

MP aes attributes backends **basexx** **bit32** blobs  
boolean buffers builders caches **callback**  
callbacks catcodes characters chemistry  
commands containers context converters  
**coroutine** ctxrunner **debug** dir directives  
document documentdata drivers environment  
experiments figures **file** **fio** floats **font** fonts  
functions global graphics **gzip** images  
interactions interfaces **io** job **language**  
languages layouts **lfs** libraries lmx loaders  
logs lpdf **lpeg** **lua** luac luatex lxml **math**  
mathematics **md5** metapost **mime** moduledata  
modules mp **mplib** noads **node** nodes number  
objects optional **os** **package** pagebuilders  
paintreaders parametersets **pdf** **pdfdecode** **pdfe**  
physics **pngdecode** publications regimes  
resolvers sandbox scripts set **sha2** **sio** **socket**  
sorters sparse statistics **status** storage  
streams **string** structures **table** **tex**  
texconditionals **texconfig** texconstants texifs  
**texio** texitdefined texmodes texsystemmodes  
thirddata **token** tokens tracers trackers  
typesetters updaters url userdata **utf8**  
utilities visualizers **xcomplex** **xdecimal** **xmath**  
xml **xzip** **zip** **zlib**

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

# global (alias: \_G)

<b>CONTEXT</b>	number	<b>createmask</b>	function
<b>FFISUPPORTED</b>	boolean	<b>ctxrunner</b>	table
<b>JITSUPPORTED</b>	boolean	<b>debug</b>	table
<b>LUAMAJORVERSION</b>	number	<b>dimen</b>	function
<b>LUAMINORVERSION</b>	number	<b>dir</b>	table
<b>LUATEXENGINE</b>	string	<b>directives</b>	table
<b>LUATEXFORMATID</b>	number	<b>document</b>	table
<b>LUATEXFUNCTIONALITY</b>	number	<b>documentdata</b>	table
<b>LUATEXVERSION</b>	number	<b>dofile</b>	function
<b>LUAVERSION</b>	number	<b>done</b>	boolean
<b>MP</b>	function	<b>drivers</b>	table
<b>aes</b>	table	<b>environment</b>	table
<b>arg</b>	table	<b>error</b>	function
<b>asnumber_p</b>	function	<b>experiments</b>	table
<b>assert</b>	function	<b>figures</b>	table
<b>attributes</b>	table	<b>file</b>	table
<b>backends</b>	table	<b>fio</b>	table
<b>basexx</b>	table	<b>floats</b>	table
<b>bit32</b>	table	<b>flushsimplerule</b>	function
<b>blobs</b>	table	<b>flushspecialrule</b>	function
<b>blockrequire</b>	function	<b>font</b>	table
<b>boolean</b>	table	<b>fonts</b>	table
<b>buffers</b>	table	<b>functions</b>	table
<b>builders</b>	table	<b>getmetatable</b>	function
<b>caches</b>	table	<b>getscriptstatus</b>	function
<b>callback</b>	table	<b>global</b>	table
<b>callbacks</b>	table	<b>graphics</b>	table
<b>catcodes</b>	table	<b>gzip</b>	table
<b>characters</b>	table	<b>handledefinitions</b>	function
<b>checkimage</b>	function	<b>handletransformstring</b>	function
<b>chemistry</b>	table	<b>images</b>	table
<b>collectgarbage</b>	function	<b>inspect</b>	function
<b>combine</b>	function	<b>interactions</b>	table
<b>commands</b>	table	<b>interfaces</b>	table
<b>containers</b>	table	<b>io</b>	table
<b>context</b>	function	<b>ipairs</b>	function
<b>converters</b>	table	<b>job</b>	table
<b>copyarray</b>	function	<b>language</b>	table
<b>copydictionary</b>	function	<b>languages</b>	table
<b>coroutine</b>	table	<b>last_pdf</b>	number
<b>count</b>	number	<b>layouts</b>	table

<b>lfs</b>	table	<b>physics</b>	table
<b>libraries</b>	table	<b>pngdecode</b>	table
<b>lmx</b>	table	<b>popleaderlevel</b>	function
<b>load</b>	function	<b>print</b>	function
<b>loaders</b>	data table	<b>profilelines</b>	function
<b>loadfile</b>	function	<b>publications</b>	table
<b>loadstring</b>	function	<b>pushleaderlevel</b>	function
<b>logs</b>	table	<b>rawequal</b>	function
<b>lpdf</b>	table	<b>rawget</b>	function
<b>lpeg</b>	table	<b>rawlen</b>	function
<b>lua</b>	table	<b>rawset</b>	function
<b>luac</b>	table	<b>recolor</b>	function
<b>luatex</b>	table	<b>regimes</b>	table
<b>lxml</b>	table	<b>require</b>	function
<b>math</b>	table	<b>required</b>	function
<b>mathematics</b>	table	<b>resolvers</b>	table
<b>mathshapekern</b>	function	<b>ruledspace</b>	function
<b>md5</b>	table	<b>sandbox</b>	table
<b>metapost</b>	table	<b>scripts</b>	table
<b>mime</b>	table	<b>select</b>	function
<b>moduledata</b>	table	<b>set</b>	table
<b>modules</b>	table	<b>setinspector</b>	function
<b>mp</b>	function	<b>setmathparameters</b>	function
<b>mplib</b>	table	<b>setmetatable</b>	function
<b>next</b>	function	<b>sha2</b>	table
<b>noads</b>	table	<b>shipbox_ref_h</b>	number
<b>node</b>	table	<b>shipbox_ref_v</b>	number
<b>nodes</b>	table	<b>sio</b>	table
<b>number</b>	table	<b>socket</b>	table
<b>objects</b>	table	<b>sorters</b>	table
<b>optional</b>	table	<b>sparse</b>	table
<b>optionalrequire</b>	function	<b>statistics</b>	table
<b>os</b>	table	<b>status</b>	table
<b>p_number_p</b>	userdata	<b>storage</b>	table
<b>p_number_u</b>	userdata	<b>streams</b>	table
<b>package</b>	table	<b>string</b>	table
<b>pagebuilders</b>	table	<b>structures</b>	table
<b>paintreaders</b>	table	<b>table</b>	table
<b>pairs</b>	function	<b>tex</b>	table
<b>parametersets</b>	table	<b>texconditionals</b>	data table
<b>pcall</b>	function	<b>texconfig</b>	table
<b>pdf</b>	table	<b>texconstants</b>	data table
<b>pdfdecode</b>	table	<b>texifs</b>	data table
<b>pdfe</b>	table	<b>texio</b>	table

<b>texisdefined</b>	data table	<b>url</b>	table
<b>texmodes</b>	data table	<b>userdata</b>	table
<b>texsystemmodes</b>	data table	<b>utf</b>	table
<b>thirddata</b>	table	<b>utf8</b>	table
<b>toboollean</b>	function	<b>utilities</b>	table
<b>todecimal</b>	function	<b>visualizers</b>	table
<b>token</b>	table	<b>warn</b>	function
<b>tokens</b>	table	<b>xcomplex</b>	table
<b>tonumber</b>	function	<b>xdecimal</b>	table
<b>tostring</b>	function	<b>xmath</b>	table
<b>tracers</b>	table	<b>xml</b>	table
<b>trackers</b>	table	<b>xpcall</b>	function
<b>type</b>	function	<b>xzip</b>	table
<b>typesetters</b>	table	<b>zip</b>	table
<b>unpack</b>	function	<b>zlib</b>	table
<b>updaters</b>	table		

## aes (context)

**decode** function  
**encode** function

**random** function

# attributes (context)

## alternates      table

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

## applyoverloads      function

## checkvalues      function

## 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
- D counts
- B couple
- F currentmodel
- F currentnamedmodel
- D data
- N default
- F defineintermediatecolor
- F definemultitonecolor
- F defineprocesscolor
- F defineprocesscolordirect
- F definesimplegray
- F definespotcolor
- F definetransparency
- F enable
- F filter
- N forced
- F forcedmodel
- F forcesupport

- F formatcolor
- F formatgray
- F formatluminance
- F formatluminanceratio
- F getpagecolormodel
- F gray
- F graytohsv
- F handler
- T helpers
  - F complement
  - F inbetween
  - F justone
- F hsvtogray
- F hsvtorgb
- F hwbtorgb
- F iccprofile
- F isblack
- F labtorgb
- F labtoxyz
- N main
- S model
- D models
- F mpcolor
- F mpnamedcolor
- F mpoptions
- F namedcolorattributes
- N none
- F popset
- F processcolorcomponents
- F pushset
- F register
- D registered
- F registerspotcolor
- F rgb
- F rgbtocmyk
- F rgbtogray
- F rgbtohsv
- F rgbtoxyz
- N selector
- F setlist
- F setmodel

F setpagecolormodel	
D sets	
F spec	
F spot	
F spotcolorname	
F spotcolorparent	
F spotcolorvalue	
B supported	
F toattributes	
F transparencycomponents	
B triggering	
F usecolors	
D valid	
F value	
D values	
B weightgray	
F xyztolab	
F xyztorgb	
<b>counts</b>	data table
<b>define</b>	function
<b>effects</b>	table
N attribute	
D data	
F enable	
F handler	
F register	
D registered	
D values	
<b>getvalue</b>	function
<b>getvalues</b>	function
<b>handlers</b>	table
<b>hasvalues</b>	function
<b>list</b>	data table
<b>markasoverload</b>	function
<b>names</b>	data table
<b>negatives</b>	table
N attribute	
D data	
F enable	
F handler	
F register	
D registered	
F set	
<b>numbers</b>	data table

<b>ofnode</b>	function
<b>private</b>	function
<b>public</b>	function
<b>registervalue</b>	function
<b>restore</b>	function
<b>save</b>	function
<b>setcleaner</b>	function
<b>showcurrent</b>	function
<b>states</b>	table
F disabletriggering	
F enabletriggering	
F finalize	
F initialize	
F process	
F selective	
F simple	
F stacked	
F stacker	
<b>system</b>	function
<b>tooverloads</b>	function
<b>transparencies</b>	table
N attribute	
D data	
F enable	
F forcesupport	
F handler	
T names	
N color	
N colorburn	
N colordodge	
N darken	
N difference	
N exclusion	
N hardlight	
N hue	
N lighten	
N luminosity	
N multiply	
N none	
N normal	
N overlay	
N saturation	
N screen	
N softlight	

N none	F forcesupport
F register	F handler
D registered	B hasorder
B supported	D listwise
F toattribute	F register
B triggering	D registered
F value	F resolve_begin
D values	F resolve_end
<b>unsetvalue</b>	F resolve_reset
<b>values</b>	F resolve_step
<b>viewerlayers</b>	D scopes
N attribute	F setfeatures
F cleanup	F start
D data	F stop
F define	B supported
F definedlayoutcomponent	D values
F enable	



# backends (context)

**closeout** function

**codeinjections** table

F registerboxresource

F restoreboxresource

**current** string

**defaults** table

T codeinjections

F prerollreference

F setautoprefix

F vfstartcolor

F vfstopcolor

T nodeinjections

F cmykcolor

F destination

F graycolor

F injectknockout

F injectoverprint

F reference

F rgbcolor

F spotcolor

F transparency

T registrations

F transparency

D tables

**getcallbackstate** function

**included** table

B context

B date

B id

B metadata

B pdf

**initialize** function

**latelua** function

**nodeinjections** table

**nothing** function

**openout** function

**registered** table

T pdf

T codeinjections

F addbookmarks

F analyzenormalsymbol

F analyzesymbol

F attachmentid

F bitmap

F clonefield

F copyimage

F definefield

F definefieldset

F defineviewerlayer

F embedfile

F embedimage

F enabletags

F exportformdata

F fieldssurrounding

F flushmergelayer

F getbookmarks

F getboxresourcebox

F getdefaultfieldvalue

F getfieldcategory

F getfieldset

F getformatoption

F getinfo

F getpreviewfigure

F getrefobj

F insertrenderingwindow

F jp2

F jpg

F maptag

F mergebookmarks

F mergecomments

F mergefields

F mergereferences

F mergerenditions

F mergeviewerlayers

F newimage

F png

F prerollreference

F presetsymbol

F presetsymbolist

F processrendering

F registerdocumentcloseaction

F registerdocumentopenaction

- F registeredsymbol
- F registerpagecloseaction
- F registerpageopenaction
- F registerpattern
- F registersymbol
- F ruleactionbox
- F ruleactiondraw
- F ruleactionfill
- F ruleactionmp
- F ruleactionstroke
- F saveboxresource
- F scanimage
- F setattachmentsupport
- F setautoprefix
- F setencryption
- F setfieldcalculationset
- F setfigurealternative
- F setfigurecolorspace
- F setfiguremask
- F setformat
- F setformsmethod
- F setpagetransition
- F settaggingsupport
- F setxmpfile
- F startlayer
- F startunicodetoactualtext
- F startunicodetoactualtextdirect
- F stoplayer
- F stopunicodetoactualtext
- F stopunicodetoactualtextdirect
- F supportedformats
- F unicodetoactualtext
- F useviewerlayer
- F validfield
- F validfieldcategory
- F validfieldset
- F vfstartcolor
- F vfstopcolor
- F wrapimage
- S name
- T nodeinjections
  - F addtags

- F annotation
- F attachfile
- F changestackedlayer
- F cmykcolor
- F comment
- F destination
- F effect
- F getboxresourcedimensions
- F graycolor
- F injectbitmap
- F insertu3d
- F knockout
- F negative
- F overprint
- F positive
- F reference
- F rgbcolor
- F spotcolor
- F startalternate
- F startlayer
- F startstackedlayer
- F stopalternate
- F stoplayer
- F stopstackedlayer
- F transparency
- F typesetfield
- F useboxresource
- T registrations
  - F cmykindexcolor
  - F cmykspotcolor
  - F getspotcolorreference
  - F grayindexcolor
  - F grayspotcolor
  - F rgbindexcolor
  - F rgbspotcolor
  - F spotcolorname
  - F transparency
- T tables
 

<b>registrations</b>	table
<b>setencryption</b>	function
<b>tables</b>	table
<b>writeout</b>	function

## basexx (extra lua)

**decode16**    function

**decode64**    function

**decode85**    function

**decodeLZW**   function

**decodeRL**    function

**encode16**    function

**encode64**    function

**encode85**    function

**encodeLZW**   function

**encodeRL**    function

## bit32 (basic lua)

**arshift** function  
**band** function  
**bnot** function  
**bor** function  
**btest** function  
**bxor** function

**extract** function  
**lrotate** function  
**lshift** function  
**replace** function  
**rrotate** function  
**rshift** 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>tonodes</b>	function
<b>tovpack</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>empty</b>	function
<b>erase</b>	function
<b>exists</b>	function
<b>get</b>	function
<b>getcontent</b>	function
<b>getctxlua</b>	function
<b>getlines</b>	function
<b>getmkvi</b>	function
<b>gettex</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>run</b>	function
<b>samplefile</b>	function
<b>undent</b>	function

# builders (context)

**checkparcontext** function

**checksidefloat** function

**kernel** table

F collapsing

F hyphenating

F kerning

F ligaturing

F mlisttohtml

**local\_box\_filter** function

**paragraphs** table

T constructors

N attribute

F define

F disable

F enable

F handler

T methods

F basic

F default

F hpack

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

**profiling** table

F add

F boxlinehandler

F distance

F fixedprofile

F get

F list

F pagehandler

F pagelinehandler

F profilebox

F profilelines

F set

F setlines

**vspacing** table

D categories

F checkstrutdepth

F collapsevbox

T data

D map

D skip

D snapmethods

F definesnapmethod

B fixed

F flushcontributions

F forcepageflush

F forcestrutdepth

F getnofpreviouslines

F inject

F injectdisable

F injectpenalty

F injectskip

F interceptsamepagecontent

F pagehandler

F pageoverflow

F popatsame

F pushatsame

F setmap

F setskip

F snapbox

F synchronizepage

F tocategories



F tocategory

F vboxhandler

## cache (context)

<b>base</b>	string	<b>loadcontent</b>	function
<b>collapsecontent</b>	function	<b>loaddata</b>	function
<b>configfiles</b>	function	<b>more</b>	string
<b>contentstate</b>	function	<b>savecontent</b>	function
<b>defaults</b>	table	<b>savadata</b>	function
<b>getfirstreadablefile</b>	function	<b>setfirstwritablefile</b>	function
<b>getreadablepaths</b>	function	<b>setluanames</b>	function
<b>getwritablepath</b>	function	<b>treehash</b>	function
<b>hashed</b>	function	<b>usedpaths</b>	function
<b>is_writable</b>	function		

## callback (basic tex)

**find**        function  
**known**     function  
**list**        function

**register**   overloaded function  
**usage**      function

# callbacks (context)

**freeze** function

**functions** table

F start\_page\_number

F stop\_page\_number

**known** function

**list** data table

**pop** function

**push** function

**register** function

**report** function

**supported** table

B alignment\_filter

B append\_line\_filter

B append\_to\_vlist\_filter

B begin\_paragraph

B build\_page\_insert

B buildpage\_filter

B define\_font

B find\_format\_file

B find\_log\_file

B get\_attribute

B get\_math\_dictionary

B get\_noad\_class

B glyph\_run

B handle\_overload

B hpack\_filter

B hpack\_quality

B hyphenate

B insert\_par

B intercept\_lua\_error

B intercept\_tex\_error

B kerning

B ligaturing

B linebreak\_filter

B local\_box\_filter

B make\_extensible

B math\_rule

B missing\_character

B mlist\_to\_hlist

B open\_data\_file

B packed\_vbox\_filter

B paragraph\_context

B post\_linebreak\_filter

B pre\_dump

B pre\_linebreak\_filter

B pre\_output\_filter

B process\_character

B process\_jobname

B register\_extensible

B show\_error\_message

B show\_lua\_call

B show\_warning\_message

B show\_whatsit

B start\_file

B start\_run

B stop\_file

B stop\_run

B trace\_memory

B vpack\_filter

B vpack\_quality

B wrapup\_run

## catcodes (context)

**names** data table

**numbers** data table

**register** function

# characters (context)

<b>adobename</b>	function	T after_subscript	
<b>bidirectional</b>	data table	T anudatta	
<b>blockrange</b>	function	T before_half	
<b>blocks</b>	data table	T before_main	
<b>can_have_space</b>	data table	T before_postscript	
<b>casemap</b>	table	T before_subscript	
<b>categories</b>	data table	T below_mark	
<b>category</b>	function	T consonant	
<b>categorytags</b>	data table	T dependent_vowel	
<b>classifiers</b>	table	T halant	
<b>collapsed</b>	data table	T independent_vowel	
<b>combined</b>	data table	T nukta	
<b>contextname</b>	function	T post_mark	
<b>csletters</b>	data table	T pre_mark	
<b>data</b>	data table	T ra	
<b>decomposed</b>	data table	T stress_tone_mark	
<b>description</b>	function	T twopart_mark	
<b>descriptions</b>	data table	T vowel_modifier	
<b>detailtags</b>	data table	<b>initialize</b>	function
<b>directions</b>	table	<b>is_character</b>	data table
<b>emoji</b>	table	<b>is_command</b>	data table
F compact		<b>is_hyphenator</b>	data table
F known		<b>is_letter</b>	data table
F resolve		<b>is_mark</b>	data table
<b>emojized</b>	function	<b>is_punctuation</b>	data table
<b>encodes</b>	data table	<b>is_spacing</b>	data table
<b>entities</b>	data table	<b>is_symbol</b>	data table
<b>fallbacks</b>	data table	<b>lcchars</b>	data table
<b>filters</b>	data table	<b>lccode</b>	function
<b>fractions</b>	table	<b>lccodes</b>	data table
<b>fromnumber</b>	function	<b>lettered</b>	function
<b>fschars</b>	data table	<b>lhash</b>	data table
<b>fscodes</b>	data table	<b>linebreaks</b>	data table
<b>getrange</b>	function	<b>lower</b>	function
<b>graphemes</b>	data table	<b>mathlists</b>	data table
<b>hangul</b>	data table	<b>mirrors</b>	table
<b>indigroups</b>	table	<b>otfscripts</b>	data table
T above_mark		<b>ranges</b>	data table
T after_half		<b>registerentities</b>	function
T after_main		<b>remap_hangul_syllable</b>	function
T after_postscript		<b>scripthash</b>	table

<b>setactivecatcodes</b>	function	D accentmapping	
<b>setlettercatcodes</b>	function	D commandmapping	
<b>setothercatcodes</b>	function	F defineaccents	
<b>shape</b>	function	F safechar	
<b>shaped</b>	function	F strtoutf	
<b>shash</b>	data table	F strtoutfpattern	
<b>shchars</b>	data table	F toutf	
<b>shcodes</b>	data table	F toutfpattern	
<b>showstring</b>	function	<b>textclasses</b>	table
<b>specialchars</b>	data table	<b>tonumber</b>	function
<b>specials</b>	data table	<b>ucchars</b>	data table
<b>splits</b>	table	<b>uccode</b>	function
T char		<b>uccodes</b>	data table
T compat		<b>uhash</b>	data table
<b>subscripts</b>	table	<b>unicodechar</b>	function
<b>superscripts</b>	table	<b>upper</b>	function
<b>synonyms</b>	data table	<b>verbosemarks</b>	data table
<b>tex</b>	table		

## chemistry (context)

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



## containers (context)

**cleannname** function  
**content** function  
**define** function  
**is\_usable** function

**is\_valid** function  
**read** function  
**usecache** boolean  
**write** function

## converters (context)

<b>A</b>	function	<b>cn-c</b>	function
<b>A:es</b>	function	<b>convert</b>	function
<b>A:ru</b>	function	<b>decimals</b>	function
<b>A:sl</b>	function	<b>define</b>	function
<b>AK</b>	function	<b>gregorian_to_hebrew</b>	function
<b>Alphabetic</b>	function	<b>gregorian_to_jalali</b>	function
<b>Alphabetic:es</b>	function	<b>hebrewnumerals</b>	function
<b>Alphabetic:ru</b>	function	<b>helpers</b>	table
<b>Alphabetic:sl</b>	function	<b>hexstringtonumber</b>	function
<b>Character</b>	function	<b>i</b>	function
<b>Characters</b>	function	<b>isleapyear</b>	function
<b>I</b>	function	<b>jalali_to_gregorian</b>	function
<b>KA</b>	function	<b>lchexnumber</b>	function
<b>KR</b>	function	<b>lchexnumbers</b>	function
<b>R</b>	function	<b>leapyear</b>	function
<b>RK</b>	function	<b>lower</b>	function
<b>Romannumerals</b>	function	<b>max</b>	function
<b>Russiannumerals</b>	function	<b>maxchrs</b>	function
<b>Sloveniannumerals</b>	function	<b>nicenumber</b>	function
<b>Spanishnumerals</b>	function	<b>nofdays</b>	function
<b>Word</b>	function	<b>number</b>	function
<b>Words</b>	function	<b>numbers</b>	function
<b>a</b>	function	<b>octnumber</b>	function
<b>a:es</b>	function	<b>octstringtonumber</b>	function
<b>a:ru</b>	function	<b>ordinal</b>	function
<b>a:sl</b>	function	<b>r</b>	function
<b>abjadnodotnumerals</b>	function	<b>rawcharacter</b>	function
<b>abjadnumerals</b>	function	<b>romannumerals</b>	function
<b>alphabetic</b>	function	<b>russiannumerals</b>	function
<b>alphabetic:es</b>	function	<b>sequences</b>	data table
<b>alphabetic:ru</b>	function	<b>settime</b>	function
<b>alphabetic:sl</b>	function	<b>sloveniannumerals</b>	function
<b>character</b>	function	<b>spaceddigits</b>	function
<b>characters</b>	function	<b>spanishnumerals</b>	function
<b>chineseallnumerals</b>	function	<b>textime</b>	function
<b>chinesecapnumerals</b>	function	<b>toabjad</b>	function
<b>chinesenumerals</b>	function	<b>tochinese</b>	function
<b>chr</b>	function	<b>tohebrew</b>	function
<b>chrs</b>	function	<b>toroman</b>	function
<b>cn</b>	function	<b>totime</b>	function
<b>cn-a</b>	function	<b>uchexnumber</b>	function

**uchexnumbers**

**upper**

**verbose**

D data

function

function

table

F translate

**weekday**

**word**

**words**

function

function

function

## coroutine (basic lua)

**close**            function  
**create**          function  
**isyieldable**    function  
**resume**          function

**running**        function  
**status**          function  
**wrap**           function  
**yield**           function

# ctxrunner (context)

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

## debug (basic lua)

**getinfo**    function

**sethook**    function

**traceback** function

## dir (context)

<b>collectpattern</b>	function
<b>current</b>	function
<b>expandname</b>	function
<b>found</b>	function
<b>glob</b>	function
<b>globdirs</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
<b>values</b>	function



# document (context)

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

# documentdata (context)

**variable** function

# drivers (context)

<b>applyanchor</b>	function	F updatefontstate
<b>applyorientation</b>	function	T whatsit
<b>convert</b>	function	S name
<b>converters</b>	table	T json
F analyze		T actions
F engine		F cleanup
F lmtx		F convert
F resyncbox		F finalize
<b>enable</b>	function	F initialize
<b>gethpos</b>	function	F outputfilename
<b>getpos</b>	function	F prepare
<b>getrpos</b>	function	F wrapup
<b>getvpos</b>	function	T flushers
<b>helpers</b>	table	F character
<b>install</b>	function	F popleaderlevel
<b>instances</b>	table	F pushleaderlevel
T empty		F rule
T actions		F setstate
F convert		F simplerule
F prepare		F specialrule
T flushers		F updatefontstate
F popleaderlevel		T whatsit
F pushleaderlevel		S name
T whatsit		T lua
S name		T actions
T js		F cleanup
T actions		F convert
F cleanup		F finalize
F convert		F initialize
F finalize		F outputfilename
F initialize		F prepare
F outputfilename		F wrapup
F prepare		T flushers
F wrapup		F character
T flushers		F popleaderlevel
F character		F pushleaderlevel
F popleaderlevel		F rule
F pushleaderlevel		F simplerule
F rule		F specialrule
F simplerule		F updatefontstate
F specialrule		T whatsit

