>found</b>            | data table | <b>registerresource</b> | function   |
| <b>get</b>              | function   | <b>registersuffix</b>   | function   |
| <b>getrealpage</b>      | function   | <b>resources</b>        | data table |
| <b>guess</b>            | function   | <b>scale</b>            | function   |
| <b>hash</b>             | function   | <b>setlookups</b>       | function   |
| <b>identifiers</b>      | data table | <b>setorder</b>         | function   |
| <b>identify</b>         | function   | <b>setpaths</b>         | function   |
| <b>images</b>           | table      | <b>suffixes</b>         | data table |
| <b>F boxes</b>          |            | <b>used</b>             | data table |
| <b>F check</b>          |            |                         |            |
| <b>F checksize</b>      |            |                         |            |
| <b>F clone</b>          |            |                         |            |
| <b>F copy</b>           |            |                         |            |
| <b>F immediatewrite</b> |            |                         |            |
| <b>F keys</b>           |            |                         |            |
| <b>F new</b>            |            |                         |            |
| <b>F node</b>           |            |                         |            |
| <b>F ofindex</b>        |            |                         |            |
| <b>F package</b>        |            |                         |            |
| <b>F print</b>          |            |                         |            |
| <b>F scan</b>           |            |                         |            |
| <b>F serialize</b>      |            |                         |            |



## file (basic lua)

|                          |          |
|--------------------------|----------|
| <b>addsuffix</b>         | function |
| <b>basename</b>          | function |
| <b>checksum</b>          | function |
| <b>collapsepath</b>      | function |
| <b>copy</b>              | function |
| <b>dirname</b>           | function |
| <b>expandname</b>        | function |
| <b>extname</b>           | function |
| <b>is_qualified_path</b> | function |
| <b>is_readable</b>       | function |
| <b>is_rootbased_path</b> | function |
| <b>is_writable</b>       | function |
| <b>isreadable</b>        | function |
| <b>iswritable</b>        | function |
| <b>join</b>              | function |
| <b>joinpath</b>          | function |
| <b>loadchecksum</b>      | function |
| <b>nameonly</b>          | function |
| <b>nametotable</b>       | function |
| <b>needs Updating</b>    | function |
| <b>needsupdating</b>     | function |
| <b>pathpart</b>          | function |
| <b>readdata</b>          | function |
| <b>removesuffix</b>      | function |
| <b>replacesuffix</b>     | function |
| <b>reslash</b>           | function |
| <b>robustname</b>        | function |
| <b>savechecksum</b>      | function |
| <b>savedata</b>          | function |
| <b>size</b>              | function |
| <b>splitbase</b>         | function |
| <b>splitname</b>         | function |
| <b>splitpath</b>         | function |
| <b>strip</b>             | function |
| <b>suffix</b>            | function |
| <b>suffixes</b>          | function |
| <b>suffixesonly</b>      | function |
| <b>suffixonly</b>        | function |
| <b>syncmtimes</b>        | function |

## floats (context)

|                         |          |
|-------------------------|----------|
| <b>analysemethod</b>    | function |
| <b>checkedpagefloat</b> | function |
| <b>collect</b>          | function |
| <b>consult</b>          | function |
| <b>flush</b>            | function |
| <b>getvariable</b>      | function |
| <b>hasstacked</b>       | function |
| <b>nofstacked</b>       | function |
| <b>pop</b>              | function |
| <b>push</b>             | function |
| <b>resave</b>           | function |
| <b>save</b>             | function |
| <b>stacked</b>          | function |

## font (basic tex)

|                 |                     |
|-----------------|---------------------|
| <b>current</b>  | function            |
| <b>define</b>   | function            |
| <b>each</b>     | function            |
| <b>fonts</b>    | table               |
| <b>frozen</b>   | function            |
| <b>getfont</b>  | overloaded function |
| <b>id</b>       | function            |
| <b>max</b>      | function            |
| <b>nextid</b>   | function            |
| <b>read_tfm</b> | function            |
| <b>read_vf</b>  | function            |
| <b>setfont</b>  | function            |

## fontloader (extra tex)

|                          |                     |
|--------------------------|---------------------|
| <b>apply_afmfile</b>     | function            |
| <b>apply_featurefile</b> | function            |
| <b>close</b>             | function            |
| <b>fields</b>            | function            |
| <b>fullinfo</b>          | function            |
| <b>info</b>              | overloaded function |
| <b>open</b>              | overloaded function |
| <b>to_table</b>          | function            |
| <b>totable</b>           | function            |

# fonts (context)

|                    |       |                           |           |
|--------------------|-------|---------------------------|-----------|
| <b>analyzers</b>   | table |                           | F report  |
| T features         |       |                           | F reset   |
| N blwf             |       |                           | T vectors |
| N fina             |       | <b>constructors</b>       | table     |
| N half             |       | F addcoreunicodes         |           |
| N init             |       | F aftercopyingcharacters  |           |
| N isol             |       | F applymanipulators       |           |
| N medi             |       | F assignmathparameters    |           |
| N pref             |       | B autocleanup             |           |
| N pstf             |       | F beforecopyingcharacters |           |
| N rphf             |       | D cache                   |           |
| D initializers     |       | B cacheintex              |           |
| D methods          |       | F calculatescale          |           |
| F setstate         |       | F checkedfeatures         |           |
| T states           |       | F checkedfilename         |           |
| N blwf             |       | F checkvirtualids         |           |
| N fina             |       | F cleanupable             |           |
| N half             |       | F collectprocessors       |           |
| N init             |       | F currentfonthasfeature   |           |
| N isol             |       | D designsizes             |           |
| N mark             |       | D dontembed               |           |
| N medi             |       | F enhanceparameters       |           |
| N pref             |       | N factor                  |           |
| N pstf             |       | F finalize                |           |
| N rest             |       | F getfeatureaction        |           |
| N rphf             |       | F hashfeatures            |           |
| B useunicodemarks  |       | F hashinstance            |           |
| <b>checkers</b>    | table | T hashmethods             |           |
| F getmissing       |       | F normal                  |           |
| F missing          |       | F virtual                 |           |
| <b>cid</b>         | table | F initializefeatures      |           |
| F getmap           |       | T keys                    |           |
| F loadfile         |       | T character               |           |
| <b>collections</b> | table | S depth                   |           |
| F checkenabled     |       | S height                  |           |
| F clonevector      |       | S italic                  |           |
| F define           |       | S width                   |           |
| T definitions      |       | T description             |           |
| F prepare          |       | T boundingbox             |           |
| F process          |       | S depth                   |           |
| F registermain     |       | S height                  |           |

|                          |                       |          |
|--------------------------|-----------------------|----------|
| S width                  | S autoitalicamount    |          |
| T parameters             | T cidinfo             |          |
| S ascender               | S embedding           |          |
| S descender              | S encodingbytes       |          |
| S designsize             | S filename            |          |
| T expansion              | S finalized           |          |
| S auto                   | S fontname            |          |
| S shrink                 | S format              |          |
| S step                   | S fullname            |          |
| S stretch                | S hasitalics          |          |
| S extendfactor           | S hasmath             |          |
| S factor                 | S mathitalics         |          |
| S hfactor                | S mode                |          |
| S mathsize               | S name                |          |
| T protrusion             | S noglyphnames        |          |
| S auto                   | S nostackmath         |          |
| S quad                   | S psname              |          |
| S scaledpoints           | S textitalics         |          |
| S scriptpercentage       | S virtualized         |          |
| S scriptscriptpercentage | D loadedfonts         |          |
| S size                   | S namemode            |          |
| S slantfactor            | F newfeatures         |          |
| S slantperpoint          | F newhandler          |          |
| T spacing                | N noffontsloaded      |          |
| S extra                  | N nofsharedfonts      |          |
| S shrink                 | N nofsharedhashes     |          |
| S stretch                | N nofsharedvectors    |          |
| S width                  | N privateoffset       |          |
| T synonyms               | F readanddefine       |          |
| S em                     | F registerfeature     |          |
| S ex                     | B resolvevirtualtoo   |          |
| S extra_space            | F scale               |          |
| S extraspace             | F scaled              |          |
| S slant                  | F setfactor           |          |
| S space                  | F setname             |          |
| S space_shrink           | B sharefonts          |          |
| S space_stretch          | F trytosharefont      |          |
| S spaceshrink            | N version             |          |
| S spacestretch           | <b>current</b>        | function |
| S x_height               | <b>currentid</b>      | function |
| S units                  | <b>definers</b>       | table    |
| S vfactor                | F addlookup           |          |
| S xheight                | F analyze             |          |
| T properties             | F applypostprocessors |          |

|                                |                     |
|--------------------------------|---------------------|
| F checkedmode                  | N Escyrillic        |
| F checkedscript                | N Fitacyrillic      |
| F current                      | N Gcedilla          |
| S defaultlookup                | N Gdot              |
| F define                       | N Gecyrillic        |
| F getspecification             | N Gheupturncyrillic |
| F internal                     | N Gjecyrillic       |
| F loadfont                     | N Hardsigncyrillic  |
| F makespecification            | N IAcyrillic        |
| T methods                      | N IUcyrillic        |
| F install                      | N Icyrillic         |
| D variants                     | N Idot              |
| F read                         | N Iecyrillic        |
| F register                     | N Iicyrillic        |
| F registered                   | N Iishortcyrillic   |
| F registersplit                | N Iocyrillic        |
| F resetnullfont                | N Izhitsacyrillic   |
| F resolve                      | N Jecyrillic        |
| T resolvers                    | N Kacyrillic        |
| F file                         | N Kcedilla          |
| F name                         | N Khacyrillic       |
| F spec                         | N Kjecyrillic       |
| <b>definetypeface</b> function | N Lcedilla          |
| <b>encodings</b> table         | N Ljecyrillic       |
| T agl                          | N Ncedilla          |
| D extras                       | N Njecyrillic       |
| D names                        | N Ocyrillic         |
| T synonyms                     | N Odblacute         |
| N Acyrillic                    | N Ohm               |
| N Becyrillic                   | N Pecyrillic        |
| N Cdot                         | N Rcedilla          |
| N Checyrillic                  | N Shacyrillic       |
| N Decyrillic                   | N Shchacyrillic     |
| N Djecyrillic                  | N Softsigncyrillic  |
| N Dzecyrillic                  | N Tcedilla          |
| N Dzhecyrillic                 | N Tecyrillic        |
| N Ecyrillic                    | N Tsecyrillic       |
| N Edot                         | N Tshacyrillic      |
| N Efcyrillic                   | N Ucyrillic         |
| N Elcyrillic                   | N Udblacute         |
| N Emcyrillic                   | N Ushortcyrillic    |
| N Encyrillic                   | N Vecyrillic        |
| N Ercyrillic                   | N Yatcyrillic       |
| N Eversedcyrillic              | N Yericyrillic      |

|                             |                           |
|-----------------------------|---------------------------|
| N Yicyrillic                | N daletpatahhebrew        |
| N Zdot                      | N daletqamats             |
| N Zecyrillic                | N daletqamatshebrew       |
| N Zhecyrillic               | N daletqubuts             |
| N acutecmb                  | N daletqubutshebrew       |
| N acyrillic                 | N daletsegol              |
| N afii00208                 | N daletsegolhebrew        |
| N afii08941                 | N daletsheva              |
| N afii57694                 | N daletshevahebrew        |
| N afii57695                 | N dalettsere              |
| N afii57700                 | N dammaarabic             |
| N afii57705                 | N dammatanaltonearabic    |
| N afii57723                 | N dargahebrew             |
| N alef                      | N dbllowline              |
| N alefmaksurainitialarabic  | N decimalseparatorarabic  |
| N alefmaksuramedialarabic   | N dialytikatonos          |
| N approximatelyequal        | N dotbelowcmb             |
| N asteriskaltonearabic      | N doubleyodpatah          |
| N ayin                      | N doubleyodpatahhebrew    |
| N bet                       | N edot                    |
| N betdagesh                 | N eightarabic             |
| N blackdownpointingtriangle | N eighthnotebeamed        |
| N blackleftpointingpointer  | N etnahtaafoukhhebrew     |
| N blackrectangle            | N etnahtaafoukhlefthebrew |
| N blackrightpointingpointer | N etnahtahebrew           |
| N blacksmilingface          | N fathaarabic             |
| N blacksquare               | N finalkaf                |
| N blackuppointingtriangle   | N finalkafdagesh          |
| N bulletinverse             | N finalkafhebrew          |
| N cdot                      | N finalkafqamats          |
| N compass                   | N finalkafqamatshebrew    |
| N dagesh                    | N finalkafsheva           |
| N dalet                     | N finalmem                |
| N daletdagesh               | N finalnun                |
| N dalethatafpatah           | N finalpe                 |
| N dalethatafpatahhebrew     | N finaltsadi              |
| N dalethatafsegol           | N fivearabic              |
| N dalethatafsegolhebrew     | N forall                  |
| N dalethebrew               | N fourarabic              |
| N dalethiriq                | N gcedilla                |
| N dalethiriqhebrew          | N gdot                    |
| N daletholam                | N gimel                   |
| N daletholamhebrew          | N gimeldagesh             |
| N daletpatah                | N gravecmb                |



|                            |                                |
|----------------------------|--------------------------------|
| N haaltonearabic           | N holam32                      |
| N hamzaarabic              | N holamhebrew                  |
| N hamzadammaarabic         | N holamnarrowhebrew            |
| N hamzadammatanarabic      | N holamquarterhebrew           |
| N hamzafathaarabic         | N ilde                         |
| N hamzafathatanarabic      | N integralbottom               |
| N hamzalowarabic           | N integraltop                  |
| N hamzalowkasraarabic      | N kaf                          |
| N hamzalowkasratanarabic   | N kafdagesh                    |
| N hatafpatah               | N kashidaautoarabic            |
| N hatafpatah16             | N kashidaautosidebearingarabic |
| N hatafpatah23             | N kcedilla                     |
| N hatafpatah2f             | N lamed                        |
| N hatafpatahhebrew         | N lameddagesh                  |
| N hatafpatahnarrowhebrew   | N lamedhebrew                  |
| N hatafpatahquarterhebrew  | N lamedholam                   |
| N hatafqamats              | N lamedholamdagesh             |
| N hatafqamats1b            | N lamedholamdageshhebrew       |
| N hatafqamats28            | N laminitialarabic             |
| N hatafqamats34            | N lammeemjeeminitialarabic     |
| N hatafqamatshebrew        | N lcedilla                     |
| N hatafqamatsnarrowhebrew  | N logicalnotreversed           |
| N hatafqamatsquarterhebrew | N mahapakhhebrew               |
| N hatafsegol               | N mem                          |
| N hatafsegol17             | N memdagesh                    |
| N hatafsegol24             | N merkhahebrew                 |
| N hatafsegol30             | N merkhakefulahebrew           |
| N hatafsegolhebrew         | N middot                       |
| N hatafsegolnarrowhebrew   | N munahhebrew                  |
| N hatafsegolquarterhebrew  | N nbspace                      |
| N he                       | N ncedilla                     |
| N hedagesh                 | N newsheqelsign                |
| N hehfinalalttwoarabic     | N ninearabic                   |
| N het                      | N noonhehinitialarabic         |
| N hiriq                    | N nun                          |
| N hiriq14                  | N nundagesh                    |
| N hiriq21                  | N odblacute                    |
| N hiriq2d                  | N onearabic                    |
| N hiriqhebrew              | N overscore                    |
| N hiriqnarrowhebrew        | N patah                        |
| N hiriqquarterhebrew       | N patah11                      |
| N holam                    | N patah1d                      |
| N holam19                  | N patah2a                      |
| N holam26                  | N patahhebrew                  |

|                            |                        |
|----------------------------|------------------------|
| N patahnarrowhebrew        | N qubuts31             |
| N patahquarterhebrew       | N qubutshebrew         |
| N pe                       | N qubutsnarrowhebrew   |
| N pedagesh                 | N qubutsquarterhebrew  |
| N qamats                   | N quoteleftreversed    |
| N qamats10                 | N rafe                 |
| N qamats1a                 | N rcedilla             |
| N qamats1c                 | N reharabic            |
| N qamats27                 | N resh                 |
| N qamats29                 | N reshhatafpatah       |
| N qamats33                 | N reshhatafpatahhebrew |
| N qamatsde                 | N reshhatafsegol       |
| N qamatshebrew             | N reshhatafsegolhebrew |
| N qamatsnarrowhebrew       | N reshhebrew           |
| N qamatsqatanhebrew        | N reshhiriq            |
| N qamatsqatannarrowhebrew  | N reshhiriqhebrew      |
| N qamatsqatanquarterhebrew | N reshholam            |
| N qamatsqatanwidehebrew    | N reshholamhebrew      |
| N qamatsquarterhebrew      | N reshpatah            |
| N qof                      | N reshpatahhebrew      |
| N qofdagesh                | N reshqamats           |
| N qofhatafpatah            | N reshqamatshebrew     |
| N qofhatafpatahhebrew      | N reshqubuts           |
| N qofhatafsegol            | N reshqubutshebrew     |
| N qofhatafsegolhebrew      | N reshsegol            |
| N qofhebrew                | N reshsegolhebrew      |
| N qofhiriq                 | N reshsheva            |
| N qofhiriqhebrew           | N reshshevahebrew      |
| N qofholam                 | N reshtsere            |
| N qofholamhebrew           | N reviahebrew          |
| N qofpatah                 | N samekh               |
| N qofpatahhebrew           | N samekhdagesh         |
| N qofqamats                | N segol                |
| N qofqamatshebrew          | N segol13              |
| N qofqubuts                | N segol1f              |
| N qofqubutshebrew          | N segol2c              |
| N qofsegol                 | N segolhebrew          |
| N qofsegolhebrew           | N segolnarrowhebrew    |
| N qofsheva                 | N segolquarterhebrew   |
| N qofshevahebrew           | N sevenarabic          |
| N qoftsere                 | N sfthyphen            |
| N qubuts                   | N shaddaarabic         |
| N qubuts18                 | N sheqel               |
| N qubuts25                 | N sheva                |

|                            |                         |            |
|----------------------------|-------------------------|------------|
| N sheva115                 | N yoddagesh             |            |
| N sheva15                  | N zayin                 |            |
| N sheva22                  | N zayindagesh           |            |
| N sheva2e                  | N zdot                  |            |
| N shevahebrew              | N zeroarabic            |            |
| N shevanarrowhebrew        | D unicodes              |            |
| N shevaquarterhebrew       | D cache                 |            |
| N shin                     | F is_known              |            |
| N shindagesh               | D known                 |            |
| N shindageshshindot        | F load                  |            |
| N shindageshsindot         | F make_unicode_vector   |            |
| N shinshindot              | D math                  |            |
| N shinsindot               | N version               |            |
| N siluqhebrew              | <b>expansions</b>       | data table |
| N sixarabic                | <b>formats</b>          | data table |
| N tav                      | <b>goodies</b>          | table      |
| N tavdages                 | D colorschemes          |            |
| N tavdagesh                | D data                  |            |
| N tcedilla                 | D designsizes           |            |
| N tchehinitialarabic       | D filenames             |            |
| N tet                      | F getcompositions       |            |
| N tetdagesh                | T list                  |            |
| N tevirhebrew              | F compositions          |            |
| N thousandsseparatorarabic | F designsizes           |            |
| N threearabic              | F expansions            |            |
| N tildecmb                 | F featureset            |            |
| N tipehahebrew             | F filenames             |            |
| N tsadi                    | F files                 |            |
| N tsadidagesh              | F mathematics           |            |
| N tsere                    | F protrusions           |            |
| N tsere12                  | F solutions             |            |
| N tsere1e                  | F treatments            |            |
| N tsere2b                  | F typefaces             |            |
| N tserehebrew              | F load                  |            |
| N tserenarrowhebrew        | F prepare_features      |            |
| N tserequarterhebrew       | F register              |            |
| N twoarabic                | F registerpostprocessor |            |
| N udblacute                | F report                |            |
| N vav                      | <b>handlers</b>         | table      |
| N vavdagesh                | T afm                   |            |
| N vavdagesh65              | B addkerns              |            |
| N vavholam                 | B addligatures          |            |
| N yerahbenyomohebrew       | B addtexligatures       |            |
| N yod                      | B autoprefixed          |            |

|   |                            |
|---|----------------------------|
| D cache   | F gsub_ligature            |
| D features  | F gsub_multiple            |
| T helpdata  | F gsub_reversecontextchain |
| D bothkerned  | F gsub_single              |
| D leftkerned  | F load                     |
| D ligatures   | F scriptandlanguage        |
| D rightkerned                                       | F setcontextchain          |
| D texligatures                                      | F setdynamics              |
| F load  | F setfeatures              |
| F setfeatures                                       | T statistics               |
| B syncspace   | D usedfeatures             |
| N version   | T tables                   |
| T otf   | D baselines                |
| F addfeature  | D features                 |
| D cache   | D languages                |
| T chainhandlers                                     | D scripts                  |
| F normal  | N version                  |
| F verbose   | T pfb                      |
| F collectlookups                                    | T tfm                      |
| F dataset   | D features                 |
| S defaultbasealternate                              | F setfeatures              |
| S defaultnodealternate                              | T vf                       |
| D enhancers   | T combinations             |
| D features  | F combine                  |
| F fileformat  | T combiner                 |
| F getalternate                                      | D commands                 |
| T glists  | F find                     |
| T handlers  | D helpers                  |
| F contextchain                                      | D math                     |
| F devanagari_remove_joiners                         | D predefined               |
| F devanagari_reorder_matras                         | D whatever                 |
| F devanagari_reorder_pre_base_reordering_consonants | <b>hashes</b>              |
| F devanagari_reorder_reph                           | <b>table</b>               |
| F gpos_context                                      | D characters               |
| F gpos_contextchain                                 | D csnames                  |
| F gpos_cursive                                      | D descriptions             |
| F gpos_mark2base                                    | D dynamics                 |
| F gpos_mark2ligature                                | D emwidths                 |
| F gpos_mark2mark                                    | D exheights                |
| F gpos_pair   | D extensibles              |
| F gpos_single                                       | D features                 |
| F gsub_alternate                                    | D identifiers              |
| F gsub_context                                      | D italics                  |
| F gsub_contextchain                                 | D lastmathids              |
|   | D marks                    |

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| D modes                   |              | F loadlumtable        |                   |
| D originals               |              | F makenameparser      |                   |
| D parameters              |              | D overloads           |                   |
| T processes               |              | F reset               |                   |
| D properties              |              | F tounicode           |                   |
| D quads                   |              | F tounicode16         |                   |
| D resources               |              | F tounicode16sequence |                   |
| T setdynamics             |              | <b>mp</b>             | <b>table</b>      |
| D spaces                  |              | D cache               |                   |
| D spacings                |              | B inline              |                   |
| D unicodes                |              | N version             |                   |
| D xheights                |              | <b>names</b>          | <b>data table</b> |
| <b>helpers</b>            | <b>table</b> | <b>nulldata</b>       | <b>data table</b> |
| F addprivate              |              | <b>protrusions</b>    | <b>data table</b> |
| F dimenfactor             |              | <b>readers</b>        | <b>table</b>      |
| F expandglyph             |              | F afm                 |                   |
| F fontpatternhassize      |              | F check_lua           |                   |
| F getdigitwidth           |              | F check_tfm           |                   |
| F getparameters           |              | F dfont               |                   |
| F getprivatenode          |              | F lua                 |                   |
| F hasprivate              |              | F opentype            |                   |
| F indextoslot             |              | F otf                 |                   |
| F name                    |              | F pfb                 |                   |
| F nametoslot              |              | D sequence            |                   |
| F setdigitwidth           |              | F tfm                 |                   |
| F splitfontpattern        |              | F ttc                 |                   |
| F tochar                  |              | F ttf                 |                   |
| <b>iterators</b>          | <b>table</b> | <b>select</b>         | <b>table</b>      |
| F characters              |              | T data                |                   |
| F descriptions            |              | F define              |                   |
| F glyphs                  |              | F definetypeface      |                   |
| <b>loggers</b>            | <b>table</b> | T fallbacks           |                   |
| F add_placeholders        |              | F filterinput         |                   |
| D category_to_placeholder |              | T methods             |                   |
| F format                  |              | F default             |                   |
| F onetimemessage          |              | F features            |                   |
| F register                |              | F file                |                   |
| F reportdefinedfonts      |              | F goodies             |                   |
| F reportusedfeatures      |              | F name                |                   |
| <b>mappings</b>           | <b>table</b> | F selectfont          |                   |
| F addtounicode            |              | F simplefonts         |                   |
| F fromunicode16           |              | F spec                |                   |
| F loadfile                |              | F style               |                   |
| F loadline                |              | F registerfallback    |                   |

- F searchfiles

**specifiers**            table

- D contextmerged
- F contextnumber
- D contextnumbers
- D contextsetups
- F contexttostring
- F definecontext
- F mergecontext
- F presetcontext
- F registercontext
- F showcontext
- F splitcontext
- D synonyms
- D variants

**symbols**                table

- F uselibrary

**tables**                table

**tracers**              table

**treatments**          table

- F applyfixes
- D data
- S filename
- F ignoredfile
- F report
- F trace

**typefaces**            data table

# functions (context)

**dummy** function

# graphics (context)

## **backgrounds** table

F calculatemultipar

F fetchmultipar

F pair

F path

F point



## gzip (extra lua)

|               |          |
|---------------|----------|
| <b>close</b>  | function |
| <b>lines</b>  | function |
| <b>load</b>   | function |
| <b>open</b>   | function |
| <b>save</b>   | function |
| <b>suffix</b> | function |

## img (basic tex)

|                       |          |
|-----------------------|----------|
| <b>boxes</b>          | function |
| <b>check</b>          | function |
| <b>checksize</b>      | function |
| <b>clone</b>          | function |
| <b>copy</b>           | function |
| <b>immediatewrite</b> | function |
| <b>keys</b>           | function |
| <b>new</b>            | function |
| <b>node</b>           | function |
| <b>ofindex</b>        | function |
| <b>package</b>        | function |
| <b>print</b>          | function |
| <b>scan</b>           | function |
| <b>serialize</b>      | function |
| <b>totable</b>        | function |
| <b>types</b>          | function |
| <b>write</b>          | function |

# interactions (context)

**attachments** data table

**fields** table

F clone

F define

F defineset

F insert

**general** table

F getidentity

F setupidentity

**help** table

F collect

F reference

F register

**javascripts** table

F addtopreamble

F code

D codes

F flushpreambles

D functions

D preambles

F setpreamble

F storecode

F storepreamble

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F usescripts

**linkedlists** data table

**pages** table

F setpagetransition

F setupcanvas

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F setcloseddocument

F setclosepage

F setopendocument

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**renderings** data table

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# interfaces (context)

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| <b>addvalidkeys</b>         | function   | F MPrs                      |
| <b>cachedsetups</b>         | data table | F MPul                      |
| <b>cachesetup</b>           | function   | F MPur                      |
| <b>checkedspecification</b> | function   | F MPw                       |
| <b>complete</b>             | data table | F MPx                       |
| <b>constants</b>            | data table | F MPxy                      |
| <b>corenamespaces</b>       | data table | F MPxywhd                   |
| <b>definecommand</b>        | function   | F MPy                       |
| <b>doifelsemessage</b>      | function   | F Romannumerals             |
| <b>elements</b>             | data table | F abjadnodotnumerals        |
| <b>formats</b>              | data table | F abjadnumerals             |
| <b>getcheckedparameters</b> | function   | F addcounter                |
| <b>getmessage</b>           | function   | F addfeature                |
| <b>hashedsetups</b>         | data table | F addgrapheme               |
| <b>implement</b>            | function   | F addlinklistelement        |
| <b>interfacedcommand</b>    | function   | F addreplacements           |
| <b>interfaces</b>           | table      | F addtojavascriptpreamble   |
| <b>invalidkey</b>           | function   | F addtolist                 |
| <b>is_command</b>           | function   | F addvalidinterfacekeys     |
| <b>namespaces</b>           | table      | F allinputpaths             |
| F define                    |            | F alphabetic                |
| F list                      |            | F analysefloatmethod        |
| <b>registernamespace</b>    | function   | F analyzeitemgroup          |
| <b>scanners</b>             | table      | F analyzelist               |
| F Alphabetic                |            | F analyzeregister           |
| F Character                 |            | F applytobox                |
| F Characters                |            | F applytofirstcharacter     |
| F MPc                       |            | F assignbuffer              |
| F MPd                       |            | F autofinishstructurelevels |
| F MPh                       |            | F autonextspace             |
| F MPll                      |            | F autonextstructurelevel    |
| F MPlr                      |            | F autosetups                |
| F MPLs                      |            | F autostarttext             |
| F MPn                       |            | F autostoptext              |
| F MPp                       |            | F averagecharwidth          |
| F MPpardata                 |            | F bitmapimage               |
| F MPplus                    |            | F boxtostring               |
| F MPpos                     |            | F bposcolumn                |
| F MPposset                  |            | F bposcolumnregistered      |
| F MPr                       |            | F btxabbreviatedjournal     |
| F MPrest                    |            | F btxaddentry               |

|                             |                          |
|-----------------------------|--------------------------|
| F btxaddjournal             | F btxtoregister          |
| F btxauthor                 | F btxusedataset          |
| F btxauthorfield            | F btxuservariable        |
| F btxcollectlistentries     | F buildtextaccent        |
| F btxcurrentfirstnames      | F character              |
| F btxcurrentinitials        | F characters             |
| F btxcurrentjuniors         | F chardescription        |
| F btxcurrentsurnames        | F checkcountersetup      |
| F btxcurrentvons            | F checkedconversion      |
| F btxdetail                 | F checkedpagefloat       |
| F btxdirect                 | F checkinjector          |
| F btxdoif                   | F checknextinjector      |
| F btxdoifelse               | F checkpreviousinjector  |
| F btxdoifelsesameasprevious | F checktwopassdata       |
| F btxdoifelseuservariable   | F chemicalcomponent      |
| F btxdoifnot                | F chinesenumerals        |
| F btxexpandedjournal        | F cleanfontname          |
| F btxfetchlistentries       | F cleanupbox             |
| F btxfield                  | F cleanuplayers          |
| F btxfieldname              | F clonefield             |
| F btxfieldtype              | F collectfloat           |
| F btxfirstofrange           | F collecthelp            |
| F btxflush                  | F colorcomponents        |
| F btxflushlistentry         | F concatcommalist        |
| F btxflushmarked            | F consultfloat           |
| F btxflushpages             | F convertbtxdatasettoxml |
| F btxfoundname              | F convertmpstopdf        |
| F btxfoundtype              | F copyposition           |
| F btxhandlecite             | F cos                    |
| F btxhandlenocite           | F cosd                   |
| F btxlastofrange            | F countervalue           |
| F btxlistvariant            | F counttwopassdata       |
| F btxloaddefinitionfile     | F currentcomponent       |
| F btxloadjournalist         | F currentdate            |
| F btxloadreplacementfile    | F currentdesignsize      |
| F btxoneorrange             | F currentenvironment     |
| F btxpreparelistentries     | F currentposthyphenchar  |
| F btxsavedataset            | F currentprehyphenchar   |
| F btxsavejournalist         | F currentproduct         |
| F btxsetdataset             | F currentproject         |
| F btxsetentry               | F currentreferenceorder  |
| F btxsetregister            | F currentsectiontolist   |
| F btxsetspecification       | F datasetvariable        |
| F btxsingularorplural       | F dayname                |

|                              |                                 |
|------------------------------|---------------------------------|
| F decrementcounter           | F defineshift                   |
| F decrementedcounter         | F definesnapmethod              |
| F decrementsubcounter        | F definespotcolorglobal         |
| F defineaccents              | F definestructureblock          |
| F defineattribute            | F definestructureset            |
| F definebreakpoint           | F definetransparency            |
| F definebreakpoints          | F definetwopasslist             |
| F definecharacterspacing     | F definetypeface                |
| F definechemical             | F defineviewerlayer             |
| F defineconversion           | F defrostrandomseed             |
| F definecounter              | F depthnumber                   |
| F definedlayoutcomponent     | F digits_normal                 |
| F definefallbackfamily       | F digits_reverse                |
| F definefield                | F disableautofontscript         |
| F definefieldset             | F disabledirectives             |
| F definefilefallback         | F disableexperiments            |
| F definefilesynonym          | F disablejobsave                |
| F definefont_one             | F disableparbuilder             |
| F definefont_two             | F disableregime                 |
| F definefontfamily           | F disablespellchecking          |
| F definefontfeature          | F disablestatetriggering        |
| F definefontsolution         | F disablestream                 |
| F definehyphenationfeatures  | F disabletrackers               |
| F defineinsertion            | F discardfromlist               |
| F defineintermediatecolor    | F doanalyzeframedbox            |
| F definelabels               | F doifcounter                   |
| F definelanguage             | F doifelseblack                 |
| F definelinkedlist           | F doifelsebuffer                |
| F definemarking              | F doifelsecommon                |
| F definemetafont             | F doifelsecontinuewithfile      |
| F definemultitonecolorglobal | F doifelseconverter             |
| F definenamespace            | F doifelsecounter               |
| F definenote                 | F doifelsecurrentfonthasfeature |
| F defineparallel             | F doifelsedrawingblack          |
| F defineparbuilder           | F doifelsefieldcategory         |
| F defineprocesscolordummy    | F doifelsefiledefined           |
| F defineprocesscolorglobal   | F doifelsefileexist             |
| F defineprocesscolorlocal    | F doifelsefirstchar             |
| F defineprogram              | F doifelsefontpresent           |
| F definereference            | F doifelseinelement             |
| F defineregister             | F doifelseinputfile             |
| F definerule                 | F doifelseinset                 |
| F definesectionlevels        | F doifelseintwopassdata         |
| F defineselectfont           | F doifelseleapyear              |

|                                |                          |
|--------------------------------|--------------------------|
| F doifselisthasentry           | F dosetpositionwhd       |
| F doifselisthasnumber          | F dostarttextfile        |
| F doifselisthaspage            | F dostoptextfile         |
| F doifselisthastitle           | F elapsedtime            |
| F doifselocfile                | F enableasciimode        |
| F doifselemarking              | F enableautofontscript   |
| F doifselmessage               | F enablebackgroundalign  |
| F doifselobjectreferencefound  | F enablebackgroundboxes  |
| F doifselolderversion          | F enablecolor            |
| F doifseloverlapping           | F enablecolorintents     |
| F doifselparallel              | F enablecrlf             |
| F doifselparentfile            | F enabledirectives       |
| F doifselpathexist             | F enableexperiments      |
| F doifselposition              | F enablefontcolorchemes  |
| F doifselpositiononpage        | F enableinteraction      |
| F doifselpositionsonsamepage   | F enableparbuilder       |
| F doifselpositionsonthispage   | F enableregime           |
| F doifselpositionsused         | F enablerules            |
| F doifselrangeonpage           | F enableshifts           |
| F doifselreference             | F enablespellchecking    |
| F doifselesame                 | F enablestatetriggering  |
| F doifselstackedfloats         | F enablestream           |
| F doifselseurldefined          | F enabletrackers         |
| F doifselutfmathabove          | F enabletransparency     |
| F doifselutfmathaccent         | F enableutf              |
| F doifselutfmathbelow          | F enhancelinkedlist      |
| F doifselutfmathfiller         | F enhancelist            |
| F doifselvisualizer            | F enhancereference       |
| F doiffielddsetelse            | F enhanceregister        |
| F doifnotcounter               | F eposcolumn             |
| F doifnotecontent              | F eposcolumnregistered   |
| F doifnoteonsamepageasprevious | F erasebuffer            |
| F doifnotsame                  | F execute                |
| F doifposition                 | F expandcurrentreference |
| F doifsame                     | F exportformdata         |
| F doprocesstypescriptfile      | F exportreferences       |
| F doreshapeframedbox           | F extendregister         |
| F dosaveposition               | F extensiblecode         |
| F dosavepositionplus           | F featureattribute       |
| F dosavepositionwhd            | F featurelist            |
| F dosetposition                | F feedback               |
| F dosetpositionbox             | F fetchallmarks          |
| F dosetpositionplus            | F fetchmultipar          |
| F dosetpositionstrut           | F fetchmultishape        |

|                             |                                 |
|-----------------------------|---------------------------------|
| F fetchonemark              | F fontlookupgetkeyofindex       |
| F fetchposboxes             | F fontlookupinitialize          |
| F fetchtwomarks             | F fontlookupnofound             |
| F figure_check              | F forceendjob                   |
| F figure_done               | F forcequitjob                  |
| F figure_dummy              | F formatcolor                   |
| F figure_identify           | F formatgray                    |
| F figure_include            | F freezerandomseed              |
| F figure_mergegoodies       | F from                          |
| F figure_pop                | F getbidimode                   |
| F figure_push               | F getbodyfontsizes              |
| F figure_reset              | F getbuffer                     |
| F figure_scale              | F getbuffercxtlua               |
| F figurefilename            | F getbuffermkvi                 |
| F figurefilepath            | F getcheckedinterfaceparameters |
| F figurefiletype            | F getcurrentprefixspec          |
| F figurerequest             | F getcurrentreferencemetadata   |
| F figurestatus              | F getdefaultfieldvalue          |
| F figureused                | F getdocumentargument           |
| F filterdefaultreference    | F getdocumentfilename           |
| F filterreference           | F getelementtag                 |
| F finalizebox               | F getfieldcategory              |
| F findtwopassdata           | F getfile                       |
| F firstcountervalue         | F getfirstcharacter             |
| F firstinset                | F getfirsttwopassdata           |
| F firstsubcountervalue      | F getfloatvariable              |
| F flushfloat                | F getfullstructurenumber        |
| F flushlabeledfloat         | F getinternallistreference      |
| F flushnotes                | F getlasttwopassdata            |
| F flushpageinjectionsafter  | F getmarking                    |
| F flushpageinjectionsbefore | F getmessage                    |
| F flushpostponedblocks      | F getmpextensions               |
| F flushpostponednotes       | F getnotestate                  |
| F flushstream               | F getprivatechar                |
| F flushstreamcopy           | F getprogram                    |
| F fontchar                  | F getrandomdimen                |
| F fontcharbyindex           | F getrandomfloat                |
| F fontcollectionclone       | F getrandomnumber               |
| F fontcollectiondefine      | F getrandomseed                 |
| F fontcollectionprepare     | F getreadfilename               |
| F fontcollectionregister    | F getsomefullstructurenumber    |
| F fontcollectionreport      | F getsomestructurenumber        |
| F fontcollectionreset       | F getspecificstructuretitle     |
| F fontlookupgetkey          | F getstructurelevel             |



|                              |                              |
|------------------------------|------------------------------|
| F getstructurenumber         | F lchexnumber                |
| F getsubstring               | F lchexnumbers               |
| F gettexbuffer               | F leapyear                   |
| F gettwopassdata             | F linenumbersstageone        |
| F gettwopassdatalist         | F linenumbersstagetwo        |
| F geturl                     | F listgroupindex             |
| F getvisual                  | F listlabel                  |
| F hboxtovbox                 | F listlocation               |
| F helpaction                 | F listnamespaces             |
| F helpreference              | F listprefixednumber         |
| F hexstringtonumber          | F listprefixedpage           |
| F horizontalcode             | F listrealpage               |
| F hour                       | F listsize                   |
| F hyphenatedlist             | F listtitle                  |
| F hyphenatedurl              | F listuserdata               |
| F immediatemessage           | F loadexamodes               |
| F incrementcounter           | F loadfontgoodies            |
| F incrementedcounter         | F loadluamodule              |
| F incrementsubcounter        | F loadmapfile                |
| F initializejob              | F loadmapline                |
| F initializestream           | F loadspellchecklist         |
| F initializetexdirectives    | F loadtypescriptfile         |
| F initializetextrackers      | F loadvisualizer             |
| F injectcurrentreference     | F locatefilepath             |
| F injectcurrentreferencehtdp | F locfilename                |
| F injectreference            | F lower                      |
| F inlinechemical             | F lpdf_adddocumentcolorspace |
| F inputfilebarename          | F lpdf_adddocumenttextgstate |
| F inputfilename              | F lpdf_adddocumentpattern    |
| F inputfilerealsuffix        | F lpdf_adddocumentshade      |
| F inputfilesuffix            | F lpdf_addpageattributes     |
| F insertattachment           | F lpdf_addpageresources      |
| F insertcomment              | F lpdf_addpagesattributes    |
| F insertfield                | F lpdf_addtocatalog          |
| F insertionnumber            | F lpdf_addtoinfo             |
| F insertrenderingwindow      | F lpdf_addtonames            |
| F installedlanguages         | F lpdf_collectedresources    |
| F installtexdirective        | F lpdf_color                 |
| F installtextracker          | F lxmlid                     |
| F jobfilename                | F markingnumber              |
| F jobfilesuffix              | F markingtitle               |
| F languagenumber             | F markinjector               |
| F lastcountervalue           | F markregionbox              |
| F lastsubcountervalue        | F markregionboxcorrected     |

|                              |                       |
|------------------------------|-----------------------|
| F markregionboxtagged        | F notedeltapage       |
| F markvisualfonts            | F notelistindex       |
| F mathfraction               | F notenumberpage      |
| F mathrenderset              | F noteprefixednumber  |
| F metapostescaped            | F notesymbolpage      |
| F metapostformatted          | F notetitle           |
| F metapostgraphformat        | F ntimes              |
| F minute                     | F number              |
| F mixcleanup                 | F numbers             |
| F mixfinalize                | F objectnumber        |
| F mixflushlist               | F objectpage          |
| F mixflushrest               | F octnumber           |
| F mixgetsplit                | F octstringtonumber   |
| F mixsetsplit                | F operatingsystem     |
| F mixstate                   | F ordinal             |
| F molecule                   | F outputfilename      |
| F month                      | F overloadbookmark    |
| F monthmnem                  | F overloaderror       |
| F monthname                  | F pagestaterealpage   |
| F mpcolor                    | F parpos              |
| F mpflushliteral             | F pdfrotation         |
| F mpflushreset               | F pdfstartmatrix      |
| F mpgettext                  | F pdfstartmirroring   |
| F mpgraphic                  | F pdfstartrotation    |
| F mpoptions                  | F pdfstartscaling     |
| F mprunset                   | F pdfstopmatrix       |
| F mpruntab                   | F pdfstopmirroring    |
| F mprunvar                   | F pdfstoprotation     |
| F mpsetclippath              | F pdfstopscaling      |
| F mpsetoutercolor            | F percentageof        |
| F mpsetsxxy                  | F pgfxcolorspec       |
| F mpsettext                  | F pickupbuffer        |
| F mptexget                   | F placeparallel       |
| F mptexreset                 | F popfloat            |
| F mptexset                   | F pophyphenation      |
| F mptexsetfrombuffer         | F popitaliccorrection |
| F namedstructureuservariable | F poplist             |
| F namedstructurevariable     | F popreferenceprefix  |
| F nbfs                       | F popregime           |
| F nextcountervalue           | F popsectionblock     |
| F nextparallel               | F postponenotes       |
| F nextsubcountervalue        | F prefixedconverted   |
| F nofdays                    | F presetsymbollist    |
| F nofstackedfloats           | F presettabulate      |

|                                |                              |
|--------------------------------|------------------------------|
| F prevcountervalue             | F registeritemgroup          |
| F previoussubcountervalue      | F registerlanguagefeatures   |
| F processbodyfontsizes         | F registerlinenumbering      |
| F processbuffer                | F registermaintextcolor      |
| F processcolorcomponents       | F registermpyfile            |
| F processedfile                | F registernamedlua           |
| F processedfiles               | F registernamespace          |
| F processfile                  | F registerpostponedblock     |
| F processfilemany              | F registerrendering          |
| F processfilenone              | F registersection            |
| F processfileonce              | F registerstructureprocessor |
| F processjob                   | F registersynonym            |
| F processlist                  | F registerunit               |
| F processregister              | F registerusedsynonym        |
| F processsplit                 | F registeruserdata           |
| F processsynonyms              | F relatemarking              |
| F purefontname                 | F removepunctuation          |
| F pushfloat                    | F renderingvar               |
| F pushhyphenation              | F replacefeature             |
| F pushitaliccorrection         | F replacepospxywhd           |
| F pushlist                     | F reportstructure            |
| F pushreferenceprefix          | F resavefloat                |
| F pushregime                   | F resetcharacteralign        |
| F pushsectionblock             | F resetcounter               |
| F pushstream                   | F reseteffect                |
| F rawcharacter                 | F resetfeature               |
| F rawcountervalue              | F resetfontfeature           |
| F rawdate                      | F resetfontsolution          |
| F rawsubcountervalue           | F resetinjector              |
| F referencepagedetail          | F resetitaliccorrection      |
| F referencepagestate           | F resetmapfiles              |
| F referencerealpage            | F resetmarking               |
| F registerattachment           | F resetmathattributes        |
| F registerbackendsymbol        | F resetmathitalics           |
| F registerbodyfontsize         | F resetnullfont              |
| F registerbookmark             | F resetparallel              |
| F registerbuttons              | F resetprevdepth             |
| F registercolorintent          | F resetreference             |
| F registeredviewerlayer        | F resetscript                |
| F registerfigurepattern        | F resetstructureprocessor    |
| F registerfiguresuffix         | F resetsubcounter            |
| F registerhelp                 | F resettimer                 |
| F registerhyphenationexception | F resettrackers              |
| F registerhyphenationpattern   | F restartcounter             |

F restartsubcounter  
F restorecounter  
F restorecurrentattributes  
F restorenote  
F revivefeature  
F romannumerals  
F rounded  
F runbuffer  
F runcontextjob  
F safechar  
F savebuffer  
F savecounter  
F savecurrentattributes  
F savedlistnumber  
F savedlistprefixednumber  
F savedlisttitle  
F savefloat  
F savemargindata  
F savenote  
F saveobject  
F savepagedata  
F savepageinjections  
F saveparallel  
F savespecificfloat  
F savestructureblock  
F savetaggedtwopassdata  
F savetwopassdata  
F savevariable  
F second  
F selectstructureblock  
F setactivecatcodes  
F setbreakpoints  
F setcharacteralign  
F setcharactercasing  
F setcharactercleaning  
F setcharacterkerning  
F setcharacterspacing  
F setcharacterstripping  
F setcloseddocumentaction  
F setclosepageaction  
F setcolormodel  
F setcounter  
F setdataset  
F setdigitsmanipulation