S name	T actions	
T mpo	F cleanup	
T actions	F convert	
F finalize	F finalize	
F initialize	F initialize	
T flushers	F outputfilename	
F character	F prepare	
F popleaderlevel	F wrapup	
F pushleaderlevel	T flushers	
F rule	F character	
F simplerule	F fontchar	
F specialrule	F group	
T whatsit	F image	
S name	F literal	
T mps	F popleaderlevel	
T actions	F poporientation	
F cleanup	F pushleaderlevel	
F convert	F pushorientation	
F finalize	F restore	
F initialize	F rule	
F outputfilename	F save	
F prepare	F setmatrix	
F wrapup	F setstate	
T flushers	F simplerule	
F character	F specialrule	
F popleaderlevel	F startclipping	
F pushleaderlevel	F startmatrix	
F rule	F startmirroring	
F simplerule	F startrotation	
F specialrule	F startscaling	
F updatefontstate	F stopclipping	
T whatsit	F stopmatrix	
S name	F stopmirroring	
T none	F stoprotation	
T actions	F stopscaling	
T flushers	F updatefontstate	
F popleaderlevel	T whatsit	
F pushleaderlevel	S name	
T whatsit	<b>lmtxversion</b>	number
S name	<b>outputfilename</b>	function
T pdf	<b>report</b>	function

## environment (context)

<b>argument</b>	function	<b>luafile</b>	function
<b>arguments</b>	data table	<b>luafilechunk</b>	function
<b>basicengines</b>	data table	<b>luatexengine</b>	string
<b>currentrun</b>	number	<b>luatexfunctionality</b>	number
<b>definefilefallback</b>	function	<b>luatexversion</b>	number
<b>definefilesynonym</b>	function	<b>maxnofruns</b>	number
<b>engineflags</b>	data table	<b>oldhome</b>	string
<b>filename</b>	string	<b>originalarguments</b>	data table
<b>filenames</b>	table	<b>outputfilename</b>	string
<b>files</b>	table	<b>ownbin</b>	string
<b>filesynonyms</b>	data table	<b>ownmain</b>	string
<b>forcedruns</b>	number	<b>ownname</b>	string
<b>getargument</b>	function	<b>ownpath</b>	string
<b>homedir</b>	string	<b>prerollrun</b>	boolean
<b>initex</b>	boolean	<b>rawarguments</b>	data table
<b>initexmode</b>	boolean	<b>reconstructcommandline</b>	function
<b>initializearguments</b>	function	<b>relativepath</b>	function
<b>initializefilenames</b>	function	<b>setargument</b>	function
<b>inputfilebarename</b>	string	<b>splitarguments</b>	function
<b>inputfilename</b>	string	<b>suffix</b>	string
<b>inputfilesuffix</b>	string	<b>texfile</b>	function
<b>jitsupported</b>	boolean	<b>texmfos</b>	string
<b>jobfilefullname</b>	string	<b>texos</b>	string
<b>jobfilename</b>	string	<b>texroot</b>	string
<b>jobfilesuffix</b>	string	<b>truefilename</b>	function
<b>jobname</b>	string	<b>uselua module</b>	function
<b>kindofrun</b>	number	<b>usemodules</b>	function
<b>lmtxmode</b>	number	<b>validengines</b>	data table
<b>loadexamodes</b>	function	<b>version</b>	string
<b>loadluafile</b>	function		

# experiments (context)

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

# figures (context)

<b>applyratio</b>	function	<b>F resetstore</b>	
<b>badname</b>	function	<b>F scan</b>	
<b>bases</b>	data table	<b>F serialize</b>	
<b>bitmapimage</b>	function	<b>T sizes</b>	
<b>boxnumber</b>	number	<b>B art</b>	
<b>cachepaths</b>	data table	<b>B bleed</b>	
<b>check</b>	function	<b>B crop</b>	
<b>checkers</b>	data table	<b>B media</b>	
<b>conversions</b>	data table	<b>B none</b>	
<b>converters</b>	data table	<b>B trim</b>	
<b>current</b>	function	<b>F storedata</b>	
<b>defaultdepth</b>	number	<b>F totable</b>	
<b>defaultheight</b>	number	<b>T types</b>	
<b>defaultsearch</b>	boolean	<b>N jbig2</b>	
<b>defaultwidth</b>	number	<b>N jp2</b>	
<b>done</b>	function	<b>N jpg</b>	
<b>dummy</b>	function	<b>N none</b>	
<b>existsers</b>	data table	<b>N pdf</b>	
<b>exists</b>	function	<b>N png</b>	
<b>formats</b>	data table	<b>N stream</b>	
<b>found</b>	data table	<b>F wrap</b>	
<b>get</b>	function	<b>include</b>	function
<b>getinfo</b>	function	<b>includers</b>	data table
<b>getpdfinfo</b>	function	<b>initialize</b>	function
<b>getrealpage</b>	function	<b>loaded</b>	data table
<b>guess</b>	function	<b>localpaths</b>	data table
<b>guessfromstring</b>	function	<b>magics</b>	data table
<b>hash</b>	function	<b>mergegoodies</b>	function
<b>identifiers</b>	data table	<b>nofmissing</b>	number
<b>identify</b>	function	<b>nofprocessed</b>	number
<b>images</b>	table	<b>order</b>	data table
<b>F check</b>		<b>paths</b>	data table
<b>F checksize</b>		<b>patterns</b>	data table
<b>F copy</b>		<b>pop</b>	function
<b>F create</b>		<b>preferquality</b>	boolean
<b>F embed</b>		<b>programs</b>	data table
<b>F embedfromstore</b>		<b>push</b>	function
<b>F fetchdata</b>		<b>registerpattern</b>	function
<b>T keys</b>		<b>registerresource</b>	function
<b>F print</b>		<b>registersuffix</b>	function
<b>F resetdata</b>		<b>remappers</b>	data table

<b>resources</b>	data table	<b>setorder</b>	function
<b>scale</b>	function	<b>setpaths</b>	function
<b>set</b>	function	<b>suffixes</b>	data table
<b>setconversion</b>	function	<b>used</b>	data table
<b>setlookups</b>	function		



## 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
<b>withinbase</b>	function

## fio (extra lua)

<b>getposition</b>	function
<b>read2dot14</b>	function
<b>readbytes</b>	function
<b>readbytetable</b>	function
<b>readcardinal1</b>	function
<b>readcardinal1le</b>	function
<b>readcardinal2</b>	function
<b>readcardinal2le</b>	function
<b>readcardinal3</b>	function
<b>readcardinal3le</b>	function
<b>readcardinal4</b>	function
<b>readcardinal4le</b>	function
<b>readcardinaltable</b>	function
<b>readcline</b>	function
<b>readcstring</b>	function
<b>readfixed2</b>	function
<b>readfixed4</b>	function
<b>readinteger1</b>	function

<b>readinteger1le</b>	function
<b>readinteger2</b>	function
<b>readinteger2le</b>	function
<b>readinteger3</b>	function
<b>readinteger3le</b>	function
<b>readinteger4</b>	function
<b>readinteger4le</b>	function
<b>readintegertable</b>	function
<b>setposition</b>	function
<b>skipposition</b>	function
<b>writecardinal1</b>	function
<b>writecardinal1le</b>	function
<b>writecardinal2</b>	function
<b>writecardinal2le</b>	function
<b>writecardinal3</b>	function
<b>writecardinal3le</b>	function
<b>writecardinal4</b>	function
<b>writecardinal4le</b>	function

# floats (context)

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

## font (basic tex)

<b>addcharacters</b>	function
<b>current</b>	function
<b>define</b>	function
<b>getfont</b>	function
<b>getfontdimen</b>	function
<b>getfontspec</b>	function
<b>getmathindex</b>	function

<b>getmathspec</b>	function
<b>id</b>	function
<b>max</b>	function
<b>nextid</b>	function
<b>setfont</b>	function
<b>setfontdimen</b>	function

# fonts (context)

## analyzers table

- D features
- D initializers
- D methods
- F setstate
- D states
- B useunicodemarks

## callbacks table

- F callback
- F devirtualize

## checkers table

- F getmissing
- D mapping
- F missing
- F placeholder

## cid table

- F getmap
- F loadfile

## collections table

- F checkenabled
- F clonevector
- F define
- T definitions
- F direct
- F found
- F prepare
- F process
- F register
- F registermain
- F report
- F reset
- T vectors

## constructors table

- F addcharacters
- F addcoreunicodes
- F aftercopyingcharacters
- F applyfinalizers
- F applymanipulators
- F assignmathparameters
- F beforecopyingcharacters
- F beforepassingfonttotex

- D cache
- F calculatescale
- F checkedfeatures
- F checkedfilename
- F collectprocessors
- F currentfonthasfeature
- D designsizes
- F enhanceparameters
- T enhancers
- T afm
  - F apply
  - F patch
- T patches
  - F register
  - F report
- F register
- F report
- T otf
  - F addfeature
  - F apply
  - F enhance
  - F patch
- T patches
  - F register
  - F report
- F register
- F report
- T tfm
  - F apply
  - F patch
- T patches
  - F register
  - F report
- F register
- F report
- N factor
- T features
  - D afm
  - D otf
  - D tfm
- F finalize

F getfeatureaction	S defaultnodealternate
F getmathparameter	D features
F getprivate	F featuresinitializer
T handlers	F featuresprocessor
T afm	F getactualtext
B autoprefixed	F getalternate
D cache	F getgsub
D features	F getkern
F getkern	F getmultiple
T helpdata	F getstreamhash
D bothkerned	F getsubstitution
D leftkerned	T handlers
D ligatures	F ctx_camelcasing
D rightkerned	F devanagari_remove_joiners
D texligatures	F devanagari_reorder_matras
F load	F devanagari_reorder_pre_base_reordering_consonants
T readers	F devanagari_reorder_reph
F getinfo	F gpos_context
F loadfont	F gpos_contextchain
F loadshapes	F gpos_cursive
F setfeatures	F gpos_mark2base
B syncspace	F gpos_mark2ligature
N version	F gpos_mark2mark
T otf	F gpos_pair
F addfeature	F gpos_single
F basemodeinitializer	F gsub_alternate
D cache	F gsub_context
F collectlookups	F gsub_contextchain
T coverup	F gsub_ligature
T actions	F gsub_multiple
F alternate	F gsub_reversecontextchain
F chainposition	F gsub_single
F chainsubstitution	F trigger_space_kerns
F kern	T helpers
F ligature	F blockligatures
F multiple	F pardirstate
F pair	F txtfirststate
F single	F load
F substitution	F loadoutlinedata
F register	F loadstreamdata
S stepkey	F modeinitializer
F dataset	D mpscache
F datasetpositionprocessor	D pdfcache
S defaultbasealternate	F plugininitializer

F pluginprocessor	F context
T plugins	F extension
T text	F ligature
D pngcache	F multiple
B pngenabled	F reversechainedcontextsingle
T readers	F single
F addunicodetable	F gvar
F avar	F head
F cbdt	T helpers
F cblc	F axistofactors
F cff	F cleannname
F cff2	F getaxisscale
T cffencoder	F getfactors
F checkhash	F getscales
F cmap	F gotodatatable
F colr	F normalizedaxis
F compact	T normalizedaxisishash
F condense	F readvariationdata
F cpal	F reportskippedtable
F ebdt	F setvariabledata
F eblc	F hhea
F ebsc	F hmtx
F expand	F hvar
F extend	F kern
F fvar	F loadfont
F gdef	F loadshapes
F getcomponents	F loca
F getinfo	F math
F glyf	F maxp
F gpos	F mvar
T gposhandlers	F name
F chainedcontext	F os/2
F context	F pack
F cursive	F parsecharstrings
F extension	F post
F marktobase	F registerextender
F marktoligature	F rehash
F marktomark	F sbix
F pair	F stat
F single	T streamreader
F gsub	F close
T gsubhandlers	F getposition
F alternate	F getsizes
F chainedcontext	F look

F open	F writecardinal3
F read2dot14	F writecardinal3le
F readbyte	F writecardinal4
F readbytes	F writecardinal4le
F readbytetable	F writeinteger1
F readcardinal	F writeinteger1le
F readcardinal1	F writeinteger2
F readcardinal1le	F writeinteger2le
F readcardinal2	F writeinteger3
F readcardinal2le	F writeinteger3le
F readcardinal3	F writeinteger4
F readcardinal3le	F writeinteger4le
F readcardinal4	F writestring
F readcardinal4le	F stripredundant
F readcardinaltable	F svg
F readchar	N tableversion
F readcline	F unifymissing
F readcstring	F unpack
F readfixed2	F vhea
F readfixed4	F vmtx
F readinteger	F vorg
F readinteger1	F vvar
F readinteger1le	F woff2otf
F readinteger2	F registerpalette
F readinteger2le	F registerplugin
F readinteger3	F reorderlookups
F readinteger3le	F scriptandlanguage
F readinteger4	F setdynamics
F readinteger4le	F setfeatures
F readintegertable	T statistics
F readsignedbyte	D usedfeatures
F readstring	D svgcache
F readtag	B svgenabled
F setposition	T tables
F size	D baselines
F skip	D features
F skiplong	D featuretypes
F skipposition	D languages
F skipshort	D scripts
F writebyte	F texthandler
F writecardinal1	T vectors
F writecardinal1le	T arab
F writecardinal2	T gpos
F writecardinal2le	N curs



- N kern
- N mark
- N mkmk
- T gsub
- N calt
- N ccmp
- N csw
- N dlig
- N fina
- N init
- N isol
- N liga
- N medi
- N mset
- N rclt
- N rlig
- N version
- T pfb
- F loadvector
- N version
- T tfm
- D cache
- D features
- N maxnestingdepth
- N maxnestingsize
- T readers
- F loadpk
- F loadtfm
- F loadtfmvf
- F loadvf
- F pktopdf
- F showpk
- F reencode
- F setfeatures
- N version
- T vf
- T combinations
- F combine
- T combiner
- D commands
- D helpers
- D math
- D predefined
- N version

- D whatever
- F hashfeatures
- F hashinstance
- T hashmethods
- F normal
- F virtual
- F initializefeatures
- D loadedfonts
- N noffontsloaded
- N nofsharedfonts
- N nofsharedhashes
- N nofsharedvectors
- N privateoffset
- D privateslots
- F readanddefine
- F registerfeature
- F resetfeature
- B resolvevirtualtoo
- F scale
- F scaled
- F setfactor
- F setfeature
- F setmathparameter
- F setname
- B sharefonts
- F trytosharefont
- N version
- current**
- currentid**
- definers**
- F addlookup
- F analyze
- F applypostprocessors
- F checkedmode
- F checkedscript
- S defaultlookup
- F define
- F getspecification
- F internal
- F loadfont
- F makespecification
- T methods
- F install
- D variants

- function
- function
- table

F read	
F register	
F registered	
F registerfallbackfont	
F registersplit	
F resetnullfont	
F resolve	
T resolvers	
F file	
F name	
F spec	
<b>definetypface</b>	function
<b>dropins</b>	table
F clone	
F getshape	
F getshapes	
F nextid	
F provide	
F registerglyph	
F registerglyphs	
F swap	
F swapone	
<b>effects</b>	table
<b>encodings</b>	table
T agl	
D ctxcodes	
D extras	
D names	
D synonyms	
D unicodes	
D cache	
F is_known	
D known	
F load	
F make_unicode_vector	
D math	
N version	
<b>enhanceid</b>	function
<b>expansions</b>	data table
<b>formats</b>	data table
<b>getalternate</b>	function
<b>getindices</b>	function
<b>getkern</b>	function
<b>getmultiple</b>	function

<b>getsubstitution</b>	function
<b>getters</b>	table
T alternate	
F opentype	
T kern	
F opentype	
F type1	
F type3	
T multiple	
F opentype	
T substitution	
F opentype	
<b>goodies</b>	table
D colorschemes	
T data	
T common-math.lfg	
S author	
S comment	
S copyright	
B initialized	
T mathematics	
T tweaks	
T presets	
F braille	
F eulertocalligraphic	
F fallbacks	
F moderntocalligraphic	
F moveintegrals	
F moveitalics	
F pagellaradical	
F rsfstoscript	
F rsfsuprighttoscript	
F scripttocalligraphic	
F wipeanchors	
F wipeitalics	
F xitsarabic	
S name	
S version	
T dejavu-math	
S author	
S comment	
S copyright	
B initialized	
T mathematics	

T alternates		D identifiers	
T dotless		D italics	
S comment		D lastmathids	
S feature		D marks	
N value		D mathparameters	
T bigslots		D modes	
T parameters		D originals	
N AccentBaseDepth		D parameters	
N AccentTopShiftUp		T processes	
N DelimiterPercent		D properties	
N DelimiterShortfall		D quads	
N DisplayOperatorMinHeight		D resources	
N FlattenedAccentTopShiftUp		T setdynamics	
N FractionRuleThickness		T shapes	
S PrimeBaselineDropMax		D spaces	
S PrimeShiftUp		D spacings	
S PrimeShiftUpCramped		T streams	
N SubscriptShiftDown		D unicodes	
S SubscriptShiftDownWithSuperscript		D unislots	
N SuperscriptShiftUp		D variants	
T tweaks		D xheights	
T aftercopying		<b>helpers</b>	<b>table</b>
S name		F addextraprivate	
S version		F addprivate	
D designsizes		F appendcommands	
D filenames		F appendcommandtable	
F getcompositions		F checkflags	
T list		F checkmerge	
F load		F checksteps	
F prepare_features		F collectanchors	
F register		F combineglyphs	
F registerpostprocessor		D commands	
F report		F composecharacters	
T suffixes		F descriptiontoslot	
<b>handlers</b>	<b>table</b>	F dimenfactor	
<b>hashes</b>	<b>table</b>	F expandglyph	
D characters		T extraprivates	
D classes		F fontpatternhassize	
D csnames		F getcoloredglyphs	
D descriptions		F getdigitwidth	
D dynamics		F getinstancespec	
D emwidths		F getparameters	
D exheights		F getprivatecharornode	
D features		F getprivatenode	

F getprivates	N delimited ghost upper corner
F getprivateslot	N delimited left annuity
F hasprivate	N delimited left lower corner
F indextoslot	N delimited left upper corner
F isprivate	N delimited right annuity
F mathscriptslots	N delimited right ast
F name	N delimited right bar
F nametoslot	N delimited right breve
F newprivateslot	N delimited right check
F prependcommands	N delimited right dagger
F prependcommandtable	N delimited right ddagger
F privateslot	N delimited right dddot
F registerglyphbox	N delimited right ddot
F scalecommands	N delimited right dot
F setboxdirectly	N delimited right hat
F setboxglyph	N delimited right lower corner
F setboxglyphs	N delimited right ring
F setdigitwidth	N delimited right star
F setmetaglyph	N delimited right tilde
F setmetaglyphs	N delimited right upper corner
T sharedprivates	N flat 0x0060 1
N cm brace piece	N flat 0x00A8 1
N delimited ghost 0x2032	N flat 0x00AF 1
N delimited ghost 0x2033	N flat 0x00B4 1
N delimited ghost 0x2034	N flat 0x02C6 1
N delimited ghost 0x2035	N flat 0x02C7 1
N delimited ghost 0x2036	N flat 0x02D8 1
N delimited ghost 0x2037	N flat 0x02D9 1
N delimited ghost 0x2057	N flat 0x02DA 1
N delimited ghost annuity	N flat 0x02DC 1
N delimited ghost ast	N flat 0x20DB 1
N delimited ghost bar	N left hook piece
N delimited ghost breve	N ll brace piece
N delimited ghost check	N lm brace piece
N delimited ghost dagger	N lr brace piece
N delimited ghost ddagger	N maps to piece
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N delimited ghost dot	N mirror.10206
N delimited ghost hat	N mirror.10210
N delimited ghost lower corner	N mirror.10211
N delimited ghost ring	N mirror.10214
N delimited ghost star	N mirror.10215
N delimited ghost tilde	N mirror.10216

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N mirror.985047	N mirror.985146



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 N radical bar extender  
 N right hook piece  
 N ul brace piece  
 N um brace piece  
 N unary minus

N unary minus plus  
 N unary plus  
 N unary plus minus  
 N ur brace piece  
 N visualsplace  
 F splitfontpattern  
 F tochar  
 T vfinjectors  
 F startcolor  
 F stopcolor  
 T vfspecials  
 T backgrounds  
 T outlines

**infofont**                      function  
**iterators**                    table

F characters  
 F descriptions  
 F glyphs

**loggers**                      table

F format  
 F onetimemessage  
 F register  
 F reportdefinedfonts  
 F reportusedfeatures

**mappings**                    table

F addtounicode  
 F fromunicode16  
 F getentry  
 F loadfile  
 F loadline  
 F makenameparser  
 D overloads  
 F reset  
 F tounicode  
 F tounicode16  
 F tounicode16sequence

**metapost**                    table

F baseline  
 F boundingbox  
 F boxtomp  
 F draw  
 F fill  
 F glyph  
 F maxbounds

F paths	
F widthline	
F zeroline	
<b>names</b>	data table
<b>nulldata</b>	data table
<b>privateoffsets</b>	table
B keepnames	
N mathbase	
N mathextrabase	
N textbase	
N textextrabase	
<b>protrusions</b>	data table
<b>readers</b>	table
F afm	
F check_lua	
F check_tfm	
F lua	
F ofm	
F opentype	
F otf	
F pfb	
D sequence	
F tfm	
F ttc	
F ttf	
F woff	
<b>registersanitizer</b>	function
<b>reserveid</b>	function
<b>select</b>	table
D alternatives	
F bodyfont	
D data	
F default	
D defaults	
F definefallbackfamily	
F definefontfamily	
F definefontfamilypreset	
D extras	
F fallback	
D fallbacks	
F features	
F filefallback	
F fontdata	
F fontfallback	

F fontsynonym	
F goodies	
F mathfallback	
D methods	
D presets	
F registerfallback	
F registerfiles	
F registerfontalternative	
F registerfontfamily	
F textfallback	
F typeface	
F typescript	
F userdata	
<b>specifiers</b>	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	

<b>symbols</b>	table
T emoji	
F checked	
F resolved	
F uselibrary	

<b>tables</b>	table
<b>toeffect</b>	function
<b>tracers</b>	table
<b>treatments</b>	table

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

<b>typefaces</b>	table
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# functions (context)

**dummy** function

# graphics (context)

## backgrounds table

- F fetchmultipar
- F pair
- F path
- F point

## bitmaps table

- F flush
- F new
- F placeholder
- F tocontext

## identifiers table

- F bitmap
- F jp2
- F jpg
- F png

## identify function

## synchronizers table

- F collapse
- F collect
- F extend
- F getbottom
- F getd
- F geth
- F getkind
- F getsize
- F gettask
- F gettop
- F getw
- F getx
- F gety
- F prune

## gzip (extra lua)

**compress**    function  
**compressed** function  
**decompress** function

**load**        function  
**save**        function  
**suffix**      function

# images (context)

<b>check</b>	function		B crop	
<b>checksize</b>	function		B media	
<b>copy</b>	function		B none	
<b>create</b>	function		B trim	
<b>embed</b>	function		<b>storedata</b>	function
<b>embedfromstore</b>	function		<b>totable</b>	function
<b>fetchdata</b>	function		<b>types</b>	table
<b>keys</b>	table		N jbig2	
<b>print</b>	function		N jp2	
<b>resetdata</b>	function		N jpg	
<b>resetstore</b>	function		N none	
<b>scan</b>	function		N pdf	
<b>serialize</b>	function		N png	
<b>sizes</b>	table		N stream	
B art			<b>wrap</b>	function
B bleed				

# interactions (context)

**attachments** data table

**fields** table

- F clone
- F define
- F defineset
- F insert

**general** table

- F getidentity
- F getidentityvariable

**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

F usepreamblenow

F usescripts

**linkedList**s data table

**pages** table

F setpagetransition

F setupcanvas

**references** table

F setcloseddocumentaction

F setclosepageaction

F setopendocumentaction

F setopenpageaction

**renderings** data table

# interfaces (context)

<b>arrays</b>	table	<b>namesofscanners</b>	table
<b>cachedsetups</b>	data table	<b>namespaces</b>	table
<b>cachesetup</b>	function	F define	
<b>cardinals</b>	table	F list	
<b>checkedspecification</b>	function	<b>numbers</b>	table
<b>complete</b>	data table	<b>registernamespace</b>	function
<b>constants</b>	data table	<b>registerscanner</b>	function
<b>corenamespaces</b>	data table	<b>scanners</b>	data table
<b>currentinterface</b>	string	<b>setconstant</b>	function
<b>currentresponse</b>	string	<b>setcount</b>	function
<b>definecommand</b>	function	<b>setdimen</b>	function
<b>defined</b>	function	<b>setelement</b>	function
<b>doifelsemessage</b>	function	<b>setformat</b>	function
<b>elements</b>	data table	<b>setmacro</b>	function
<b>floats</b>	table	<b>setmessage</b>	function
<b>formats</b>	data table	<b>setmessages</b>	function
<b>getmessage</b>	function	<b>settranslation</b>	function
<b>getnamespace</b>	function	<b>setupstrings</b>	data table
<b>getsetupstring</b>	function	<b>setvariable</b>	function
<b>hashedsetups</b>	data table	<b>showmessage</b>	function
<b>implement</b>	function	<b>storedscanners</b>	data table
<b>integers</b>	table	<b>tolist</b>	function
<b>interfacedcommand</b>	function	<b>translations</b>	data table
<b>interfaces</b>	table	<b>usednamespaces</b>	data table
<b>knownscanner</b>	function	<b>variables</b>	data table
<b>message</b>	function	<b>writestatus</b>	function
<b>nameofscanner</b>	function		