F setdirection  
F setdocumentargument  
F setdocumentcommandline  
F setdocumentctxfile  
F setdocumentdefaultargument  
F setdocumentenvironments  
F setdocumentfilename  
F setdocumentfilenames  
F setdocumentmodes  
F setdocumentmodules  
F seteffect  
F setelementuserproperties  
F setfigurelookuporder  
F setfigurepaths  
F setfirstline  
F setfontfeature  
F setfontofid  
F setfontsolution  
F setformat  
F setformsmethod  
F sethyphenatedurlcharacters  
F sethyphenationfeatures  
F sethyphenationmethod  
F setinitial  
F setinjector  
F setinnerreferencemethod  
F setinsertionlocation  
F setinterfaceconstant  
F setinterfaceelement  
F setinterfacemessage  
F setinterfacemessages  
F setinterfacevariable  
F setinternalreference  
F setitaliccorrection  
F setjavascriptpreamble  
F setjobcomment  
F setlanguageexceptions  
F setlanguagesynonym  
F setlettercatcodes  
F setmarking  
F setmathalphabet  
F setmathalternate  
F setmathattribute  
F setmathdirection

|                            |                         |
|----------------------------|-------------------------|
| F setmathitalics           | F settaglist            |
| F setmathstyle             | F settagproperty        |
| F setmpextensions          | F settagproperty_b      |
| F setnegative              | F settagproperty_n      |
| F setnextinternalreference | F settagregister        |
| F setnextreferenceorder    | F settagsorting         |
| F setnotestate             | F settagsynonym         |
| F setnotesymbolpage        | F settagtablecell       |
| F setobject                | F settagtabulatecell    |
| F setopendocumentaction    | F setupbookmarks        |
| F setopenpageaction        | F setupcanvas           |
| F setowncounter            | F setupcharacterspacing |
| F setownsubcounter         | F setupexport           |
| F setpagecolormodel        | F setupfontexpansion    |
| F setpagestate             | F setupfontprotrusion   |
| F setpagestaterealpageno   | F setupidentity         |
| F setpagetransition        | F setupinsertion        |
| F setparbuilder            | F setupitaliccorrection |
| F setrandomseed            | F setuplinenumbers      |
| F setrealign               | F setuserinterface      |
| F setrealspaces            | F setvalidinterfacekeys |
| F setreferencearguments    | F setvisual             |
| F setreferenceattribute    | F setvisualfont         |
| F setreferenceoperation    | F setvisuallayer        |
| F setregionbox             | F setxmpfile            |
| F setregionboxtagged       | F showassignerror       |
| F setregistermethod        | F showattributes        |
| F setreplacements          | F showcounter           |
| F setscript                | F showdebuginfo         |
| F setsectionblock          | F showdirectives        |
| F setsectionentry          | F showdiscretionaries   |
| F setstructureblockstate   | F showexperiments       |
| F setstructurelevel        | F showhyphenatedinlist  |
| F setstructurenumber       | F showhyphenationtrace  |
| F setsubcounter            | F showinjector          |
| F settagaspect             | F showjustification     |
| F settagcombination        | F showlogcategories     |
| F settagdescription        | F showmessage           |
| F settagdescriptionsymbol  | F showtrackers          |
| F settagfigure             | F sin                   |
| F settaggedmetadata        | F sind                  |
| F settaghighlight          | F splitfilename         |
| F settagitem               | F spotcolorname         |
| F settagitemgroup          | F spotcolorparent       |

|                            |                             |
|----------------------------|-----------------------------|
| F spotcolorvalue           | F structuregivencatcodedget |
| F startactualtext          | F structurenumber           |
| F startchemical            | F structuretitle            |
| F startcolorset            | F structureuservariable     |
| F startcomponent           | F structurevariable         |
| F startenvironment         | F strwd                     |
| F startfontsolution        | F subcountervalue           |
| F startparbuilder          | F subcountervalues          |
| F startproduct             | F subsubcountervalues       |
| F startproject             | F subtractfeature           |
| F startregime              | F synchronizemarking        |
| F startsectionlevel        | F synchronizestream         |
| F startstream              | F synonymmeaning            |
| F starttag                 | F synonymname               |
| F starttag_c               | F systemlog                 |
| F starttag_d               | F taggedmathfunction        |
| F starttag_u               | F tan                       |
| F starttext                | F tand                      |
| F startviewerlayer         | F texdefinition_one         |
| F stopactualtext           | F texdefinition_two         |
| F stopchemical             | F textime                   |
| F stopcolorset             | F thefirstcharacter         |
| F stopcomponent            | F theremainingcharacters    |
| F stopenvironment          | F tochar                    |
| F stopfontsolution         | F transparencycomponents    |
| F stopparbuilder           | F truefilename              |
| F stopproduct              | F type                      |
| F stopproject              | F typebuffer                |
| F stopregime               | F typefile                  |
| F stopsectionlevel         | F uchar                     |
| F stopstream               | F uchexnumber               |
| F stoptag                  | F uchexnumbers              |
| F stoptext                 | F undefinechemical          |
| F stopviewerlayer          | F unicodechar               |
| F storejavascriptcode      | F unihex                    |
| F storejavascriptpreamble  | F unit_normal               |
| F storenote                | F unit_reverse              |
| F storeregister            | F unloadlanguage            |
| F strdp                    | F upper                     |
| F strhd                    | F useMPLibrary              |
| F strht                    | F useanyfile                |
| F strip                    | F useanyfileonce            |
| F structureautocatcodedget | F useclldfile               |
| F structurecatcodedget     | F useclldfileonce           |

|                         |                                     |
|-------------------------|-------------------------------------|
| F usecolors             | F x_table_create                    |
| F usecomponent          | F x_table_finish_row                |
| F useenvironment        | F x_table_flush                     |
| F usefigurebase         | F x_table_init_construct            |
| F usefile               | F x_table_init_reflow_height        |
| F usejavascriptpreamble | F x_table_init_reflow_height_option |
| F usejavascriptscripts  | F x_table_init_reflow_width         |
| F useluafile            | F x_table_init_reflow_width_option  |
| F useluafileonce        | F x_table_next_row                  |
| F useluamodule          | F x_table_next_row_option           |
| F usemodules            | F x_table_r                         |
| F usepath               | F x_table_reflow_height             |
| F useproduct            | F x_table_reflow_width              |
| F useproject            | F x_table_set_construct             |
| F usesubpath            | F x_table_set_reflow_height         |
| F usesymbols            | F x_table_set_reflow_width          |
| F usetexfile            | F xmllafterdocumentsetup            |
| F usetexfileonce        | F xmllaftersetup                    |
| F useurl                | F xmlall                            |
| F usexmlfile            | F xmlappenddocumentsetup            |
| F usexmlfileonce        | F xmlappendsetup                    |
| F usezipfile            | F xmlapplyselectors                 |
| F utfchar               | F xmlatt                            |
| F utfmathclass          | F xmlattdef                         |
| F utfmathcommand        | F xmlattribute                      |
| F utfmathcommandabove   | F xmlattributedef                   |
| F utfmathcommandbelow   | F xmlbeforedocumentsetup            |
| F utfmathcommandfiller  | F xmlbeforesetup                    |
| F utfmathfiller         | F xmlchainatt                       |
| F utfmathstretch        | F xmlchainattdef                    |
| F vboxlisttohbox        | F xmlchecknamespace                 |
| F verbose               | F xmlcommand                        |
| F vspacing              | F xmlconcat                         |
| F vspacingcollapse      | F xmlconcatrange                    |
| F vspacingdefine        | F xmlcontext                        |
| F vspacingsetamount     | F xmlcount                          |
| F vspacingsnap          | F xmldelete                         |
| F way                   | F xmldirect                         |
| F weekday               | F xmldirectives                     |
| F weekdayname           | F xmldirectivesafter                |
| F writestatus           | F xmldirectivesbefore               |
| F x_table_c             | F xmldisplayverbatim                |
| F x_table_cleanup       | F xmldoif                           |
| F x_table_construct     | F xmldoifelse                       |

F xmldoifelseempty  
 F xmldoifelseempty  
 F xmldoifelseempty  
 F xmldoifempty  
 F xmldoifnot  
 F xmldoifnotempty  
 F xmldoifnotselfempty  
 F xmldoifnottext  
 F xmldoifselfempty  
 F xmldoiftext  
 F xmlelement  
 F xmlfilter  
 F xmlfilterlist  
 F xmlfirst  
 F xmlflush  
 F xmlflushcontext  
 F xmlflushdocumentsetup  
 F xmlflushlinewise  
 F xmlflushspacewise  
 F xmlfunction  
 F xmlgetindex  
 F xmlinclude  
 F xmlincludeoptions  
 F xmlinclusion  
 F xmlinclusions  
 F xmlindex  
 F xmlinfo  
 F xmlinlineverbatim  
 F xmlinstalldirective  
 F xmlload  
 F xmlloadbuffer  
 F xmlloaddata  
 F xmlloaddirectives  
 F xmlloadregistered  
 F xmlmain  
 F xmlmatch  
 F xmlname  
 F xmlnamespace  
 F xmlnonamespace  
 F xmlpos  
 F xmlprependdocumentsetup  
 F xmlprependsetup  
 F xmlraw

F xmlregisters  
 F xmlremapname  
 F xmlremapnamespace  
 F xmlremoveddocumentsetup  
 F xmlremovesetup  
 F xmlresetdocumentsetups  
 F xmlresetinjectors  
 F xmlsave  
 F xmlsetcommandtonone  
 F xmlsetcommandtotext  
 F xmlsetentity  
 F xmlsetfunction  
 F xmlsetinjectors  
 F xmlsetsetup  
 F xmlsnippet  
 F xmlstarttraw  
 F xmlstarttiming  
 F xmlstopraw  
 F xmlstoptiming  
 F xmlstrip  
 F xmlstripanywhere  
 F xmlstripnolines  
 F xmlstripped  
 F xmlstrippednolines  
 F xmltag  
 F xmltextentity  
 F xmltext  
 F xmltobuffer  
 F xmltobufferverbose  
 F xmltofile  
 F xmltoparameters  
 F xmlverbatim  
 F xmlwithindex  
 F year

|                         |          |
|-------------------------|----------|
| <b>setconstant</b>      | function |
| <b>setcount</b>         | function |
| <b>setdimen</b>         | function |
| <b>setelement</b>       | function |
| <b>setformat</b>        | function |
| <b>setmacro</b>         | function |
| <b>setmessage</b>       | function |
| <b>setmessages</b>      | function |
| <b>settranslation</b>   | function |
| <b>setuserinterface</b> | function |



|                       |            |
|-----------------------|------------|
| <b>setvalidkeys</b>   | function   |
| <b>setvariable</b>    | function   |
| <b>showmessage</b>    | function   |
| <b>storedscanners</b> | data table |
| <b>strings</b>        | table      |
| <b>syntax</b>         | data table |
| <b>tolist</b>         | function   |
| <b>translations</b>   | data table |
| <b>variables</b>      | data table |
| <b>writestatus</b>    | function   |

## io (basic lua)

|                      |                     |
|----------------------|---------------------|
| <b>ask</b>           | function            |
| <b>bytes</b>         | function            |
| <b>characters</b>    | function            |
| <b>close</b>         | function            |
| <b>exists</b>        | function            |
| <b>fileseparator</b> | string              |
| <b>flush</b>         | function            |
| <b>input</b>         | overloaded function |
| <b>lines</b>         | overloaded function |
| <b>loadchunk</b>     | function            |
| <b>loaddata</b>      | function            |
| <b>loadlines</b>     | function            |
| <b>noflines</b>      | function            |
| <b>open</b>          | overloaded function |
| <b>output</b>        | overloaded function |
| <b>pathseparator</b> | string              |
| <b>popen</b>         | overloaded function |
| <b>read</b>          | function            |
| <b>readall</b>       | function            |
| <b>readnumber</b>    | function            |
| <b>readstring</b>    | function            |
| <b>savedata</b>      | function            |
| <b>size</b>          | function            |
| <b>stderr</b>        | userdata            |
| <b>stdin</b>         | userdata            |
| <b>stdout</b>        | userdata            |
| <b>tmpfile</b>       | function            |
| <b>type</b>          | function            |
| <b>write</b>         | function            |

# jit (context)

|               |          |
|---------------|----------|
| <b>arch</b>   | string   |
| <b>attach</b> | function |
| <b>flush</b>  | function |
| <b>off</b>    | function |
| <b>on</b>     | function |
| <b>opt</b>    | table    |
| F start       |          |
| <b>os</b>     | string   |
| <b>status</b> | function |
| <b>util</b>   | table    |

|                 |
|-----------------|
| F funcbc        |
| F funcinfo      |
| F funcck        |
| F funcuvname    |
| F ircalladdr    |
| F traceexitstub |
| F traceinfo     |
| F traceir       |
| F tracek        |
| F tracemc       |
| F tracesnap     |

|                    |        |
|--------------------|--------|
| <b>version</b>     | string |
| <b>version_num</b> | number |

# job (context)

**comment**        function  
**datasets**      table  
    D collected  
    F extend  
    F getdata  
    F setdata  
    D tobesaved

**disablesave**    function  
**files**          table  
    D collected  
    F context  
    B forcerun  
    F run  
    D tobesaved

**initialize**    function  
**load**          function  
**loadother**    function  
**objects**      table  
    D collected  
    F get  
    F number  
    F page  
    F save  
    F set  
    D tobesaved

**pack**          boolean  
**packversion**   number  
**pagestates**   table  
    D collected  
    F extend  
    F realpage  
    F setstate  
    D tobesaved

**passes**        table  
    F check  
    D collected  
    F count  
    F define  
    F find  
    F first  
    F get

    F getcollected  
    F getdata  
    F getfield  
    F gettobesaved  
    F inlist  
    F last  
    F list  
    F save  
    F savetagged  
    D tobesaved

**positions**    table  
    F b\_col  
    F b\_region  
    F c  
    D collected  
    F column  
    F copy  
    F depth  
    F e\_col  
    F e\_region  
    F enhance  
    F extra  
    F get  
    F getreserved  
    F hangafter  
    F hangindent  
    F height  
    F hsize  
    F leftskip  
    F lowerleft  
    F lowerright  
    F markregionbox  
    F n  
    F onsamepage  
    F overlapping  
    F p  
    F page  
    F paragraph  
    F parindent  
    F position  
    F r

- F region
- F replace
- F rightskip
- F set
- F setall
- F setdim
- F setregionbox
- D tobesaved
- F upperleft
- F upperright
- S used
- F width
- F x
- F xy
- F y
- register**        function
- save**            function
- structure**      table
  - D collected
  - T components
  - T tobesaved
  - T branches
  - S name
  - S type
- variables**      table
  - D checksums
  - D collected
  - F getchecksum
  - F makechecksum
  - F restore
  - F save
  - F setchecksum
  - D tobesaved
- version**        number

## lang (basic tex)

|                          |          |
|--------------------------|----------|
| <b>clean</b>             | function |
| <b>clear_hyphenation</b> | function |
| <b>clear_patterns</b>    | function |
| <b>exceptions</b>        | function |
| <b>hyphenate</b>         | function |
| <b>hyphenation</b>       | function |
| <b>id</b>                | function |
| <b>new</b>               | function |
| <b>patterns</b>          | function |
| <b>postexhyphenchar</b>  | function |
| <b>posthyphenchar</b>    | function |
| <b>preexhyphenchar</b>   | function |
| <b>prehyphenchar</b>     | function |

# languages (context)

|                        |            |                                 |            |
|------------------------|------------|---------------------------------|------------|
| <b>associate</b>       | function   | F setfeatures                   |            |
| <b>associated</b>      | data table | <b>installed</b>                | function   |
| <b>association</b>     | function   | <b>labels</b>                   | table      |
| <b>counters</b>        | data table | F define                        |            |
| <b>current</b>         | function   | F split                         |            |
| <b>data</b>            | data table | <b>lefthyphenmin</b>            | function   |
| <b>define</b>          | function   | <b>loadable</b>                 | function   |
| <b>expand</b>          | function   | <b>loadwords</b>                | function   |
| <b>expanders</b>       | table      | <b>logger</b>                   | table      |
| <b>frequencies</b>     | table      | F report                        |            |
| F averagecharwidth     |            | <b>numbers</b>                  | data table |
| F getdata              |            | <b>postexhyphenchar</b>         | function   |
| <b>getdata</b>         | function   | <b>posthyphenchar</b>           | function   |
| <b>getnumber</b>       | function   | <b>preexhyphenchar</b>          | function   |
| <b>hyphenate</b>       | function   | <b>prehyphenchar</b>            | function   |
| <b>hyphenators</b>     | table      | <b>registered</b>               | data table |
| T dictionaries         |            | <b>replacements</b>             | table      |
| D featuresets          |            | F add                           |            |
| F handler              |            | F handler                       |            |
| T methods              |            | F set                           |            |
| F expanded             |            | <b>rightlyhyphenmin</b>         | function   |
| B none                 |            | <b>serializediscretionary</b>   | function   |
| F original             |            | <b>setexceptions</b>            | function   |
| F tex                  |            | <b>setsynonym</b>               | function   |
| F traditional          |            | <b>showdiscretionaries</b>      | function   |
| B optimize             |            | <b>unload</b>                   | function   |
| F popmethod            |            | <b>version</b>                  | number     |
| F pushmethod           |            | <b>visualizediscretionaries</b> | function   |
| F setmethod            |            | <b>words</b>                    | table      |
| F setup                |            | F check                         |            |
| F showhyphenationtrace |            | T data                          |            |
| T traditional          |            | F disable                       |            |
| F definefeatures       |            | F enable                        |            |
| F gettrace             |            | T enablers                      |            |
| F hyphenate            |            | B enables                       |            |
| F injecthyphens        |            | F found                         |            |
| F installmethod        |            | F load                          |            |
| F lasttrace            |            | T methods                       |            |
| F loadpatterns         |            | N threshold                     |            |
| F registerexception    |            |                                 |            |
| F registerpattern      |            |                                 |            |

# layouts (context)

**status** table

F isleftpage

F leftorrightpagection



## lfs (extra lua)

|                          |                     |
|--------------------------|---------------------|
| <b>attributes</b>        | overloaded function |
| <b>chdir</b>             | overloaded function |
| <b>currentdir</b>        | function            |
| <b>dir</b>               | overloaded function |
| <b>isdir</b>             | overloaded function |
| <b>isfile</b>            | overloaded function |
| <b>lock</b>              | function            |
| <b>lock_dir</b>          | overloaded function |
| <b>mkdir</b>             | overloaded function |
| <b>mkdirs</b>            | function            |
| <b>readlink</b>          | overloaded function |
| <b>rmdir</b>             | overloaded function |
| <b>setmode</b>           | overloaded function |
| <b>shortname</b>         | overloaded function |
| <b>symlinkattributes</b> | overloaded function |
| <b>touch</b>             | overloaded function |
| <b>unlock</b>            | function            |

## libraries (context)

|                  |            |
|------------------|------------|
| <b>basiclua</b>  | data table |
| <b>basictex</b>  | data table |
| <b>builtin</b>   | data table |
| <b>extralua</b>  | data table |
| <b>extratex</b>  | data table |
| <b>functions</b> | data table |
| <b>globals</b>   | data table |

# lmx (context)

**color** function  
**convert** function  
**convertfile** function  
**convertstring** function  
**einject** function  
**eprint** function  
**escape** function  
**finalized** function  
**finject** function  
**fprint** function  
**get** function  
**getvariables** function  
**htmfile** function  
**html** table

F a

F td

F th

**include** function  
**inherited** table

S color-background-four

S color-background-one

S color-background-three

S color-background-two

S title

**initialize** function  
**inject** function  
**lmxfile** function  
**loadedfile** function  
**make** function  
**new** function  
**overloaderror** function  
**popupfile** function  
**print** function  
**pv** function  
**report** function  
**reset** function  
**result** function  
**set** function  
**show** function  
**showdebuginfo** function  
**showerror** function

**stripcss** function  
**tv** function  
**type** function  
**urlescape** function  
**variable** function  
**variables** table

S color-background-blue

S color-background-body

S color-background-green

S color-background-main

S color-background-purple

S color-background-yellow

S title-default

# logs (context)

|                     |          |
|---------------------|----------|
| <b>application</b>  | function |
| <b>categories</b>   | function |
| <b>direct</b>       | function |
| <b>disable</b>      | function |
| <b>enable</b>       | function |
| <b>exporters</b>    | table    |
| <b>extendbanner</b> | function |
| <b>flush</b>        | function |
| <b>help</b>         | function |
| <b>messenger</b>    | function |
| <b>new</b>          | function |
| <b>newline</b>      | function |
| <b>poptarget</b>    | function |
| <b>pushtarget</b>   | function |
| <b>report</b>       | function |
| <b>reportbanner</b> | function |
| <b>reporter</b>     | function |
| <b>reporters</b>    | table    |

F banner

F export

F help

F info

F lines

F version

|                        |          |
|------------------------|----------|
| <b>reportline</b>      | function |
| <b>reportlines</b>     | function |
| <b>setformats</b>      | function |
| <b>setformatters</b>   | function |
| <b>setlogfile</b>      | function |
| <b>setmessenger</b>    | function |
| <b>setprocessor</b>    | function |
| <b>setprogram</b>      | function |
| <b>settarget</b>       | function |
| <b>settimedlog</b>     | function |
| <b>settranslations</b> | function |
| <b>show</b>            | function |
| <b>show_close</b>      | function |
| <b>show_load</b>       | function |
| <b>show_open</b>       | function |
| <b>simple</b>          | function |
| <b>simpleline</b>      | function |

|                          |          |
|--------------------------|----------|
| <b>simplelines</b>       | function |
| <b>start_page_number</b> | function |
| <b>status</b>            | function |
| <b>stop_page_number</b>  | function |
| <b>subdirect</b>         | function |
| <b>subreport</b>         | function |
| <b>system</b>            | function |
| <b>texerrormessage</b>   | function |
| <b>writer</b>            | function |

# lpdf (context)

|                                 |            |                                  |            |
|---------------------------------|------------|----------------------------------|------------|
| <b>action</b>                   | function   | <b>finalizepage</b>              | function   |
| <b>adddocumentcolorspace</b>    | function   | <b>finishtransparencycode</b>    | function   |
| <b>adddocumenttextgstate</b>    | function   | <b>flushobject</b>               | function   |
| <b>adddocumentpattern</b>       | function   | <b>flushstreamfileobject</b>     | function   |
| <b>adddocumentshade</b>         | function   | <b>flushstreamobject</b>         | function   |
| <b>addtocatalog</b>             | function   | <b>formats</b>                   | data table |
| <b>addtoinfo</b>                | function   | <b>frompdfdoc</b>                | function   |
| <b>addtonames</b>               | function   | <b>fromsixteen</b>               | function   |
| <b>addtopageattributes</b>      | function   | <b>gethpos</b>                   | function   |
| <b>addtopageresources</b>       | function   | <b>getmatrix</b>                 | function   |
| <b>addtopagesattributes</b>     | function   | <b>getpos</b>                    | function   |
| <b>addxmpinfo</b>               | function   | <b>getvpos</b>                   | function   |
| <b>annotationspecification</b>  | function   | <b>graycode</b>                  | function   |
| <b>array</b>                    | function   | <b>hasmatrix</b>                 | function   |
| <b>boolean</b>                  | function   | <b>id</b>                        | function   |
| <b>border</b>                   | function   | <b>injectxmpinfo</b>             | function   |
| <b>checkedkey</b>               | function   | <b>insertxmpinfo</b>             | function   |
| <b>checkedvalue</b>             | function   | <b>layerreference</b>            | function   |
| <b>circularshade</b>            | function   | <b>limited</b>                   | function   |
| <b>cmykcode</b>                 | function   | <b>linearshade</b>               | function   |
| <b>collectedresources</b>       | function   | <b>nametree</b>                  | function   |
| <b>color</b>                    | function   | <b>null</b>                      | function   |
| <b>colorspace</b>               | function   | <b>number</b>                    | function   |
| <b>colorspaceconstants</b>      | data table | <b>pagedestinations</b>          | data table |
| <b>colorspec</b>                | function   | <b>pagereference</b>             | function   |
| <b>colorvalue</b>               | function   | <b>pagereferences</b>            | data table |
| <b>colorvalues</b>              | function   | <b>pdfcolor</b>                  | function   |
| <b>constant</b>                 | function   | <b>pdftimestamp</b>              | function   |
| <b>delayedobject</b>            | function   | <b>protectresources</b>          | boolean    |
| <b>destinationspecification</b> | function   | <b>rectangle</b>                 | function   |
| <b>dictionary</b>               | function   | <b>reference</b>                 | function   |
| <b>docstring</b>                | function   | <b>registerannotation</b>        | function   |
| <b>epdf</b>                     | table      | <b>registerdestination</b>       | function   |
| F contenttotext                 |            | <b>registerdocumentfinalizer</b> | function   |
| F expand                        |            | <b>registerpagefinalizer</b>     | function   |
| F expanded                      |            | <b>reserveobject</b>             | function   |
| F getpagecontent                |            | <b>rgbcode</b>                   | function   |
| F getstructure                  |            | <b>rotationcm</b>                | function   |
| F load                          |            | <b>shareobject</b>               | function   |
| F unload                        |            | <b>shareobjectreference</b>      | function   |
| <b>finalizeddocument</b>        | function   | <b>spotcode</b>                  | function   |

|                           |          |
|---------------------------|----------|
| <b>stream</b>             | function |
| <b>string</b>             | function |
| <b>timestamp</b>          | function |
| <b>toeight</b>            | function |
| <b>topdfdoc</b>           | function |
| <b>tosixteen</b>          | function |
| <b>transform</b>          | function |
| <b>transparency</b>       | function |
| <b>transparencycode</b>   | function |
| <b>transparencygroups</b> | table    |
| B none                    |          |
| <b>transparencyvalue</b>  | function |
| <b>unicode</b>            | function |
| <b>verbose</b>            | function |

## lpeg (basic lua)

|                        |            |                              |          |
|------------------------|------------|------------------------------|----------|
| <b>B</b>               | function   | <b>setmaxstack</b>           | function |
| <b>C</b>               | function   | <b>split</b>                 | function |
| <b>Carg</b>            | function   | <b>splitat</b>               | function |
| <b>Cb</b>              | function   | <b>splitter</b>              | function |
| <b>Cc</b>              | function   | <b>stripper</b>              | function |
| <b>Cf</b>              | function   | <b>times</b>                 | function |
| <b>Cg</b>              | function   | <b>tsplitat</b>              | function |
| <b>Cmt</b>             | function   | <b>tsplitter</b>             | function |
| <b>Cp</b>              | function   | <b>type</b>                  | function |
| <b>Cs</b>              | function   | <b>utfchartabletopattern</b> | function |
| <b>Ct</b>              | function   | <b>version</b>               | function |
| <b>P</b>               | function   |                              |          |
| <b>R</b>               | function   |                              |          |
| <b>S</b>               | function   |                              |          |
| <b>UP</b>              | function   |                              |          |
| <b>UR</b>              | function   |                              |          |
| <b>US</b>              | function   |                              |          |
| <b>V</b>               | function   |                              |          |
| <b>afterprefix</b>     | function   |                              |          |
| <b>anywhere</b>        | function   |                              |          |
| <b>append</b>          | function   |                              |          |
| <b>balancer</b>        | function   |                              |          |
| <b>beforesuffix</b>    | function   |                              |          |
| <b>checkedsplit</b>    | function   |                              |          |
| <b>counter</b>         | function   |                              |          |
| <b>endstripper</b>     | function   |                              |          |
| <b>finder</b>          | function   |                              |          |
| <b>firstofsplit</b>    | function   |                              |          |
| <b>frontstripper</b>   | function   |                              |          |
| <b>instringchecker</b> | function   |                              |          |
| <b>is_lpeg</b>         | function   |                              |          |
| <b>keeper</b>          | function   |                              |          |
| <b>locale</b>          | function   |                              |          |
| <b>match</b>           | function   |                              |          |
| <b>oneof</b>           | function   |                              |          |
| <b>patterns</b>        | data table |                              |          |
| <b>pcode</b>           | function   |                              |          |
| <b>print</b>           | function   |                              |          |
| <b>ptree</b>           | function   |                              |          |
| <b>replacer</b>        | function   |                              |          |
| <b>secondofsplit</b>   | function   |                              |          |

# ltn12 (extra lua)

**BLOCKSIZE**    number

**filter**        table

    F chain

    F cycle

**pump**          table

    F all

    F step

**sink**           table

    F chain

    F error

    F file

    F null

    F simplify

    F table

**source**        table

    F cat

    F chain

    F empty

    F error

    F file

    F rewind

    F simplify

    F string



## lua (basic tex)

|                            |            |
|----------------------------|------------|
| <b>bytecode</b>            | table      |
| <b>bytedata</b>            | data table |
| <b>bytdone</b>             | table      |
| <b>collectgarbage</b>      | function   |
| <b>delay</b>               | function   |
| <b>finalize</b>            | function   |
| <b>firstbytecode</b>       | number     |
| <b>flush</b>               | function   |
| <b>flushdelayed</b>        | function   |
| <b>get_functions_table</b> | function   |
| <b>getbytecode</b>         | function   |
| <b>getluaname</b>          | function   |
| <b>lastbytecode</b>        | number     |
| <b>mask</b>                | string     |
| <b>messages</b>            | data table |
| <b>name</b>                | table      |
| <b>numbers</b>             | data table |
| <b>registercode</b>        | function   |
| <b>registeredcodes</b>     | function   |
| <b>registerfinalizer</b>   | function   |
| <b>registername</b>        | function   |
| <b>setbytecode</b>         | function   |
| <b>setluaname</b>          | function   |
| <b>startupfile</b>         | string     |
| <b>version</b>             | string     |

# luatex (context)

|                             |          |
|-----------------------------|----------|
| <b>cleanuptempfiles</b>     | function |
| <b>registerstartactions</b> | function |
| <b>registerstopactions</b>  | function |
| <b>registertempfile</b>     | function |
| <b>starttime</b>            | number   |

# lxml (context)

|                        |            |                       |          |
|------------------------|------------|-----------------------|----------|
| <b>addindex</b>        | function   | <b>flushlinewise</b>  | function |
| <b>all</b>             | function   | <b>flushsetups</b>    | function |
| <b>applyfunction</b>   | function   | <b>flushspacewise</b> | function |
| <b>applyselectors</b>  | function   | <b>get_id</b>         | function |
| <b>att</b>             | function   | <b>getid</b>          | function |
| <b>attribute</b>       | function   | <b>getindex</b>       | function |
| <b>chainattribute</b>  | function   | <b>id</b>             | function |
| <b>checkindex</b>      | function   | <b>idsplitter</b>     | userdata |
| <b>collected</b>       | function   | <b>include</b>        | function |
| <b>command</b>         | function   | <b>inclusion</b>      | function |
| <b>concat</b>          | function   | <b>inclusions</b>     | function |
| <b>concatrange</b>     | function   | <b>index</b>          | function |
| <b>content</b>         | function   | <b>info</b>           | function |
| <b>context</b>         | function   | <b>inlineverbatim</b> | function |
| <b>convert</b>         | function   | <b>installsetup</b>   | function |
| <b>count</b>           | function   | <b>last</b>           | function |
| <b>delete</b>          | function   | <b>load</b>           | function |
| <b>direct</b>          | function   | <b>loadbuffer</b>     | function |
| <b>directives</b>      | table      | <b>loaddata</b>       | function |
| F after                |            | <b>loaded</b>         | table    |
| F before               |            | <b>loadregistered</b> | function |
| F handle               |            | <b>main</b>           | function |
| F load                 |            | <b>match</b>          | function |
| F setup                |            | <b>name</b>           | function |
| <b>displayverbatim</b> | function   | <b>namespace</b>      | function |
| <b>doif</b>            | function   | <b>nonspace</b>       | function |
| <b>doifelse</b>        | function   | <b>pos</b>            | function |
| <b>doifelseempty</b>   | function   | <b>position</b>       | function |
| <b>doifelsetext</b>    | function   | <b>raw</b>            | function |
| <b>doifempty</b>       | function   | <b>rawroot</b>        | function |
| <b>doifnot</b>         | function   | <b>register</b>       | function |
| <b>doifnotempty</b>    | function   | <b>registerentity</b> | function |
| <b>doifnottext</b>     | function   | <b>removesetup</b>    | function |
| <b>doiftext</b>        | function   | <b>resetcdata</b>     | function |
| <b>element</b>         | function   | <b>resetsetups</b>    | function |
| <b>elements</b>        | function   | <b>resolvedentity</b> | function |
| <b>entities</b>        | data table | <b>root</b>           | function |
| <b>filter</b>          | function   | <b>save</b>           | function |
| <b>filterlist</b>      | function   | <b>serialize</b>      | function |
| <b>first</b>           | function   | <b>setaction</b>      | function |
| <b>flush</b>           | function   | <b>setcdata</b>       | function |

|                         |            |
|-------------------------|------------|
| <b>setcommandtonone</b> | function   |
| <b>setcommandtotext</b> | function   |
| <b>setsetup</b>         | function   |
| <b>snippet</b>          | function   |
| <b>sorters</b>          | table      |
| F add                   |            |
| F compare               |            |
| F flush                 |            |
| F reset                 |            |
| F show                  |            |
| F sort                  |            |
| <b>splitid</b>          | function   |
| <b>startraw</b>         | function   |
| <b>stopraw</b>          | function   |
| <b>store</b>            | function   |
| <b>strip</b>            | function   |
| <b>stripped</b>         | function   |
| <b>tag</b>              | function   |
| <b>text</b>             | function   |
| <b>tobuffer</b>         | function   |
| <b>tofile</b>           | function   |
| <b>toparameters</b>     | function   |
| <b>toverbatim</b>       | function   |
| <b>verbatim</b>         | function   |
| <b>withindex</b>        | function   |
| <b>xmltexhandler</b>    | data table |

## math (basic lua)

|                       |          |
|-----------------------|----------|
| <b>abs</b>            | function |
| <b>acos</b>           | function |
| <b>asin</b>           | function |
| <b>atan</b>           | function |
| <b>atan2</b>          | function |
| <b>ceil</b>           | function |
| <b>cos</b>            | function |
| <b>cosd</b>           | function |
| <b>cosh</b>           | function |
| <b>deg</b>            | function |
| <b>div</b>            | function |
| <b>even</b>           | function |
| <b>exp</b>            | function |
| <b>floor</b>          | function |
| <b>fmod</b>           | function |
| <b>frexp</b>          | function |
| <b>huge</b>           | number   |
| <b>initialseed</b>    | number   |
| <b>ldexp</b>          | function |
| <b>log</b>            | function |
| <b>log10</b>          | function |
| <b>max</b>            | function |
| <b>min</b>            | function |
| <b>mod</b>            | function |
| <b>modf</b>           | function |
| <b>odd</b>            | function |
| <b>pi</b>             | number   |
| <b>pow</b>            | function |
| <b>rad</b>            | function |
| <b>random</b>         | function |
| <b>randomseed</b>     | function |
| <b>round</b>          | function |
| <b>setrandomseedi</b> | function |
| <b>sin</b>            | function |
| <b>sind</b>           | function |
| <b>sinh</b>           | function |
| <b>sqrt</b>           | function |
| <b>tan</b>            | function |
| <b>tand</b>           | function |
| <b>tanh</b>           | function |

# mathematics (context)

|                               |            |                               |            |
|-------------------------------|------------|-------------------------------|------------|
| <b>addfallbacks</b>           | function   | <b>renderset</b>              | function   |
| <b>alphabets</b>              | data table | <b>resetattributes</b>        | function   |
| <b>alternatives</b>           | data table | <b>resetitalics</b>           | function   |
| <b>big</b>                    | function   | <b>scaleparameters</b>        | function   |
| <b>boldmap</b>                | data table | <b>setalternate</b>           | function   |
| <b>categories</b>             | table      | <b>setitalics</b>             | function   |
| D functions                   |            | <b>sets</b>                   | data table |
| <b>charactersets</b>          | data table | <b>styles</b>                 | data table |
| <b>checkaccentbaseheight</b>  | function   | <b>syncboth</b>               | function   |
| <b>checkprivateparameters</b> | function   | <b>syncname</b>               | function   |
| <b>classes</b>                | data table | <b>syncstyle</b>              | function   |
| <b>codes</b>                  | data table | <b>toname</b>                 | function   |
| <b>define</b>                 | function   | <b>tostyle</b>                | function   |
| <b>dimensions</b>             | function   | <b>tweakaftercopyingfont</b>  | function   |
| <b>extensiblecode</b>         | function   | <b>tweakbeforecopyingfont</b> | function   |
| <b>extensibles</b>            | data table | <b>tweaks</b>                 | table      |
| <b>extrabase</b>              | number     | <b>utfmathaccent</b>          | function   |
| <b>extras</b>                 | table      | <b>utfmathclass</b>           | function   |
| F add                         |            | <b>utfmathcommand</b>         | function   |
| F copy                        |            | <b>utfmathfiller</b>          | function   |
| <b>fallbacks</b>              | table      | <b>utfmathstretch</b>         | function   |
| F apply                       |            |                               |            |
| F install                     |            |                               |            |
| <b>fallbackstyleattr</b>      | function   |                               |            |
| <b>families</b>               | data table |                               |            |
| <b>gaps</b>                   | data table |                               |            |
| <b>getboth</b>                | function   |                               |            |
| <b>getstyle</b>               | function   |                               |            |
| <b>horizontalcode</b>         | function   |                               |            |
| <b>initializeparameters</b>   | function   |                               |            |
| <b>injectfallbacks</b>        | function   |                               |            |
| <b>makefont</b>               | function   |                               |            |
| <b>mapremap</b>               | data table |                               |            |
| <b>overloaddimensions</b>     | function   |                               |            |
| <b>overloadparameters</b>     | function   |                               |            |
| <b>privatebase</b>            | number     |                               |            |
| <b>remapalphabets</b>         | function   |                               |            |
| <b>renderings</b>             | table      |                               |            |
| D mappings                    |            |                               |            |
| D numbers                     |            |                               |            |
| D sets                        |            |                               |            |

## mbox (context)

|                      |          |
|----------------------|----------|
| <b>parse</b>         | function |
| <b>parse_from</b>    | function |
| <b>parse_header</b>  | function |
| <b>parse_headers</b> | function |
| <b>parse_message</b> | function |
| <b>split_headers</b> | function |
| <b>split_mbox</b>    | function |
| <b>split_message</b> | function |

## md5 (extra lua)

|                |          |
|----------------|----------|
| <b>HEX</b>     | function |
| <b>crypt</b>   | function |
| <b>dec</b>     | function |
| <b>decrypt</b> | function |
| <b>exor</b>    | function |
| <b>hex</b>     | function |
| <b>sum</b>     | function |
| <b>sumhexa</b> | function |



# metapost (context)

|                         |            |                               |          |
|-------------------------|------------|-------------------------------|----------|
| <b>analyzeplugins</b>   | function   | <b>gettext</b>                | function |
| <b>checkformat</b>      | function   | <b>graphic</b>                | function |
| <b>checktexts</b>       | function   | <b>graphic_base_pass</b>      | function |
| <b>collapse</b>         | boolean    | <b>initializescriptrunner</b> | function |
| <b>colorinitializer</b> | function   | <b>instance</b>               | function |
| <b>convert</b>          | function   | <b>intermediate</b>           | table    |
| <b>defaultformat</b>    | string     | T actions                     |          |
| <b>defaultinstance</b>  | string     | F makemply                    |          |
| <b>defaultmethod</b>    | string     | <b>lastlog</b>                | string   |
| <b>directrun</b>        | function   | <b>load</b>                   | function |
| <b>escaped</b>          | function   | <b>makemply</b>               | table    |
| <b>exectime</b>         | table      | N nofconverted                |          |
| <b>extensiondata</b>    | data table | F processgraphics             |          |
| <b>filterclippath</b>   | function   | F registerfile                |          |
| <b>flush</b>            | function   | <b>maketext</b>               | function |
| <b>flushers</b>         | table      | <b>metafun</b>                | table    |
| T pdf                   |            | F interpolate                 |          |
| F comment               |            | F topath                      |          |
| F flushfigure           |            | <b>method</b>                 | number   |
| F startfigure           |            | <b>mptopdf</b>                | table    |
| F stopfigure            |            | F convertmptopdf              |          |
| F textfigure            |            | N nofconverted                |          |
| <b>flushliteral</b>     | function   | <b>n</b>                      | number   |
| <b>flushnormalpath</b>  | function   | <b>nvformat</b>               | function |
| <b>flushreset</b>       | function   | <b>optimize</b>               | boolean  |
| <b>fonts</b>            | table      | <b>parse</b>                  | function |
| F define                |            | <b>pdfliterals</b>            | function |
| T flusher               |            | <b>pluginactions</b>          | function |
| F flushfigure           |            | <b>process</b>                | function |
| F startfigure           |            | <b>processplugins</b>         | function |
| F stopfigure            |            | <b>processspecial</b>         | function |
| N instances             |            | <b>properties</b>             | table    |
| F process               |            | <b>quickanddirty</b>          | function |
| <b>format</b>           | function   | <b>reducetogray</b>           | boolean  |
| <b>format_number</b>    | function   | <b>reporterror</b>            | function |
| <b>format_string</b>    | function   | <b>reset</b>                  | function |
| <b>formatnumber</b>     | function   | <b>resetlastlog</b>           | function |
| <b>getclippath</b>      | function   | <b>resetplugins</b>           | function |
| <b>getextensions</b>    | function   | <b>runscript</b>              | function |
| <b>getjobdata</b>       | function   | <b>scripterror</b>            | function |
| <b>getstatistics</b>    | function   | <b>setextensions</b>          | function |

|                      |          |
|----------------------|----------|
| <b>setoutercolor</b> | function |
| <b>settext</b>       | function |
| <b>showlog</b>       | boolean  |
| <b>svformat</b>      | function |
| <b>tex</b>           | table    |
| F get                |          |
| F reset              |          |
| F set                |          |
| F setfrombuffer      |          |
| <b>texerrors</b>     | boolean  |
| <b>textextsdata</b>  | function |
| <b>theclippath</b>   | function |
| <b>totable</b>       | function |
| <b>unload</b>        | function |
| <b>untagvariable</b> | function |
| <b>variables</b>     | table    |

## mime (extra lua)

**b64** function

**decode** function

**decodet** table

F base64

F quoted-printable

**dot** function

**encode** function

**encodet** table

F base64

F quoted-printable

**eol** function

**normalize** function

**qp** function

**qpwrp** function

**stuff** function

**unb64** function

**unqp** function

**wrap** function

**wrapt** table

F base64

F default

F quoted-printable

F text

**wrp** function

## mp (context)

|                             |          |                            |          |
|-----------------------------|----------|----------------------------|----------|
| <b>BackSpace</b>            | function | <b>OverlayDepth</b>        | function |
| <b>BaseLineSkip</b>         | function | <b>OverlayHeight</b>       | function |
| <b>BodyFontSize</b>         | function | <b>OverlayLineWidth</b>    | function |
| <b>BottomDistance</b>       | function | <b>OverlayOffset</b>       | function |
| <b>BottomHeight</b>         | function | <b>OverlayWidth</b>        | function |
| <b>BottomSpace</b>          | function | <b>PageDepth</b>           | function |
| <b>CurrentColumn</b>        | function | <b>PageFraction</b>        | function |
| <b>CurrentHeight</b>        | function | <b>PageNumber</b>          | function |
| <b>CurrentWidth</b>         | function | <b>PageOffset</b>          | function |
| <b>CutSpace</b>             | function | <b>PaperHeight</b>         | function |
| <b>EmWidth</b>              | function | <b>PaperWidth</b>          | function |
| <b>ExHeight</b>             | function | <b>PrintPaperHeight</b>    | function |
| <b>FooterDistance</b>       | function | <b>PrintPaperWidth</b>     | function |
| <b>FooterHeight</b>         | function | <b>RealPageNumber</b>      | function |
| <b>HSize</b>                | function | <b>RightEdgeDistance</b>   | function |
| <b>HeaderDistance</b>       | function | <b>RightEdgeWidth</b>      | function |
| <b>HeaderHeight</b>         | function | <b>RightMarginDistance</b> | function |
| <b>InPageBody</b>           | function | <b>RightMarginWidth</b>    | function |
| <b>InnerEdgeDistance</b>    | function | <b>StrutDepth</b>          | function |
| <b>InnerEdgeWidth</b>       | function | <b>StrutHeight</b>         | function |
| <b>InnerMarginDistance</b>  | function | <b>TextHeight</b>          | function |
| <b>InnerMarginWidth</b>     | function | <b>TextWidth</b>           | function |
| <b>LastPageNumber</b>       | function | <b>TopDistance</b>         | function |
| <b>LayoutColumnDistance</b> | function | <b>TopHeight</b>           | function |
| <b>LayoutColumnWidth</b>    | function | <b>TopSkip</b>             | function |
| <b>LayoutColumns</b>        | function | <b>TopSpace</b>            | function |
| <b>LeftEdgeDistance</b>     | function | <b>VSize</b>               | function |
| <b>LeftEdgeWidth</b>        | function | <b>_f_</b>                 | function |
| <b>LeftMarginDistance</b>   | function | <b>boolean</b>             | function |
| <b>LeftMarginWidth</b>      | function | <b>dataset</b>             | function |
| <b>LineHeight</b>           | function | <b>datasets</b>            | table    |
| <b>MakeupHeight</b>         | function | <b>F load</b>              |          |
| <b>MakeupWidth</b>          | function | <b>defaultcolormodel</b>   | function |
| <b>NOfColumns</b>           | function | <b>format</b>              | function |
| <b>NOfPages</b>             | function | <b>formatted</b>           | function |
| <b>OnOddPage</b>            | function | <b>get</b>                 | table    |
| <b>OnRightPage</b>          | function | <b>F boolean</b>           |          |
| <b>OuterEdgeDistance</b>    | function | <b>F number</b>            |          |
| <b>OuterEdgeWidth</b>       | function | <b>F numeric</b>           |          |
| <b>OuterMarginDistance</b>  | function | <b>F string</b>            |          |
| <b>OuterMarginWidth</b>     | function | <b>graphformat</b>         | function |

|                      |          |
|----------------------|----------|
| <b>n</b>             | function |
| <b>numeric</b>       | function |
| <b>pair</b>          | function |
| <b>path</b>          | function |
| <b>print</b>         | function |
| <b>quadruple</b>     | function |
| <b>quoted</b>        | function |
| <b>size</b>          | function |
| <b>triplet</b>       | function |
| <b>tt_dimensions</b> | function |
| <b>tt_initialize</b> | function |