## io (basic lua)

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

# job (context)

<b>comment</b>	function	D tobesaved	
<b>datasets</b>	table	<b>parwrappers</b>	table
D collected		D collected	
F extend		D tobesaved	
F getdata		<b>passes</b>	table
F setdata		F check	
D tobesaved		D collected	
<b>disablesave</b>	function	F count	
<b>embedded</b>	table	F define	
D collected		F find	
D tobesaved		F first	
<b>fileobjreferences</b>	table	F get	
D collected		F getcollected	
D tobesaved		F getdata	
<b>files</b>	table	F getfield	
D collected		F gettobesaved	
F context		F inlist	
B forcerun		F last	
F run		F list	
D tobesaved		F save	
<b>getrandomseed</b>	function	F savetagged	
<b>initialize</b>	function	D tobesaved	
<b>load</b>	function	<b>positions</b>	table
<b>loadother</b>	function	F b_column	
<b>objects</b>	table	F b_region	
D collected		F c	
F get		D collected	
F number		F column	
F page		F columnofpos	
F save		F copy	
F set		F depth	
D tobesaved		F e_column	
<b>pack</b>	boolean	F e_region	
<b>packversion</b>	number	F enhance	
<b>pagestates</b>	table	F extra	
D collected		F get	
F countervalue		F getcolumndata	
F extend		F getfree	
F realpage		F gethpos	
F realpageorder		F getpos	
F setstate		F getreserved	

F getrpos  
 F getsync  
 F gettobesaved  
 F getvpos  
 F hangafter  
 F hangindent  
 F height  
 F hsize  
 N lastx  
 N lasty  
 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 registerhandlers  
 F replace  
 F rightskip  
 F set  
 F setall  
 F setregionbox

F setspec  
 F settobesaved  
 D tobesaved  
 F upperleft  
 F upperright  
 F used  
 F whd  
 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

## language (basic tex)

<b>clean</b>	function
<b>clearhyphenation</b>	function
<b>clearpatterns</b>	function
<b>current</b>	function
<b>gethjcode</b>	function
<b>has_language</b>	function
<b>hyphenate</b>	function
<b>hyphenation</b>	function
<b>hyphenationmin</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
<b>sethjcode</b>	function
<b>setwordhandler</b>	function

# languages (context)

<b>addgoodiesdata</b>	function	F installmethod	
<b>addgoodiesfile</b>	function	F lasttrace	
<b>appliedoptions</b>	table	F loadpatterns	
<b>associate</b>	function	F registerexception	
<b>associated</b>	data table	F registerpattern	
<b>association</b>	function	F setfeatures	
<b>counters</b>	data table	<b>installed</b>	function
<b>current</b>	function	<b>installhandler</b>	function
<b>data</b>	data table	<b>labels</b>	table
<b>decimals</b>	data table	F define	
<b>define</b>	function	F split	
<b>explicitthyphen</b>	function	<b>loadable</b>	function
<b>flatten</b>	function	<b>loadwords</b>	function
<b>frequencies</b>	table	<b>logger</b>	table
F averagecharwidth		F report	
F getdata		<b>nofflattened</b>	function
<b>getdata</b>	function	<b>numbers</b>	data table
<b>getnumber</b>	function	<b>postexhyphenchar</b>	function
<b>goodiefiles</b>	function	<b>posthyphenchar</b>	function
<b>hjcounts</b>	table	<b>preexhyphenchar</b>	function
<b>hyphenate</b>	function	<b>prehyphenchar</b>	function
<b>hyphenators</b>	table	<b>registered</b>	data table
T dictionaries		<b>registeredactions</b>	table
D featuresets		<b>replacements</b>	table
F handler		F add	
T methods		F addlist	
F expanded		F handler	
B none		F set	
F original		<b>serializediscretionary</b>	function
F tex		<b>setexceptions</b>	function
F traditional		<b>setgoodieshandler</b>	function
F popmethod		<b>setoptions</b>	function
F pushmethod		<b>setpatterns</b>	function
F setmethod		<b>setsynonym</b>	function
F setup		<b>setwordhandler</b>	function
F showhyphenationtrace		<b>showdiscretionaries</b>	function
T traditional		<b>strippedgoodiewords</b>	function
F definefeatures		<b>tolang</b>	function
F gettrace		<b>transliteration</b>	table
F hyphenate		F exception	
F injectthyphens		F handler	

F register		visualizediscretionaries	function
F set		words	table
F use		F check	
unload	function	T data	
urls	table	F disable	
D characters		F enable	
N lefthyphenmin		T enablers	
D mapping		B enables	
B packslashes		F found	
N righthyphenmin		F load	
F setcharacters		T methods	
version	number	N threshold	

# layouts (context)

<b>getcanvas</b>	function	<b>status</b>	table
<b>getpagedimensions</b>	function	F isleftpage	
<b>setupcanvas</b>	function	F lefttorrightpageaction	

## 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>isfound</b>	function
<b>isreadabledir</b>	function
<b>isreadablefile</b>	function
<b>iswriteabledir</b>	function
<b>iswriteablefile</b>	function

<b>link</b>	overloaded function
<b>mkdir</b>	overloaded function
<b>mkdirs</b>	function
<b>modification</b>	function
<b>readlink</b>	function
<b>rmdir</b>	overloaded function
<b>setexecutable</b>	function
<b>symlink</b>	function
<b>symlinktarget</b>	function
<b>touch</b>	overloaded function



# libraries (context)

**basiclua** data table

**basictex** data table

**builtin** data table

**extralua** data table

**extratex** data table

**functions** data table

**globals** data table

# lmx (context)

<b>color</b>	function
<b>convert</b>	function
<b>convertfile</b>	function
<b>convertstring</b>	function
<b>einject</b>	function
<b>eprint</b>	function
<b>escape</b>	function
<b>finalized</b>	function
<b>finject</b>	function
<b>fprint</b>	function
<b>get</b>	function
<b>getvariables</b>	function
<b>htmfile</b>	function
<b>html</b>	table
F a	
F td	
F th	
<b>include</b>	function
<b>inherited</b>	table
S color-background-four	
S color-background-one	
S color-background-three	
S color-background-two	
S title	
<b>initialize</b>	function
<b>inject</b>	function
<b>lmxfile</b>	function

<b>loadedfile</b>	function
<b>make</b>	function
<b>new</b>	function
<b>overloaderror</b>	function
<b>popupfile</b>	function
<b>print</b>	function
<b>pv</b>	function
<b>report</b>	function
<b>reset</b>	function
<b>result</b>	function
<b>set</b>	function
<b>show</b>	function
<b>showerror</b>	function
<b>stripcss</b>	function
<b>tv</b>	function
<b>type</b>	function
<b>urlescape</b>	function
<b>variable</b>	function
<b>variables</b>	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>setformats</b>	function
<b>categories</b>	function	<b>setformatters</b>	function
<b>direct</b>	function	<b>setlogfile</b>	function
<b>disable</b>	function	<b>setmessenger</b>	function
<b>enable</b>	function	<b>setprocessor</b>	function
<b>finalactions</b>	function	<b>settarget</b>	function
<b>flush</b>	function	<b>settimedlog</b>	function
<b>loggingerrors</b>	function	<b>settranslations</b>	function
<b>messenger</b>	function	<b>show</b>	function
<b>new</b>	function	<b>start_page_number</b>	function
<b>newline</b>	function	<b>start_run</b>	function
<b>poplogfile</b>	function	<b>startererrorlogging</b>	function
<b>poptarget</b>	function	<b>startfilelogging</b>	function
<b>private</b>	table	<b>status</b>	function
F enablepagetiming		<b>stop_page_number</b>	function
F getpagetiming		<b>stoperrorlogging</b>	function
<b>pushlogfile</b>	function	<b>stopfilelogging</b>	function
<b>pushtarget</b>	function	<b>subdirect</b>	function
<b>registerfinalactions</b>	function	<b>subreport</b>	function
<b>report</b>	function	<b>texerrormessage</b>	function
<b>reporter</b>	function	<b>writer</b>	function
<b>resetlogfile</b>	function		

# lpdf (context)

<b>action</b>	function
<b>adddocumentcolorspace</b>	function
<b>adddocumenttextgstate</b>	function
<b>adddocumentpattern</b>	function
<b>adddocumentshade</b>	function
<b>addtocatalog</b>	function
<b>addtoinfo</b>	function
<b>addtonames</b>	function
<b>addtopageattributes</b>	function
<b>addtopageresources</b>	function
<b>addtopagesattributes</b>	function
<b>addxmpinfo</b>	function
<b>annotationspecification</b>	function
<b>array</b>	function
<b>attachmentsymbols</b>	function
<b>boolean</b>	function
<b>border</b>	function
<b>checkedkey</b>	function
<b>checkedvalue</b>	function
<b>circularshade</b>	function
<b>cmykcode</b>	function
<b>collectedresources</b>	function
<b>color</b>	function
<b>colorspace</b>	function
<b>colorspaceconstants</b>	data table
<b>colorspec</b>	function
<b>colorvalue</b>	function
<b>colorvalues</b>	function
<b>commentsymbols</b>	function
<b>compresslevel</b>	function
<b>constant</b>	function
<b>copyarray</b>	function
<b>copyboolean</b>	function
<b>copyconstant</b>	function
<b>copydictionary</b>	function
<b>copyfloat</b>	function
<b>copyinteger</b>	function
<b>copynumber</b>	function
<b>copystring</b>	function
<b>copyunicode</b>	function
<b>deferredobject</b>	function

<b>delayedobject</b>	function
<b>destinationspecification</b>	function
<b>dictionary</b>	function
<b>docstring</b>	function
<b>epdf</b>	table
F analyzefonts	
F contenttotext	
F expanded	
F getpagecontent	
F getstructure	
T image	
F close	
F copy	
F new	
F open	
F query	
F load	
F objecttype	
F parsecontent	
F plugin	
T resolvers	
F destinations	
F embeddedfiles	
F javascripts	
F layers	
F pages	
F structure	
F widgets	
F stripcontent	
F unload	
F verboseobject	
<b>escaped</b>	function
<b>finalizeddocument</b>	function
<b>finalizefonts</b>	function
<b>finalizepage</b>	function
<b>finishtransparencycode</b>	function
<b>flags</b>	table
T annotations	
N AutoView	
N Hidden	
N Invisible	

N Locked		<b>fonts</b>	table
N LockedContents		F color_direct	
N NoRotate		F color_indirect	
N NoView		<b>formats</b>	data table
N NoZoom		<b>frombytes</b>	function
N Print		<b>fromeight</b>	function
N Printable		<b>frompdfdoc</b>	function
N ReadOnly		<b>fromsixteen</b>	function
N ToggleNoView		<b>getcatalog</b>	function
N auto		<b>getcompression</b>	function
N hidden		<b>getfontname</b>	function
N printable		<b>getfontobjectnumber</b>	function
T widgets		<b>getinfo</b>	function
N Comb		<b>getmatrix</b>	function
N CommitOnSelChange		<b>getnofpages</b>	function
N DoNotScroll		<b>getpageproperties</b>	function
N DoNotSpellCheck		<b>getpagereference</b>	function
N Edit		<b>getpagetags</b>	function
N FileSelect		<b>getpos</b>	function
N MultiLine		<b>gettrailerid</b>	function
N NoExport		<b>getversion</b>	function
N NoToggleToOff		<b>getxformname</b>	function
N Password		<b>graycode</b>	function
N PopUp		<b>hasmatrix</b>	function
N PushButton		<b>immediateobject</b>	function
N Radio		<b>includeimage</b>	function
N RadiosInUnison		<b>initialize</b>	function
N ReadOnly		<b>injectors</b>	table
N Required		F bitmap	
N RichText		F jp2	
N Sort		F jpg	
N file		F png	
N fixed		<b>injectxmpinfo</b>	function
N nocheck		<b>insertxmpinfo</b>	function
N protected		<b>lastreferredpage</b>	function
N readonly		<b>layerreference</b>	function
N required		<b>limited</b>	function
N sorted		<b>linearshade</b>	function
N unavailable		<b>literal</b>	function
<b>flushfonts</b>	function	<b>majorversion</b>	function
<b>flushgroup</b>	function	<b>makenametree</b>	function
<b>flushobject</b>	function	<b>minorversion</b>	function
<b>flushstreamfileobject</b>	function	<b>nofpages</b>	function
<b>flushstreamobject</b>	function	<b>null</b>	function

<b>number</b>	function	<b>usedcharacters</b>	table
<b>object</b>	function	<b>usedfontnames</b>	table
<b>objectcompresslevel</b>	function	N dejavusansmonoboldttf-1	
<b>pagereference</b>	function	<b>usedfontobjects</b>	table
<b>patternstream</b>	function	N dejavusansmonoboldttf-1	
<b>pdfcolor</b>	function	<b>usedfontstreams</b>	table
<b>pdftimestamp</b>	function	T dejavusansmonoboldttf-1	
<b>print</b>	function	T characters	
<b>procset</b>	function	T descriptions	
<b>protectresources</b>	boolean	T fonts	
<b>rectangle</b>	function	T goodies	
<b>reference</b>	function	S original	
<b>registerannotation</b>	function	T parameters	
<b>registerdestination</b>	function	N ascender	
<b>registerdocumentfinalizer</b>	function	N descender	
<b>registerfont</b>	function	N designsize	
<b>registerinitializer</b>	function	T expansion	
<b>registerpagefinalizer</b>	function	N shrink	
<b>registerpattern</b>	function	N step	
<b>reserveobject</b>	function	N stretch	
<b>rgbcode</b>	function	N extendfactor	
<b>rotationcm</b>	function	N extrafactor	
<b>setcompression</b>	function	N extraspace	
<b>setencryption</b>	function	N factor	
<b>setincludecidset</b>	function	N hfactor	
<b>setpageorder</b>	function	N mathsize	
<b>setpagestate</b>	function	N maxsize	
<b>setpagetag</b>	function	N minsize	
<b>setversion</b>	function	N mode	
<b>sharedobject</b>	function	N quad	
<b>shareobject</b>	function	N scaledpoints	
<b>shareobjectreference</b>	function	N size	
<b>spotcode</b>	function	N slant	
<b>stream</b>	function	N slantfactor	
<b>string</b>	function	N space	
<b>toeight</b>	function	N spaceshrink	
<b>topdfdoc</b>	function	N spacestretch	
<b>tosixteen</b>	function	N squeezefactor	
<b>transparency</b>	function	N textsize	
<b>transparencycode</b>	function	N units	
<b>transparencygroups</b>	table	N vfactor	
B none		N width	
<b>transparencyvalue</b>	function	N xheight	
<b>unicode</b>	function	T properties	

S filename	T arab
B finalized	B dflt
S fontname	T gsub
S format	T anum
S fullname	T arab
S hash	B dflt
B hasmath	B urd
N id	T camelcasing
S language	T *
S mode	B *
S name	T char-ligatures
S psname	T *
S script	B *
S sharedwith	T compat-ligatures
N subfont	T *
N textcontrol	B *
S writingmode	T dlig
T resources	T latn
T alreadydone	B dflt
T classes	B ism
T duplicates	B ksm
T features	B lsm
T gpos	B mol
T mark	B nsm
T arab	B rom
B dflt	B sks
T cyrl	B ssm
B dflt	T locl
B srb	T cyrl
T grek	B srb
B dflt	T latn
T lao	B ism
B dflt	B ksm
T latn	B lsm
B dflt	B nsm
B ism	B sks
B ksm	B ssm
B lsm	T lowercasing
B mol	T *
B nsm	B *
B rom	T primes
B sks	T *
B ssm	B *
T mkmk	T tlig

T *	N Circumflex
B *	N D
T trep	N Dcaron
T *	N Dcroat
B *	N Delta
T uppercasing	N Dieresis
T *	N E
B *	N Eacute
S filename	N Ebreve
S foundfilename	N Ecaron
T foundtables	N Ecircumflex
T markclasses	N Edieresis
T marks	N Edotaccent
T marksets	N Egrave
N private	N Emacron
T sequences	N Eng
T sublookups	N Eng.alt
T unicodes	N Eogonek
N .null	N Epsilon
N A	N Epsilontonos
N AE	N Eta
N AEacute	N Etatonos
N Aacute	N Eth
N Abreve	N Euro
N Acircumflex	N F
N Acute	N G
N Adieresis	N Gamma
N Agrave	N Gbreve
N Alpha	N Gcaron
N Alphanos	N Gcircumflex
N Amacron	N Gcommaaccent
N Aogonek	N Gdotaccent
N Aring	N Grave
N Atilde	N H
N B	N Hbar
N Beta	N Hcircumflex
N C	N I
N Cacute	N IJ
N Caron	N Iacute
N Ccaron	N Ibreve
N Ccedilla	N Icircumflex
N Ccircumflex	N Idieresis
N Cdotaccent	N Idotaccent
N Chi	N Igrave



N Imacron  
N Iogonek  
N Iota  
N Iotadieresis  
N Iotatonos  
N Itilde  
N J  
N Jcircumflex  
N K  
N Kappa  
N Kcommaaccent  
N L  
N Lacute  
N Lambda  
N Lcaron  
N Lcommaaccent  
N Ldot  
N Lslash  
N M  
N Mu  
N N  
N Nacute  
N Ncaron  
N Ncommaaccent  
N Ntilde  
N Nu  
N O  
N OE  
N Oacute  
N Obreve  
N Ocircumflex  
N Odieresis  
N Ograve  
N Ohorn  
N Ohungarumlaut  
N Omacron  
N Omega  
N Omegatonos  
N Omicron  
N Omicrontonos  
N Oslash  
N Oslashacute  
N Otilde  
N P

N Phi  
N Pi  
N Psi  
N Q  
N R  
N Racute  
N Rcaron  
N Rcommaaccent  
N Rho  
N S  
N Sacute  
N Scaron  
N Scedilla  
N Scircumflex  
N Scommaaccent  
N Sigma  
N T  
N Tau  
N Tbar  
N Tcaron  
N Tcommaaccent  
N Theta  
N Thorn  
N Tilde  
N U  
N Ugrave  
N Uhorn  
N Uhungarumlaut  
N Umacron  
N Uogonek  
N Upsilon  
N Upsilon1  
N Upsilondieresis  
N Upsilontonos  
N Uring  
N Utilde  
N V  
N W  
N Wacute  
N Wcircumflex  
N Wdieresis  
N Wgrave  
N X  
N Xi

N Y	N arrowdown
N Yacute	N arrowleft
N Ycircumflex	N arrowright
N Ydieresis	N arrowup
N Ygrave	N arrowupdn
N Z	N arrowupdnbse
N Zacute	N asciicircum
N Zcaron	N asciitilde
N Zdotaccent	N asterisk
N Zeta	N asteriskmath
N a	N at
N aacute	N atilde
N abreve	N b
N acircumflex	N backslash
N acute	N bar
N acutecomb	N beta
N adieresis	N block
N ae	N braceleft
N aeacute	N braceright
N agrave	N bracketleft
N alpha	N bracketright
N alphanos	N breve
N amacron	N brokenbar
N ampersand	N bullet
N angle	N c
N anoteleia	N cacute
N aogonek	N caron
N approxequal	N carriagereturn
N arabic_2dots	N ccaron
N arabic_2dots_a	N ccedilla
N arabic_3dots	N ccircumflex
N arabic_3dots_a	N cdotaccent
N arabic_4dots	N cedilla
N arabic_dot	N cent
N arabic_gaf_bar	N chi
N arabic_gaf_bar_a	N circle
N arabic_ring	N circlemultiply
N aring	N circleplus
N arrowboth	N circumflex
N arrowdblboth	N club
N arrowdbldown	N colon
N arrowdblleft	N colonmonetary
N arrowdblright	N comma
N arrowdblup	N congruent

N copyright	N equivalence
N currency	N estimated
N d	N eta
N dagger	N etatonos
N daggerdbl	N eth
N dcaron	N exclam
N dcroat	N exclamdbl
N degree	N exclamdown
N delta	N existential
N diaeresis.symbols	N f
N diamond	N female
N dieresis	N fi
N dieresistonos	N figuredash
N divide	N filledbox
N dkshade	N filledrect
N dLlTcaron	N five
N dnblock	N fiveighths
N dollar	N fl
N dong	N florin
N dotaccent	N four
N dotbelowcomb	N fractionslash
N dotlessi	N franc
N dotlessj	N g
N dotmath	N gamma
N e	N gbreve
N eacute	N gcaron
N ebreve	N gcircumflex
N ecaron	N gcommaaccent
N ecircumflex	N gdotaccent
N edieresis	N germandbls
N edotaccent	N gradient
N egrave	N grave
N eight	N gravecomb
N element	N greater
N ellipsis	N greaterequal
N emacron	N guillemotleft
N emdash	N guillemotright
N emptyset	N guilsinglleft
N endash	N guilsinglright
N eng	N h
N eogonek	N hbar
N epsilon	N hcircumflex
N epsilontonos	N heart
N equal	N hookabovcomb

N house	N logicalor
N hungarumlaut	N longs
N hyphen	N lozenge
N i	N lslash
N iacute	N ltshade
N ibreve	N m
N icircumflex	N macron
N idieresis	N male
N igrave	N minus
N ij	N minute
N imacron	N mu
N infinity	N multiply
N integral	N musicalnote
N integralbt	N musicalnotedbl
N integraltp	N n
N intersection	N nacute
N invbullet	N napostrophe
N invcircle	N ncaron
N invsmileface	N ncommaaccent
N iogonek	N nine
N iota	N nonbreakingspace
N iotadieresis	N nonmarkingreturn
N iotadieresis-tonos	N notdef
N iotatonos	N notelement
N itilde	N notequal
N j	N notsubset
N jcircumflex	N ntilde
N jot	N nu
N k	N numbersign
N kappa	N o
N kcommaaccent	N oacute
N kgreenlandic	N obreve
N l	N ocircumflex
N lacute	N odieresis
N lambda	N oe
N lcaron	N ogonek
N lcommaaccent	N ograve
N ldot	N ohorn
N less	N ohungarumlaut
N lessequal	N omacron
N lfblock	N omega
N lira	N omegal
N logicaland	N omegatonos
N logicalnot	N omicron

N omicrontonos	N quoteright
N one	N quotesinglbase
N oneeighth	N quotesingle
N onehalf	N r
N onequarter	N racute
N onesuperior	N radical
N onethird	N rcaron
N openbullet	N rcommaaccent
N ordfeminine	N reflexsubset
N ordmasculine	N reflexsuperset
N orthogonal	N registered
N oslash	N revlogicalnot
N oslashacute	N rho
N otilde	N ring
N p	N rtblock
N paragraph	N s
N parenleft	N sacute
N parenright	N scaron
N partialdiff	N scedilla
N percent	N scircumflex
N period	N scommaaccent
N periodcentered	N second
N perpendicular	N section
N perthousand	N semicolon
N peseta	N seven
N phi	N seveneighths
N phil	N sfthyphen
N pi	N shade
N plus	N sigma
N plusminus	N sigma1
N product	N similar
N propersubset	N six
N propersuperset	N slash
N proportional	N smileface
N psi	N space
N q	N spade
N question	N sterling
N questiondown	N suchthat
N quotedbl	N summation
N quotedblbase	N sun
N quotedblleft	N t
N quotedblright	N tau
N quoteleft	N tbar
N quotereversed	N tcaron

N tcommaaccent  
N therefore  
N theta  
N theta1  
N thinquestion  
N thorn  
N three  
N threeeighths  
N threequarters  
N threesuperior  
N tilde  
N tildecomb  
N tonos  
N trademark  
N triagdn  
N triaglf  
N triagrt  
N triagup  
N two  
N twosuperior  
N twothirds  
N u  
N ugrave  
N uhorn  
N uhungarumlaut  
N umacron  
N underbar  
N underbar.small  
N underbar.wide  
N underscore  
N underscoredbl  
N union  
N universal  
N uogonek  
N upblock  
N upsilon  
N upsilondieresis  
N upsilondieresis-tonos  
N upsilontonos  
N uring  
N utilde  
N v  
N w  
N wacute

N wcircumflex  
N wdieresis  
N wgrave  
N x  
N xi  
N y  
N yacute  
N ycircumflex  
N ydieresis  
N yen  
N ygrave  
N z  
N zacute  
N zcaron  
N zdotaccent  
N zero  
N zeta  
S version  
T shared  
T dynamics  
T features  
B analyze  
B checkmarks  
B devanagari  
B dummies  
B extensions  
B extrafeatures  
B extraprivates  
B features  
S indic  
B mathrules  
S mode  
N number  
B spacekern  
B visualspace  
T processes  
T rawdata  
S cache\_uuid  
N cache\_version  
B compacted  
B condensed  
S creator  
T descriptions  
B expanded

S format	N version
T goodies	S weight
T lookuphash	S width
T metadata	N nofglyphs
N ascender	N private
N averagewidth	T properties
T boundingbox	B hascolor
N defaultvheight	B hasitalics
N descender	B hasspacekerns
S family	N size
S familyname	N tableversion
S fontname	N time
N fstype	T specification
S fullname	S cs
T horizontalmetrics	S detail
N ascender	S fallbacks
N descender	T features
N linegap	T normal
N maxadvanceheight	B features
N maxadvancewidth	S mode
N maxextent	N number
N minbottomsidebearing	S filename
N mintopsidebearing	S forced
N version	S forcedname
N italicangle	B global
B monospaced	S goodies
S panoseweight	S hash
S panosewidth	N id
N pfmweight	S lookup
N pfmwidth	N mathsize
S subfamily	S method
S subfamilyname	S name
N subfontindex	S resolved
N units	N scalemode
S version	N size
T verticalmetrics	S source
N ascender	S specification
N descender	N textsize
N linegap	N textcontrol
N maxadvanceheight	T unscaled
N maxadvancewidth	N cache_version
N maxextent	T changed
N minbottomsidebearing	T characters
N mintopsidebearing	T descriptions

T mathparameters	S filename	
T parameters	S fontname	
N ascender	S format	
N charwidth	S fullname	
N descender	B hasmath	
N designsized	N id	
N extraspace	S mode	
N italicangle	B monospaced	
N maxsize	S name	
N minsize	N private	
N quad	S psname	
N slant	B setitalics	
N space	S space	
N spaceshrink	N subfont	
N spacestretch	S writingmode	
N units	<b>usedindices</b>	table
N vheight	T dejavusansmonoboldttf-1	
N xheight	<b>verbose</b>	function
T properties		



## lpeg (basic lua)

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

# lua (basic tex)

<b>bytecode</b>	<b>table</b>	<b>lastbytecode</b>	<b>number</b>
<b>bytedata</b>	<b>data table</b>	<b>macros</b>	<b>table</b>
<b>bytedone</b>	<b>table</b>	<b>B enabled</b>	
<b>callbytecode</b>	<b>function</b>	<b>F loaded</b>	
<b>delay</b>	<b>function</b>	<b>F required</b>	
<b>finalizeinitex</b>	<b>function</b>	<b>F reset</b>	
<b>firstbytecode</b>	<b>number</b>	<b>F resolvestring</b>	
<b>flush</b>	<b>function</b>	<b>F resolving</b>	
<b>flushdelayed</b>	<b>function</b>	<b>F showdefinitions</b>	
<b>get_functions_table</b>	<b>function</b>	<b>messages</b>	<b>data table</b>
<b>getbytecode</b>	<b>function</b>	<b>newindex</b>	<b>function</b>
<b>getcurrenttime</b>	<b>function</b>	<b>newtable</b>	<b>function</b>
<b>getdebuginfo</b>	<b>function</b>	<b>numbers</b>	<b>data table</b>
<b>getexitcode</b>	<b>function</b>	<b>registercode</b>	<b>function</b>
<b>getfunctionstable</b>	<b>overloaded function</b>	<b>registeredcodes</b>	<b>function</b>
<b>getpreciseseconds</b>	<b>function</b>	<b>registerinitexfinalizer</b>	<b>function</b>
<b>getpreciseticks</b>	<b>function</b>	<b>registername</b>	<b>function</b>
<b>getruntime</b>	<b>function</b>	<b>setbytecode</b>	<b>function</b>
<b>getstacktop</b>	<b>function</b>	<b>setexitcode</b>	<b>function</b>
<b>getstartupfile</b>	<b>function</b>	<b>startupfile</b>	<b>string</b>
<b>getversion</b>	<b>function</b>	<b>version</b>	<b>string</b>

## luac (context)

**inspect**    function  
**print**     function

# luatex (context)

<b>abort</b>	function	F enable	
<b>cleanup</b>	function	F finish	
<b>cleanuptempfiles</b>	function	F pause	
<b>currentfile</b>	function	F popline	
<b>poprunstate</b>	function	F pushline	
<b>pushrunstate</b>	function	F registerdisabler	
<b>registerdumpactions</b>	function	F registerenabler	
<b>registerpageactions</b>	function	F resetfilename	
<b>registerstartactions</b>	function	F resume	
<b>registerstopactions</b>	function	F setfilename	
<b>registertempfile</b>	function	F setup	
<b>starttime</b>	number	F start	
<b>synctex</b>	table	F stop	
F blockfilename		F wrapup	
F collect		<b>wrapup</b>	function
F disable			

# lxml (context)

<b>addindex</b>	function	<b>first</b>	function
<b>all</b>	function	<b>flush</b>	function
<b>applyfunction</b>	function	<b>flushlinewise</b>	function
<b>applyselectors</b>	function	<b>flushsetups</b>	function
<b>att</b>	function	<b>flushspacewise</b>	function
<b>attribute</b>	function	<b>get_id</b>	function
<b>badinclusions</b>	function	<b>getid</b>	function
<b>chainattribute</b>	function	<b>getindex</b>	function
<b>checkindex</b>	function	<b>id</b>	function
<b>collected</b>	function	<b>idsplitter</b>	userdata
<b>command</b>	function	<b>ifatt</b>	function
<b>concat</b>	function	<b>ifattempty</b>	function
<b>concatrange</b>	function	<b>include</b>	function
<b>content</b>	function	<b>inclusion</b>	function
<b>context</b>	function	<b>inclusions</b>	function
<b>convert</b>	function	<b>index</b>	function
<b>count</b>	function	<b>inlineverbatimim</b>	function
<b>delete</b>	function	<b>installsetup</b>	function
<b>depth</b>	function	<b>last</b>	function
<b>direct</b>	function	<b>lastatt</b>	function
<b>directives</b>	table	<b>lastmatch</b>	function
F after		<b>lastpar</b>	function
F before		<b>load</b>	function
F handle		<b>loadbuffer</b>	function
F load		<b>loaddata</b>	function
F setup		<b>loaded</b>	table
<b>displayverbatimim</b>	function	<b>main</b>	function
<b>doif</b>	function	<b>match</b>	function
<b>doifelse</b>	function	<b>name</b>	function
<b>doifelseempty</b>	function	<b>namespace</b>	function
<b>doifelsetext</b>	function	<b>nonspace</b>	function
<b>doifempty</b>	function	<b>par</b>	function
<b>doifnot</b>	function	<b>param</b>	function
<b>doifnotempty</b>	function	<b>parameter</b>	function
<b>doifnottext</b>	function	<b>path</b>	function
<b>doiftext</b>	function	<b>popmatch</b>	function
<b>element</b>	function	<b>pos</b>	function
<b>elements</b>	function	<b>position</b>	function
<b>entities</b>	data table	<b>pure</b>	function
<b>filter</b>	function	<b>pushmatch</b>	function
<b>filterlist</b>	function	<b>raw</b>	function

<b>rawroot</b>	function
<b>rawtex</b>	function
<b>refatt</b>	function
<b>register</b>	function
<b>registerentity</b>	function
<b>removesetup</b>	function
<b>replace</b>	function
<b>resetcdata</b>	function
<b>resetsetups</b>	function
<b>resolvedentity</b>	function
<b>root</b>	function
<b>save</b>	function
<b>serialize</b>	function
<b>setaction</b>	function
<b>setatt</b>	function
<b>setattribute</b>	function
<b>setcdata</b>	function
<b>setcommandtonone</b>	function
<b>setcommandtotext</b>	function
<b>setpar</b>	function
<b>setparam</b>	function
<b>setparameter</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>startunesescaped</b>	function
<b>stopraw</b>	function
<b>stopunesescaped</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>min</b>	function
<b>acos</b>	function	<b>mininteger</b>	number
<b>asin</b>	function	<b>mod</b>	function
<b>atan</b>	function	<b>modf</b>	function
<b>atan2</b>	function	<b>odd</b>	function
<b>ceil</b>	function	<b>pi</b>	number
<b>ceiling</b>	function	<b>pow</b>	function
<b>cos</b>	function	<b>rad</b>	function
<b>cosd</b>	function	<b>random</b>	overloaded function
<b>cosh</b>	function	<b>randomseed</b>	function
<b>deg</b>	function	<b>round</b>	function
<b>div</b>	function	<b>setrandomseedi</b>	function
<b>even</b>	function	<b>sin</b>	function
<b>exp</b>	function	<b>sind</b>	function
<b>floor</b>	function	<b>sinh</b>	function
<b>fmod</b>	function	<b>sqrt</b>	function
<b>huge</b>	number	<b>tan</b>	function
<b>initialseed</b>	number	<b>tand</b>	function
<b>ldexp</b>	function	<b>tanh</b>	function
<b>log</b>	function	<b>tointeger</b>	function
<b>log10</b>	function	<b>type</b>	function
<b>max</b>	function	<b>ult</b>	function
<b>maxinteger</b>	number		

# mathematics (context)

<b>addfallbacks</b>	function	<b>makefont</b>	function
<b>addvariant</b>	function	<b>mapremap</b>	data table
<b>alphabets</b>	data table	<b>overloadparameters</b>	function
<b>alternatives</b>	data table	<b>preset</b>	function
<b>beforepassingfonttotex</b>	function	<b>presets</b>	table
<b>big</b>	function	T less	
<b>boldmap</b>	data table	T more	
<b>categories</b>	table	T zero	
D functions		<b>privatebase</b>	number
<b>charactersets</b>	data table	<b>registersimplematrix</b>	function
<b>checkaftercopyingfont</b>	function	<b>remapalphabets</b>	function
<b>classes</b>	data table	<b>renderings</b>	table
<b>classnames</b>	data table	D mappings	
<b>codes</b>	data table	D numbers	
<b>collected</b>	function	D sets	
<b>define</b>	function	<b>renderset</b>	function
<b>dictionaries</b>	table	<b>resetattributes</b>	function
D data		<b>scaleparameters</b>	function
D defaults		<b>sets</b>	data table
D groups		<b>setsnapping</b>	function
F groupset		<b>setvariant</b>	function
F groupsetgroup		<b>startcollecting</b>	function
D names		<b>stopcollecting</b>	function
F registercharacter		<b>styles</b>	data table
F registergroup		<b>syncboth</b>	function
F registergroupset		<b>syncname</b>	function
D sets		<b>syncstyle</b>	function
D variants		<b>toengineclass</b>	function
<b>dimensions</b>	function	<b>toname</b>	function
<b>extensiblecode</b>	function	<b>tostyle</b>	function
<b>extensibles</b>	data table	<b>tweakaftercopyingfont</b>	function
<b>extrabase</b>	number	<b>tweakbeforecopyingfont</b>	function
<b>fallbacks</b>	table	<b>tweaks</b>	table
F apply		F accentdimensions	
F install		F action	
<b>fallbackstyleattr</b>	function	F addactuarian	
<b>gaps</b>	data table	F addarrows	
<b>getboth</b>	function	F addbars	
<b>getstyle</b>	function	F addequals	
<b>horizontalcode</b>	function	F addfourier	
<b>initializeparameters</b>	function	F addmirrors	



F addparts	F radicaldegreeanchors	
F addprimed	F replace	
F addprivates	F replacealphabets	
F addrules	F setoptions	
F addscripts	F setovershoots	
F bigslots	F showinfo	
F checkspacing	F simplifykerns	
F copyaccents	F staircase	
T datasets	T subsets	
T accentdimensions	T acenorsuvxz	
T accent	T bhklt	
T over	T d	
T under	T dotless	
T addarrows	T f	
T addscripts	T gjqy	
T checkspacing	T horizontalfences	
T copyaccents	T i	
T fixprimes	T integrals	
T fixslashes	T mw	
T wipecues	T p	
F dimensions	F substitute	
F extendaccents	F topanchors	
F fallbacks	F tweaks	
F fixaccents	F version	
F fixellipses	F wipeanchors	
F fixintegrals	F wipecues	
F fixoldschool	F wipeitalics	
F fixprimes	F wipevariants	
F fixradicals	<b>utfmathaccent</b>	function
F fixslashes	<b>utfmathclass</b>	function
F flattenaccents	<b>utfmathcommand</b>	function
F kernpairs	<b>utfmathfiller</b>	function
F kerns	<b>utfmathstretch</b>	function
F margins	<b>variantcode</b>	function
F message	<b>variantcount</b>	function
F moveitalics	<b>virtualize</b>	function
F movelimits	<b>virtualized</b>	data table
F parameters		

## md5 (extra lua)

<b>HEX</b>	function
<b>dec</b>	function
<b>hex</b>	function

<b>sum</b>	function
<b>sumHEXA</b>	function
<b>sumhexa</b>	function

# metapost (context)

<b>checkformat</b>	function	N nullary
<b>checktracingonline</b>	function	N numeric
<b>cm</b>	function	N of
<b>codes</b>	table	N ofbinary
N addto		N onlyset
N ampersand		N parametertype
N and		N pathjoin
N assignment		N plusorminus
N atleast		N primarybinary
N begingroup		N primarydef
N btex		N property
N capsule		N protection
N colon		N relax
N comma		N repeatloop
N controls		N rightbrace
N curl		N rightbracket
N cycle		N rightdelimiter
N definedmacro		N runscript
N delimiters		N save
N endgroup		N scantokens
N equals		N secondarybinary
N etex		N secondarydef
N everyjob		N semicolon
N exittest		N setbounds
N expandafter		N shipout
N fiorelse		N show
N if		N slash
N input		N step
N interim		N stop
N internal		N str
N iteration		N string
N leftbrace		N tag
N leftbracket		N tension
N leftdelimiter		N tertiarybinary
N let		N tertiarydef
N macrodef		N thingstoadd
N macrospecial		N to
N maketext		N typename
N message		N unary
N mode		N undefinedcs
N newinternal		N until

N void		<b>gettext</b>	function
N with		<b>gettolerance</b>	function
N within		<b>graphic</b>	function
N write		<b>graphic_base_pass</b>	function
<b>colorinitializer</b>	function	<b>includesvgbuffer</b>	function
<b>convert</b>	function	<b>includesvgfile</b>	function
<b>currentmpx</b>	function	<b>installplugin</b>	function
<b>currentmpxstatus</b>	function	<b>isobject</b>	function
<b>defaultformat</b>	string	<b>knownparameters</b>	table
<b>defaultinstance</b>	string	<b>lastlog</b>	string
<b>defaultmethod</b>	string	<b>load</b>	function
<b>directrun</b>	function	<b>maketext</b>	function
<b>escaped</b>	function	<b>metafonts</b>	table
<b>exectime</b>	table	<b>metafun</b>	table
<b>extensiondata</b>	data table	F interpolate	
<b>filterclippath</b>	function	F topath	
<b>flush</b>	function	<b>mptopdf</b>	table
<b>flushers</b>	table	F convertmpstopdf	
T pdf		N nofconverted	
F flushfigure		<b>n</b>	number
F startfigure		<b>newlogger</b>	function
F stopfigure		<b>nofruns</b>	number
F textfigure		<b>nofscriptruns</b>	function
F tocomment		<b>nvformat</b>	function
<b>flushnormalpath</b>	function	<b>pdf literals</b>	function
<b>fonts</b>	table	<b>pluginactions</b>	function
F define		<b>popformat</b>	function
<b>format_number</b>	function	<b>popscriptrunner</b>	function
<b>format_string</b>	function	<b>popvariable</b>	function
<b>formatnumber</b>	function	<b>popvariables</b>	function
<b>getbendtolerance</b>	function	<b>preparetexttextsdata</b>	function
<b>getbuffer</b>	function	<b>process</b>	function
<b>getclippath</b>	function	<b>processing</b>	function
<b>getextensions</b>	function	<b>processplugins</b>	function
<b>getextradata</b>	function	<b>properties</b>	table
<b>gethashentries</b>	function	<b>pushformat</b>	function
<b>getinstancenames</b>	function	<b>pushscriptrunner</b>	function
<b>getjobdata</b>	function	<b>pushvariable</b>	function
<b>getmovetolerance</b>	function	<b>pushvariables</b>	function
<b>getparameter</b>	function	<b>reducetogray</b>	boolean
<b>getparameterpreset</b>	function	<b>registerdirect</b>	function
<b>getparameterset</b>	function	<b>registerscript</b>	function
<b>getrecord</b>	function	<b>registertokens</b>	function
<b>getstatistics</b>	function	<b>remappedtext</b>	function

<b>remaptext</b>	function	<b>svgglyphtomp</b>	function
<b>reporterror</b>	function	<b>svgshapestomp</b>	function
<b>reportsvgfonts</b>	function	<b>svgshapestopdf</b>	function
<b>reset</b>	function	<b>svgsplitcolor</b>	function
<b>resetlastlog</b>	function	<b>svgtomp</b>	function
<b>resetplugins</b>	function	<b>svgtopdf</b>	function
<b>run</b>	function	<b>sxsy</b>	function
<b>runinternal</b>	function	<b>tex</b>	table
<b>runscript</b>	function	F get	
<b>scanparameters</b>	function	F reset	
<b>scripterror</b>	function	F set	
<b>scriptindex</b>	function	F setfrombuffer	
<b>setbendtolerance</b>	function	<b>texerrors</b>	boolean
<b>setbuffer</b>	function	<b>texexp</b>	function
<b>setextensions</b>	function	<b>theclippath</b>	function
<b>setlogging</b>	function	<b>tographic</b>	function
<b>setmovetolerance</b>	function	<b>totable</b>	function
<b>setoutercolor</b>	function	<b>types</b>	table
<b>setparameterset</b>	function	N boolean	
<b>setrecord</b>	function	N cmykcolor	
<b>settext</b>	function	N color	
<b>settolerance</b>	function	N dependent	
<b>setvariable</b>	function	N independent	
<b>showlog</b>	boolean	N known	
<b>showsvgpage</b>	function	N nep	
<b>simple</b>	function	N numeric	
<b>splitprescript</b>	function	N pair	
<b>startgraphic</b>	function	N path	
<b>startsvghashing</b>	function	N pen	
<b>stopgraphic</b>	function	N picture	
<b>stopsvghashing</b>	function	N protodependent	
<b>svformat</b>	function	N string	
<b>svgcolorremapper</b>	function	N structured	
<b>svgfactors</b>	table	N suffixedmacro	
N %		N tokenlist	
N bp		N transform	
N cm		N unknownboolean	
N em		N unknownnep	
N ex		N unknownpath	
N in		N unknownpen	
N mm		N unknownpicture	
N pc		N unknownstring	
N pt		N unsuffixedmacro	
N px		N vacuum	

<b>typesvgpage</b>	function	<b>variables</b>	table
<b>unload</b>	function		
<b>untagvariable</b>	function		

## 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

**report** 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>autoinject</b>	function	<b>fprint</b>	function
<b>aux</b>	function	<b>get</b>	table
F boolean		F hashentry	
F color		<b>graphformat</b>	function
F direct		<b>inject</b>	function
F draw		F boolean	
F fill		F cmykcolor	
F flush		F color	
F fprint		F integer	
F integer		F number	
F number		F numeric	
F pair		F pair	
F pairpoints		F path	
F path		F pt	
F pathpoints		F quadruplet	
F points		F string	
F print		F transform	
F quadruple		F triplet	
F quadruplepoints		F whatever	
F quoted		F whd	
F size		F xy	
F string		<b>integer</b>	function
F transform		<b>lmt_color_functions</b>	table
F triplet		F shade	
F tripletpoints		F step	
F vprint		<b>lmt_contours_bitmap_get</b>	function
<b>boolean</b>	function	<b>lmt_contours_bitmap_set</b>	function
<b>cleaned</b>	function	<b>lmt_contours_cleanup</b>	function
<b>color</b>	function	<b>lmt_contours_color</b>	function
<b>dataset</b>	function	<b>lmt_contours_edge_get_band</b>	function
<b>datasets</b>	function	<b>lmt_contours_edge_get_cell</b>	function
F load		<b>lmt_contours_edge_paths</b>	function
<b>direct</b>	function	<b>lmt_contours_edge_set</b>	function
<b>draw</b>	function	<b>lmt_contours_edge_set_by_band</b>	function
<b>expandtex</b>	function	<b>lmt_contours_edge_set_by_cell</b>	function
<b>fill</b>	function	<b>lmt_contours_format</b>	function
<b>flatten</b>	function	<b>lmt_contours_function</b>	function
<b>flush</b>	function	<b>lmt_contours_maxmean</b>	function
<b>format</b>	function	<b>lmt_contours_maxz</b>	function
<b>formatted</b>	function	<b>lmt_contours_minmean</b>	function
		<b>lmt_contours_minz</b>	function



<b>lmt_contours_nofvalues</b>	function	<b>mf_formatted_text</b>	function
<b>lmt_contours_nx</b>	function	<b>mf_get_outline_text</b>	function
<b>lmt_contours_ny</b>	function	<b>mf_graphic_text</b>	function
<b>lmt_contours_range</b>	function	<b>mf_inject_blob</b>	function
<b>lmt_contours_shade_paths</b>	function	<b>mf_map_move</b>	function
<b>lmt_contours_shade_set</b>	function	<b>mf_map_text</b>	function
<b>lmt_contours_shape_paths</b>	function	<b>mf_named_color</b>	function
<b>lmt_contours_start</b>	function	<b>mf_outline_text</b>	function
<b>lmt_contours_stop</b>	function	<b>mf_save_data</b>	function
<b>lmt_contours_value</b>	function	<b>mf_script_index</b>	function
<b>lmt_contours_xrange</b>	function	<b>mf_start_saving_data</b>	function
<b>lmt_contours_yrange</b>	function	<b>mf_stop_saving_data</b>	function
<b>lmt_function_x</b>	function	<b>mode</b>	function
<b>lmt_glyphshape_accent</b>	function	<b>n</b>	function
<b>lmt_glyphshape_baseline</b>	function	<b>number</b>	function
<b>lmt_glyphshape_boundingbox</b>	function	<b>numeric</b>	function
<b>lmt_glyphshape_depth</b>	function	<b>pair</b>	function
<b>lmt_glyphshape_height</b>	function	<b>pairpoints</b>	function
<b>lmt_glyphshape_italic</b>	function	<b>path</b>	function
<b>lmt_glyphshape_n</b>	function	<b>pathpoints</b>	function
<b>lmt_glyphshape_path</b>	function	<b>points</b>	function
<b>lmt_glyphshape_start</b>	function	<b>print</b>	function
<b>lmt_glyphshape_stop</b>	function	F boolean	
<b>lmt_glyphshape_usedbox</b>	function	F color	
<b>lmt_glyphshape_usedline</b>	function	F direct	
<b>lmt_glyphshape_width</b>	function	F draw	
<b>lmt_mesh_set</b>	function	F fill	
<b>lmt_mesh_update</b>	function	F flush	
<b>lmt_poisson_generate</b>	function	F fprint	
<b>lmt_surface_do</b>	function	F integer	
<b>lmt_svg_include</b>	function	F number	
<b>mf_blob_add</b>	function	F numeric	
<b>mf_blob_dimensions</b>	function	F pair	
<b>mf_blob_index</b>	function	F pairpoints	
<b>mf_blob_new</b>	function	F path	
<b>mf_blob_raw_content</b>	function	F pathpoints	
<b>mf_blob_raw_dimensions</b>	function	F points	
<b>mf_blob_raw_reset</b>	function	F print	
<b>mf_blob_raw_toutf</b>	function	F quadruple	
<b>mf_blob_raw_wipe</b>	function	F quadruplepoints	
<b>mf_blob_size</b>	function	F quoted	
<b>mf_blob_width</b>	function	F size	
<b>mf_external_figure</b>	function	F string	
<b>mf_finish_saving_data</b>	function	F transform	

F triplet		F property	
F tripletpoints		F string	
F vprint		F symbol	
<b>processingmode</b>	function	F token	
<b>quadruple</b>	function	T tokenscanners	
<b>quadruplepoints</b>	function	F transform	
<b>quoted</b>	function	T typescanners	
<b>report</b>	function	F whatever	
<b>scan</b>	table	<b>set</b>	table
F boolean		<b>size</b>	function
F cmykcolor		<b>skip</b>	table
F color		F token	
F expression		<b>solve</b>	function
F integer		<b>string</b>	function
F next		<b>systemmode</b>	function
F number		<b>transform</b>	function
F numeric		<b>triplet</b>	function
F pair		<b>tripletpoints</b>	function
F path		<b>vprint</b>	function
F pen			

## mplib (extra tex)

<b>execute</b>	function	<b>injectstring</b>	function
<b>expandtex</b>	function	<b>injecttransform</b>	function
<b>finder</b>	function	<b>injectwhatever</b>	function
<b>finders</b>	table	<b>new</b>	overloaded function
F file		<b>peninfo</b>	function
F mpstemplate		<b>propertycodes</b>	table
<b>finish</b>	function	<b>realtimelogging</b>	boolean
<b>getcallbackstate</b>	function	<b>scanboolean</b>	function
<b>getcodes</b>	function	<b>scanbmykcolor</b>	function
<b>getcolormodels</b>	function	<b>scanbcolor</b>	function
<b>getfields</b>	function	<b>scanexpression</b>	function
<b>gethashentries</b>	function	<b>scaninteger</b>	function
<b>gethashentry</b>	function	<b>scannext</b>	function
<b>getobjecttypes</b>	function	<b>scannumber</b>	function
<b>getstates</b>	function	<b>scannumeric</b>	function
<b>getstatistics</b>	function	<b>scanpair</b>	function
<b>getstatus</b>	function	<b>scanpath</b>	function
<b>gettolerance</b>	function	<b>scanpen</b>	function
<b>gettype</b>	function	<b>scanproperty</b>	function
<b>gettypes</b>	function	<b>scanstring</b>	function
<b>injectboolean</b>	function	<b>scansymbol</b>	function
<b>injectbmykcolor</b>	function	<b>scantoken</b>	function
<b>injectbcolor</b>	function	<b>scantransform</b>	function
<b>injectinteger</b>	function	<b>settolerance</b>	function
<b>injectnumber</b>	function	<b>showcontext</b>	function
<b>injectnumeric</b>	function	<b>skiptoken</b>	function
<b>injectpair</b>	function	<b>solvepath</b>	function
<b>injectpath</b>	function	<b>version</b>	function

# noads (context)

<b>handlers</b>	table		F showtree
F alternates			F snap
F autofences			F spacing
F classes			F suspicious
F collapse			F tags
F dictionaries			F unscript
F export			F unstack
F families			F variants
F fencing		<b>process</b>	function
F fixscripts		<b>processnested</b>	function
F kernpairs		<b>processors</b>	table
F makeup		T dictionaries	
F normalize		F mlisttohtml	
F numbers		T suspicious	
F relocate		T unscript	
F render		T unstack	
F resize		<b>processouter</b>	function