## mplib (extra tex)

|                     |                     |
|---------------------|---------------------|
| <b>fields</b>       | function            |
| <b>finder</b>       | function            |
| <b>finders</b>      | table               |
| F file              |                     |
| <b>get_boolean</b>  | function            |
| <b>get_number</b>   | function            |
| <b>get_numeric</b>  | function            |
| <b>get_string</b>   | function            |
| <b>new</b>          | overloaded function |
| <b>pen_info</b>     | function            |
| <b>preprocessed</b> | function            |
| <b>version</b>      | function            |

## newtoken (basic tex)

|                     |          |
|---------------------|----------|
| <b>create</b>       | function |
| <b>get_next</b>     | function |
| <b>is_token</b>     | function |
| <b>scan_code</b>    | function |
| <b>scan_dimen</b>   | function |
| <b>scan_glue</b>    | function |
| <b>scan_int</b>     | function |
| <b>scan_keyword</b> | function |
| <b>scan_string</b>  | function |
| <b>scan_token</b>   | function |
| <b>scan_toks</b>    | function |
| <b>scan_word</b>    | function |
| <b>set_macro</b>    | function |
| <b>type</b>         | function |

# noads (context)

**handlers**      table

- F check
- F classes
- F collapse
- F families
- F italics
- F relocate
- F render
- F resize
- F showtree
- F tags
- F unscript
- F variants

**process**          function

**processors**    table

- T collapse
- F mlist\_to\_hlist
- T relocate
- T render
- T resize
- T unscript



## node (basic tex)

|                          |          |                               |          |
|--------------------------|----------|-------------------------------|----------|
| <b>copy</b>              | function | F protect_glyphs              |          |
| <b>copy_list</b>         | function | F protrusion_skippable        |          |
| <b>count</b>             | function | F remove                      |          |
| <b>current_attr</b>      | function | F set_attribute               |          |
| <b>dimensions</b>        | function | F set_properties_mode         |          |
| <b>direct</b>            | table    | F setbox                      |          |
| F copy                   |          | F setfield                    |          |
| F copy_list              |          | F setproperty                 |          |
| F count                  |          | F slide                       |          |
| F current_attr           |          | F tail                        |          |
| F dimensions             |          | F todirect                    |          |
| F do_ligature_n          |          | F tonode                      |          |
| F end_of_math            |          | F toString                    |          |
| F first_glyph            |          | F traverse                    |          |
| F flush_list             |          | F traverse_id                 |          |
| F flush_node             |          | F unprotect_glyphs            |          |
| F flush_properties_table |          | F unset_attribute             |          |
| F free                   |          | F usedlist                    |          |
| F get_properties_table   |          | F vpack                       |          |
| F getbox                 |          | F write                       |          |
| F getchar                |          | <b>do_ligature_n</b>          | function |
| F getfield               |          | <b>end_of_math</b>            | function |
| F getfont                |          | <b>family_font</b>            | function |
| F getid                  |          | <b>fields</b>                 | function |
| F getleader              |          | <b>first_character</b>        | function |
| F getlist                |          | <b>first_glyph</b>            | function |
| F getnext                |          | <b>flush_list</b>             | function |
| F getprev                |          | <b>flush_node</b>             | function |
| F getproperty            |          | <b>flush_properties_table</b> | function |
| F getsubtype             |          | <b>free</b>                   | function |
| F has_attribute          |          | <b>get_properties_table</b>   | function |
| F has_field              |          | <b>getchar</b>                | function |
| F has_glyph              |          | <b>getfield</b>               | function |
| F hpack                  |          | <b>getfont</b>                | function |
| F insert_after           |          | <b>getid</b>                  | function |
| F insert_before          |          | <b>getleader</b>              | function |
| F is_direct              |          | <b>getlist</b>                | function |
| F is_node                |          | <b>getnext</b>                | function |
| F last_node              |          | <b>getprev</b>                | function |
| F length                 |          | <b>getproperty</b>            | function |
| F new                    |          | <b>getsubtype</b>             | function |

|                             |          |
|-----------------------------|----------|
| <b>has_attribute</b>        | function |
| <b>has_field</b>            | function |
| <b>has_glyph</b>            | function |
| <b>hpack</b>                | function |
| <b>id</b>                   | function |
| <b>insert_after</b>         | function |
| <b>insert_before</b>        | function |
| <b>is_node</b>              | function |
| <b>kerning</b>              | function |
| <b>last_node</b>            | function |
| <b>length</b>               | function |
| <b>ligaturing</b>           | function |
| <b>mlist_to_hlist</b>       | function |
| <b>new</b>                  | function |
| <b>next</b>                 | function |
| <b>prev</b>                 | function |
| <b>protect_glyphs</b>       | function |
| <b>protrusion_skippable</b> | function |
| <b>remove</b>               | function |
| <b>set_attribute</b>        | function |
| <b>set_properties_mode</b>  | function |
| <b>setfield</b>             | function |
| <b>setProperty</b>          | function |
| <b>slide</b>                | function |
| <b>subtype</b>              | function |
| <b>tail</b>                 | function |
| <b>tostring</b>             | function |
| <b>traverse</b>             | function |
| <b>traverse_id</b>          | function |
| <b>type</b>                 | function |
| <b>types</b>                | function |
| <b>unprotect_glyphs</b>     | function |
| <b>unset_attribute</b>      | function |
| <b>usedlist</b>             | function |
| <b>vpack</b>                | function |
| <b>whatsits</b>             | function |
| <b>write</b>                | function |

## nodes (context)

|                           |            |                               |            |
|---------------------------|------------|-------------------------------|------------|
| <b>accentcodes</b>        | data table | <b>free_spec</b>              | function   |
| <b>aligned</b>            | function   | <b>getattr</b>                | function   |
| <b>append</b>             | function   | <b>getattribute</b>           | function   |
| <b>astable</b>            | function   | <b>getbox</b>                 | function   |
| <b>basepoints</b>         | function   | <b>getchar</b>                | function   |
| <b>builders</b>           | table      | <b>getfield</b>               | function   |
| F buildpage_filter        |            | <b>getfont</b>                | function   |
| F vpack_filter            |            | <b>getid</b>                  | function   |
| <b>codes</b>              | data table | <b>getleader</b>              | function   |
| <b>concat</b>             | function   | <b>getlist</b>                | function   |
| <b>copy</b>               | function   | <b>getnext</b>                | function   |
| <b>copy_list</b>          | function   | <b>getprev</b>                | function   |
| <b>copy_spec</b>          | function   | <b>getskip</b>                | function   |
| <b>count</b>              | function   | <b>getsubtype</b>             | function   |
| <b>current_attr</b>       | function   | <b>gluecodes</b>              | data table |
| <b>delete</b>             | function   | <b>glyphcodes</b>             | data table |
| <b>destinations</b>       | table      | <b>glyphdir_is_equal</b>      | data table |
| N attribute               |            | <b>glyphdir_is_opposite</b>   | data table |
| T done                    |            | <b>glyphdir_is_orthogonal</b> | data table |
| F handler                 |            | <b>gonuts</b>                 | boolean    |
| T stack                   |            | <b>handlers</b>               | table      |
| <b>dimensionfields</b>    | data table | F accessibility               |            |
| <b>dimensions</b>         | function   | F alignbackgrounds            |            |
| <b>dir_is_pop</b>         | data table | F backgrounds                 |            |
| <b>dir_negation</b>       | data table | F characters                  |            |
| <b>disccodes</b>          | data table | F checkforleaks               |            |
| <b>discretionarycodes</b> | data table | F checkglyphs                 |            |
| <b>do_ligature_n</b>      | function   | F cleanupbox                  |            |
| <b>end_of_math</b>        | function   | F cleanuppage                 |            |
| <b>fasthpack</b>          | function   | F export                      |            |
| <b>fencecodes</b>         | data table | F finalize                    |            |
| <b>fields</b>             | function   | F migrate                     |            |
| <b>fillcodes</b>          | data table | F protectglyphs               |            |
| <b>first_character</b>    | function   | F stripping                   |            |
| <b>first_glyph</b>        | function   | F unprotectglyphs             |            |
| <b>firstcharacter</b>     | function   | <b>has_attribute</b>          | function   |
| <b>firstcharinbox</b>     | function   | <b>has_field</b>              | function   |
| <b>firstglyph</b>         | function   | <b>has_glyph</b>              | function   |
| <b>flush_list</b>         | function   | <b>hpack</b>                  | function   |
| <b>flush_node</b>         | function   | <b>idstostring</b>            | function   |
| <b>free</b>               | function   | <b>ignorablefields</b>        | data table |

|                                |            |                       |            |
|--------------------------------|------------|-----------------------|------------|
| <b>injections</b>              | table      | <b>listablefields</b> | data table |
| F copy                         |            | <b>listcodes</b>      | data table |
| F getligaindex                 |            | <b>listtoutf</b>      | function   |
| F handler                      |            | <b>load</b>           | function   |
| F installnewkern               |            | <b>locate</b>         | function   |
| F keepcounts                   |            | <b>margincodes</b>    | data table |
| F reset                        |            | <b>markers</b>        | table      |
| F resetcounts                  |            | F get                 |            |
| F setcursive                   |            | <b>mathcodes</b>      | data table |
| F setkern                      |            | <b>maxboxwidth</b>    | function   |
| F setligaindex                 |            | <b>mlist_to_hlist</b> | function   |
| F setmark                      |            | <b>new</b>            | function   |
| F setpair                      |            | <b>noadcodes</b>      | data table |
| <b>insert_after</b>            | function   | <b>nodecodes</b>      | data table |
| <b>insert_before</b>           | function   | <b>nopts</b>          | function   |
| <b>insert_list_after</b>       | function   | <b>nuts</b>           | table      |
| <b>installattributehandler</b> | function   | F append              |            |
| <b>is_direct</b>               | function   | F concat              |            |
| <b>is_display_math</b>         | function   | F copy                |            |
| <b>is_mirrored</b>             | data table | F copy_list           |            |
| <b>is_node</b>                 | function   | F copy_properties     |            |
| <b>is_nut</b>                  | function   | F count               |            |
| <b>is_rotated</b>              | data table | F current_attr        |            |
| <b>kerncodes</b>               | data table | F delete              |            |
| <b>kerning</b>                 | function   | F dimensions          |            |
| <b>keys</b>                    | table      | F do_ligature_n       |            |
| T whatsit                      |            | F end_of_math         |            |
| <b>last_node</b>               | function   | F fasthpack           |            |
| <b>leftmarginwidth</b>         | function   | F first_glyph         |            |
| <b>ligaturing</b>              | function   | F firstcharacter      |            |
| <b>lines</b>                   | table      | F firstcharinbox      |            |
| T boxed                        |            | F firstglyph          |            |
| F register                     |            | F flush_list          |            |
| F setup                        |            | F flush_node          |            |
| F stage_one                    |            | F free                |            |
| F stage_two                    |            | F getattr             |            |
| F stage_zero                   |            | F getattribute        |            |
| D data                         |            | F getbox              |            |
| F finalize                     |            | F getchar             |            |
| F number                       |            | F getfield            |            |
| N scratchbox                   |            | F getfont             |            |
| <b>link</b>                    | function   | F getid               |            |
| <b>linked</b>                  | function   | F getleader           |            |
| <b>list</b>                    | function   | F getlist             |            |

|                     |                        |
|---------------------|------------------------|
| F getnext           | F pdfdestination       |
| F getprev           | F pdfdirect            |
| F getprop           | F pdfliteral           |
| F getskip           | F pdfrestore           |
| F getsubtype        | F pdfsave              |
| F has_attribute     | F pdfsetmatrix         |
| F has_field         | F penalty              |
| F has_glyph         | F register             |
| F hpack             | F rightmarginkern      |
| F insert_after      | F rightskip            |
| F insert_before     | F rule                 |
| F insert_list_after | F shrink               |
| F is_direct         | F special              |
| F is_display_math   | F stretch              |
| F is_node           | F temp                 |
| F is_nut            | F textdir              |
| F kerning           | F usage                |
| F last_node         | T userids              |
| F leftmarginwidth   | N margins.inline       |
| F ligaturing        | N property             |
| F link              | N splitters.one        |
| F linked            | N splitters.two        |
| F locate            | F userlist             |
| F mlist_to_hlist    | F usernumber           |
| F nestedtracedslide | F userstring           |
| F new               | F usertokens           |
| T pool              | F vlist                |
| F baselineskip      | F zeroglue             |
| F cleanup           | F prepend              |
| F disc              | F protect_glyphs       |
| F fontkern          | F protrusion_skippable |
| F glue              | F reference            |
| F gluespec          | F remove               |
| F glyph             | F repackhlist          |
| F hlist             | F replace              |
| F kern              | F rightmarginwidth     |
| F latelua           | F set_attribute        |
| F lateluafunction   | F setattr              |
| F leftmarginkern    | F setattrtribute       |
| F leftskip          | F setattrtributes      |
| F lineskip          | F setbox               |
| F negatedglue       | F setfield             |
| F noad              | F setprop              |
| F pdfannotation     | F setunsetattributes   |

|                            |            |                         |          |
|----------------------------|------------|-------------------------|----------|
| F slide                    |            | N attribute             |          |
| F somepenalty              |            | D data                  |          |
| F somespace                |            | F enable                |          |
| F tail                     |            | F handler               |          |
| F takebox                  |            | F register              |          |
| F tonode                   |            | D registered            |          |
| F tonodes                  |            | D values                |          |
| F tonut                    |            | F processor             |          |
| F tosequence               |            | <b>points</b>           | function |
| F tostring                 |            | <b>pool</b>             | table    |
| F tracedslide              |            | F baselineskip          |          |
| F traverse                 |            | F cleanup               |          |
| F traverse_id              |            | F glyph                 |          |
| T typesetters              |            | F kern                  |          |
| F fast_hpack               |            | F latelua               |          |
| F hpack                    |            | F lateluafunction       |          |
| F tohpack                  |            | F lineskip              |          |
| F tohpackfast              |            | F pdfdirect             |          |
| F tonodes                  |            | F pdfliteral            |          |
| F tovpack                  |            | F pdfrestore            |          |
| F tovpackfast              |            | F pdfsave               |          |
| F vpack                    |            | F pdfsetmatrix          |          |
| F unprotect_glyphs         |            | F register              |          |
| F unset_attribute          |            | F rule                  |          |
| F unsetattribute           |            | F special               |          |
| F unsetattributes          |            | F usage                 |          |
| F untracedslide            |            | F usernumber            |          |
| F usedlist                 |            | <b>prepend</b>          | function |
| F vianodes                 |            | <b>print</b>            | function |
| F vianuts                  |            | <b>processors</b>       | table    |
| F vpack                    |            | B enabled               |          |
| F writable_spec            |            | F hpack_filter          |          |
| F write                    |            | F post_linebreak_filter |          |
| <b>packlist</b>            | function   | F pre_linebreak_filter  |          |
| <b>pardir_is_equal</b>     | data table | F tracer                |          |
| <b>pardir_is_opposite</b>  | data table | <b>processwords</b>     | function |
| <b>pardir_is_parallel</b>  | data table | <b>properties</b>       | table    |
| <b>partextdir_is_equal</b> | data table | T actions               |          |
| <b>penaltycodes</b>        | data table | F delayed               |          |
| <b>plugindata</b>          | table      | F fdelayed              |          |
| F finalizer                |            | F immediate             |          |
| F initializer              |            | F attach                |          |
| S name                     |            | T data                  |          |
| T namespace                |            | F delayed               |          |

|                             |            |                             |            |
|-----------------------------|------------|-----------------------------|------------|
| <b>protect_glyphs</b>       | function   | F resetsamples              |            |
| <b>protrusion_skippable</b> | function   | F takesample                |            |
| <b>pts</b>                  | function   | <b>somepenalty</b>          | function   |
| <b>reference</b>            | function   | <b>somespace</b>            | function   |
| <b>references</b>           | table      | <b>stripdiscretionaries</b> | function   |
| N attribute                 |            | <b>stripping</b>            | table      |
| T done                      |            | T glyphs                    |            |
| F handler                   |            | F set                       |            |
| T stack                     |            | <b>striprange</b>           | function   |
| <b>remove</b>               | function   | <b>tail</b>                 | function   |
| <b>repacklist</b>           | function   | <b>takebox</b>              | function   |
| <b>replace</b>              | function   | <b>tasks</b>                | table      |
| <b>report</b>               | function   | F actions                   |            |
| <b>rightmarginwidth</b>     | function   | F appendaction              |            |
| <b>rules</b>                | table      | F disableaction             |            |
| D data                      |            | F disablegroup              |            |
| F define                    |            | F enableaction              |            |
| F enable                    |            | F enablegroup               |            |
| F handler                   |            | F freeze                    |            |
| <b>save</b>                 | function   | F freezegroup               |            |
| <b>serialize</b>            | function   | F new                       |            |
| <b>serializebox</b>         | function   | F prependaction             |            |
| <b>set_attribute</b>        | function   | F removeaction              |            |
| <b>setattr</b>              | function   | F replaceaction             |            |
| <b>setattribute</b>         | function   | F restart                   |            |
| <b>setattributes</b>        | function   | F setaction                 |            |
| <b>setbox</b>               | function   | F showactions               |            |
| <b>setfield</b>             | function   | F table                     |            |
| <b>setunsetattributes</b>   | function   | <b>texmdir_is_equal</b>     | data table |
| <b>shifts</b>               | table      | <b>texmdir_is_is</b>        | data table |
| D data                      |            | <b>texmdir_is_opposite</b>  | data table |
| F define                    |            | <b>texmdir_is_parallel</b>  | data table |
| F enable                    |            | <b>tobasepoints</b>         | function   |
| F handler                   |            | <b>tocentimeters</b>        | function   |
| <b>show</b>                 | function   | <b>tociceros</b>            | function   |
| <b>showboxes</b>            | function   | <b>todidots</b>             | function   |
| <b>showcodes</b>            | function   | <b>todimen</b>              | function   |
| <b>showlist</b>             | function   | <b>toinches</b>             | function   |
| <b>showsimplelist</b>       | function   | <b>tomillimeters</b>        | function   |
| <b>skipcodes</b>            | data table | <b>tonewciceros</b>         | function   |
| <b>slide</b>                | function   | <b>tonewdidots</b>          | function   |
| <b>snapshots</b>            | table      | <b>tonode</b>               | function   |
| F getparameters             |            | <b>tonodes</b>              | function   |
| F getsamples                |            | <b>tonut</b>                | function   |

|                       |          |                         |            |
|-----------------------|----------|-------------------------|------------|
| <b>topics</b>         | function | F stop                  |            |
| <b>topoints</b>       | function | F stop                  |            |
| <b>toscaledpoints</b> | function | T transparencies        |            |
| <b>tosequence</b>     | function | F reset                 |            |
| <b>tostring</b>       | function | F set                   |            |
| <b>totable</b>        | function | F setlist               |            |
| <b>totree</b>         | function | <b>traverse</b>         | function   |
| <b>toutf</b>          | function | <b>traverse_id</b>      | function   |
| <b>tracers</b>        | table    | <b>typesetters</b>      | table      |
| T characters          |          | F hpack                 |            |
| F collect             |          | F tohpack               |            |
| F equal               |          | F tohpackfast           |            |
| F start               |          | F tonodes               |            |
| F string              |          | F tovpack               |            |
| F unicodes            |          | F tovpackfast           |            |
| T colors              |          | F vpack                 |            |
| F reset               |          | <b>unprotect_glyphs</b> | function   |
| F set                 |          | <b>unset_attribute</b>  | function   |
| F setlist             |          | <b>unsetattribute</b>   | function   |
| F fontchar            |          | <b>unsetattributes</b>  | function   |
| T frequencies         |          | <b>usedlist</b>         | function   |
| F register            |          | <b>vianodes</b>         | function   |
| T pool                |          | <b>vianuts</b>          | function   |
| T nodes               |          | <b>visualizebox</b>     | function   |
| F rule                |          | <b>visualizers</b>      | table      |
| T nuts                |          | F box                   |            |
| F rule                |          | F handler               |            |
| F resetproperties     |          | F markfonts             |            |
| F rule                |          | F setfont               |            |
| F setlist             |          | F setlayer              |            |
| F setproperties       |          | F setvisual             |            |
| F start               |          | <b>vpack</b>            | function   |
| T steppers            |          | <b>whatcodes</b>        | data table |
| F check               |          | <b>whatsitcodes</b>     | data table |
| F codes               |          | <b>writable_spec</b>    | function   |
| F features            |          | <b>write</b>            | function   |
| F font                |          |                         |            |
| F glyphs              |          |                         |            |
| F message             |          |                         |            |
| F messages            |          |                         |            |
| F nofsteps            |          |                         |            |
| F register            |          |                         |            |
| F reset               |          |                         |            |
| F start               |          |                         |            |



## number (context)

|                       |            |
|-----------------------|------------|
|                       | function   |
| <b>basepoints</b>     | function   |
| <b>bit</b>            | function   |
| <b>bits</b>           | function   |
| <b>clearbit</b>       | function   |
| <b>dimenfactors</b>   | data table |
| <b>formatted</b>      | function   |
| <b>hasbit</b>         | function   |
| <b>maxdimen</b>       | number     |
| <b>nopts</b>          | function   |
| <b>percent</b>        | function   |
| <b>points</b>         | function   |
| <b>pts</b>            | function   |
| <b>setbit</b>         | function   |
| <b>signed</b>         | function   |
| <b>sparseexponent</b> | function   |
| <b>splitdimen</b>     | function   |
| <b>tobasepoints</b>   | function   |
| <b>tobitstring</b>    | function   |
| <b>tocentimeters</b>  | function   |
| <b>toxiceros</b>      | function   |
| <b>to didots</b>      | function   |
| <b>todimen</b>        | function   |
| <b>toevenhex</b>      | function   |
| <b>toinches</b>       | function   |
| <b>tomillimeters</b>  | function   |
| <b>tonewciceros</b>   | function   |
| <b>tonewdidots</b>    | function   |
| <b>tonumberf</b>      | function   |
| <b>tonumberg</b>      | function   |
| <b>topics</b>         | function   |
| <b>topoints</b>       | function   |
| <b>toscaled</b>       | function   |
| <b>toscaledpoints</b> | function   |
| <b>toset</b>          | function   |
| <b>valid</b>          | function   |