# node (basic tex)

<b>checkdiscretionaries</b>	function	F getbottom
<b>checkdiscretionary</b>	function	F getbox
<b>copy</b>	function	F getcachestate
<b>copylist</b>	function	F getchar
<b>count</b>	function	F getchardict
<b>currentattributes</b>	function	F getcharspec
<b>dimensions</b>	function	F getchoice
<b>direct</b>	table	F getclass
F addmargins		F getdata
F addxoffset		F getdegree
F addxymargins		F getdelimiter
F addyoffset		F getdenominator
F appendaftertail		F getdepth
F checkdiscretionaries		F getdirection
F checkdiscretionary		F getdisc
F collapsing		F getdiscpart
F copy		F getexpansion
F copylist		F getfam
F copyonly		F getfield
F count		F getfont
F currentattributes		F getgeometry
F dimensions		F getglue
F effectiveglue		F getglyphdata
F endofmath		F getglyphdimensions
F exchange		F getheight
F fields		F getid
F findattribute		F getindex
F findattributerange		F getinputfields
F findnode		F getkern
F firstglyph		F getkerndimension
F flattendiscretionaries		F getlanguage
F flattenleaders		F getleader
F flushlist		F getleftdelimiter
F flushnode		F getlist
F free		F getlistdimensions
F freeze		F getnext
F getanchors		F getnodes
F getattribute		F getnormalizedline
F getattributelist		F getnucleus
F getattributes		F getnumerator
F getboth		F getoffsets

F getoptions	F insertafter
F getorientation	F insertbefore
F getparstate	F isboth
F getpenalty	F ischar
F getpost	F isdirect
F getpre	F isglyph
F getprev	F isnext
F getprime	F isnextchar
F getpropertystable	F isnextglyph
F getproperty	F isnode
F getreplace	F isprev
F getrightdelimiter	F isprevchar
F getruledimensions	F isprevglyph
F getscale	F isspeciallist
F getscales	F isvalid
F getscrip	F iszeroglue
F getshift	F kerning
F getspeciallist	F lastnode
F getstate	F length
F getsub	F ligaturing
F getsubpre	F makeextensible
F getsubtype	F migrate
F getsup	F mlisttohtml
F getsuppre	F naturalhsize
F gettop	F naturalwidth
F gettotal	F new
F getusedattributes	F newmathglyph
F getwhd	F newtextglyph
F getwidth	F patchattributes
F getwordrange	F prependbeforehead
F getxscale	F protectglyph
F getxyscales	F protectglyphs
F getyscale	F protectglyphsnone
F gluetostring	F protrusionskipable
F hasattribute	F rangedimensions
F hasdimensions	F remove
F hasfield	F removefromlist
F hasgeometry	F repack
F hasglyph	F reverse
F hasglyphoption	F serialized
F hpack	F setanchors
F hyphenating	F setattribute
F id	F setattributelist
F ignoremathskip	F setattributes

F setboth	F setrightdelimiter
F setbottom	F setscales
F setbox	F setscript
F setchar	F setshift
F setchardict	F setspeciallist
F setchoice	F setsplit
F setclass	F setstate
F setdata	F setsub
F setdegree	F setsubpre
F setdelimiter	F setsubtype
F setdenominator	F setsup
F setdepth	F setsuppre
F setdirection	F settop
F setdisc	F settotal
F setdiscpart	F setwhd
F setexpansion	F setwidth
F setfam	F show
F setfield	F slide
F setfont	F softenhyphens
F setgeometry	F startofpar
F setglue	F subtypes
F setglyphdata	F tail
F setheight	F todirect
F setindex	F tonode
F setinputfields	F tostring
F setkern	F tovaliddirect
F setlanguage	F traverse
F setleader	F traversechar
F setleftdelimiter	F traversecontent
F setlink	F traverseglyph
F setlist	F traverseid
F setnext	F traverseleader
F setnucleus	F traverselist
F setnumerator	F type
F setoffsets	F types
F setoptions	F unprotectglyph
F setorientation	F unprotectglyphs
F setpenalty	F unsetattribute
F setpost	F unsetattributes
F setpre	F usedlist
F setprev	F usesfont
F setprime	F values
F setproperty	F verticalbreak
F setreplace	F vpack

F write  
 F xscaled  
 F yscaled  
**effectiveglue** function  
**endofmath** function  
**family\_font** function  
**fields** function  
**findattribute** function  
**firstglyph** function  
**flattendiscretionaries** function  
**flushlist** function  
**flushnode** function  
**free** function  
**getattribute** function  
**getcachestate** function  
**getfield** function  
**getglue** function  
**getpropertystable** function  
**getproperty** function  
**gluetostring** function  
**hasattribute** function  
**hasfield** function  
**hasglyph** function  
**hpack** function  
**hyphenating** function  
**id** function  
**insertafter** function  
**insertbefore** function  
**instock** function  
**inuse** function  
**isnode** function  
**iszeroglue** function  
**kerning** function

**lastnode** function  
**length** function  
**ligaturing** function  
**makeextensible** function  
**mlisttohlist** function  
**new** function  
**protectglyph** function  
**protectglyphs** function  
**protrusionskipable** function  
**rangedimensions** function  
**remove** function  
**serialized** function  
**setattribute** function  
**setfield** function  
**setglue** function  
**setproperty** function  
**show** function  
**slide** function  
**subtypes** function  
**tail** function  
**tostring** function  
**traverse** function  
**traverseid** function  
**type** function  
**types** function  
**unprotectglyph** function  
**unprotectglyphs** function  
**unsetattribute** function  
**usedlist** function  
**usesfont** function  
**values** function  
**vpack** function  
**write** function



# nodes (context)

<b>accentcodes</b>	data table	<b>dircodes</b>	data table
<b>adaptive</b>	table	<b>directioncodes</b>	data table
F handlehorizontal		<b>directionvalues</b>	data table
F handlevertical		<b>dirvalues</b>	data table
F set		<b>disccodes</b>	data table
<b>aligned</b>	function	<b>discretionarycodes</b>	data table
<b>append</b>	function	<b>fencecodes</b>	data table
<b>apply</b>	function	<b>fields</b>	function
<b>applyvisuals</b>	function	<b>fieldtypes</b>	table
<b>astable</b>	function	<b>fillcodes</b>	data table
<b>attributeCodes</b>	data table	<b>fillvalues</b>	data table
<b>basepoints</b>	function	<b>firstcharacter</b>	function
<b>boundarycodes</b>	data table	<b>firstcharinbox</b>	function
<b>boxes</b>	table	<b>firstdirinbox</b>	function
F count		<b>flush</b>	function
F dimensions		<b>flushlist</b>	function
F direct		<b>flushnode</b>	function
F dispose		<b>fullhpack</b>	function
F found		<b>getattr</b>	function
F prune		<b>getattribute</b>	function
F reset		<b>getboth</b>	function
F restore		<b>getbox</b>	function
F save		<b>getchar</b>	function
F savenode		<b>getfield</b>	function
<b>builders</b>	table	<b>getfont</b>	function
F buildpage_filter		<b>getid</b>	function
F vbox_filter		<b>getleader</b>	function
F vpack_filter		<b>getlist</b>	function
<b>choicecodes</b>	data table	<b>getnext</b>	function
<b>concat</b>	function	<b>getprev</b>	function
<b>copy</b>	function	<b>getproperty</b>	function
<b>copy_node</b>	function	<b>getsubtype</b>	function
<b>copylist</b>	function	<b>gluecodes</b>	data table
<b>countall</b>	function	<b>glyphcodes</b>	data table
<b>currentattributes</b>	function	<b>handlers</b>	table
<b>delete</b>	function	F accessibility	
<b>destinations</b>	table	F adjusters	
N attribute		F aligncharacter	
T done		F backgrounds	
F handler		F backgroundspage	
T stack		F backgroundsvbox	

F characters		F setmove	
F checkglyphs		F setposition	
F checkparcounter		F setspacekerns	
F cleanupbox		<b>insertafter</b>	function
F cleanuppage		<b>insertbefore</b>	function
F export		<b>insertlistafter</b>	function
F finalizebox		<b>installattributehandler</b>	function
F finalizelist		<b>is_display_math</b>	function
F fixmathalign		<b>isdirect</b>	function
F flatten		<b>isnode</b>	function
F flattenline		<b>isnut</b>	function
F mathmatrixornaments		<b>kerncodes</b>	data table
F mathmatrixrules		<b>leftmarginwidth</b>	function
F migrate		<b>linefillers</b>	table
F protectglyphs		F filler	
F recolor		F handler	
F show		F set	
F showwhyphenation		<b>lines</b>	table
F showpreamble		T boxed	
F stripping		F addlinenumbers	
F textbackgrounds		F register	
F unprotectglyphs		F setup	
F visualizehyphenation		D data	
F wipe		F finalize	
<b>hasattribute</b>	function	F number	
<b>hasfield</b>	function	<b>link</b>	function
<b>hpack</b>	function	<b>linked</b>	function
<b>idsandsubtypes</b>	function	<b>list</b>	function
<b>idstosting</b>	function	<b>listcodes</b>	data table
<b>injections</b>	table	<b>listtoutf</b>	function
F copy		<b>literalvalues</b>	data table
F getligaindex		<b>locate</b>	function
F getthreshold		<b>markcodes</b>	data table
F handler		<b>markers</b>	table
F installgetspaceboth		F get	
F installnewkern		<b>mathcodes</b>	data table
F isspace		<b>mathvalues</b>	data table
F keepcounts		<b>maxboxwidth</b>	function
F reset		<b>migrations</b>	table
F resetcounts		F setinserts	
F setcursive		F setmarks	
F setkern		<b>new</b>	function
F setligaindex		<b>noadcodes</b>	data table
F setmark		<b>noadoptions</b>	table

N axis		F dirdimensions
N exact		F effectiveglue
N left		F endofmath
N middle		F exchange
N no_axis		F findattribute
N right		F findnode
N set		F firstcharacter
N unused_1		F firstcharinbox
N unused_2		F firstglyph
<b>nodecodes</b>	<b>data table</b>	F flattendiscretionaries
<b>nopts</b>	<b>function</b>	F flattenleaders
<b>nuts</b>	<b>table</b>	F flush
F addmargins		F flushlist
F addxoffset		F flushnode
F addxymargins		F free
F addyoffset		F freeze
F append		F fullhpack
F appendaftertail		F getanchors
F apply		F getattr
F applyvisuals		F getattribute
F checkdiscretionaries		F getattributelist
F checkslide		F getattributes
F collapsing		F getattrlist
T colors		F getattrrs
F set		F getboth
T components		F getbottom
F copynocomponents		F getbox
F copyonlyglyphs		F getboxglue
F count		F getchar
F flush		F getchardict
F get		F getcharspec
F set		F getchoice
F concat		F getclass
F copy		F getcomponents
F copy_properties		F getdata
F copylist		F getdegree
F copynode		F getdelimiter
F copyonly		F getdenominator
F copyvisual		F getdepth
F count		F getdirection
F countall		F getdisc
F currentattributes		F getdiscpart
F delete		F getdiscretionary
F dimensions		F getexpansion

F getfam	F getstate
F getfield	F getsub
F getfont	F getsubpre
F getgeometry	F getsubtype
F getglue	F getsup
F getglyphdata	F getsuppre
F getglyphdimensions	F getsurround
F getheight	F gettop
F getid	F gettotal
F getindex	F getusedattributes
F getinputfields	F getvalue
F getkern	F getwhd
F getkerndimension	F getwidth
F getlang	F getwordrange
F getlanguage	F getxscale
F getleader	F getxyscales
F getleftdelimiter	F getsyscale
F getlist	F gluetostring
F getlistdimensions	F hasattribute
F getmiddle	F hasdimensions
F getmiddledelimiter	F hasfield
F getnext	F hasgeometry
F getnormalizedline	F hasglyph
F getnucleus	F hasglyphoption
F getnumerator	F hpack
F getoffsets	F hyphenating
F getoptions	F ignoremathskip
F getorientation	F insertafter
F getparstate	F insertbefore
F getpenalty	F insertlistafter
F getpost	F is_display_math
F getpre	F isboth
F getprev	F ischar
F getprime	F isdirect
F getprop	F isdone
F getreplace	F isglyph
F getrightdelimiter	F isnext
F getruledata	F isnextchar
F getruledimensions	F isnextglyph
F getscale	F isnode
F getscales	F isnut
F getscrip	F isprev
F getshift	F isprevchar
F getspeciallist	F isprevglyph

F iszeroglua	F lefthangskip
F kerning	F leftmarginkern
F lastnode	F leftskip
F length	F lineskip
F ligaturing	F literal
F link	F mathchar
F linked	F mathtextchar
F locate	F negatedglue
F migrate	F noad
F migratebox	F originliteral
F mlisttohlist	F outlinerule
F naturalhsia	F pageliteral
F naturalwidth	F penalty
F nestedtracedslide	F radical
F new	F rawliteral
F newmathglyph	F register
F openup	F restore
F patchattributes	F righthangskip
T pool	F rightmarginkern
F accent	F rightskip
F baselineskip	F rule
F boundary	F save
F boxrule	F savepos
F choice	F setmatrix
F cleanup	F setstate
F delim	F shrink
F delimiter	F startrotation
F direction	F stock
F directliteral	F stretch
F disc	F strutrula
F emptyrule	F subbox
F fence	F sublist
F fontkern	F temp
F fraction	F usage
F glue	F userdefined
F gluespec	T usersids
F glyph	F usernode
F hlist	F userrule
F imagerule	F virtualrule
F indentskip	F vlist
F italicckern	F wordboundary
F kern	F prepend
F latelua	F prependbeforehead
F leader	F processranges

F processwords	F setdepth
F protectglyph	F setdirection
F protectglyphs	F setdisc
F protectglyphsnone	F setdiscpart
F protrusionskipable	F setdiscretionary
F rangedimensions	F setexpansion
F rawprop	F setfam
F reference	F setfield
F rehpac	F setfont
F remove	F setgeometry
F removefromlist	F setglue
F repack	F setglyphdata
F repackhlist	F setheight
F replace	F setinputfields
F reverse	F setkern
T rules	F setlang
T ruleactions	F setlanguage
F box	F setleader
F draw	F setleftdelimiter
F fill	F setlink
F mp	F setlist
F stroke	F setmiddledelimiter
F userrule	F setnext
F serialized	F setnucleus
F setanchors	F setnumerator
F setattr	F setoffsets
F setattribute	F setoptions
F setattributelist	F setorientation
F setattributes	F setparproperty
F setattrlist	F setpenalty
F setatrs	F setpost
F setboth	F setpre
F setbottom	F setprev
F setbox	F setprime
F setboxglue	F setprop
F setchar	F setreplace
F setchardict	F setrightdelimiter
F setchoice	F setruledata
F setclass	F setscale
F setcomponents	F setscales
F setdata	F setscript
F setdegree	F setshift
F setdelimiter	F setspeciallist
F setdenominator	F setsplit

F setstate	F dir
F setsub	F disc
F setsubpre	F glue
F setsubtype	F glyph
F setup	F hlist
F setsuppre	F leader
F setsurround	F list
F settop	F mark
F setvalue	F next
F setvisual	F node
F setvisuals	F penalty
F setwhd	F rule
F setwidth	F unset
F show	F vlist
F slide	F whatsit
F softenhyphens	T treversers
F somepenalty	F char
F somespace	F content
F splitbox	F glyph
F startofpar	F leader
F striprange	F list
F tail	F node
F takeattr	T typesetters
F takebox	F tohbox
F takelist	F tohpack
F theprop	F tonodes
F tonode	F to vbox
F tonodes	F to vpack
F tonut	F unprotectglyph
F tosequence	F unprotectglyphs
F toString	F unsetattribute
F tracedslide	F unsetattributes
F traverse	F untracedslide
F traversechar	F usedlist
F traversecontent	F usesfont
F traverseglyph	F verticalbreak
F traverseid	F vianodes
F traverseleader	F vianuts
F traverselist	F vpack
T traversers	F write
F alignrecord	F xscaled
F boundary	F yscaled
F char	
F content	

**packlist**  
**parcodes**

function  
data table

<b>penaltycodes</b>			
<b>plugindata</b>	data table	F trace_glyph_run_b	
	table	<b>properties</b>	table
F finalizer		T data	
F initializer		<b>pts</b>	function
S name		<b>radicalcodes</b>	data table
T namespace		<b>references</b>	table
N attribute		N attribute	
D data		T done	
F enable		F handler	
F handler		T stack	
F register		<b>reheapack</b>	function
D registered		<b>remove</b>	function
D values		<b>repackhlist</b>	function
F processor		<b>replace</b>	function
<b>points</b>	function	<b>report</b>	function
<b>pool</b>	table	<b>rightmarginwidth</b>	function
F baselineskip		<b>rulecodes</b>	data table
F cleanup		<b>rules</b>	table
F directliteral		F handler	
F glyph		F process	
F hlist		F set	
F latelua		F userrule	
F leader		<b>serialize</b>	function
F lineskip		<b>serializebox</b>	function
F literal		<b>serialized</b>	function
F originliteral		<b>setattr</b>	function
F register		<b>setattribute</b>	function
F restore		<b>setboth</b>	function
F save		<b>setbox</b>	function
F savepos		<b>setboxtonaturalwd</b>	function
F setmatrix		<b>setchar</b>	function
F stock		<b>setfield</b>	function
F usage		<b>setfont</b>	function
F usernode		<b>setleader</b>	function
F vlist		<b>setlink</b>	function
<b>prepend</b>	function	<b>setlist</b>	function
<b>print</b>	function	<b>setnext</b>	function
<b>processors</b>	table	<b>setprev</b>	function
F alignment_filter		<b>setproperty</b>	function
F append_line_filter		<b>shifts</b>	table
F glyph_run		F handler	
F post_linebreak_filter		F set	
F pre_linebreak_filter		<b>showboxes</b>	function
F trace_glyph_run_a		<b>showlist</b>	function



<b>showsimplelist</b>	function	<b>tonodes</b>	function
<b>skipcodes</b>	data table	<b>tonut</b>	function
<b>snapshots</b>	table	<b>topicas</b>	function
F getsamples		<b>topoints</b>	function
F resetsamples		<b>toscaledpoints</b>	function
F takesample		<b>tosequence</b>	function
<b>somepenalty</b>	function	<b>tostring</b>	function
<b>somespace</b>	function	<b>totable</b>	function
<b>specialskipcodes</b>	table	<b>totree</b>	function
<b>splitbox</b>	function	<b>toutf</b>	function
<b>startofpar</b>	function	<b>tracers</b>	table
<b>stripdiscretionaries</b>	function	T colors	
<b>stripping</b>	table	F reset	
T glyphs		F set	
F set		F setlist	
<b>subtypes</b>	data table	F directions	
<b>tail</b>	function	F fontchar	
<b>takeattr</b>	function	T frequencies	
<b>takebox</b>	function	F register	
<b>tasks</b>	table	T pool	
F actions		T nodes	
F appendaction		F rule	
F disableaction		T nuts	
F disablegroup		F rule	
F enableaction		F resetproperties	
F enablegroup		F rule	
F freeze		F setlist	
F freezegroup		F setproperties	
F new		F start	
F prependaction		T steppers	
F removeaction		F check	
F replaceaction		F codes	
F restart		F features	
F setaction		F font	
F showactions		F glyphs	
F table		F message	
<b>tobasepoints</b>	function	F messages	
<b>tocentimeters</b>	function	F nofsteps	
<b>toxiceros</b>	function	F register	
<b>todidots</b>	function	F reset	
<b>todimen</b>	function	F start	
<b>toinches</b>	function	F stop	
<b>tomillimeters</b>	function	F stop	
<b>tonode</b>	function	T transparencies	

F reset		N glue	
F set		N glyph	
F setlist		N hbox	
<b>traverse</b>	function	N insert	
<b>traverseid</b>	function	N italic	
<b>typesetters</b>	table	N kern	
F hbox		N line	
F hpack		N marginkern	
F tohbox		N mark	
F tohpack		N math	
F tonodes		N mathglue	
F tovbox		N mathkern	
F tovpack		N origin	
F vpack		N par	
<b>unsetattribute</b>	function	N penalty	
<b>usedlist</b>	function	N simple	
<b>vianodes</b>	function	N simplehbox	
<b>vianuts</b>	function	N simplevbox	
<b>visualizebox</b>	function	N simplevtop	
<b>visualizers</b>	table	N space	
F attribute		N strut	
T attributes		N user	
F box		N vbox	
F enable		N vtop	
F handler		N whatsit	
F markfonts		F register	
T modes		F setfont	
N boundary		F setlayer	
N depth		F setruledglyph	
N dir		F setvisual	
N discretionary		<b>vpack</b>	function
N expansion		<b>whatsitcodes</b>	data table
N fontkern		<b>write</b>	function

## number (context)

	function	<b>tol6dot16</b>	function
<b>basepoints</b>	function	<b>tobasepoints</b>	function
<b>bytetodecimal</b>	function	<b>tobitstring</b>	function
<b>compactfloat</b>	function	<b>tocentimeters</b>	function
<b>decimaltobyte</b>	function	<b>tociceros</b>	function
<b>dimenfactors</b>	data table	<b>tocontext</b>	function
<b>formatted</b>	function	<b>todidots</b>	function
<b>formattedfloat</b>	function	<b>todimen</b>	function
<b>idiv</b>	function	<b>toevenhex</b>	function
<b>maxdimen</b>	number	<b>toinches</b>	function
<b>nopts</b>	function	<b>tomillimeters</b>	function
<b>nubasepoints</b>	function	<b>tonumberf</b>	function
<b>nupoints</b>	function	<b>tonumberg</b>	function
<b>percent</b>	function	<b>topicsas</b>	function
<b>points</b>	function	<b>topoints</b>	function
<b>pts</b>	function	<b>toscaled</b>	function
<b>signed</b>	function	<b>toscaledpoints</b>	function
<b>sparseexponent</b>	function	<b>valid</b>	function
<b>splitdimen</b>	function		

## objects (context)

<b>data</b>	table	<b>page</b>	function
<b>dimensions</b>	function	<b>reference</b>	function
<b>found</b>	function	<b>register</b>	function
<b>n</b>	number	<b>restore</b>	function

# optional (context)

## **curl** table

F escape  
F fetch  
F getversion  
F initialize  
F unescape

## **foreign** table

F abivalues  
F getbuffer  
F initialize  
F load  
F newbuffer  
F totable  
F types

## **ghostscript** table

F execute  
F initialize

## **graphicsmagick** table

F execute  
F initialize

## **hb** table

F getshapers  
F getversion  
F initialize  
F loadfont  
F shapestring

## **imagemagick** table

F execute  
F initialize

## **kpse** table

F expand\_braces  
F expand\_path  
F expand\_var  
F find\_file  
F find\_files  
F get\_file\_types  
F initialize  
F readable\_file  
F set\_program\_name  
F var\_value

## **library** table

F load

## **loaded** table

## **lz4** table

F compress  
F decompresssize  
F framecompress  
F framedecompress  
F initialize

## **lzma** table

F compress  
F decompress  
F initialize

## **lzo** table

F compress  
F decompresssize  
F initialize

## **mujs** table

F dofile  
F execute  
F initialize  
F reset  
F setclosefile  
F setconsole  
F setfindfile  
F setopenfile  
F setreadfile  
F setseekfile

## **mysql** table

F close  
F execute  
F getmessage  
F initialize  
F open

## **postgres** table

F close  
F execute  
F getmessage  
F initialize  
F open

## **sqlite** table

F close

F execute	F initialize	
F getmessage	<b>zstd</b>	table
F initialize	F compress	
F open	F decompress	
<b>zint</b>	F initialize	
F execute		

## os (basic lua)

<b>__getenv__</b>	function	<b>remove</b>	overloaded function
<b>__setenv__</b>	function	<b>rename</b>	overloaded function
<b>binsuffix</b>	string	<b>resultof</b>	function
<b>binsuffixes</b>	table	<b>runtime</b>	function
<b>bits</b>	number	<b>selfarg</b>	table
<b>clock</b>	function	<b>selfbin</b>	string
<b>converttime</b>	function	<b>selfcore</b>	string
<b>date</b>	overloaded function	<b>selfdir</b>	string
<b>difftime</b>	function	<b>selflink</b>	string
<b>enableansi</b>	function	<b>selfname</b>	string
<b>env</b>	data table	<b>selfpath</b>	string
<b>execute</b>	overloaded function	<b>setenv</b>	overloaded function
<b>exit</b>	overloaded function	<b>setexitcode</b>	function
<b>fulltime</b>	function	<b>setlocale</b>	overloaded function
<b>getcodepage</b>	function	<b>sleep</b>	function
<b>getenv</b>	overloaded function	<b>time</b>	function
<b>gettimeofday</b>	function	<b>timezone</b>	function
<b>isleapyear</b>	function	<b>tmpname</b>	function
<b>launch</b>	function	<b>today</b>	function
<b>libsuffix</b>	string	<b>type</b>	string
<b>localtime</b>	function	<b>uname</b>	function
<b>name</b>	string	<b>uuid</b>	function
<b>newline</b>	string	<b>validdatetime</b>	function
<b>nofdays</b>	function	<b>weekday</b>	function
<b>now</b>	function	<b>where</b>	function
<b>pipeto</b>	function	<b>which</b>	function
<b>platform</b>	string		

## package (basic lua)

<b>config</b>	string	<b>loadlib</b>	function
<b>cpath</b>	string	<b>luapaths</b>	function
<b>extralibpath</b>	function	<b>path</b>	string
<b>extralibpaths</b>	function	<b>poplibpath</b>	function
<b>extralupath</b>	function	<b>popluapath</b>	function
<b>extralupaths</b>	function	<b>preload</b>	table
<b>helpers</b>	table	<b>pushlibpath</b>	function
<b>libpaths</b>	function	<b>pushluapath</b>	function
<b>loaded</b>	table	<b>searchers</b>	table
<b>loaders</b>	table	<b>searchpath</b>	function



# pagebuilders (context)

## **columnsets**    table

F add  
F block  
F check  
F currentcolumn  
F define  
F finishflush  
F flushareas  
F flushcolumn  
F flushrest  
F goto  
F noto  
F prepareflush  
F put  
F registerarea  
F reset  
F setarea

F sethsize  
F sethspace  
F setlines  
F setproperties  
F setstart  
F setvsize

## **injections**    table

F flushafter  
F flushbefore  
F save

## **mixedcolumns**    table

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

## paintreaders (context)

**1** function  
**2** function  
**3** function  
**4** function  
**5** function  
**6** function  
**7** function  
**8** function  
**9** function  
**10** function  
**11** function  
**12** function  
**13** function  
**14** function  
**15** function  
**16** function

**17** function  
**18** function  
**19** function  
**20** function  
**21** function  
**22** function  
**23** function  
**24** function  
**25** function  
**26** function  
**27** function  
**28** function  
**29** function  
**30** function  
**31** function  
**32** function

## pdf (basic tex)

`immediateobj` function

## pdfc (extra tex)

<b>arraytotable</b>	function	<b>getnofpages</b>	function
<b>close</b>	function	<b>getnumber</b>	function
<b>closestream</b>	function	<b>getpage</b>	function
<b>dictionarytotable</b>	function	<b>getpages</b>	function
<b>encryptioncodes</b>	data table	<b>getsize</b>	function
<b>getarray</b>	function	<b>getstatus</b>	function
<b>getboolean</b>	function	<b>getstream</b>	function
<b>getbox</b>	function	<b>getstring</b>	function
<b>getcatalag</b>	function	<b>gettrailer</b>	function
<b>getdictionary</b>	function	<b>getversion</b>	function
<b>getfromarray</b>	function	<b>new</b>	function
<b>getfromdictionary</b>	function	<b>objectcodes</b>	data table
<b>getfromobject</b>	function	<b>open</b>	function
<b>getfromreference</b>	function	<b>openfile</b>	function
<b>getfromstream</b>	function	<b>openstream</b>	function
<b>getinfo</b>	function	<b>pagestotable</b>	function
<b>getinteger</b>	function	<b>readfromstream</b>	function
<b>getmemoryusage</b>	function	<b>readwholestream</b>	function
<b>getname</b>	function	<b>type</b>	function
<b>getnofobjects</b>	function	<b>unencrypt</b>	function

# physics (context)

**units** table

F registerunit

D tables

## pngdecode (extra tex)

**applyfilter** function

**expand** function

**interlace** function

**splitmask** function

**tocmyk** function

**tomask** function

# publications (context)

<b>addtexentry</b>	function	<b>concatstate</b>	function
<b>analyze</b>	function	<b>converttoxml</b>	function
<b>anywhere</b>	function	<b>currentspecification</b>	table
<b>authorcache</b>	data table	S author	
<b>authorcollapsers</b>	data table	T categories	
<b>authorhashers</b>	table	T article	
F invertedshort		S category	
F normal		T extra	
F normalinverted		T fields	
F normalshort		S author	
F sequential		S editor	
F sequentialshort		S journal	
F short		S keywords	
<b>authormap</b>	data table	S note	
<b>authortoregister</b>	function	S number	
<b>btx</b>	table	S pages	
<b>casters</b>	table	S title	
F author		S volume	
F keyword		S year	
F pagenumber		T optional	
F range		T required	
<b>checkeddataset</b>	function	T sets	
<b>citevariants</b>	table	T author	
F author		T virtual	
F authornum		T book	
F authoryear		S category	
F authoryears		T extra	
F category		T fields	
F default		S address	
F entry		S author	
F index		S edition	
F keywords		S editor	
F num		S keywords	
F page		S note	
F short		S number	
F tag		S publisher	
F textnum		S subtitle	
F year		S title	
<b>collected</b>	data table	S volume	
<b>components</b>	table	S year	
F author		T optional	

T required	S page	
T sets	S pages	
T author	S volume	
T editionset	S version	
T virtual	D virtual	
T demo-a	T virtualfields	
S category	B authornum	
T extra	B authoryear	
T fields	B authoryears	
S author	B num	
S institution	B suffix	
S organization	<b>datasets</b>	table
S subtitle	<b>detailed</b>	table
S title	<b>endnotes_to_btx</b>	function
S year	<b>enhancer</b>	table
T optional	S arguments	
T required	T askip	
T sets	B dirty	
T author	T gskip	
T virtual	T kind	
T demo-b	T list	
S category	T system	
T extra	T order	
T fields	N steps	
S author	<b>enhancers</b>	table
S institution	F details	
S organization	F order	
S subtitle	F suffixes	
S title	<b>finder</b>	function
S year	<b>firstofrange</b>	function
T optional	<b>found</b>	function
T required	<b>get</b>	function
T sets	<b>getcasted</b>	function
T authors	<b>getdetail</b>	function
T virtual	<b>getdirect</b>	function
S comment	<b>getfaster</b>	function
S copyright	<b>getfield</b>	function
T fields	<b>getfuzzy</b>	function
S name	<b>getindex</b>	function
T types	<b>inspectors</b>	data table
S author	<b>journals</b>	table
S editor	F abbreviated	
S keywords	F add	
S number	F expanded	



F load		F json	
F save		F lua	
<b>lastofrange</b>	function	F refman	
<b>lists</b>	table	F registercleaner	
F collectentries		F xml	
F combiinlist		<b>loadreplacementfile</b>	function
F fetchentries		<b>new</b>	function
F filterall		<b>okay</b>	function
F flushcombi		<b>oneorange</b>	function
F flushentry		<b>parenttag</b>	function
F flushtag		<b>permitted</b>	function
T methods		<b>prerollcmdstring</b>	function
F dataset		<b>refman_to_btx</b>	function
F force		<b>resolvedname</b>	function
F global		<b>save</b>	function
F local		<b>savers</b>	table
F nofregistered		F bib	
F prepareentries		F lua	
F register		F xml	
F sameasprevious		<b>search</b>	function
T sorters		<b>setcategory</b>	function
F cite		<b>setspecification</b>	function
F dataset		<b>singularorplural</b>	function
F default		<b>sortedentries</b>	function
F index		<b>sortmethods</b>	table
F list		T authortitle	
F reference		T sequence	
F short		T authoryear	
F used		T sequence	
F uservariable		T dataset	
<b>listvariants</b>	table	T sequence	
F default		T key	
F index		T sequence	
F num		<b>specifications</b>	table
F short		T default	
F tag		S author	
<b>load</b>	function	S comment	
<b>loadbibdata</b>	function	S copyright	
<b>loaddefinitionfile</b>	function	S name	
<b>loaders</b>	table	S version	
F bbl		D virtual	
F bib		<b>splitauthor</b>	function
F buffer		<b>splitoneauthor</b>	function
F endnote		<b>statistics</b>	table

N nofbytes		F showdatasetfields	
N nofdatasets		F showentry	
N nofdefinitions		F showfields	
N nofshortcuts		F showhashedauthors	
<b>tables</b>	table	F showtables	
D implicits		F showvariants	
D origins		<b>typesetters</b>	table
D privates		F author	
D sets		F string	
D specials		<b>usedataset</b>	function
D types		<b>usedentries</b>	function
D virtuals		<b>writers</b>	table
<b>tags</b>	function	F author	
<b>tracers</b>	table	F keyword	
F showdatasetauthors		F pagenumber	
F showdatasetcompleteness		F range	

## regimes (context)

<b>backmapping</b>	data table
<b>cleanup</b>	function
<b>disable</b>	function
<b>enable</b>	function
<b>fromregime</b>	function
<b>list</b>	function

<b>mapping</b>	data table
<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>findfiles</b>	function
<b>appendhash</b>	function	<b>findgivenfile</b>	function
<b>automount</b>	function	<b>findgivenfiles</b>	function
<b>booleanvariable</b>	function	<b>findlib</b>	function
<b>cacheversion</b>	string	<b>findpath</b>	function
<b>checkedvariable</b>	function	<b>findtexfile</b>	function
<b>cleanedpathlist</b>	function	<b>findwildcardfile</b>	function
<b>cleaners</b>	data table	<b>findwildcardfiles</b>	function
<b>cleanpath</b>	function	<b>formatofsuffix</b>	function
<b>cleanpathlist</b>	function	<b>formatofvariable</b>	function
<b>cleanupbinfile</b>	function	<b>formats</b>	data table
<b>concatinators</b>	data table	<b>foundintree</b>	function
<b>configbanner</b>	string	<b>foundintrees</b>	function
<b>configurationfiles</b>	function	<b>generators</b>	data table
<b>dangerous</b>	data table	<b>get_from_content</b>	function
<b>datastate</b>	function	<b>getenv</b>	function
<b>decompressors</b>	table	<b>getextrapaths</b>	function
F register		<b>getfilehashes</b>	function
F unregister		<b>gethashes</b>	function
<b>defaultsuffixes</b>	table	<b>getownpath</b>	function
<b>dirstatus</b>	function	<b>getreadfilename</b>	function
<b>dowithfilesandreport</b>	function	<b>hashers</b>	data table
<b>dowithfilesintree</b>	function	<b>homedir</b>	string
<b>dowithpath</b>	function	<b>initialized</b>	function
<b>dowithvariable</b>	function	<b>installinputfilehandler</b>	function
<b>executers</b>	table	<b>installinputlinehandler</b>	function
<b>expandbraces</b>	function	<b>jobpath</b>	function
<b>expandedpathfromlist</b>	function	<b>jobs</b>	table
<b>expandedpathlist</b>	function	F currentcomponent	
<b>expandedpathlistfromvariable</b>	function	F currentenvironment	
<b>expandpath</b>	function	F currentproduct	
<b>expandpathfromvariable</b>	function	F currentproject	
<b>expansion</b>	function	F justacomponent	
<b>extendtexmfvariable</b>	function	D processors	
<b>filtered_from_content</b>	function	F productcomponent	
<b>find_file</b>	function	F usefile	
<b>find_files</b>	function	<b>joinpath</b>	function
<b>findbinfile</b>	function	<b>knownvariables</b>	function
<b>findctxfile</b>	function	<b>libraries</b>	table
<b>finders</b>	data table	F optionalloaded	
<b>findfile</b>	function	F validoptional	

<b>load</b>	function	<b>renew</b>	function
<b>loadbinfile</b>	function	<b>renewcache</b>	function
<b>loaders</b>	data table	<b>repath</b>	function
<b>loadlualib</b>	function	<b>reset</b>	function
<b>loadtexfile</b>	function	<b>resetextrapaths</b>	function
<b>loadtime</b>	function	<b>resetresolve</b>	function
<b>locateformat</b>	function	<b>resolve</b>	function
<b>locators</b>	data table	<b>savers</b>	data table
<b>luacnffallback</b>	string	<b>scandata</b>	function
<b>luacnfname</b>	string	<b>scanfiles</b>	function
<b>luacnfspec</b>	string	<b>schemes</b>	table
<b>luacnfstate</b>	string		
<b>macros</b>	table	T cleaners	
		F md5	
F convertfile		F none	
F decodecomment		F strip	
F enablecomment		F cleanname	
F encodecomment		F fetchstring	
F preprocessed		F fetchtable	
F processmk		F install	
F processmklx		<b>setdynamic</b>	function
F processmkvi		<b>setenv</b>	function
F version		<b>showpath</b>	function
<b>maxreadlevel</b>	number	<b>simplescanfiles</b>	function
<b>methodhandler</b>	function	<b>splitconfigurationpath</b>	function
<b>openbinfile</b>	function	<b>splitexpansions</b>	function
<b>openers</b>	data table	<b>splitmethod</b>	function
<b>openfile</b>	function	<b>splitpath</b>	function
<b>opentexfile</b>	function	<b>stackpath</b>	function
<b>ownpath</b>	string	<b>starttiming</b>	function
<b>popextrapath</b>	function	<b>stoptiming</b>	function
<b>popinputname</b>	function	<b>suffixes</b>	data table
<b>poppath</b>	function	<b>suffixmap</b>	data table
<b>prefixes</b>	data table	<b>suffixofformat</b>	function
<b>prependhash</b>	function	<b>texdatablob</b>	function
<b>pushextrapath</b>	function	<b>toppath</b>	function
<b>pushinputname</b>	function	<b>tracers</b>	data table
<b>pushpath</b>	function	<b>unexpandedpath</b>	function
<b>registerextrapath</b>	function	<b>unexpandedpathlist</b>	function
<b>registerfile</b>	function	<b>unresolve</b>	function
<b>registerfilehash</b>	function	<b>updaterelations</b>	function
<b>registerintrees</b>	function	<b>updatescript</b>	function
<b>registermethod</b>	function	<b>uselibrary</b>	function
<b>registerzipfile</b>	function	<b>usertypes</b>	data table
<b>relations</b>	data table	<b>usezipfile</b>	function

<b>validatedpath</b>	function	<b>variableofformatorsuffix</b>	function
<b>variable</b>	function	<b>wildcardpattern</b>	function
<b>variableofformat</b>	function		

## sandbox (context)

<b>disablelibraries</b>	function
<b>disablerunners</b>	function
<b>enable</b>	function
<b>filehandlerone</b>	function
<b>filehandlertwo</b>	function
<b>finalizer</b>	function
<b>getrunner</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>registerlibrary</b>	function
<b>registerroot</b>	function
<b>registerrunner</b>	function
<b>report</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

**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

**getdata** function

**getinjector** function

**getsplitter** function

**getstatus** function

**handlers** data table

**helpers** data table

**injectors** data table

**inserters** table

F nobreakspace\_after

F nobreakspace\_before

F space\_after

F space\_before

F zerowidthspace\_after

F zerowidthspace\_before

**installdataset** function

**installmethod** function

**numbertodataset** data table

**numbertohandler** data table

**reset** function

**set** function

**setstatus** function

**splitters** data table



## set (context)

**contains**    function

**create**     function

**tolist**     function

**tonumber**   function

**totable**    function

## sha2 (extra lua)

<b>HASH256</b>	function
<b>HASH384</b>	function
<b>HASH512</b>	function
<b>HEX256</b>	function
<b>HEX384</b>	function
<b>HEX512</b>	function
<b>digest256</b>	function
<b>digest384</b>	function
<b>digest512</b>	function

<b>hash256</b>	function
<b>hash384</b>	function
<b>hash512</b>	function
<b>hex256</b>	function
<b>hex384</b>	function
<b>hex512</b>	function
<b>sum256</b>	function
<b>sum384</b>	function
<b>sum512</b>	function

## sio (extra lua)

<b>read2dot14</b>	function
<b>readbytes</b>	function
<b>readbytetable</b>	function
<b>readcardinal1</b>	function
<b>readcardinal1le</b>	function
<b>readcardinal2</b>	function
<b>readcardinal2le</b>	function
<b>readcardinal3</b>	function
<b>readcardinal3le</b>	function
<b>readcardinal4</b>	function
<b>readcardinal4le</b>	function
<b>readcardinaltable</b>	function
<b>readcline</b>	function
<b>readcstring</b>	function
<b>readfixed2</b>	function
<b>readfixed4</b>	function
<b>readinteger1</b>	function

<b>readinteger1le</b>	function
<b>readinteger2</b>	function
<b>readinteger2le</b>	function
<b>readinteger3</b>	function
<b>readinteger3le</b>	function
<b>readinteger4</b>	function
<b>readinteger4le</b>	function
<b>readintegertable</b>	function
<b>tocardinal1</b>	function
<b>tocardinal1le</b>	function
<b>tocardinal2</b>	function
<b>tocardinal2le</b>	function
<b>tocardinal3</b>	function
<b>tocardinal3le</b>	function
<b>tocardinal4</b>	function
<b>tocardinal4le</b>	function

# socket (extra lua)

<b>BLOCKSIZE</b>	number	S content-md5
<b>_DATAGRAMSIZE</b>	number	S content-range
<b>_SETSIZE</b>	number	S content-transfer-encoding
<b>_SOCKETINVALID</b>	number	S content-type
<b>bind</b>	function	S cookie
<b>choose</b>	function	S date
<b>connect</b>	function	S diagnostic-code
<b>connect4</b>	function	S dsn-gateway
<b>connect6</b>	function	S etag
<b>dns</b>	table	S expect
F getaddrinfo		S expires
F gethostname		S final-log-id
F getnameinfo		S final-recipient
F tohostname		S from
F toip		S host
<b>gettime</b>	function	S if-match
<b>headers</b>	table	S if-modified-since
T canonic		S if-none-match
S accept		S if-range
S accept-charset		S if-unmodified-since
S accept-encoding		S in-reply-to
S accept-language		S keywords
S accept-ranges		S last-attempt-date
S action		S last-modified
S age		S location
S allow		S max-forwards
S alternate-recipient		S message-id
S arrival-date		S mime-version
S authorization		S original-envelope-id
S bcc		S original-recipient
S cache-control		S pragma
S cc		S proxy-authenticate
S comments		S proxy-authorization
S connection		S range
S content-description		S received
S content-disposition		S received-from-mta
S content-encoding		S references
S content-id		S referer
S content-language		S remote-mta
S content-length		S reply-to
S content-location		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  
 F lower  
 F normalize  
**http** table  
 N TIMEOUT  
 S USERAGENT  
 F genericform  
 F open  
 F request  
**newtry** function

**protect** function  
**report** function  
**select** function  
**sink** function  
**sinkt** table  
 F close-when-done  
 F default  
 F http-chunked  
 F keep-open  
**skip** function  
**sleep** function  
**source** function  
**sourcet** table  
 F by-length  
 F default  
 F http-chunked  
 F until-closed  
**tcp** function  
**tcp4** function  
**tcp6** function  
**tp** table  
 N TIMEOUT  
 F connect  
**try** function  
**udp** function  
**udp4** function  
**udp6** function  
**url** table  
 F absolute  
 F build  
 F build\_path  
 F escape  
 F parse  
 F parse\_path  
 F unescape

# sorters (context)

<b>basicsorter</b>	function		B pm
<b>comparers</b>	table		B uc
F basic			B zc
<b>constants</b>	table		B zm
S defaultdigits		<b>definitions</b>	data table
S defaultlanguage		<b>firstofsplit</b>	function
S defaultmethod		<b>packch</b>	function
N digitmaximum		<b>packuc</b>	function
N digitoffset		<b>replacementlist</b>	function
N ignoredoffset		<b>setlanguage</b>	function
N replacementoffset		<b>sort</b>	function
T validmethods		<b>splitters</b>	table
B ch		F utf	
B mc		<b>strip</b>	function
B mm		<b>tracers</b>	data table
B pc		<b>update</b>	function

## sparse (context)

<b>concat</b>	function
<b>get</b>	function
<b>max</b>	function
<b>min</b>	function
<b>new</b>	function

<b>range</b>	function
<b>restore</b>	function
<b>set</b>	function
<b>traverse</b>	function
<b>wipe</b>	function

## statistics (context)

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



## status (basic tex)

<b>getbufferstate</b>	function	<b>getmarkstate</b>	function
<b>getcallbackstate</b>	function	<b>getneststate</b>	function
<b>getconstants</b>	function	<b>getnodestate</b>	function
<b>geterrorlinestate</b>	function	<b>getparameterstate</b>	function
<b>geterrorstate</b>	function	<b>getpoolstate</b>	function
<b>getexpandstate</b>	function	<b>getreadstate</b>	function
<b>getextrastate</b>	function	<b>getsavestate</b>	function
<b>getfilestate</b>	function	<b>getsparsestate</b>	function
<b>getfontstate</b>	function	<b>getstringstate</b>	function
<b>gethalferrorlinestate</b>	function	<b>gettexstate</b>	function
<b>gethashstate</b>	function	<b>gettokenstate</b>	function
<b>getinputstate</b>	function	<b>getwarningstate</b>	function
<b>getinsertstate</b>	function	<b>iocodes</b>	table
<b>getlanguagestate</b>	function	<b>list</b>	function
<b>getlookupstate</b>	function	<b>resetmessages</b>	function
<b>getluastate</b>	function		

## storage (context)

<b>allocate</b>	function	<b>noftables</b>	number
<b>data</b>	table	<b>register</b>	function
<b>mark</b>	function	<b>shared</b>	data table
<b>marked</b>	function	<b>storedfunctions</b>	data table
<b>max</b>	number	<b>strip</b>	boolean
<b>min</b>	number	<b>tofmodules</b>	number
<b>nofmodules</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>nospaces</b>	function
<b>autosingle</b>	function	<b>nspace</b>	table
<b>booleanstring</b>	function	<b>optionalquoted</b>	function
<b>byte</b>	function	<b>pack</b>	function
<b>bytepairs</b>	function	<b>packrowscolumns</b>	function
<b>bytes</b>	function	<b>packsize</b>	function
<b>bytetable</b>	function	<b>quote</b>	function
<b>char</b>	function	<b>quoted</b>	function
<b>characterpairs</b>	function	<b>rep</b>	function
<b>characters</b>	function	<b>replacenewlines</b>	function
<b>checkedsplit</b>	function	<b>reverse</b>	function
<b>collapsespaces</b>	function	<b>split</b>	function
<b>containsws</b>	function	<b>splitlines</b>	function
<b>count</b>	function	<b>splitup</b>	function
<b>dawson</b>	function	<b>strip</b>	function
<b>dump</b>	function	<b>sub</b>	function
<b>erf</b>	function	<b>texnewlines</b>	function
<b>erfc</b>	function	<b>tformat</b>	function
<b>erfcx</b>	function	<b>toHEX</b>	function
<b>erfi</b>	function	<b>toboollean</b>	function
<b>escapedpattern</b>	function	<b>tobytes</b>	function
<b>escapedquotes</b>	function	<b>tocontext</b>	function
<b>explode</b>	function	<b>todec</b>	function
<b>f6</b>	function	<b>todimen</b>	function
<b>find</b>	function	<b>tohex</b>	function
<b>format</b>	function	<b>tonodes</b>	function
<b>formatter</b>	function	<b>topattern</b>	function
<b>formatters</b>	function	<b>totable</b>	function
<b>fullstrip</b>	function	<b>tounicode16</b>	function
<b>gmatch</b>	function	<b>toutf</b>	function
<b>gsub</b>	function	<b>toutf32</b>	function
<b>hextocharacters</b>	function	<b>toutf8</b>	function
<b>is_boolean</b>	function	<b>tracedchar</b>	function
<b>is_empty</b>	function	<b>tracedchars</b>	table
<b>itself</b>	function	<b>unescapedquotes</b>	function
<b>len</b>	function	<b>unpack</b>	function
<b>limit</b>	function	<b>unquote</b>	function
<b>linetable</b>	function	<b>unquoted</b>	function
<b>longtostring</b>	function	<b>upper</b>	function
<b>lower</b>	function	<b>utfcharacter</b>	function
<b>match</b>	function	<b>utfcharacters</b>	function

<b>utfcharacter</b>	<b>table</b>	function
<b>utflength</b>		function
<b>utfpadd</b>		function
<b>utfpadding</b>		function
<b>utfvalue</b>		function
<b>utfvalues</b>		function

<b>utfvalue</b>	<b>table</b>	function
<b>valid</b>		function
<b>voigt</b>		function
<b>voigt_hwhm</b>		function
<b>wordsplitter</b>		function

# structures (context)

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

F title	
F touserdata	
<b>inserts</b>	<b>table</b>
D data	
F define	
F getdata	
F getlocation	
F getname	
F getnumber	
F setlocation	
F setup	
D stored	
<b>itemgroups</b>	<b>table</b>
<b>lists</b>	<b>table</b>
F addto	
F analyze	
B autoreorder	
D cached	
D collected	
F discard	
F enhance	
T enhancers	
F external	
F filter	
F formulainumber	
F getresult	
F groupindex	
F hasnumberdata	
F haspagedata	
F hastitledata	
F integrate	
F iscached	
D kinds	
F label	
F location	
D names	
F number	
D ordered	
F page	
F popnesting	
F prefix	
F prefixednumber	
F prefixedpage	
F process	

D pushed	
F pushnesting	
F rawnumber	
F realpage	
F reordered	
T result	
F savedlistnumber	
F savedlistprefixednumber	
F savedlisttitle	
D sectionblocks	
F sectionnumber	
F size	
F title	
D tobesaved	
F use	
F userdata	
F uservalue	
<b>marks</b>	<b>table</b>
F number	
F title	
<b>notes</b>	<b>table</b>
F check_spacing	
F checkpagechange	
F define	
F doifonsamepageasprevious	
F get	
F getdeltapage	
F getinternal	
F getn	
F getstate	
F hascontent	
F internal	
F internalid	
F listindex	
D numbers	
F ordered	
F postpone	
F resetpostponed	
F restore	
F save	
F setstate	
D states	
F store	
<b>pages</b>	<b>table</b>

- F allmarked
- F analyze
- D collected
- F fraction
- F in\_body
- F is\_odd
- F mark
- F marked
- F markedlist
- N nopages
- F number
- F on\_right
- F save
- D tobesaved
- F toranges

## references

- F analyze
- F checked
- F checkedfile
- F checkedfileorurl
- F checkedprogram
- F checkedrealpage
- F checkedurl
- D collected
- U componentsplitter
- F currentmetadata
- F currentorder
- D currentset
- F define
- D defined
- D derived
- F enhance
- D executers
- F export
- T files
- T data
- F define
- F found
- F get
- F filter
- F filterdefault
- D filters
- D flaginternals
- F from