## os (basic lua)

|                     |                     |                      |          |
|---------------------|---------------------|----------------------|----------|
| <b>__getenv__</b>   | function            | <b>uname</b>         | function |
| <b>__setenv__</b>   | function            | <b>uuid</b>          | function |
| <b>binsuffix</b>    | string              | <b>validdatetime</b> | function |
| <b>binsuffixes</b>  | table               | <b>weekday</b>       | function |
| <b>clock</b>        | function            | <b>where</b>         | function |
| <b>converttime</b>  | function            | <b>which</b>         | function |
| <b>date</b>         | function            |                      |          |
| <b>difftime</b>     | function            |                      |          |
| <b>env</b>          | data table          |                      |          |
| <b>exec</b>         | overloaded function |                      |          |
| <b>execute</b>      | overloaded function |                      |          |
| <b>exit</b>         | function            |                      |          |
| <b>fulltime</b>     | function            |                      |          |
| <b>getenv</b>       | overloaded function |                      |          |
| <b>gettimeofday</b> | function            |                      |          |
| <b>isleapyear</b>   | function            |                      |          |
| <b>launch</b>       | function            |                      |          |
| <b>libsuffix</b>    | string              |                      |          |
| <b>localtime</b>    | function            |                      |          |
| <b>name</b>         | string              |                      |          |
| <b>nofdays</b>      | function            |                      |          |
| <b>now</b>          | function            |                      |          |
| <b>platform</b>     | string              |                      |          |
| <b>remove</b>       | overloaded function |                      |          |
| <b>rename</b>       | overloaded function |                      |          |
| <b>resolvers</b>    | table               |                      |          |
| F bits              |                     |                      |          |
| <b>resultof</b>     | function            |                      |          |
| <b>runtime</b>      | function            |                      |          |
| <b>selfdir</b>      | string              |                      |          |
| <b>setenv</b>       | overloaded function |                      |          |
| <b>setlocale</b>    | overloaded function |                      |          |
| <b>sleep</b>        | function            |                      |          |
| <b>spawn</b>        | overloaded function |                      |          |
| <b>time</b>         | function            |                      |          |
| <b>times</b>        | function            |                      |          |
| <b>timezone</b>     | function            |                      |          |
| <b>tmpdir</b>       | function            |                      |          |
| <b>tmpname</b>      | function            |                      |          |
| <b>today</b>        | function            |                      |          |
| <b>type</b>         | string              |                      |          |

## package (basic lua)

|                      |          |
|----------------------|----------|
| <b>config</b>        | string   |
| <b>cpath</b>         | string   |
| <b>extralibpath</b>  | function |
| <b>extralibpaths</b> | function |
| <b>extralupath</b>   | function |
| <b>extralupaths</b>  | function |
| <b>helpers</b>       | table    |
| <b>libpaths</b>      | function |
| <b>loaded</b>        | table    |
| <b>loaders</b>       | table    |
| <b>loadlib</b>       | function |
| <b>luapaths</b>      | function |
| <b>path</b>          | string   |
| <b>preload</b>       | table    |
| <b>searchpath</b>    | function |
| <b>seeall</b>        | function |

# pagebuilders (context)

## **injections**    table

F flushafter  
F flushbefore  
F save

## **mixedcolumns**    table

F cleanup  
F finalize  
F getlist  
F getrest  
F getsplit  
F setsplit

## pdf (basic tex)

|                           |                     |
|---------------------------|---------------------|
| <b>getcatalog</b>         | function            |
| <b>gethpos</b>            | function            |
| <b>getinfo</b>            | function            |
| <b>getmatrix</b>          | function            |
| <b>getnames</b>           | function            |
| <b>getpageattributes</b>  | function            |
| <b>getpageresources</b>   | function            |
| <b>getpagesattributes</b> | function            |
| <b>getpos</b>             | function            |
| <b>gettrailer</b>         | function            |
| <b>getvpos</b>            | function            |
| <b>hasmatrix</b>          | function            |
| <b>immediateobj</b>       | function            |
| <b>mapfile</b>            | function            |
| <b>mapline</b>            | function            |
| <b>maxobjnum</b>          | function            |
| <b>obj</b>                | function            |
| <b>objtype</b>            | function            |
| <b>pageref</b>            | function            |
| <b>print</b>              | function            |
| <b>refobj</b>             | function            |
| <b>registerannot</b>      | overloaded function |
| <b>reserveobj</b>         | function            |
| <b>setcatalog</b>         | overloaded function |
| <b>setinfo</b>            | overloaded function |
| <b>setnames</b>           | overloaded function |
| <b>setpageattributes</b>  | overloaded function |
| <b>setpageresources</b>   | overloaded function |
| <b>setpagesattributes</b> | overloaded function |
| <b>settrailer</b>         | overloaded function |

# pdfscanner (context)

**scan** function

# physics (context)

**units** table

F registerunit

D tables

## profiler (extra lua)

**pause**    function  
**resume**   function  
**start**    function  
**stop**     function



# publications (context)

|                             |            |               |
|-----------------------------|------------|---------------|
| <b>addtexentry</b>          | function   | S author      |
| <b>analyze</b>              | function   | S editor      |
| <b>anywhere</b>             | function   | S journal     |
| <b>authorcache</b>          | table      | S keywords    |
| <b>authorcollapsers</b>     | data table | S number      |
| <b>casters</b>              | table      | S pages       |
| F author                    |            | S title       |
| F keyword                   |            | S volume      |
| F pagenumber                |            | S year        |
| F range                     |            | T optional    |
| <b>checkeddataset</b>       | function   | T required    |
| <b>citevariants</b>         | table      | T sets        |
| F author                    |            | T author      |
| F authornum                 |            | T virtual     |
| F authoryear                |            | T book        |
| F authoryears               |            | S category    |
| F category                  |            | T extra       |
| F default                   |            | T fields      |
| F entry                     |            | S address     |
| F index                     |            | S author      |
| F key                       |            | S edition     |
| F keywords                  |            | S editor      |
| F num                       |            | S keywords    |
| F page                      |            | S number      |
| F serial                    |            | S publisher   |
| F short                     |            | S subtitle    |
| F tag                       |            | S title       |
| F type                      |            | S volume      |
| F year                      |            | S year        |
| <b>collected</b>            | data table | T optional    |
| <b>components</b>           | table      | T required    |
| F author                    |            | T sets        |
| <b>concatstate</b>          | function   | T author      |
| <b>converttoxml</b>         | function   | T editionset  |
| <b>currentspecification</b> | table      | T virtual     |
| S author                    |            | T demo-a      |
| T categories                |            | S category    |
| T article                   |            | T extra       |
| S category                  |            | T fields      |
| T extra                     |            | S author      |
| T fields                    |            | S institution |

|                        |          |                     |            |
|------------------------|----------|---------------------|------------|
| S organization         |          | B dirty             |            |
| S subtitle             |          | T gskip             |            |
| S title                |          | T kind              |            |
| S year                 |          | T list              |            |
| T optional             |          | T system            |            |
| T required             |          | T order             |            |
| T sets                 |          | <b>enhancers</b>    | table      |
| T author               |          | F details           |            |
| T virtual              |          | F order             |            |
| T demo-b               |          | F suffixes          |            |
| S category             |          | <b>finder</b>       | function   |
| T extra                |          | <b>firstofrange</b> | function   |
| T fields               |          | <b>found</b>        | function   |
| S author               |          | <b>get</b>          | function   |
| S institution          |          | <b>getcasted</b>    | function   |
| S organization         |          | <b>getdetail</b>    | function   |
| S subtitle             |          | <b>getdirect</b>    | function   |
| S title                |          | <b>getfaster</b>    | function   |
| S year                 |          | <b>getfield</b>     | function   |
| T optional             |          | <b>getfuzzy</b>     | function   |
| T required             |          | <b>getindex</b>     | function   |
| T sets                 |          | <b>inspectors</b>   | data table |
| T authors              |          | <b>journals</b>     | table      |
| T virtual              |          | F abbreviated       |            |
| S comment              |          | F add               |            |
| S copyright            |          | F expanded          |            |
| T fields               |          | F load              |            |
| S name                 |          | F save              |            |
| T types                |          | <b>lastofrange</b>  | function   |
| S author               |          | <b>lists</b>        | table      |
| S editor               |          | F collectentries    |            |
| S keywords             |          | F fetchentries      |            |
| S number               |          | F filterall         |            |
| S page                 |          | F flushentry        |            |
| S pages                |          | T methods           |            |
| S volume               |          | F dataset           |            |
| S version              |          | F force             |            |
| T virtual              |          | F global            |            |
| <b>datasets</b>        | table    | F local             |            |
| <b>detailed</b>        | table    | F nofregistered     |            |
| <b>endnotes_to_btx</b> | function | F prepareentries    |            |
| <b>enhancer</b>        | table    | F register          |            |
| S arguments            |          | F sameasprevious    |            |
| T askip                |          | T sorters           |            |

|                            |          |                           |          |
|----------------------------|----------|---------------------------|----------|
| F dataset                  |          | S comment                 |          |
| F default                  |          | S copyright               |          |
| F reference                |          | S name                    |          |
| F short                    |          | S version                 |          |
| F uservariable             |          | <b>statistics</b>         | table    |
| <b>listvariants</b>        | table    | N nofbytes                |          |
| F bib                      |          | N nofdatasets             |          |
| F default                  |          | N nofdefinitions          |          |
| F num                      |          | N nofshortcuts            |          |
| F page                     |          | <b>tables</b>             | table    |
| F short                    |          | D implicits               |          |
| F yes                      |          | D origins                 |          |
| <b>load</b>                | function | D privates                |          |
| <b>loadbibdata</b>         | function | D sets                    |          |
| <b>loaddefinitionfile</b>  | function | D specials                |          |
| <b>loaders</b>             | table    | D types                   |          |
| F bbl                      |          | D virtuals                |          |
| F bib                      |          | <b>tags</b>               | function |
| F buffer                   |          | <b>tracers</b>            | table    |
| F endnote                  |          | F showdatasetauthors      |          |
| F lua                      |          | F showdatasetcompleteness |          |
| F refman                   |          | F showdatasetfields       |          |
| F registercleaner          |          | F showentry               |          |
| F xml                      |          | F showfields              |          |
| <b>loadreplacementfile</b> | function | F showtables              |          |
| <b>new</b>                 | function | F showvariants            |          |
| <b>okay</b>                | function | <b>typesetters</b>        | table    |
| <b>oneorange</b>           | function | F author                  |          |
| <b>parenttag</b>           | function | F string                  |          |
| <b>permitted</b>           | function | <b>usedataset</b>         | function |
| <b>refman_to_btx</b>       | function | <b>usedentries</b>        | function |
| <b>resolvedname</b>        | function | <b>writers</b>            | table    |
| <b>save</b>                | function | F author                  |          |
| <b>search</b>              | function | F keyword                 |          |
| <b>setcategory</b>         | function | F pagenumber              |          |
| <b>setspecification</b>    | function | F range                   |          |
| <b>singularorplural</b>    | function |                           |          |
| <b>sortedentries</b>       | function |                           |          |
| <b>sortmethods</b>         | table    |                           |          |
| T authorityyear            |          |                           |          |
| T sequence                 |          |                           |          |
| <b>specifications</b>      | table    |                           |          |
| T default                  |          |                           |          |
| S author                   |          |                           |          |

## regimes (context)

|                   |          |
|-------------------|----------|
| <b>cleanup</b>    | function |
| <b>disable</b>    | function |
| <b>enable</b>     | function |
| <b>fromregime</b> | function |
| <b>pop</b>        | function |
| <b>process</b>    | function |
| <b>push</b>       | function |
| <b>toregime</b>   | function |
| <b>translate</b>  | function |

# resolvers (context)

|                                     |            |                                |            |
|-------------------------------------|------------|--------------------------------|------------|
| <b>allprefixes</b>                  | function   | <b>findtextfile</b>            | function   |
| <b>appendhash</b>                   | function   | <b>findwildcardfile</b>        | function   |
| <b>automount</b>                    | function   | <b>findwildcardfiles</b>       | function   |
| <b>automounted</b>                  | table      | <b>formatofsuffix</b>          | function   |
| <b>booleanvariable</b>              | function   | <b>formatofvariable</b>        | function   |
| <b>cacheversion</b>                 | string     | <b>formats</b>                 | data table |
| <b>checkedvariable</b>              | function   | <b>generators</b>              | data table |
| <b>cleanedpathlist</b>              | function   | <b>get_from_content</b>        | function   |
| <b>cleanpath</b>                    | function   | <b>getenv</b>                  | function   |
| <b>cleanpathlist</b>                | function   | <b>getownpath</b>              | function   |
| <b>concatinators</b>                | data table | <b>getreadfilename</b>         | function   |
| <b>configbanner</b>                 | string     | <b>hashers</b>                 | data table |
| <b>criticalvars</b>                 | data table | <b>homedir</b>                 | string     |
| <b>dangerous</b>                    | data table | <b>inputstack</b>              | table      |
| <b>datastate</b>                    | function   | <b>installinputfilehandler</b> | function   |
| <b>defaultsuffixes</b>              | table      | <b>installinputlinehandler</b> | function   |
| <b>dowithfilesandreport</b>         | function   | <b>instance</b>                | table      |
| <b>dowithfilesintree</b>            | function   | D data                         |            |
| <b>dowithpath</b>                   | function   | B diskcache                    |            |
| <b>dowithvariable</b>               | function   | D environment                  |            |
| <b>env</b>                          | function   | D expansions                   |            |
| <b>executers</b>                    | table      | D fakepaths                    |            |
| <b>expandbraces</b>                 | function   | D files                        |            |
| <b>expandedpathfromlist</b>         | function   | B force_suffixes               |            |
| <b>expandedpathlist</b>             | function   | D found                        |            |
| <b>expandedpathlistfromvariable</b> | function   | D foundintrees                 |            |
| <b>expandpath</b>                   | function   | D hashed                       |            |
| <b>expandpathfromvariable</b>       | function   | D hashes                       |            |
| <b>expansion</b>                    | function   | D lists                        |            |
| <b>extendtexmfvariable</b>          | function   | B loadererror                  |            |
| <b>filtered_from_content</b>        | function   | D order                        |            |
| <b>find_file</b>                    | function   | D pathlists                    |            |
| <b>find_files</b>                   | function   | T pathstack                    |            |
| <b>findbinfile</b>                  | function   | B remember                     |            |
| <b>findctxfile</b>                  | function   | B renewcache                   |            |
| <b>finders</b>                      | data table | B renewtree                    |            |
| <b>findfile</b>                     | function   | B savelists                    |            |
| <b>findfiles</b>                    | function   | D setups                       |            |
| <b>findgivenfile</b>                | function   | D specification                |            |
| <b>findgivenfiles</b>               | function   | D variables                    |            |
| <b>findpath</b>                     | function   | <b>jobpath</b>                 | function   |

|                          |            |                               |            |
|--------------------------|------------|-------------------------------|------------|
| <b>jobs</b>              | table      | <b>registerfilehash</b>       | function   |
| F currentcomponent       |            | <b>registerintrees</b>        | function   |
| F currentenvironment     |            | <b>registermethod</b>         | function   |
| F currentproduct         |            | <b>registerzipfile</b>        | function   |
| F currentproject         |            | <b>relations</b>              | data table |
| F justacomponent         |            | <b>renew</b>                  | function   |
| D processors             |            | <b>repath</b>                 | function   |
| F productcomponent       |            | <b>reset</b>                  | function   |
| F usefile                |            | <b>resetextrapath</b>         | function   |
| <b>joinpath</b>          | function   | <b>resetresolve</b>           | function   |
| <b>load</b>              | function   | <b>resolve</b>                | function   |
| <b>loadbinfile</b>       | function   | <b>savers</b>                 | data table |
| <b>loaders</b>           | data table | <b>scandata</b>               | function   |
| <b>loadlualib</b>        | function   | <b>scanfiles</b>              | function   |
| <b>loadtexfile</b>       | function   | <b>schemes</b>                | table      |
| <b>loadtime</b>          | function   | T cleaners                    |            |
| <b>locateformat</b>      | function   | F md5                         |            |
| <b>locators</b>          | data table | F none                        |            |
| <b>luacnfname</b>        | string     | F strip                       |            |
| <b>luacnfspec</b>        | string     | F cleanname                   |            |
| <b>luacnfstate</b>       | string     | F fetchstring                 |            |
| <b>macros</b>            | table      | F fetchtable                  |            |
| F convertfile            |            | F install                     |            |
| F decodecomment          |            | <b>setdynamic</b>             | function   |
| F enablecomment          |            | <b>setenv</b>                 | function   |
| F encodecomment          |            | <b>setinstance</b>            | function   |
| F preprocessed           |            | <b>showpath</b>               | function   |
| F processmk              |            | <b>simplescanfiles</b>        | function   |
| F processmkvi            |            | <b>splitconfigurationpath</b> | function   |
| F version                |            | <b>splitexpansions</b>        | function   |
| <b>maxreadlevel</b>      | number     | <b>splitmethod</b>            | function   |
| <b>methodhandler</b>     | function   | <b>splitpath</b>              | function   |
| <b>newinstance</b>       | function   | <b>stackpath</b>              | function   |
| <b>openbinfile</b>       | function   | <b>suffixes</b>               | data table |
| <b>openers</b>           | data table | <b>suffixmap</b>              | data table |
| <b>openfile</b>          | function   | <b>suffixofformat</b>         | function   |
| <b>opentexfile</b>       | function   | <b>texdatablob</b>            | function   |
| <b>ownpath</b>           | string     | <b>toppath</b>                | function   |
| <b>poppath</b>           | function   | <b>unexpandedpath</b>         | function   |
| <b>prefixes</b>          | data table | <b>unexpandedpathlist</b>     | function   |
| <b>prependhash</b>       | function   | <b>unresolve</b>              | function   |
| <b>pushpath</b>          | function   | <b>updaterelations</b>        | function   |
| <b>registerextrapath</b> | function   | <b>updatescript</b>           | function   |
| <b>registerfile</b>      | function   | <b>uselibrary</b>             | function   |

|                                 |            |
|---------------------------------|------------|
| <b>usertypes</b>                | data table |
| <b>usezipfile</b>               | function   |
| <b>validatedpath</b>            | function   |
| <b>variable</b>                 | function   |
| <b>variableofformat</b>         | function   |
| <b>variableofformatorsuffix</b> | function   |
| <b>wildcardpattern</b>          | function   |

## sandbox (context)

|                          |          |
|--------------------------|----------|
| <b>binaryhandler</b>     | function |
| <b>disablerunners</b>    | function |
| <b>enable</b>            | function |
| <b>filehandlerone</b>    | function |
| <b>filehandlertwo</b>    | function |
| <b>finalizer</b>         | function |
| <b>initializer</b>       | function |
| <b>iohandler</b>         | function |
| <b>logcalls</b>          | function |
| <b>logfiles</b>          | function |
| <b>original</b>          | function |
| <b>overload</b>          | function |
| <b>possiblepath</b>      | function |
| <b>redefine</b>          | function |
| <b>register</b>          | function |
| <b>registerbinary</b>    | function |
| <b>registerroot</b>      | function |
| <b>registerrunner</b>    | function |
| <b>report</b>            | function |
| <b>run</b>               | function |
| <b>runhandler</b>        | function |
| <b>setfilenamelogger</b> | function |
| <b>setlogger</b>         | function |
| <b>setreporter</b>       | function |
| <b>settrace</b>          | function |
| <b>validfilename</b>     | function |



# scripts (context)

**autofontfeature**    table  
    F disable  
    F enable  
    F handler

**categorytonumber** data table

**colors**            data table

**decomposehangul**   function

**defaults**          table  
    N inter\_char\_half\_shrink\_factor  
    N inter\_char\_half\_stretch\_factor  
    N inter\_char\_hangul\_penalty  
    N inter\_char\_quarter\_shrink\_factor  
    N inter\_char\_quarter\_stretch\_factor  
    N inter\_char\_shrink\_factor  
    N inter\_char\_stretch\_factor  
    N inter\_word\_stretch\_factor

**handlers**          data table

**hash**              table

**injectors**        data table

**installdataset**   function

**installmethod**    function

**numbertocategory** data table

**numbertodataset** data table

**numbertohandler** data table

**reset**             function

**set**                function

**splitters**        data table

## set (context)

**contains** function  
**create** function  
**tolist** function  
**tonumber** function  
**totable** function

# socket (extra lua)

|                       |          |                             |
|-----------------------|----------|-----------------------------|
| <b>BLOCKSIZE</b>      | number   | S connection                |
| <b>_DEBUG</b>         | boolean  | S content-description       |
| <b>_SETSIZE</b>       | number   | S content-disposition       |
| <b>bind</b>           | function | S content-encoding          |
| <b>choose</b>         | function | S content-id                |
| <b>connect</b>        | function | S content-language          |
| <b>connect4</b>       | function | S content-length            |
| <b>connect6</b>       | function | S content-location          |
| <b>dns</b>            | table    | S content-md5               |
| F getaddrinfo         |          | S content-range             |
| F gethostname         |          | S content-transfer-encoding |
| F getnameinfo         |          | S content-type              |
| F tohostname          |          | S date                      |
| F toip                |          | S diagnostic-code           |
| <b>ftp</b>            | table    | S dsn-gateway               |
| S PASSWORD            |          | S etag                      |
| N PORT                |          | S expect                    |
| N TIMEOUT             |          | S expires                   |
| S USER                |          | S final-log-id              |
| F command             |          | S final-recipient           |
| F get                 |          | S from                      |
| F open                |          | S host                      |
| F put                 |          | S if-match                  |
| <b>gettime</b>        | function | S if-modified-since         |
| <b>headers</b>        | table    | S if-none-match             |
| T canonic             |          | S if-range                  |
| S accept              |          | S if-unmodified-since       |
| S accept-charset      |          | S in-reply-to               |
| S accept-encoding     |          | S keywords                  |
| S accept-language     |          | S last-attempt-date         |
| S accept-ranges       |          | S last-modified             |
| S action              |          | S location                  |
| S age                 |          | S max-forwards              |
| S allow               |          | S message-id                |
| S alternate-recipient |          | S mime-version              |
| S arrival-date        |          | S original-envelope-id      |
| S authorization       |          | S original-recipient        |
| S bcc                 |          | S pragma                    |
| S cache-control       |          | S proxy-authenticate        |
| S cc                  |          | S proxy-authorization       |
| S comments            |          | S range                     |

S received  
 S received-from-mta  
 S references  
 S referer  
 S remote-mta  
 S reply-to  
 S reporting-mta  
 S resent-bcc  
 S resent-cc  
 S resent-date  
 S resent-from  
 S resent-message-id  
 S resent-reply-to  
 S resent-sender  
 S resent-to  
 S retry-after  
 S return-path  
 S sender  
 S server  
 S smtp-remote-recipient  
 S status  
 S subject  
 S te  
 S to  
 S trailer  
 S transfer-encoding  
 S upgrade  
 S user-agent  
 S vary  
 S via  
 S warning  
 S will-retry-until  
 S www-authenticate  
 S x-mailer