## table

- D functions
- F get
- F getcurrentmetadata
- F getcurrentprefixspec
- F getinnermethod
- F getinternalcachedlistreference
- F getinternallistreference
- F getinternalreference
- F getoutermethod
- D handlers
- F identify
- F import
- F inject
- F injectcurrentset
- S innermethod
- F integrate
- D internals
- F load
- F loadpresets
- F mark
- S outermethod
- D pages
- U prefixsplitter
- D productdata
- T programs
- T data
- F define
- F get
- F realpageofpage
- U referencesplitter
- D referred
- F referredpage
- F registerfinalizer
- F registerinitializer
- F registerpage
- F reset
- D runners
- F set
- F setandgetattribute
- F setcomponent
- F setinternalreference
- F setlinkmethod
- 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

D tracedpages

T urls

T data

F define

F found

F get

F untex

D usedinternals

D usedviews

F valid

## registers

table

F analyze

D collected

F compare

F define

F enhance

F extend

F filter

F filtercollected

F finalize

F findinternal

F flush

F get

F integrate

F prepare

F process

F setmethod

F sort

F store

D tobesaved

F unique

F use

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 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 synonym	
F setentry		D tobesaved	
F setinitialblock		<b>tags</b>	<b>table</b>
F setlevel		T backend	
F setnumber		T checks	
F showstructure		F marginanchor	
F structuredata		F margintext	
F title		F math	
D tobesaved		F mrow	
F typesetnumber		F mtable	
F userdata		T destinationhash	
B verbose		T extras	
<b>sets</b>	<b>table</b>	F adddestination	
F define		F addimplicit	
F get		F addinternal	
F getall		F addreference	
D setlist		F combination	
<b>specials</b>	<b>table</b>	F delimitedsymbol	
D collected		F description	
F retrieve		F descriptionsymbol	
F store		F document	
D tobesaved		F float	
<b>synonyms</b>	<b>table</b>	F formulacontent	
F analyzed		F image	
D collected		F item	
F compare		F itemgroup	
F define		F link	
F filter		F listitem	
F finalize		F mi	
F flush		F msub	
F isshown		F msup	
F isused		F paragraph	
F meaning		F publication	
F prepare		F reference	
F process		F registerlocation	
F register		F registerpages	
F registershown		F registerseparator	
F registerused		F section	
F reset		F sorting	
F resetall		F subsentencesymbol	
F resetlist		F synonym	
F resetshown		F tablecell	
F resetused		F tabulate	
F sort		F tabulatecell	

T finalizers	F registermetadata
F descriptions	F restart
T fixes	F setaspect
F linenumber	F setattributehash
T listdata	F setcombination
T referencehash	F setconstruct
F setattribute	F setfigure
T usedimages	F setfloat
T image	F setformulacontent
T usedstyles	F sethighlight
T construct	F setitem
T highlight	F setitemgroup
F current	F setlist
F elementtag	F setnotation
F enabled	F setnotationsymbol
F exportbox	F setparagraph
F finishexport	F setproperty
F getextradata	F setpublication
F getid	F setregister
F getmetadata	F setsorting
F gettablecell	F setsynonym
F gettabulatecell	F settablecell
F handler	F settabulatecell
F initializeexport	F settagdelimitedsymbol
D labels	F settagsubsentencesymbol
F last	F setupexport
F lastinchain	F setuserproperties
F localexport	D specifications
F locatedtag	F start
T patterns	F stop
U splitter	F strip
D properties	D taglist
F registerextradata	T usewithcare

## table (basic lua)

<code>allkeys</code>	function	<code>orderedhash</code>	function
<code>append</code>	function	<code>pack</code>	function
<code>are_equal</code>	function	<code>prepend</code>	function
<code>collapsed</code>	function	<code>print</code>	function
<code>collapsedhash</code>	function	<code>remove</code>	function
<code>combine</code>	function	<code>reverse</code>	function
<code>compact</code>	function	<code>reversed</code>	function
<code>concat</code>	function	<code>save</code>	function
<code>contains</code>	function	<code>sequenced</code>	function
<code>copy</code>	function	<code>serialize</code>	function
<code>count</code>	function	<code>setmetatablecall</code>	function
<code>derive</code>	function	<code>setmetatableindex</code>	function
<code>deserialize</code>	function	<code>setmetatableindices</code>	function
<code>drop</code>	function	<code>setmetatablekey</code>	function
<code>fastcopy</code>	function	<code>setmetatablenewindex</code>	function
<code>fastserialize</code>	function	<code>sort</code>	function
<code>filtered</code>	function	<code>sorted</code>	function
<code>flattened</code>	function	<code>sortedhash</code>	function
<code>fromhash</code>	function	<code>sortedhashkeys</code>	function
<code>getmetatablekey</code>	function	<code>sortedhashonly</code>	function
<code>getn</code>	function	<code>sortedindexonly</code>	function
<code>has_one_entry</code>	function	<code>sortedkeys</code>	function
<code>hashed</code>	function	<code>sortedpairs</code>	function
<code>identical</code>	function	<code>sparse</code>	function
<code>imerge</code>	function	<code>strip</code>	function
<code>imerged</code>	function	<code>sub</code>	function
<code>insert</code>	function	<code>swapped</code>	function
<code>is_empty</code>	function	<code>tocontext</code>	function
<code>is_simple_table</code>	function	<code>tocsv</code>	function
<code>keys</code>	function	<code>tofile</code>	function
<code>load</code>	function	<code>tohandle</code>	function
<code>loweredkeys</code>	function	<code>tohash</code>	function
<code>makewweak</code>	function	<code>toxml</code>	function
<code>merge</code>	function	<code>twowaymapper</code>	function
<code>merged</code>	function	<code>unique</code>	function
<code>mirrored</code>	function	<code>unnest</code>	function
<code>move</code>	function	<code>unpack</code>	function
<code>ordered</code>	function	<code>values</code>	function

# tex (basic tex)

<b>attribute</b>	table	<b>forceinputstateline</b>	function
<b>automigrationcodes</b>	data table	<b>fprint</b>	function
<b>badness</b>	function	<b>frozenparcodes</b>	data table
<b>boundaries</b>	table	<b>get</b>	function
D names		<b>getalignmentcontextvalues</b>	function
D numbers		<b>getappendlinecontextvalues</b>	function
F system		<b>getattribute</b>	function
<b>box</b>	table	<b>getautomigrationvalues</b>	function
<b>boxresources</b>	table	<b>getbox</b>	function
F getbox		<b>getboxdir</b>	function
F getdimensions		<b>getboxresourcebox</b>	function
F save		<b>getboxresourcedimensions</b>	function
F use		<b>getcatcode</b>	function
<b>catcode</b>	table	<b>getcharacteritagvalues</b>	function
<b>chardef</b>	function	<b>getcount</b>	function
<b>classoptioncodes</b>	data table	<b>getdelcode</b>	function
<b>codes</b>	table	<b>getdelcodes</b>	function
<b>conditionals</b>	data table	<b>getdimen</b>	function
<b>constants</b>	data table	<b>getdimensionvalue</b>	function
<b>count</b>	table	<b>getdiscoptionvalues</b>	function
<b>cprint</b>	function	<b>getdiscstatevalues</b>	function
<b>ctdcatcodes</b>	number	<b>geterrorvalues</b>	function
<b>ctxcatcodes</b>	number	<b>getflagvalues</b>	function
<b>definefont</b>	function	<b>getfontoffamily</b>	function
<b>delcode</b>	table	<b>getfrozenparvalues</b>	function
<b>dimen</b>	table	<b>getglue</b>	function
<b>dimensiondef</b>	function	<b>getglyphdata</b>	function
<b>directives</b>	data table	<b>getglyphoptionvalues</b>	function
<b>discoptioncodes</b>	data table	<b>getglyphscales</b>	function
<b>dontcomplain</b>	function	<b>getglyphscript</b>	function
<b>enableprimitives</b>	function	<b>getglyphstate</b>	function
<b>error</b>	function	<b>getgroupvalues</b>	function
<b>expandasvalue</b>	function	<b>gethccode</b>	function
<b>experiments</b>	data table	<b>gethelptext</b>	function
<b>extraprimitives</b>	function	<b>gethmcode</b>	function
<b>fatalerror</b>	function	<b>gethyphenationvalues</b>	function
<b>flagcodes</b>	data table	<b>getinputstatefile</b>	function
<b>fontidentifier</b>	function	<b>getinputstateline</b>	function
<b>fontname</b>	function	<b>getinputstatemode</b>	function
<b>forcehmode</b>	function	<b>getinsertcontent</b>	function
<b>forceinputstatefile</b>	function	<b>getinsertdepth</b>	function

<b>getinsertdistance</b>	function	<b>getparmodevalues</b>	function
<b>getinsertheight</b>	function	<b>getparstate</b>	function
<b>getinsertlimit</b>	function	<b>getprimitiveorigins</b>	function
<b>getinsertmultiplier</b>	function	<b>getregisterindex</b>	function
<b>getinsertwidth</b>	function	<b>getrunstatevalues</b>	function
<b>getintegervalue</b>	function	<b>getsfcode</b>	function
<b>getinteraction</b>	function	<b>getshapingpenaltiesvalues</b>	function
<b>getiovalues</b>	function	<b>getskip</b>	function
<b>getkerneloptionvalues</b>	function	<b>getspecialmathclassvalues</b>	function
<b>getlargestusedmark</b>	function	<b>gettextcontrolvalues</b>	function
<b>getlccode</b>	function	<b>gettextdir</b>	function
<b>getlinedir</b>	function	<b>gettoks</b>	function
<b>getlist</b>	function	<b>getuccode</b>	function
<b>getlistanchorvalues</b>	function	<b>glue</b>	table
<b>getlistgeometryvalues</b>	function	<b>glyphoptioncodes</b>	data table
<b>getlistsigvalues</b>	function	<b>groupcodes</b>	data table
<b>getlocalbox</b>	function	<b>hashtokens</b>	function
<b>getlocallevel</b>	function	<b>hccode</b>	table
<b>getmark</b>	function	<b>hmcode</b>	table
<b>getmath</b>	function	<b>hyphenationcodes</b>	data table
<b>getmathclassoptionvalues</b>	function	<b>ifs</b>	data table
<b>getmathcode</b>	function	<b>inimatcodes</b>	number
<b>getmathcodes</b>	function	<b>integerdef</b>	function
<b>getmathcontrolvalues</b>	function	<b>isattribute</b>	function
<b>getmathdir</b>	function	<b>isbox</b>	function
<b>getmathparametervalues</b>	function	<b>iscount</b>	function
<b>getmathstylenamevalues</b>	function	<b>isdefined</b>	function
<b>getmathstylevalues</b>	function	<b>isdimen</b>	function
<b>getmathvariantvalues</b>	function	<b>isglue</b>	function
<b>getmode</b>	function	<b>ismuglue</b>	function
<b>getmodevalues</b>	function	<b>ismuskip</b>	function
<b>getmuglue</b>	function	<b>isprintable</b>	function
<b>getmuskip</b>	function	<b>isskip</b>	function
<b>getnest</b>	function	<b>istoks</b>	function
<b>getnoadoptoptionvalues</b>	function	<b>lastnodetype</b>	function
<b>getnormalizelinevalues</b>	function	<b>lccode</b>	table
<b>getnormalizeparvalues</b>	function	<b>linebreak</b>	function
<b>getoutputactive</b>	function	<b>listanchorcodes</b>	data table
<b>getpacktypevalues</b>	function	<b>lists</b>	table
<b>getpagecontextvalues</b>	function	<b>listsigncodes</b>	data table
<b>getpagestate</b>	function	<b>luacatcodes</b>	number
<b>getparbeginvalues</b>	function	<b>magicconstants</b>	table
<b>getparcontextvalues</b>	function		
<b>getpardir</b>	function		

N assumedmathcontrol

N awfulbad

N decentcriterium  
 N defaultcatcodetable  
 N defaultdeadcycles  
 N defaulteqnogapstep  
 N defaulthangafter  
 N defaultoutputbox  
 N defaultpredisplaygap  
 N defaultrule  
 N defaultspacefactor  
 N defaulttolerance  
 N deplorable  
 N ejectpenalty  
 N ignoredepth  
 N infinitebad  
 N infinitepenalty  
 N infinity  
 N largewidthexcess  
 N loosecriterium  
 N mathbeginclass  
 N mathendclass  
 N maxattributeregisterindex  
 N maxboxregisterindex  
 N maxbytecodeindex  
 N maxcardinal  
 N maxcategorycode  
 N maxcharactercode  
 N maxcharcode  
 N maxdatavalue  
 N maxdimen  
 N maxdimenregisterindex  
 N maxfunctionreference  
 N maxglueregisterindex  
 N maxhalfvalue  
 N maxhalfword  
 N maxinteger  
 N maxintregisterindex  
 N maxlimitedscale  
 N maxmarkindex  
 N maxmathclasscode  
 N maxmathfamilyindex  
 N maxmuglueregisterindex  
 N maxnewlinecharacter  
 N maxnofbytecodes  
 N maxnofcatcodetables

N maxnoffonts  
 N maxnoflanguages  
 N maxnofmarks  
 N maxnofmathfamilies  
 N maxquarterword  
 N maxsizeofword  
 N maxspacefactor  
 N maxtoksregisterindex  
 N mincardinal  
 N mindatavalue  
 N mindimen  
 N minhalfword  
 N mininfinity  
 N mininteger  
 N minquarterword  
 N minspacefactor  
 N nocatcodetable  
 N null  
 N nullflag  
 N nullfont  
 N onebp  
 N presetrulethickness  
 N runningrule  
 N smallstretchability  
 N texeqtbsize  
 N texhashprime  
 N texhashsize  
 N two  
 N undefinedmathparameter  
 N unity  
 N unusedattributevalue  
 N unusedmathfamily  
 N unusedmathstyle  
 N unusedscriptvalue  
 N unusedstatevalue  
 N zeroglu  
**mathchardef**  
**mathcode**  
**mathcontrolcodes**  
**modelevels**  
 N horizontal  
 N math  
 N unset  
 N vertical

function  
 table  
 data table  
 table

<b>modes</b>	data table	<b>setglyphstate</b>	function
<b>mprint</b>	function	<b>sethccode</b>	function
<b>mulglue</b>	table	<b>sethmcodes</b>	function
<b>muskip</b>	table	<b>setinputstatefile</b>	function
<b>nest</b>	table	<b>setinputstateline</b>	function
<b>nilcatcodes</b>	number	<b>setinputstatemode</b>	function
<b>noadoptioncodes</b>	data table	<b>setinsertcontent</b>	function
<b>normalizelinecodes</b>	data table	<b>setinsertdistance</b>	function
<b>normalizeparcodes</b>	data table	<b>setinsertlimit</b>	function
<b>notcatcodes</b>	number	<b>setinsertmultiplier</b>	function
<b>number</b>	function	<b>setintegervalue</b>	function
<b>parcontextcodes</b>	data table	<b>setinteraction</b>	function
<b>poplocal</b>	function	<b>setlccode</b>	function
<b>popsavelevel</b>	function	<b>setlinedir</b>	function
<b>preparelinebreak</b>	function	<b>setlist</b>	function
<b>primitives</b>	function	<b>setlocalbox</b>	function
<b>print</b>	function	<b>setmath</b>	function
<b>prtcategories</b>	number	<b>setmathcode</b>	function
<b>pushlocal</b>	function	<b>setmathdir</b>	function
<b>pushsavelevel</b>	function	<b>setmulglue</b>	function
<b>quitlocal</b>	function	<b>setmuskip</b>	function
<b>quittoks</b>	function	<b>setnest</b>	function
<b>resetparagraph</b>	function	<b>setpardir</b>	function
<b>rlncatcodes</b>	number	<b>setrunstate</b>	overloaded function
<b>romannumeral</b>	function	<b>setsfcode</b>	function
<b>round</b>	function	<b>setskip</b>	function
<b>runlocal</b>	function	<b>settextrdir</b>	function
<b>runstring</b>	function	<b>settoks</b>	function
<b>runtoks</b>	function	<b>setuccode</b>	function
<b>saveboxresource</b>	function	<b>sfcode</b>	table
<b>scale</b>	function	<b>shiftparshape</b>	function
<b>scantoks</b>	function	<b>shipout</b>	function
<b>set</b>	function	<b>showcontext</b>	function
<b>setattribute</b>	function	<b>skip</b>	table
<b>setbox</b>	function	<b>snapshotpar</b>	function
<b>setboxdir</b>	function	<b>sp</b>	function
<b>setcatcode</b>	function	<b>specialmathclasscodes</b>	data table
<b>setcount</b>	function	<b>splitbox</b>	function
<b>setdelcode</b>	function	<b>sprint</b>	function
<b>setdimen</b>	function	<b>stringtocodesbitmap</b>	function
<b>setdimensionvalue</b>	function	<b>systemmodes</b>	data table
<b>setglue</b>	function	<b>takebox</b>	function
<b>setglyphdata</b>	function	<b>texcatcodes</b>	number
<b>setglyphscript</b>	function	<b>textcontrolcodes</b>	data table



<b>toks</b>	table	<b>txtcatcodes</b>	number
<b>tonumber</b>	function	<b>type</b>	function
<b>toscaled</b>	function	<b>uccode</b>	table
<b>tpacatcodes</b>	number	<b>uprint</b>	function
<b>tpbcatcodes</b>	number	<b>useboxresource</b>	function
<b>tprint</b>	function	<b>vrbcatcodes</b>	number
<b>trackers</b>	data table	<b>write</b>	function
<b>triggerbuildpage</b>	function		

# texconfig (basic tex)

<b>firstline</b>	string		N step
<b>formatname</b>	string	<b>propertyssize</b>	number
<b>functionsize</b>	number	<b>shell_escape</b>	string
<b>init</b>	overloaded function	<b>tokensize</b>	table
<b>kpse_init</b>	boolean		N size
<b>nodesize</b>	table		N step
	N size		

## texio (basic tex)

<b>closeinput</b>	function	<b>writeln</b>	function
<b>setlogfile</b>	function	<b>writeselector</b>	function
<b>terminal</b>	function	<b>writeselectorlf</b>	function
<b>write</b>	function	<b>writeselectornl</b>	function
<b>write_nl</b>	function		

## token (basic tex)

<b>create</b>	function	<b>getdimension</b>	function
<b>expand</b>	function	<b>getexpandable</b>	function
<b>expand_macro</b>	function	<b>getexpansion</b>	function
<b>expandmacro</b>	function	<b>getfields</b>	function
<b>future_expand</b>	function	<b>getflags</b>	function
<b>futureexpand</b>	function	<b>getfrozen</b>	function
<b>get_active</b>	function	<b>getfunctionvalues</b>	function
<b>get_cmdchrscs</b>	function	<b>getid</b>	function
<b>get_cmdname</b>	function	<b>getimmutable</b>	function
<b>get_command</b>	function	<b>getindex</b>	function
<b>get_csname</b>	function	<b>getinstance</b>	function
<b>get_cstoken</b>	function	<b>getinteger</b>	function
<b>get_dimension</b>	function	<b>getmacro</b>	function
<b>get_expandable</b>	function	<b>getmeaning</b>	function
<b>get_fields</b>	function	<b>getnoaligned</b>	function
<b>get_flags</b>	function	<b>getparameters</b>	function
<b>get_frozen</b>	function	<b>getpermanent</b>	function
<b>get_id</b>	function	<b>getprimitive</b>	function
<b>get_immutable</b>	function	<b>getprimitives</b>	function
<b>get_index</b>	function	<b>getprotected</b>	function
<b>get_instance</b>	function	<b>getrange</b>	function
<b>get_integer</b>	function	<b>gettok</b>	function
<b>get_macro</b>	function	<b>gettolerant</b>	function
<b>get_meaning</b>	function	<b>gobble</b>	function
<b>get_noaligned</b>	function	<b>gobble_dimen</b>	function
<b>get_parameters</b>	function	<b>gobble_integer</b>	function
<b>get_permanent</b>	function	<b>gobbledimen</b>	function
<b>get_primitive</b>	function	<b>gobbleinteger</b>	function
<b>get_protected</b>	function	<b>grab</b>	function
<b>get_range</b>	function	<b>is_defined</b>	function
<b>get_tok</b>	function	<b>is_next_char</b>	function
<b>get_tolerant</b>	function	<b>is_token</b>	function
<b>getactive</b>	function	<b>isdefined</b>	function
<b>getcmdchrscs</b>	function	<b>isnextchar</b>	function
<b>getcmdname</b>	function	<b>istoken</b>	function
<b>getcommand</b>	function	<b>new</b>	function
<b>getcommandid</b>	function	<b>peek_next</b>	function
<b>getcommandvalues</b>	function	<b>peek_next_char</b>	function
<b>getconstant</b>	function	<b>peek_next_expanded</b>	function
<b>getcscname</b>	function	<b>peeknext</b>	function
<b>getcstoken</b>	function	<b>peeknextchar</b>	function

<b>peeknextexpanded</b>	function	<b>scan_value</b>	function
<b>pop_macro</b>	function	<b>scan_word</b>	function
<b>popmacro</b>	function	<b>scanargument</b>	function
<b>push_macro</b>	function	<b>scanbox</b>	function
<b>pushmacro</b>	function	<b>scancardinal</b>	function
<b>put_back</b>	function	<b>scanchar</b>	function
<b>put_next</b>	function	<b>scancmdchr</b>	function
<b>putback</b>	function	<b>scancmdchrexploded</b>	function
<b>putnext</b>	function	<b>scancode</b>	function
<b>save_lua</b>	function	<b>scancsname</b>	function
<b>savelua</b>	function	<b>scandelimited</b>	function
<b>scan_argument</b>	function	<b>scandimen</b>	function
<b>scan_box</b>	function	<b>scandimenargument</b>	function
<b>scan_cardinal</b>	function	<b>scanfloat</b>	function
<b>scan_char</b>	function	<b>scan glue</b>	function
<b>scan_cmdchr</b>	function	<b>scaninteger</b>	function
<b>scan_cmdchr_expanded</b>	function	<b>scanintegerargument</b>	function
<b>scan_code</b>	function	<b>scankey</b>	function
<b>scan_csname</b>	function	<b>scankeyword</b>	function
<b>scan_delimited</b>	function	<b>scankeywordcs</b>	function
<b>scan_dimen</b>	function	<b>scanletters</b>	function
<b>scan_dimen_argument</b>	function	<b>scanluacardinal</b>	function
<b>scan_float</b>	function	<b>scanluainteger</b>	function
<b>scan_glue</b>	function	<b>scanluanumber</b>	function
<b>scan_integer</b>	function	<b>scannext</b>	function
<b>scan_integer_argument</b>	function	<b>scannextchar</b>	function
<b>scan_key</b>	function	<b>scannextexpanded</b>	function
<b>scan_keyword</b>	function	<b>scanreal</b>	function
<b>scan_keyword_cs</b>	function	<b>scanscale</b>	function
<b>scan_letters</b>	function	<b>scanskip</b>	function
<b>scan_luacardinal</b>	function	<b>scanstring</b>	function
<b>scan_luainteger</b>	function	<b>scantoken</b>	function
<b>scan_luanumber</b>	function	<b>scantokencode</b>	function
<b>scan_next</b>	function	<b>scantokenlist</b>	function
<b>scan_next_char</b>	function	<b>scantoks</b>	function
<b>scan_next_expanded</b>	function	<b>scanvalue</b>	function
<b>scan_real</b>	function	<b>scanword</b>	function
<b>scan_scale</b>	function	<b>serialize</b>	function
<b>scan_skip</b>	function	<b>set_char</b>	function
<b>scan_string</b>	function	<b>set_dimension</b>	function
<b>scan_token</b>	function	<b>set_integer</b>	function
<b>scan_token_code</b>	function	<b>set_lua</b>	function
<b>scan_tokenlist</b>	function	<b>set_macro</b>	function
<b>scan_toks</b>	function	<b>setchar</b>	function

<b>setdimension</b>	function	<b>skipnext</b>	function
<b>setinteger</b>	function	<b>skipnextexpanded</b>	function
<b>setlua</b>	function	<b>type</b>	function
<b>setmacro</b>	function	<b>undefine_macro</b>	function
<b>skip_next</b>	function	<b>undefinemacro</b>	function
<b>skip_next_expanded</b>	function		

# tokens (context)

## accessors table

- F active
- F cmd
- F cmdchrcs
- F cmdname
- F command
- F csname
- F expandable
- F frozen
- F index
- F name
- F protected
- F range

## astable function

## bits table

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

## cache table

- U NC
- U NR
- U bf
- U buff\_finish
- U c\_font\_compact

- U color
- U colordefalc
- U colordefflc
- U colordefflt
- U colordefrlt
- U dofinishreference
- U dostarttext
- U finishjob
- U firstofoneargument
- U firstoftwoarguments
- U gobbleoneargument
- U goto
- U iftrue
- U input
- U loadfoundtypescriptfile
- U resetctxscanner
- U rlap
- U secondoftwoarguments
- U setfalsevalue
- U setsectionblock
- U setupsystem
- U startcolumns
- U starttabulate
- U starttitle
- U startxtitle
- U stopcolumns
- U stoptabulate
- U stoptitle
- U stopxtitle
- U texsetup
- U xmlw

## commands data table

## compile function

## constant function

## converters table

- S toboolean
- S todimen
- S toglue
- S tonumber
- S tostring

## create function

<b>defined</b>	function	F cmdchrexploded
<b>flags</b>	function	F code
<b>getinteger</b>	function	F conditional
<b>getters</b>	table	F count
F box		F csname
F count		F csnameunchecked
F cstoken		F delimited
F dimen		F dimen
F glue		F dimenargument
F macro		F dimension
F meaning		F float
F skip		F glue
F token		F gluespec
<b>gobble</b>	function	F gluevalues
<b>isdefined</b>	function	F hash
<b>istoken</b>	function	F hbox
<b>new</b>	function	F integer
<b>pickup</b>	function	F integerargument
<b>popmacro</b>	function	F ischar
<b>presets</b>	table	F key
T 1 argument		F keyword
T 1 string		F keywordcs
T 2 arguments		F letters
T 2 strings		F list
T 3 arguments		F luacardinal
T 3 strings		F luainteger
T 4 arguments		F luanumber
T 4 strings		F lxmlid
T 5 strings		F next
T 6 strings		F nextchar
T 7 strings		F nextexpanded
T 8 strings		F number
<b>pushmacro</b>	function	F optional
<b>scanners</b>	table	F peek
F argument		F peekchar
F argumentasis		F peekexpanded
F array		F real
F boolean		F scanclose
F box		F scanopen
F bracketed		F skip
F bracketedasis		F skipexpanded
F cardinal		F string
F char		F table
F cmdchr		F token