## http table

N PORT  
 N TIMEOUT  
 S USERAGENT  
 F open  
 F request

**newtry** function  
**protect** function  
**select** function  
**sink** function

## sinkt table

F close-when-done  
 F default  
 F http-chunked  
 F keep-open

## skip function

## sleep function

## smtp table

S DOMAIN  
 N PORT  
 S SERVER  
 N TIMEOUT  
 S ZONE  
 F message  
 F open  
 F send

## source function

## sourcet table

F by-length  
 F default  
 F http-chunked  
 F until-closed

## tcp function

## tcp6 function

## tp table

N TIMEOUT  
 F connect

## try function

## udp function

## udp6 function

## url table

F absolute  
 F build  
 F build\_path  
 F escape  
 F parse  
 F parse\_path  
 F unescape

# sorters (context)

**basicsorter**      function

**comparers**        table

    F basic

**constants**        table

    S defaultdigits

    S defaultlanguage

    S defaultmethod

    N digitsoffset

    N ignoredoffset

    N replacementoffset

    T validmethods

        B ch

        B mc

        B mm

        B pc

        B pm

        B uc

        B zc

        B zm

**definitions**      data table

**firstofsplit**    function

**setlanguage**    function

**sort**            function

**splitters**       table

    F utf

**strip**           function

**tracers**        data table

**update**         function

## statistics (context)

|                       |          |
|-----------------------|----------|
| <b>checkfmtstatus</b> | function |
| <b>elapsed</b>        | function |
| <b>elapsedindeed</b>  | function |
| <b>elapsedseconds</b> | function |
| <b>elapsedtime</b>    | function |
| <b>enable</b>         | boolean  |
| <b>formatruntime</b>  | function |
| <b>hastiming</b>      | function |
| <b>memused</b>        | function |
| <b>register</b>       | function |
| <b>resettiming</b>    | function |
| <b>runtime</b>        | function |
| <b>savefmtstatus</b>  | function |
| <b>show</b>           | function |
| <b>starttiming</b>    | function |
| <b>stoptiming</b>     | function |
| <b>threshold</b>      | number   |
| <b>timed</b>          | function |
| <b>tracefunction</b>  | function |

status (basic tex)

**list** function

## storage (context)

|                        |            |
|------------------------|------------|
| <b>allocate</b>        | function   |
| <b>data</b>            | table      |
| <b>mark</b>            | function   |
| <b>marked</b>          | function   |
| <b>max</b>             | number     |
| <b>min</b>             | number     |
| <b>nofmodules</b>      | number     |
| <b>noftables</b>       | number     |
| <b>register</b>        | function   |
| <b>shared</b>          | data table |
| <b>storedfunctions</b> | data table |
| <b>strip</b>           | boolean    |
| <b>tofmodules</b>      | number     |
| <b>toftables</b>       | number     |



## streams (context)

|                    |          |
|--------------------|----------|
| <b>collect</b>     | function |
| <b>disable</b>     | function |
| <b>enable</b>      | function |
| <b>flush</b>       | function |
| <b>initialize</b>  | function |
| <b>push</b>        | function |
| <b>start</b>       | function |
| <b>stop</b>        | function |
| <b>synchronize</b> | function |

## string (basic lua)

|                       |          |                      |          |
|-----------------------|----------|----------------------|----------|
| <b>autodouble</b>     | function | <b>tformat</b>       | function |
| <b>autosingle</b>     | function | <b>toHEX</b>         | function |
| <b>booleanstring</b>  | function | <b>toboollean</b>    | function |
| <b>byte</b>           | function | <b>tobytes</b>       | function |
| <b>bytepairs</b>      | function | <b>tocontext</b>     | function |
| <b>bytes</b>          | function | <b>todec</b>         | function |
| <b>char</b>           | function | <b>todimen</b>       | function |
| <b>characterpairs</b> | function | <b>tohex</b>         | function |
| <b>characters</b>     | function | <b>tonodes</b>       | function |
| <b>checkedsplit</b>   | function | <b>topattern</b>     | function |
| <b>collapsespaces</b> | function | <b>totable</b>       | function |
| <b>count</b>          | function | <b>toutf</b>         | function |
| <b>dump</b>           | function | <b>tracedchar</b>    | function |
| <b>escapedpattern</b> | function | <b>tracedchars</b>   | table    |
| <b>explode</b>        | function | <b>unquote</b>       | function |
| <b>find</b>           | function | <b>unquoted</b>      | function |
| <b>format</b>         | function | <b>upper</b>         | function |
| <b>formatter</b>      | function | <b>utfcharacters</b> | function |
| <b>formatters</b>     | function | <b>utfvalues</b>     | function |
| <b>fullstrip</b>      | function | <b>valid</b>         | function |
| <b>gmatch</b>         | function |                      |          |
| <b>gsub</b>           | function |                      |          |
| <b>is_boolean</b>     | function |                      |          |
| <b>is_empty</b>       | function |                      |          |
| <b>itself</b>         | function |                      |          |
| <b>len</b>            | function |                      |          |
| <b>limit</b>          | function |                      |          |
| <b>longtostring</b>   | function |                      |          |
| <b>lower</b>          | function |                      |          |
| <b>match</b>          | function |                      |          |
| <b>nspaces</b>        | table    |                      |          |
| <b>optionalquoted</b> | function |                      |          |
| <b>quote</b>          | function |                      |          |
| <b>quoted</b>         | function |                      |          |
| <b>rep</b>            | function |                      |          |
| <b>reverse</b>        | function |                      |          |
| <b>split</b>          | function |                      |          |
| <b>splitlines</b>     | function |                      |          |
| <b>splitup</b>        | function |                      |          |
| <b>strip</b>          | function |                      |          |
| <b>sub</b>            | function |                      |          |

# structures (context)

|                   |          |                                      |
|-------------------|----------|--------------------------------------|
| <b>allocation</b> | function | F previous                           |
| <b>blocks</b>     | table    | F raw                                |
| D collected       |          | F record                             |
| F define          |          | F reset                              |
| F print           |          | F restart                            |
| F save            |          | F restore                            |
| F select          |          | F save                               |
| F setstate        |          | F set                                |
| D states          |          | F setlevel                           |
| D tobesaved       |          | F setoffset                          |
| <b>bookmarks</b>  | table    | F setown                             |
| T extras          |          | F setstate                           |
| F get             |          | F setvalue                           |
| F mergesections   |          | T specials                           |
| F register        |          | F userpage                           |
| F reset           |          | F subs                               |
| F tosections      |          | D tobesaved                          |
| F finalize        |          | F value                              |
| F flatten         |          | F way                                |
| F installhandler  |          | <b>currentsectionnumber</b> function |
| F merge           |          | <b>descriptions</b> table            |
| S method          |          | <b>documents</b> table               |
| F overload        |          | D data                               |
| F place           |          | F initialize                         |
| F register        |          | F preset                             |
| F setup           |          | F reset                              |
| <b>counters</b>   | table    | <b>floats</b> table                  |
| F add             |          | <b>formulas</b> table                |
| F analyze         |          | F current                            |
| F check           |          | F simplify                           |
| D collected       |          | F store                              |
| F compact         |          | <b>helpers</b> table                 |
| F converted       |          | F analyze                            |
| F currentvalue    |          | F formulanumber                      |
| D data            |          | F merged                             |
| F define          |          | F page                               |
| F first           |          | F prefix                             |
| F get             |          | F prefixlastpage                     |
| F last            |          | F prefixpage                         |
| F next            |          | F simplify                           |
| F prev            |          | F title                              |

|                   |              |                            |              |
|-------------------|--------------|----------------------------|--------------|
| F touserdata      |              | F reordered                |              |
| <b>inserts</b>    | <b>table</b> | T result                   |              |
| D data            |              | F savedlistnumber          |              |
| F define          |              | F savedlistprefixednumber  |              |
| F getdata         |              | F savedlisttitle           |              |
| F getlocation     |              | D sectionblocks            |              |
| F getname         |              | F sectionnumber            |              |
| F getnumber       |              | F size                     |              |
| F setlocation     |              | F title                    |              |
| F setup           |              | D tobesaved                |              |
| D stored          |              | F userdata                 |              |
| <b>itemgroups</b> | <b>table</b> | F uservalue                |              |
| <b>lists</b>      | <b>table</b> | <b>marks</b>               | <b>table</b> |
| F addto           |              | D data                     |              |
| F analyze         |              | F define                   |              |
| B autoreorder     |              | F exists                   |              |
| D cached          |              | F fetch                    |              |
| D collected       |              | F fetchallmarks            |              |
| F discard         |              | F fetched                  |              |
| F enhance         |              | F fetchonemark             |              |
| T enhancers       |              | F fetchtwomarks            |              |
| F filter          |              | F get                      |              |
| F formulainumber  |              | F number                   |              |
| F getresult       |              | F relate                   |              |
| F groupindex      |              | F reset                    |              |
| F hasnumberdata   |              | F set                      |              |
| F haspagedata     |              | F show                     |              |
| F hastitledata    |              | F synchronize              |              |
| F iscached        |              | F title                    |              |
| D kinds           |              | T tracers                  |              |
| F label           |              | F showtable                |              |
| F location        |              | <b>notes</b>               | <b>table</b> |
| D names           |              | F checkpagechange          |              |
| F number          |              | F define                   |              |
| D ordered         |              | F doifonsamepageasprevious |              |
| F page            |              | F get                      |              |
| F popnesting      |              | F getdeltapage             |              |
| F prefix          |              | F getn                     |              |
| F prefixednumber  |              | F getnumberpage            |              |
| F prefixedpage    |              | F getstate                 |              |
| F process         |              | F getsymbolpage            |              |
| D pushed          |              | F hascontent               |              |
| F pushnesting     |              | F internal                 |              |
| F realpage        |              | F internalid               |              |

|                     |                            |
|---------------------|----------------------------|
| F listindex         | F get                      |
| F ordered           | F filter                   |
| F postpone          | F filterdefault            |
| F resetpostponed    | D filters                  |
| F restore           | D flaginternals            |
| F save              | F from                     |
| F setstate          | D functions                |
| F setsymbolpage     | F get                      |
| D states            | F getcurrentmetadata       |
| F store             | F getcurrentprefixspec     |
| <b>pages</b>        | F getinnermethod           |
|                     | F getinternallistreference |
| F analyze           | F getinternalreference     |
| D collected         | D handlers                 |
| F in_body           | F identify                 |
| F is_odd            | F import                   |
| N nopages           | F inject                   |
| F number            | F injectcurrentset         |
| F on_right          | S innermethod              |
| F save              | D internals                |
| D tobesaved         | F load                     |
| <b>references</b>   | F loadpresets              |
|                     | F mark                     |
| F analyze           | D pages                    |
| F checkedfile       | U prefixsplitter           |
| F checkedfileorurl  | D productdata              |
| F checkedprogram    | T programs                 |
| F checkedrealpage   | T data                     |
| F checkedurl        | F define                   |
| D collected         | F get                      |
| U componentsplitter | F realpageofpage           |
| F currentmetadata   | U referencesplitter        |
| F currentorder      | D referred                 |
| D currentset        | F referredpage             |
| F define            | F registerfinalizer        |
| D defined           | F registerinitializer      |
| D derived           | F registerpage             |
| F enableinteraction | F reportproblems           |
| F enhance           | F reset                    |
| D executers         | D runners                  |
| F expandcurrent     | F set                      |
| F export            | F setandgetattribute       |
| T files             | F setcomponent             |
| T data              | F setinnermethod           |
| F define            |                            |
| F found             |                            |

- F setinternalreference
- F setnextinternal
- F setnextorder
- F setreferencerealpage
- D specials
- F splitcomponent
- F splitprefix
- F splitreference
- F synchronizepage
- T testrunners
  - F inner
  - F special
  - F special operation
  - F special operation with arguments
- T testspecials
  - F deltapage
  - F i
  - F internal
  - F page
  - F realpage
  - F section
  - F userpage
- D tobereferred
- D tobesaved
- T urls
  - T data
  - F define
  - F found
  - F get
- D usedinternals
- D usedviews
- F valid

## registers

- F analyze
- D collected
- F compare
- F define
- F enhance
- F extend
- F filter
- F filtercollected
- F finalize
- F flush
- F get

## table

- F prepare
- F process
- F setmethod
- F sort
- F store
- D tobesaved
- F unique
- F userdata

## sections

## table

- F autodepth
- F cct
- D collected
- F current
- F currentblock
- F currentid
- F currentlevel
- F currentsectionindex
- F depthnumber
- F finddata
- F findnumber
- F fullnumber
- F getcurrentlevel
- F getlevel
- F getnumber
- F internalreference
- D levelmap
- D levels
- F load
- F matchingtilldepth
- F numberatdepth
- F numbers
- F popblock
- F prefixedconverted
- F pushblock
- F register
- D registered
- F reportstructure
- F save
- T sectionblockdata
  - T bodypart
    - S bookmark
- F set
- F setblock
- F setchecker

|                 |                        |
|-----------------|------------------------|
| F setentry      | U splitter             |
| F setlevel      | D properties           |
| F setnumber     | F registermetadata     |
| F structuredata | F restart              |
| F title         | F setaspect            |
| D tobesaved     | F setattributehash     |
| F typesetnumber | F setcombination       |
| F userdata      | F setdescription       |
| B verbose       | F setdescriptionsymbol |
| <b>sets</b>     | F setfigure            |
|                 | F sethighlight         |
| F define        | F setitem              |
| F get           | F setitemgroup         |
| F getall        | F setlist              |
| D setlist       | F setproperty          |
| <b>specials</b> | F setregister          |
|                 | F setsorting           |
| D collected     | F setsynonym           |
| F retrieve      | F settablecell         |
| F store         | F settabulatecell      |
| D tobesaved     | F setupexport          |
| <b>synonyms</b> | F setuserproperties    |
|                 | D specifications       |
| F analyzed      | F start                |
| D collected     | F stop                 |
| F compare       | D taglist              |
| F define        |                        |
| F filter        |                        |
| F finalize      |                        |
| F flush         |                        |
| F meaning       |                        |
| F prepare       |                        |
| F process       |                        |
| F register      |                        |
| F registerused  |                        |
| F sort          |                        |
| F synonym       |                        |
| D tobesaved     |                        |
| <b>tags</b>     |                        |
|                 |                        |
| F elementtag    |                        |
| F getid         |                        |
| F handler       |                        |
| D labels        |                        |
| F last          |                        |
| F lastinchain   |                        |
| F locatedtag    |                        |
| T patterns      |                        |

## table (basic lua)

|                        |          |                             |          |
|------------------------|----------|-----------------------------|----------|
| <b>allkeys</b>         | function | <b>sequenced</b>            | function |
| <b>append</b>          | function | <b>serialize</b>            | function |
| <b>are_equal</b>       | function | <b>setmetatablecall</b>     | function |
| <b>autokey</b>         | function | <b>setmetatableindex</b>    | function |
| <b>compact</b>         | function | <b>setmetatablekey</b>      | function |
| <b>concat</b>          | function | <b>setmetatablenewindex</b> | function |
| <b>contains</b>        | function | <b>sort</b>                 | function |
| <b>copy</b>            | function | <b>sorted</b>               | function |
| <b>count</b>           | function | <b>sortedhash</b>           | function |
| <b>derive</b>          | function | <b>sortedhashkeys</b>       | function |
| <b>deserialize</b>     | function | <b>sortedhashonly</b>       | function |
| <b>drop</b>            | function | <b>sortedindexonly</b>      | function |
| <b>fastcopy</b>        | function | <b>sortedkeys</b>           | function |
| <b>fastserialize</b>   | function | <b>sortedpairs</b>          | function |
| <b>filtered</b>        | function | <b>sparse</b>               | function |
| <b>flattened</b>       | function | <b>strip</b>                | function |
| <b>foreach</b>         | function | <b>sub</b>                  | function |
| <b>foreachi</b>        | function | <b>swapped</b>              | function |
| <b>fromhash</b>        | function | <b>tocontext</b>            | function |
| <b>getmetatablekey</b> | function | <b>tocsv</b>                | function |
| <b>getn</b>            | function | <b>tofile</b>               | function |
| <b>has_one_entry</b>   | function | <b>tohandle</b>             | function |
| <b>identical</b>       | function | <b>tohash</b>               | function |
| <b>imerge</b>          | function | <b>toxml</b>                | function |
| <b>imerged</b>         | function | <b>twowaymapper</b>         | function |
| <b>insert</b>          | function | <b>unique</b>               | function |
| <b>is_empty</b>        | function | <b>unnest</b>               | function |
| <b>keys</b>            | function | <b>unpack</b>               | function |
| <b>load</b>            | function | <b>values</b>               | function |
| <b>loweredkeys</b>     | function |                             |          |
| <b>maxn</b>            | function |                             |          |
| <b>merge</b>           | function |                             |          |
| <b>merged</b>          | function |                             |          |
| <b>mirrored</b>        | function |                             |          |
| <b>pack</b>            | function |                             |          |
| <b>prepend</b>         | function |                             |          |
| <b>print</b>           | function |                             |          |
| <b>remove</b>          | function |                             |          |
| <b>reverse</b>         | function |                             |          |
| <b>reversed</b>        | function |                             |          |
| <b>save</b>            | function |                             |          |



## tex (basic tex)

|                         |            |                              |            |
|-------------------------|------------|------------------------------|------------|
| <b>attribute</b>        | table      | <b>isdefined</b>             | function   |
| <b>badness</b>          | function   | <b>isdimen</b>               | function   |
| <b>box</b>              | table      | <b>isskip</b>                | function   |
| <b>catcode</b>          | table      | <b>istoken</b>               | function   |
| <b>conditionals</b>     | data table | <b>lccode</b>                | table      |
| <b>constants</b>        | data table | <b>linebreak</b>             | function   |
| <b>count</b>            | table      | <b>lists</b>                 | table      |
| <b>ctdcatcodes</b>      | number     | <b>lua_math_random</b>       | function   |
| <b>ctxcatcodes</b>      | number     | <b>lua_math_randomseed</b>   | function   |
| <b>definefont</b>       | function   | <b>luacatcodes</b>           | number     |
| <b>delcode</b>          | table      | <b>mathcode</b>              | table      |
| <b>dimen</b>            | table      | <b>modes</b>                 | data table |
| <b>directives</b>       | data table | <b>nest</b>                  | table      |
| <b>enableprimitives</b> | function   | <b>nilcatcodes</b>           | number     |
| <b>error</b>            | function   | <b>normal_rand</b>           | function   |
| <b>extraprimitives</b>  | function   | <b>notcatcodes</b>           | number     |
| <b>finish</b>           | function   | <b>number</b>                | function   |
| <b>fontidentifier</b>   | function   | <b>pdffontname</b>           | function   |
| <b>fontname</b>         | function   | <b>pdffontobjnum</b>         | function   |
| <b>fprint</b>           | function   | <b>pdffontsize</b>           | function   |
| <b>get</b>              | function   | <b>pdfpageref</b>            | function   |
| <b>getattribute</b>     | function   | <b>pdfxformname</b>          | function   |
| <b>getbox</b>           | function   | <b>primitives</b>            | function   |
| <b>getcatcode</b>       | function   | <b>print</b>                 | function   |
| <b>getcount</b>         | function   | <b>prtcacodes</b>            | number     |
| <b>getdelcode</b>       | function   | <b>romannumeral</b>          | function   |
| <b>getdimen</b>         | function   | <b>round</b>                 | function   |
| <b>getlccode</b>        | function   | <b>run</b>                   | function   |
| <b>getlist</b>          | function   | <b>scale</b>                 | function   |
| <b>getmath</b>          | function   | <b>set</b>                   | function   |
| <b>getmathcode</b>      | function   | <b>set_experimental_code</b> | function   |
| <b>getnest</b>          | function   | <b>setattribute</b>          | function   |
| <b>getsfcode</b>        | function   | <b>setbox</b>                | function   |
| <b>getskip</b>          | function   | <b>setcatcode</b>            | function   |
| <b>gettoks</b>          | function   | <b>setcount</b>              | function   |
| <b>getuccode</b>        | function   | <b>setdelcode</b>            | function   |
| <b>hashtokens</b>       | function   | <b>setdimen</b>              | function   |
| <b>ifs</b>              | data table | <b>setlccode</b>             | function   |
| <b>inicalcodes</b>      | number     | <b>setlist</b>               | function   |
| <b>init_rand</b>        | function   | <b>setmath</b>               | function   |
| <b>iscount</b>          | function   | <b>setmathcode</b>           | function   |

|                       |            |
|-----------------------|------------|
| <b>setnest</b>        | function   |
| <b>setsfcode</b>      | function   |
| <b>setskip</b>        | function   |
| <b>settoks</b>        | function   |
| <b>setuccode</b>      | function   |
| <b>sfcode</b>         | table      |
| <b>shipout</b>        | function   |
| <b>show_context</b>   | function   |
| <b>skip</b>           | table      |
| <b>sp</b>             | function   |
| <b>sprint</b>         | function   |
| <b>systemmodes</b>    | data table |
| <b>takebox</b>        | function   |
| <b>texcatcodes</b>    | number     |
| <b>toks</b>           | table      |
| <b>tpacatcodes</b>    | number     |
| <b>tpbcacodes</b>     | number     |
| <b>tprint</b>         | function   |
| <b>trackers</b>       | data table |
| <b>txtcatcodes</b>    | number     |
| <b>type</b>           | function   |
| <b>uccode</b>         | table      |
| <b>uniform_rand</b>   | function   |
| <b>uniformdeviate</b> | function   |
| <b>uprint</b>         | function   |
| <b>vrbcacodes</b>     | number     |
| <b>write</b>          | function   |

## texconfig (basic tex)

|                        |                     |
|------------------------|---------------------|
| <b>error_line</b>      | number              |
| <b>expand_depth</b>    | number              |
| <b>formatname</b>      | string              |
| <b>half_error_line</b> | number              |
| <b>hash_extra</b>      | number              |
| <b>init</b>            | overloaded function |
| <b>kpse_init</b>       | boolean             |
| <b>max_in_open</b>     | number              |
| <b>max_print_line</b>  | number              |
| <b>max_strings</b>     | number              |
| <b>nest_size</b>       | number              |
| <b>param_size</b>      | number              |
| <b>save_size</b>       | number              |
| <b>shell_escape</b>    | string              |
| <b>stack_size</b>      | overloaded number   |

## texio (basic tex)

`write`      function

`write_nl`   function

# tokens (context)

**astable**      function  
**bgroup**      userdata  
**bits**        table

N active  
N alignment  
N begingroup  
N character  
N close  
N comment  
N endgroup  
N endofline  
N escape  
N ignore  
N invalid  
N letter  
N mathshift  
N open  
N other  
N parameter  
N space  
N subscript  
N superscript  
N whitespace

**collectors** table

T data  
F defaultwords  
F dowithwords  
F flush  
F install  
F register  
T registered  
F show  
F test

**compile**      function

**converters** table

S toboolean  
S todimen  
S toglue  
S tonumber  
S toString

**egroup**        userdata

**getters**      table

F box  
F count  
F dimen  
F token

**hbox**          userdata

**istoken**        function

**letter**        function

**letters**        function

**other**          function

**pickup**        function

**printlist**     function

**scanners**      table

F boolean  
F code  
F conditional  
F count  
F dimen  
F dimension  
F glue  
F integer  
F keyword  
F list  
F lxmlid  
F number  
F scanclose  
F scanopen  
F skip  
F string  
F token  
F tokens  
F toks  
F word