F tokencode  
 F tokenlist  
 F tokens  
 F toks  
 F value  
 F vbox  
 F verbatim  
 F vtop  
 F whd  
 F word  
**setinteger** function  
**setters** table

F box  
 F char  
 F count  
 F dimen  
 F glue  
 F lua  
 F macro  
 F skip

**shortcuts** table

T bits  
 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  
 N close  
 F inspect

N open  
 F report  
 F scanargument  
 F scanargumentasis  
 F scanarray  
 F scanboolean  
 F scanbox  
 F scanbracketed  
 F scanbracketedasis  
 F scancardinal  
 F scanclose  
 F scancode  
 F scanconditional  
 F scanscname  
 F scanscnameunchecked  
 F scandelimited  
 F scandimen  
 F scandimenargument  
 F scandimension  
 F scanglue  
 F scangluespec  
 F scangluevalues  
 F scanhash  
 F scanhbox  
 F scaninteger  
 F scanintegerargument  
 F scankeyword  
 F scankeywordcs  
 F scanletters  
 F scanlist  
 T scanners  
 F argument  
 F argumentasis  
 F array  
 F boolean  
 F box  
 F bracketed  
 F bracketedasis  
 F cardinal  
 F char  
 F cmdchr  
 F cmdchrexploded  
 F code  
 F conditional

F count	F toks
F csname	F value
F csnameunchecked	F vbox
F delimited	F verbatim
F dimen	F vtop
F dimenargument	F whd
F dimension	F word
F float	F scannumber
F glue	F scanopen
F gluespec	F scanoptional
F gluevalues	F scanstring
F hash	F scantable
F hbox	F scantokenlist
F integer	F scantoks
F integerargument	F scanvbox
F ischar	F scanverbatim
F key	F scanvtop
F keyword	F scanword
F keywordcs	F toboolean
F letters	F todimen
F list	T tokens
F luacardinal	T accessors
F luainteger	F active
F luanumber	F cmd
F lxmlid	F cmdchrcs
F next	F cmdname
F nextchar	F command
F nextexpanded	F csname
F number	F expandable
F optional	F frozen
F peek	F index
F peekchar	F name
F peekexpanded	F protected
F real	F range
F scanclose	F astable
F scanopen	T cache
F skip	U NC
F skipexpanded	U NR
F string	U bf
F table	U buff_finish
F token	U c_font_compact
F tokencode	U color
F tokenlist	U colordefalc
F tokens	U colordefflc

U colordefflt	F cstoken
U colordefrlt	F dimen
U dofinishreference	F glue
U dostarttext	F macro
U finishjob	F meaning
U firstofoneargument	F skip
U firstoftwoarguments	F token
U gobbleoneargument	F gobble
U goto	F isdefined
U iftrue	F istoken
U input	F new
U loadfoundtypescriptfile	F pickup
U resetctxscanner	F popmacro
U rlap	T presets
U secondoftwoarguments	F pushmacro
U setfalsevalue	F setinteger
U setsectionblock	T setters
U setupsystem	F box
U startcolumns	F char
U starttabulate	F count
U starttitle	F dimen
U startxtitle	F glue
U stopcolumns	F lua
U stoptabulate	F macro
U stoptitle	F skip
U stopxtitle	T shortcuts
U texsetup	N close
U xmlw	F inspect
D commands	N open
F compile	F report
F constant	F scanargument
T converters	F scanargumentasis
S toboolean	F scanarray
S todimen	F scanboolean
S toglue	F scanbox
S tonumber	F scanbracketed
S tostring	F scanbracketedasis
F create	F scancardinal
F defined	F scanclose
F flags	F scancode
F getinteger	F scanconditional
T getters	F scansname
F box	F scansnameunchecked
F count	F scandalimited

F scandimen	F scanstring
F scandimenargument	F scantable
F scandimension	F scantokenlist
F scanglue	F scantoks
F scangluespec	F scanvbox
F scangluevalues	F scanverbatim
F scanhash	F scanvtop
F scanhbox	F scanword
F scaninteger	F tobboolean
F scanintegerargument	F todimen
F scankeyword	F tonumber
F scankeywordcs	F tostring
F scanletters	D values
F scanlist	F tonumber
F scannumber	F tostring
F scanopen	<b>values</b> data table
F scanoptional	

## tracers (context)

**printerror**    function  
**printwarning**    function

**showlines**    function

## trackers (context)

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

# typesetters (context)

## **alignments** table

F handler  
F set

## **breakpoints** table

F define  
F handler  
D mapping  
T methods  
T numbers  
F set  
F setreplacement

## **cases** table

T actions  
F handler  
F register  
F set

## **characteralign** table

F handler  
F resetcharacteralign  
F setcharacteralign

## **characters** table

F handler  
T methods  
F replacensp  
F replacenspaces

## **checkers** table

F handler  
F reset  
F set

## **cleaners** table

F handler  
F set

## **digits** table

T actions  
F handler  
F set

## **directions** table

F getfences  
F getglobal  
F getmethod  
F handler

T handlers  
F installhandler  
F set  
F setcolor  
F tomode

## **firstlines** table

T actions  
F default  
F line  
F word  
F handler  
F set

## **fontkerns** table

F handler

## **initials** table

T actions  
F default  
F handler  
F set

## **injectors** table

F check  
T list  
F mark  
F reset  
F set  
F show

## **italics** table

F enablemath  
F enabletext  
F forcevariant  
F handler  
F reset  
F set

## **kerns** table

D factors  
F handler  
F keepligature  
D mapping  
F set

## **localboxes** table

F handler

## **manipulators**      table

F apply  
F applyspecification  
T methods  
  F Word  
  F Words  
  F abbreviatedjournal  
  F expandedjournal  
  F lowercase  
  F stripperperiod  
  F uppercase  
T patterns  
  U list  
  U pair  
F splitspecification

## **margins**            table

F finalhandler  
F globalhandler  
F localhandler  
F save

## **marksuspects**      function

## **paragraphs**        table

F addanchortoline  
F addtoline  
F calculatedelta  
F checkline  
F moveinline

## **periodkerns**        table

D factors  
F handler  
D mapping  
F set

## **processors**         table

F apply  
F register  
F reset  
F split  
F startapply  
F stopapply

F stripped

F tostring

## **rubies**             table

F attach

F check

## **showsuspects**      function

## **spacings**           table

F define

F handler

D mapping

T numbers

  T frenchpunctuation

    T characters

    S name

    N number

F reset

F set

F setup

## **synchronize**        table

F handler

## **tighten**             table

F handler

## **wrappers**           table

## **xtables**             table

F cleanup

F construct

F create

F finish\_row

F flush

F initialize\_construct

F initialize\_reflow\_height

F initialize\_reflow\_width

F next\_row

F reflow\_height

F reflow\_width

F set\_construct

F set\_reflow\_height

F set\_reflow\_width



## updaters (context)

**apply**      function  
**register**   function

## url (context)

<b>addscheme</b>	function
<b>barepath</b>	function
<b>construct</b>	function
<b>decode</b>	function
<b>encode</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>unescape</b>	function
<b>unescapeget</b>	function

## utf8 (basic lua)

**char**           function  
**charpattern** string  
**codepoint**     function

**codes**          function  
**len**           function  
**offset**         function

# utilities (context)

## **debugger**            table

F disable  
F enable  
F savestats  
F showstats  
F showtraceback

## **files**                table

F close  
F getposition  
F getsize  
F look  
F open  
F read2dot14  
F readbyte  
F readbytes  
F readbytetable  
F readcardinal  
F readcardinal1  
F readcardinal1le  
F readcardinal2  
F readcardinal2le  
F readcardinal3  
F readcardinal3le  
F readcardinal4  
F readcardinal4le  
F readcardinaltable  
F readchar  
F readcline  
F readcstring  
F readfixed2  
F readfixed4  
F readinteger  
F readinteger1  
F readinteger1le  
F readinteger2  
F readinteger2le  
F readinteger3  
F readinteger3le  
F readinteger4  
F readinteger4le  
F readintegertable

F readsignedbyte  
F readstring  
F readtag  
F setposition  
F size  
F skip  
F skiplong  
F skipposition  
F skipshort  
F writebyte  
F writecardinal1  
F writecardinal1le  
F writecardinal2  
F writecardinal2le  
F writecardinal3  
F writecardinal3le  
F writecardinal4  
F writecardinal4le  
F writeinteger1  
F writeinteger1le  
F writeinteger2  
F writeinteger2le  
F writeinteger3  
F writeinteger3le  
F writeinteger4  
F writeinteger4le  
F writestring

## **formatters**           table

F formatcolumns  
F list  
F stripzeros

## **ghostscript**           table

F convert  
F statistics

## **graphicmagick**        table

F convert  
F statistics

## **graphicsmagick**      table

F convert  
F statistics

## **lua**                    table

- B alwaysstripcode
- F checkmemory
- F compile
- F loadedluacode
- F loadstring
- F loadstripped
- N nofstrippedbytes
- N nofstrippedchunks
- F registerfinalizer
- 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
- T hashes
  - T settings\_to\_set
    - T text,hidden,paper,page,leftpage,rightpage
      - B hidden
      - B leftpage
      - B page

- B paper
- B rightpage
- B text
- 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 settings\_to\_hash\_d
  - U unittotex
- F process\_stripped\_settings
- F rfc4180splitter
- F runtime
- F settings\_to\_array
- F settings\_to\_array\_obey\_fences
- F settings\_to\_array\_with\_repeat
- F settings\_to\_hash
- F settings\_to\_hash\_colon\_too
- F settings\_to\_hash\_strict
- F settings\_to\_hash\_tolerant
- F settings\_to\_numbers
- F settings\_to\_set
- F simple\_hash\_to\_string
- F splitmethod
- F splitthousands
- F stepper
- F stripped\_settings\_to\_array
- F totime
- F unittotex
- F unittoxml

## randomizer table

- F get
- F getnumber
- F getrepeatable
- F getrepeatableseed
- F getseed
- F newrepeatable

F popseed		F sparse	
F pushseed		<b>streams</b>	table
F repeatable		F close	
F reuseseed		F getposition	
F setseed		F getsize	
F setseedi		F getstring	
<b>randomizers</b>	table	F look	
F poisson		F open	
<b>sequencers</b>	table	F openstring	
F appendaction		F read2dot14	
F appendgroup		F readbyte	
F compile		F readbytes	
F disableaction		F readbytetable	
F disablegroup		F readcardinal	
F enableaction		F readcardinal1	
F enablegroup		F readcardinal1le	
D functions		F readcardinal2	
F localize		F readcardinal2le	
F new		F readcardinal3	
F nodeprocessor		F readcardinal3le	
F prependaction		F readcardinal4	
F prependgroup		F readcardinal4le	
F removeaction		F readcardinaltable	
F replaceaction		F readchar	
F setkind		F readcline	
F tostring		F readcstring	
<b>setters</b>	table	F readfixed2	
F disable		F readfixed4	
F enable		F readinteger	
F initialize		F readinteger1	
F list		F readinteger1le	
F new		F readinteger2	
F register		F readinteger2le	
F report		F readinteger3	
F reset		F readinteger3le	
F show		F readinteger4	
<b>stacker</b>	table	F readinteger4le	
F new		F readintegertable	
<b>storage</b>	table	F readsignedbyte	
F allocate		F readstring	
F checked		F setposition	
F mark		F size	
F marked		F skip	
F setinitializer		F skipbytes	

F skiplong		F removevalue	
F skipshort		F replacevalue	
F tocardinal1		<b>tar</b>	<b>table</b>
F tocardinal1le		T archives	
F tocardinal2		F closearchive	
F tocardinal2le		T files	
F tocardinal3		F fetch	
F tocardinal3le		F hash	
F tocardinal4		F list	
F tocardinal4le		F pack	
<b>strings</b>	<b>table</b>	F unpack	
F collapse		F openarchive	
F collapsecrlf		T registeredfiles	
T formatters		T streams	
F add		F fetch	
F new		F hash	
F newcollector		F list	
F newrepeater		F pack	
F nice		F unpack	
T striplinepatterns		T strings	
U collapse		F fetch	
U prune		F hash	
U prune and collapse		F list	
U prune and no empty		F pack	
U prune and to space		F unpack	
U retain		<b>templates</b>	<b>table</b>
U retain and collapse		F load	
U retain and no empty		F replace	
F striplines		F replacer	
F striplong		F resolve	
F tabtospace		<b>zipfiles</b>	<b>table</b>
T tracers		F close	
<b>tables</b>	<b>table</b>	F found	
F accesstable		F hash	
F definedtable		F list	
F definetable		F open	
F encapsulate		F unzip	
F insertaftervalue		F unzipdir	
F insertbeforevalue		F zipdir	
F migratetable			

## visualizers (context)

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



# xcomplex (extra lua)

<b>I</b>	function	F sqrt	
<b>__add</b>	function	F tan	
<b>__div</b>	function	F tanh	
<b>__eq</b>	function	F topair	
<b>__index</b>	table	F tostring	
F I		F totable	
F __add		F __mul	
F __div		S __name	
F __eq		F __pow	
T __index		F __sub	
F I		F __tostring	
F __add		F __unm	
F __div		F abs	
F __eq		F acos	
F __mul		F acosh	
S __name		F arg	
F __pow		F asin	
F __sub		F asinh	
F __tostring		F atan	
F __unm		F atanh	
F abs		F conj	
F acos		F cos	
F acosh		F cosh	
F arg		F exp	
F asin		F i	
F asinh		F imag	
F atan		F log	
F atanh		F new	
F conj		F pow	
F cos		F proj	
F cosh		F real	
F exp		F sin	
F i		F sinh	
F imag		F sqrt	
F log		F tan	
F new		F tanh	
F pow		F topair	
F proj		F tostring	
F real		F totable	
F sin		<b>__mul</b>	function
F sinh		<b>__name</b>	string

<b>__pow</b>	function	<b>i</b>	function
<b>__sub</b>	function	<b>imag</b>	function
<b>__tostring</b>	function	<b>log</b>	function
<b>__unm</b>	function	<b>new</b>	function
<b>abs</b>	function	<b>pow</b>	function
<b>acos</b>	function	<b>proj</b>	function
<b>acosh</b>	function	<b>real</b>	function
<b>arg</b>	function	<b>sin</b>	function
<b>asin</b>	function	<b>sinh</b>	function
<b>asinh</b>	function	<b>sqrt</b>	function
<b>atan</b>	function	<b>tan</b>	function
<b>atanh</b>	function	<b>tanh</b>	function
<b>conj</b>	function	<b>topair</b>	function
<b>cos</b>	function	<b>tostring</b>	function
<b>cosh</b>	function	<b>totable</b>	function
<b>exp</b>	function		

## xdecimal (extra lua)

<b>__add</b>	function	F getprecision
<b>__band</b>	function	F ln
<b>__bor</b>	function	F log
<b>__bxor</b>	function	F max
<b>__div</b>	function	F min
<b>__eq</b>	function	F minus
<b>__idiv</b>	function	F new
<b>__index</b>	table	F plus
F __add		F pow
F __band		F rotate
F __bor		F setprecision
F __bxor		F shift
F __div		F sqrt
F __eq		F toengstring
F __idiv		F tonumber
T __index		F tostring
F __add		F trim
F __band		F __le
F __bor		F __lt
F __bxor		F __mod
F __div		F __mul
F __eq		S __name
F __idiv		F __pow
F __le		F __shl
F __lt		F __shr
F __mod		F __sub
F __mul		F __tostring
S __name		F __unm
F __pow		F abs
F __shl		F band
F __shr		F bor
F __sub		F bxor
F __tostring		F conj
F __unm		F copy
F abs		F exp
F band		F getprecision
F bor		F ln
F bxor		F log
F conj		F max
F copy		F min
F exp		F minus

F new		<b>band</b>	function
F plus		<b>bor</b>	function
F pow		<b>bxor</b>	function
F rotate		<b>conj</b>	function
F setprecision		<b>copy</b>	function
F shift		<b>exp</b>	function
F sqrt		<b>getprecision</b>	function
F toengstring		<b>ln</b>	function
F tonumber		<b>log</b>	function
F tostring		<b>max</b>	function
F trim		<b>min</b>	function
<b>__le</b>	function	<b>minus</b>	function
<b>__lt</b>	function	<b>new</b>	function
<b>__mod</b>	function	<b>plus</b>	function
<b>__mul</b>	function	<b>pow</b>	function
<b>__name</b>	string	<b>rotate</b>	function
<b>__pow</b>	function	<b>setprecision</b>	function
<b>__shl</b>	function	<b>shift</b>	function
<b>__shr</b>	function	<b>sqrt</b>	function
<b>__sub</b>	function	<b>toengstring</b>	function
<b>__tostring</b>	function	<b>tonumber</b>	function
<b>__unm</b>	function	<b>tostring</b>	function
<b>abs</b>	function	<b>trim</b>	function

## xmath (extra lua)

**acos** function  
**acosh** function  
**asin** function  
**asinh** function  
**atan** function  
**atan2** function  
**atanh** function  
**cbrt** function  
**ceil** function  
**copysign** function  
**cos** function  
**cosh** function  
**deg** function  
**erf** function  
**erfc** function  
**exp** function  
**exp2** function  
**expm1** function  
**fabs** function  
**fdim** function  
**floor** function  
**fma** function  
**fmax** function  
**fmin** function  
**fmod** function  
**frexp** function  
**gamma** function  
**hypot** function  
**inf** number  
**isfinite** function  
**isinf** function  
**isnan** function

**isnormal** function  
**j0** function  
**j1** function  
**jn** function  
**ldexp** function  
**lgamma** function  
**log** function  
**log10** function  
**log1p** function  
**log2** function  
**logb** function  
**modf** function  
**nan** number  
**nearbyint** function  
**nextafter** function  
**pi** number  
**pow** function  
**rad** function  
**remainder** function  
**remquo** function  
**round** function  
**scalbn** function  
**sin** function  
**sinh** function  
**sqrt** function  
**tan** function  
**tanh** function  
**tgamma** function  
**trunc** function  
**y0** function  
**y1** function  
**yn** function

# xml (context)

<b>addentitiesdoctype</b>	function	F family	
<b>addspecialcode</b>	function	F fontspecification	
<b>after</b>	function	F mappedstylevalue	
<b>all</b>	function	F padding	
<b>applylpath</b>	function	F size	
<b>applyselector</b>	function	F style	
<b>assign</b>	function	F stylevalue	
<b>attribute</b>	function	F todimension	
<b>badinclusions</b>	function	F variant	
<b>before</b>	function	F weight	
<b>body</b>	function	<b>defaulthandlers</b>	table
<b>builtinentities</b>	table	D file	
B amp		D parsedxml	
B apos		D string	
B gt		D tex	
B lt		D texline	
B quot		D texspace	
<b>CDATA</b>	function	D verbose	
<b>CDATATOTEXT</b>	function	<b>defaultprotocol</b>	string
<b>checkbom</b>	function	<b>delete</b>	function
<b>checkedempty</b>	function	<b>delete_element</b>	function
<b>checkerror</b>	function	<b>despecialized</b>	function
<b>checknamespace</b>	function	<b>each</b>	function
<b>checkns</b>	function	<b>each_element</b>	function
<b>cleansed</b>	function	<b>elements</b>	function
<b>collect</b>	function	<b>elementtocdata</b>	function
<b>collect_elements</b>	function	<b>empty</b>	function
<b>collect_tags</b>	function	<b>entities</b>	data table
<b>collect_texts</b>	function	<b>erase</b>	function
<b>collected</b>	function	<b>errorhandler</b>	function
<b>collecttexts</b>	function	<b>escaped</b>	function
<b>compactelement</b>	function	<b>expand</b>	function
<b>content</b>	function	<b>expressions</b>	table
<b>convert</b>	function	F attribute	
<b>copy</b>	function	F boolean	
<b>count</b>	function	F child	
<b>cprint</b>	function	F contains	
<b>CSS</b>	table	F count	
F applyselector		F error	
F colorspecification		F find	
F dimension		F hasclass	

F idstring		F text	
F lower		F upper	
F name		F upperall	
F number		F xml	
F oneof		T xml	
F print		F all	
F quit		F att	
F tag		F attribute	
F text		F attributes	
F undefined		F cdata	
F upper		F chainattribute	
<b>fillin</b>	function	F count	
<b>filter</b>	function	F default	
<b>finalizers</b>	table	F elements	
F paragraphs		F empty	
T tex		F first	
F all		F function	
F attribute		F index	
F chainattribute		F last	
F chainpath		F lowerall	
F command		F match	
F concat		F name	
F concatrange		F position	
F context		F reverse	
F count		F table	
F ctxtext		F tag	
F default		F tags	
F depth		F text	
F first		F texts	
F function		F upperall	
F index		<b>first</b>	function
F last		<b>found</b>	function
F lettered		<b>functions</b>	table
F lower		F classes	
F lowerall		F hasclass	
F match		<b>getbuffer</b>	function
F name		<b>gethandlers</b>	function
F param		<b>gethandlersfunction</b>	function
F parameter		<b>helpers</b>	table
F position		F recursetext	
F reverse		<b>include</b>	function
F stripped		<b>inclusion</b>	function
F tag		<b>inclusions</b>	function
F tags		<b>index</b>	function

<b>inheritattributes</b>	function	<b>privatecodes</b>	table
<b>inheritedconvert</b>	function	<b>privatetoken</b>	function
<b>inject</b>	function	<b>process</b>	function
<b>inject_element</b>	function	<b>process_attributes</b>	function
<b>inject_element_after</b>	function	<b>process_elements</b>	function
<b>inject_element_before</b>	function	<b>processattributes</b>	function
<b>injectafter</b>	function	<b>profiled</b>	table
<b>injectbefore</b>	function	<b>pure</b>	function
<b>insert</b>	function	<b>pushmatch</b>	function
<b>insert_element</b>	function	<b>raw</b>	function
<b>insert_element_after</b>	function	<b>registerentity</b>	function
<b>insert_element_before</b>	function	<b>registerns</b>	function
<b>insertafter</b>	function	<b>reindex</b>	function
<b>insertbefore</b>	function	<b>remap_name</b>	function
<b>insertcdata</b>	function	<b>remap_namespace</b>	function
<b>insertcomment</b>	function	<b>remap_tag</b>	function
<b>inspect</b>	function	<b>remapname</b>	function
<b>is_valid</b>	function	<b>remapnamespace</b>	function
<b>kind</b>	function	<b>remaptag</b>	function
<b>last</b>	function	<b>rename</b>	function
<b>lastmatch</b>	function	<b>renamespace</b>	function
<b>load</b>	function	<b>reparsedentitylpeg</b>	userdata
<b>lpath</b>	function	<b>replace</b>	function
<b>lpathcached</b>	function	<b>replace_element</b>	function
<b>lpathcalls</b>	function	<b>resetinjectors</b>	function
<b>lshow</b>	function	<b>resolvns</b>	function
<b>makestandalone</b>	function	<b>root</b>	function
<b>match</b>	function	<b>save</b>	function
<b>name</b>	function	<b>selection</b>	function
<b>newhandlers</b>	function	<b>separate</b>	function
<b>nodesettostring</b>	function	<b>serialize</b>	function
<b>originalload</b>	function	<b>serializetotext</b>	function
<b>package</b>	function	<b>setcdata</b>	function
<b>parent</b>	function	<b>setcomment</b>	function
<b>parsedentitylpeg</b>	userdata	<b>sethandlersfunction</b>	function
<b>pihandlers</b>	table	<b>setinjectors</b>	function
F injector		<b>setproperty</b>	function
F tex		<b>settings</b>	function
<b>placeholders</b>	table	<b>specialcodes</b>	table
F unknown_any_entity		S "	
F unknown_dec_entity		S #	
F unknown_hex_entity		S \$	
<b>popmatch</b>	function	S %	
<b>position</b>	function	S &	



<code>S '</code>		<code>texttocdata</code>	function
<code>S &lt;</code>		<code>tocdata</code>	function
<code>S &gt;</code>		<code>toelement</code>	function
<code>S \</code>		<code>tostring</code>	function
<code>S {</code>		<code>totable</code>	function
<code>S  </code>		<code>toxml</code>	function
<code>S }</code>		<code>tprint</code>	function
<code>S ~</code>		<code>traverse</code>	function
<code>specialhandler</code>	table	<code>unescaped</code>	function
<code>sprint</code>	function	<code>unescapedentitylpeg</code>	userdata
<code>string</code>	function	<code>unprivatized</code>	function
<code>strip</code>	function	<code>unspecialized</code>	function
<code>strip_whitespace</code>	function	<code>wipe</code>	function
<code>stripelement</code>	function	<code>withelement</code>	function
<code>stripleadingspaces</code>	function	<code>withelements</code>	function
<code>table</code>	function	<code>wrap</code>	function
<code>text</code>	function	<code>xmlns</code>	table
<code>textonly</code>	function		

## xzip (extra lua)

**adler32**           function  
**compress**        function  
**compresssize**   function

**crc32**            function  
**decompress**      function  
**decompresssize** function

## zip (extra lua)

**archives**

table

**closearchive**

function

**openarchive**

function

**registeredfiles**

table

## zlib (extra lua)

**adler32**            function

**compress**        function

**compresssize**    function

**crc32**            function

**decompress**      function

**decompresssize** function