**scantable**     function

**setters**        table

F box  
F count  
F dimen  
F macro

**shortcuts**     table

T bits

|                   |                |
|-------------------|----------------|
| N active          | F lxmlid       |
| N alignment       | F number       |
| N begingroup      | F scanclose    |
| N character       | F scanopen     |
| N close           | F skip         |
| N comment         | F string       |
| N endgroup        | F token        |
| N endofline       | F tokens       |
| N escape          | F toks         |
| N ignore          | F word         |
| N invalid         | F scannumber   |
| N letter          | F scanopen     |
| N mathshift       | F scanstring   |
| N open            | F scanword     |
| N other           | F toboolean    |
| N parameter       | F todimen      |
| N space           | T tokens       |
| N subscript       | F astable      |
| N superscript     | U bgroup       |
| N whitespace      | T collectors   |
| N close           | F defaultwords |
| F inspect         | F dowithwords  |
| N open            | F flush        |
| F report          | F install      |
| F scanboolean     | F register     |
| F scanclose       | F show         |
| F scancode        | F test         |
| F scanconditional | F compile      |
| F scandimen       | T converters   |
| F scandimension   | S toboolean    |
| F scaninteger     | S todimen      |
| F scankeyword     | S toglue       |
| F scanlist        | S tonumber     |
| T scanners        | S toString     |
| F boolean         | U egroup       |
| F code            | T getters      |
| F conditional     | F box          |
| F count           | F count        |
| F dimen           | F dimen        |
| F dimension       | F token        |
| F glue            | U hbox         |
| F integer         | F istoken      |
| F keyword         | F letter       |
| F list            | F letters      |

F other  
F pickup  
F printlist  
F scantable  
T setters  
  F box  
  F count  
  F dimen  
  F macro  
T shortcuts  
  N close  
  F inspect  
  N open  
  F report  
  F scanboolean  
  F scanclose  
  F scancode  
  F scanconditional  
  F scandimen  
  F scandimension  
  F scaninteger  
  F scankeyword  
  F scanlist  
  F scannumber  
  F scanopen  
  F scanstring  
  F scanword  
  F toboolean  
  F todimen  
  F tonumber  
  F tostring  
U vbox  
U vtop  
F tonumber  
F tostring  
**vbox**           userdata  
**vtop**          userdata

# tracers (context)

|                  |          |
|------------------|----------|
| <b>count</b>     | function |
| <b>cs</b>        | function |
| <b>dimen</b>     | function |
| <b>knownlist</b> | function |
| <b>lists</b>     | table    |

T context

T internals

T scratch

|                  |          |
|------------------|----------|
| <b>name</b>      | function |
| <b>primitive</b> | function |
| <b>prnterror</b> | function |
| <b>showlines</b> | function |
| <b>strings</b>   | table    |

S undefined

|             |          |
|-------------|----------|
| <b>toks</b> | function |
| <b>type</b> | function |



## trackers (context)

|                       |            |
|-----------------------|------------|
| <b>data</b>           | data table |
| <b>default</b>        | function   |
| <b>disable</b>        | function   |
| <b>dumphashtofile</b> | function   |
| <b>enable</b>         | function   |
| <b>list</b>           | function   |
| <b>name</b>           | string     |
| <b>register</b>       | function   |
| <b>report</b>         | function   |
| <b>reset</b>          | function   |
| <b>savehash</b>       | function   |
| <b>show</b>           | function   |
| <b>value</b>          | function   |

# typesetters (context)

|                       |       |                   |                      |
|-----------------------|-------|-------------------|----------------------|
| <b>alignments</b>     | table |                   | F installhandler     |
|                       |       |                   | F processmath        |
|                       |       |                   | F set                |
| <b>breakpoints</b>    | table |                   | F setcolor           |
|                       |       |                   | F setmath            |
|                       |       |                   | F tomode             |
|                       |       | <b>firstlines</b> | table                |
|                       |       |                   | T actions            |
|                       |       |                   | F default            |
|                       |       |                   | F line               |
|                       |       |                   | F word               |
| <b>cases</b>          | table |                   | F handler            |
|                       |       |                   | F set                |
|                       |       | <b>initials</b>   | table                |
|                       |       |                   | T actions            |
|                       |       |                   | F default            |
| <b>characteralign</b> | table |                   | F handler            |
|                       |       |                   | F set                |
|                       |       | <b>injectors</b>  | table                |
|                       |       |                   | F check              |
|                       |       |                   | T list               |
| <b>characters</b>     | table |                   | F mark               |
|                       |       |                   | F reset              |
|                       |       |                   | F set                |
|                       |       |                   | F show               |
| <b>checkers</b>       | table |                   | <b>italics</b>       |
|                       |       |                   | table                |
|                       |       |                   | F forcevariant       |
|                       |       |                   | F handler            |
|                       |       |                   | F reset              |
| <b>cleaners</b>       | table |                   | F set                |
|                       |       | <b>kerns</b>      | table                |
|                       |       |                   | D factors            |
| <b>digits</b>         | table |                   | F handler            |
|                       |       |                   | F keepligature       |
|                       |       |                   | B keeptogether       |
|                       |       |                   | D mapping            |
|                       |       |                   | F set                |
| <b>directions</b>     | table |                   | <b>manipulators</b>  |
|                       |       |                   | table                |
|                       |       |                   | F apply              |
|                       |       |                   | F applyspecification |
|                       |       |                   | T methods            |

|                      |                 |                            |
|----------------------|-----------------|----------------------------|
| F Word               |                 | F construct                |
| F Words              |                 | F create                   |
| F abbreviatedjournal |                 | F finish_row               |
| F expandedjournal    |                 | F flush                    |
| F lowercase          |                 | F initialize_construct     |
| F stripperperiod     |                 | F initialize_reflow_height |
| F uppercase          |                 | F initialize_reflow_width  |
| T patterns           |                 | F next_row                 |
| U list               |                 | F reflow_height            |
| U pair               |                 | F reflow_width             |
| F splitspecification |                 | F set_construct            |
| <b>margins</b>       | <b>table</b>    | F set_reflow_height        |
| F finalhandler       |                 | F set_reflow_width         |
| F globalhandler      |                 |                            |
| F ha                 |                 |                            |
| F localhandler       |                 |                            |
| F save               |                 |                            |
| <b>marksuspects</b>  | <b>function</b> |                            |
| <b>processors</b>    | <b>table</b>    |                            |
| F apply              |                 |                            |
| F register           |                 |                            |
| F reset              |                 |                            |
| F split              |                 |                            |
| F startapply         |                 |                            |
| F stopapply          |                 |                            |
| F stripped           |                 |                            |
| F tostring           |                 |                            |
| <b>showsuspects</b>  | <b>function</b> |                            |
| <b>spacings</b>      | <b>table</b>    |                            |
| F define             |                 |                            |
| F handler            |                 |                            |
| D mapping            |                 |                            |
| T numbers            |                 |                            |
| T frenchpunctuation  |                 |                            |
| T characters         |                 |                            |
| S name               |                 |                            |
| N number             |                 |                            |
| F reset              |                 |                            |
| F set                |                 |                            |
| F setup              |                 |                            |
| <b>wrappers</b>      | <b>table</b>    |                            |
| F handler            |                 |                            |
| <b>xtables</b>       | <b>table</b>    |                            |
| F cleanup            |                 |                            |

# unicode (extra lua)

## ascii table

F byte  
F char  
F dump  
F find  
F format  
F gfind  
F gmatch  
F gsub  
F len  
F lower  
F match  
F rep  
F reverse  
F sub  
F upper

## grapheme table

F byte  
F char  
F dump  
F find  
F format  
F gfind  
F gmatch  
F gsub  
F len  
F lower  
F match  
F rep  
F reverse  
F sub  
F upper

## latin1 table

F byte  
F char  
F dump  
F find  
F format  
F gfind  
F gmatch  
F gsub

F len  
F lower  
F match  
F rep  
F reverse  
F sub  
F upper

## utf8 table

F byte  
F char  
F characters  
F chrln  
F count  
F dump  
F filetype  
F find  
F format  
F gfind  
F gmatch  
F gsub  
F is\_valid  
F len  
F length  
F lower  
F magic  
F match  
F remapper  
F rep  
F replacer  
F reverse  
F split  
F splitlines  
F sub  
F subtituter  
F tocodes  
F toeight  
F toentities  
F toString  
F totable  
F upper  
F ustring

F utf16\_to\_utf8\_be  
F utf16\_to\_utf8\_be\_t  
F utf16\_to\_utf8\_le  
F utf16\_to\_utf8\_le\_t  
F utf16\_to\_utf8\_t  
F utf32\_to\_utf8\_be  
F utf32\_to\_utf8\_be\_t  
F utf32\_to\_utf8\_le  
F utf32\_to\_utf8\_le\_t  
F utf32\_to\_utf8\_t  
F utf8\_to\_utf16  
F utf8\_to\_utf16\_be  
F utf8\_to\_utf16\_le  
F utf8\_to\_utf8\_t  
F values  
F xstring

## url (context)

|                    |          |
|--------------------|----------|
| <b>addscheme</b>   | function |
| <b>barepath</b>    | function |
| <b>construct</b>   | function |
| <b>escape</b>      | function |
| <b>filename</b>    | function |
| <b>hashed</b>      | function |
| <b>hasscheme</b>   | function |
| <b>query</b>       | function |
| <b>split</b>       | function |
| <b>toquery</b>     | function |
| <b>unescapeget</b> | function |

# utilities (context)

## debugger table

- F disable
- F enable
- F savestats
- F showstats
- F showtraceback

## formatters table

- F formatcolumns
- F list
- F stripzeros

## garbagecollector table

- F check
- N criterium
- B enabled

## lua table

- B alwaysstripcode
- F compile
- F loadedluacode
- F loadstripped
- N nofstrippedbytes
- N nofstrippedchunks
- B stripcode
- T strippedchunks
- F strippedloadstring
- T suffixes
  - S lua
  - S luc
  - S lui
  - S luj
  - S luv
  - S tma
  - S tmc
  - S tua
  - S tuc

## packers table

- F hashed
- F new
- F pack
- F simplehashed
- F strip
- F unpack

N version

## parsers table

- F add\_settings\_to\_array
- F arguments\_to\_table
- F array\_to\_string
- F csvsplitter
- F getparameters
- F groupedsplitat
- F hash\_to\_string
- F iterator
- F keq\_to\_hash
- F listitem
- F make\_settings\_to\_hash\_pattern
- F mergehashes
- F options\_to\_array
- F options\_to\_hash
- T patterns
  - U settings\_to\_array
  - U settings\_to\_hash\_a
  - U settings\_to\_hash\_b
  - U settings\_to\_hash\_c
  - U unittotex
- F process\_stripped\_settings
- F rfc4180splitter
- F runtime
- F settings\_to\_array
- F settings\_to\_array\_with\_repeat
- F settings\_to\_hash
- F settings\_to\_hash\_strict
- F settings\_to\_hash\_tolerant
- F settings\_to\_set
- F simple\_hash\_to\_string
- F splitmethod
- F splitthousands
- F stepper
- F stripped\_settings\_to\_array
- F unittotex
- F unittotxml

## report function

## sequencers table

- F appendaction

|                     |              |                       |              |
|---------------------|--------------|-----------------------|--------------|
| F appendgroup       |              | U prune               |              |
| F compile           |              | U prune and collapse  |              |
| F disableaction     |              | U prune and no empty  |              |
| F disablegroup      |              | U retain              |              |
| F enableaction      |              | U retain and collapse |              |
| F enablegroup       |              | U retain and no empty |              |
| D functions         |              | F striplines          |              |
| F localize          |              | F striplong           |              |
| F new               |              | F tabtospace          |              |
| F nodeprocessor     |              | T tracers             |              |
| F prependaction     |              | <b>tables</b>         | <b>table</b> |
| F prependgroup      |              | F accesstable         |              |
| F removeaction      |              | F definedtable        |              |
| F replaceaction     |              | F definetable         |              |
| F setkind           |              | F encapsulate         |              |
| F tostring          |              | F insertaftervalue    |              |
| <b>setters</b>      | <b>table</b> | F insertbeforevalue   |              |
| F disable           |              | F migratetable        |              |
| F enable            |              | F removevalue         |              |
| F initialize        |              | F replacevalue        |              |
| F list              |              | <b>templates</b>      | <b>table</b> |
| F new               |              | F load                |              |
| F register          |              | F replace             |              |
| F report            |              | F replacer            |              |
| F reset             |              | F resolve             |              |
| F show              |              |                       |              |
| <b>stacker</b>      | <b>table</b> |                       |              |
| F new               |              |                       |              |
| <b>storage</b>      | <b>table</b> |                       |              |
| F allocate          |              |                       |              |
| F checked           |              |                       |              |
| F mark              |              |                       |              |
| F marked            |              |                       |              |
| F setinitializer    |              |                       |              |
| F sparse            |              |                       |              |
| <b>strings</b>      | <b>table</b> |                       |              |
| F collapseCrLf      |              |                       |              |
| T formatters        |              |                       |              |
| F add               |              |                       |              |
| F new               |              |                       |              |
| F newrepeater       |              |                       |              |
| F nice              |              |                       |              |
| T striplinepatterns |              |                       |              |
| U collapse          |              |                       |              |



## vf (context)

|                |          |
|----------------|----------|
| <b>char</b>    | function |
| <b>down</b>    | function |
| <b>fontid</b>  | function |
| <b>image</b>   | function |
| <b>node</b>    | function |
| <b>nop</b>     | function |
| <b>pop</b>     | function |
| <b>push</b>    | function |
| <b>right</b>   | function |
| <b>rule</b>    | function |
| <b>special</b> | function |

## visualizers (context)

|                              |            |
|------------------------------|------------|
| <b>escapepatterns</b>        | data table |
| <b>getspecification</b>      | function   |
| <b>getvisualizer</b>         | function   |
| <b>load</b>                  | function   |
| <b>makenested</b>            | function   |
| <b>makepattern</b>           | function   |
| <b>newgrammar</b>            | function   |
| <b>newhandler</b>            | function   |
| <b>parsedxml</b>             | function   |
| <b>pattern</b>               | function   |
| <b>register</b>              | function   |
| <b>registerescapecommand</b> | function   |
| <b>registerescapeline</b>    | function   |
| <b>registerescapepattern</b> | function   |
| <b>signal</b>                | string     |
| <b>signalpattern</b>         | userdata   |
| <b>specifications</b>        | data table |
| <b>visualize</b>             | function   |
| <b>visualizebuffer</b>       | function   |
| <b>visualizefile</b>         | function   |
| <b>visualizestring</b>       | function   |
| <b>write</b>                 | function   |
| <b>writeargument</b>         | function   |
| <b>writedefault</b>          | function   |
| <b>writeemptyline</b>        | function   |
| <b>writenewline</b>          | function   |
| <b>writespace</b>            | function   |

# xml (context)

|                           |          |                        |            |
|---------------------------|----------|------------------------|------------|
| <b>addentitiesdoctype</b> | function | D tex                  |            |
| <b>after</b>              | function | D texline              |            |
| <b>all</b>                | function | D texspace             |            |
| <b>applylpath</b>         | function | D verbose              |            |
| <b>assign</b>             | function | <b>defaultprotocol</b> | string     |
| <b>attribute</b>          | function | <b>delete</b>          | function   |
| <b>before</b>             | function | <b>delete_element</b>  | function   |
| <b>body</b>               | function | <b>each</b>            | function   |
| <b>builtinentities</b>    | table    | <b>each_element</b>    | function   |
| B amp                     |          | <b>elements</b>        | function   |
| B apos                    |          | <b>elementtocdata</b>  | function   |
| B gt                      |          | <b>empty</b>           | function   |
| B lt                      |          | <b>entities</b>        | data table |
| B quot                    |          | <b>erase</b>           | function   |
| <b>cdata</b>              | function | <b>errorhandler</b>    | function   |
| <b>cdatatotext</b>        | function | <b>escaped</b>         | function   |
| <b>checkbom</b>           | function | <b>expressions</b>     | table      |
| <b>checkerror</b>         | function | F boolean              |            |
| <b>checknamespace</b>     | function | F child                |            |
| <b>checkns</b>            | function | F contains             |            |
| <b>cleansed</b>           | function | F count                |            |
| <b>collect</b>            | function | F error                |            |
| <b>collect_elements</b>   | function | F find                 |            |
| <b>collect_tags</b>       | function | F idstring             |            |
| <b>collect_texts</b>      | function | F lower                |            |
| <b>collected</b>          | function | F name                 |            |
| <b>collecttexts</b>       | function | F number               |            |
| <b>content</b>            | function | F oneof                |            |
| <b>convert</b>            | function | F print                |            |
| <b>copy</b>               | function | F quit                 |            |
| <b>count</b>              | function | F tag                  |            |
| <b>cprint</b>             | function | F text                 |            |
| <b>css</b>                | table    | F undefined            |            |
| F colorspecification      |          | F upper                |            |
| F dimension               |          | <b>fillin</b>          | function   |
| F fontspecification       |          | <b>filter</b>          | function   |
| F padding                 |          | <b>finalizers</b>      | table      |
| <b>defaulthandlers</b>    | table    | F paragraphs           |            |
| D file                    |          | T tex                  |            |
| D parsedxml               |          | F all                  |            |
| D string                  |          | F attribute            |            |

|                  |                              |          |
|------------------|------------------------------|----------|
| F chainattribute | F reverse                    |          |
| F command        | F table                      |          |
| F concat         | F tag                        |          |
| F concatrange    | F tags                       |          |
| F context        | F text                       |          |
| F count          | F texts                      |          |
| F ctxtext        | F upperall                   |          |
| F default        | <b>first</b>                 | function |
| F first          | <b>found</b>                 | function |
| F function       | <b>functions</b>             | table    |
| F index          | <b>getbuffer</b>             | function |
| F last           | <b>gethandlers</b>           | function |
| F lettered       | <b>gethandlersfunction</b>   | function |
| F lower          | <b>helpers</b>               | table    |
| F lowerall       | F recursetext                |          |
| F match          | <b>include</b>               | function |
| F name           | <b>inclusion</b>             | function |
| F position       | <b>inclusions</b>            | function |
| F reverse        | <b>index</b>                 | function |
| F stripped       | <b>inheritedconvert</b>      | function |
| F tag            | <b>inject</b>                | function |
| F tags           | <b>inject_element</b>        | function |
| F text           | <b>inject_element_after</b>  | function |
| F upper          | <b>inject_element_before</b> | function |
| F upperall       | <b>injectafter</b>           | function |
| T xml            | <b>injectbefore</b>          | function |
| F all            | <b>insert</b>                | function |
| F att            | <b>insert_element</b>        | function |
| F attribute      | <b>insert_element_after</b>  | function |
| F attributes     | <b>insert_element_before</b> | function |
| F cdata          | <b>insertafter</b>           | function |
| F chainattribute | <b>insertbefore</b>          | function |
| F count          | <b>insertcdata</b>           | function |
| F default        | <b>insertcomment</b>         | function |
| F elements       | <b>inspect</b>               | function |
| F empty          | <b>is_valid</b>              | function |
| F first          | <b>kind</b>                  | function |
| F function       | <b>last</b>                  | function |
| F index          | <b>load</b>                  | function |
| F last           | <b>lpath</b>                 | function |
| F lowerall       | <b>lpathcached</b>           | function |
| F match          | <b>lpathcalls</b>            | function |
| F name           | <b>lshow</b>                 | function |
| F position       | <b>makestandalone</b>        | function |

|                           |          |                            |          |
|---------------------------|----------|----------------------------|----------|
| <b>match</b>              | function | <b>sethandlersfunction</b> | function |
| <b>name</b>               | function | <b>setinjectors</b>        | function |
| <b>newhandlers</b>        | function | <b>setProperty</b>         | function |
| <b>nodesettostring</b>    | function | <b>settings</b>            | function |
| <b>originalload</b>       | function | <b>specialhandler</b>      | table    |
| <b>package</b>            | function | <b>sprint</b>              | function |
| <b>parent</b>             | function | <b>string</b>              | function |
| <b>parsedentitylpeg</b>   | userdata | <b>strip</b>               | function |
| <b>pihandlers</b>         | table    | <b>strip_whitespace</b>    | function |
| F injector                |          | <b>stripelement</b>        | function |
| <b>placeholders</b>       | table    | <b>stripleadingspaces</b>  | function |
| F unknown_any_entity      |          | <b>table</b>               | function |
| F unknown_dec_entity      |          | <b>text</b>                | function |
| F unknown_hex_entity      |          | <b>textonly</b>            | function |
| <b>position</b>           | function | <b>texttocdata</b>         | function |
| <b>privatecodes</b>       | table    | <b>tocdata</b>             | function |
| <b>privatetoken</b>       | function | <b>toelement</b>           | function |
| <b>process</b>            | function | <b>tostring</b>            | function |
| <b>process_attributes</b> | function | <b>totable</b>             | function |
| <b>process_elements</b>   | function | <b>toxml</b>               | function |
| <b>processattributes</b>  | function | <b>tprint</b>              | function |
| <b>profiled</b>           | table    | <b>traverse</b>            | function |
| <b>raw</b>                | function | <b>unescaped</b>           | function |
| <b>registerentity</b>     | function | <b>unprivatized</b>        | function |
| <b>registers</b>          | function | <b>withelement</b>         | function |
| <b>reindex</b>            | function | <b>withelements</b>        | function |
| <b>remap_name</b>         | function | <b>wrap</b>                | function |
| <b>remap_namespace</b>    | function | <b>xmlns</b>               | table    |
| <b>remap_tag</b>          | function |                            |          |
| <b>remapname</b>          | function |                            |          |
| <b>remapnamespace</b>     | function |                            |          |
| <b>remaptag</b>           | function |                            |          |
| <b>renamespace</b>        | function |                            |          |
| <b>replace</b>            | function |                            |          |
| <b>replace_element</b>    | function |                            |          |
| <b>resetinjectors</b>     | function |                            |          |
| <b>resolvens</b>          | function |                            |          |
| <b>root</b>               | function |                            |          |
| <b>save</b>               | function |                            |          |
| <b>selection</b>          | function |                            |          |
| <b>separate</b>           | function |                            |          |
| <b>serialize</b>          | function |                            |          |
| <b>setcdata</b>           | function |                            |          |
| <b>setcomment</b>         | function |                            |          |

## zip (extra lua)

|                        |                     |
|------------------------|---------------------|
| <b>archives</b>        | table               |
| <b>close</b>           | function            |
| <b>closearchive</b>    | function            |
| <b>open</b>            | overloaded function |
| <b>openarchive</b>     | function            |
| <b>openfile</b>        | function            |
| <b>registeredfiles</b> | table               |
| <b>type</b>            | function            |

## zlib (extra lua)

|                      |          |
|----------------------|----------|
| <b>adler32</b>       | function |
| <b>compress</b>      | function |
| <b>compressobj</b>   | function |
| <b>crc32</b>         | function |
| <b>decompress</b>    | function |
| <b>decompressobj</b> | function |
| <b>version</b>       | function |