

MP 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 logs lpdf  
**lpeg** **lua** luatex lxml **math** mathematics **md5**  
metapost **mime** moduledata modules mp **mplib**  
noads **node** nodes number objects optional **os**  
**package** pagebuilders 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>CONTEXTLMTXMODE</b>	number	<b>directives</b>	table
<b>FFISUPPORTED</b>	boolean	<b>document</b>	table
<b>LUAMAJORVERSION</b>	number	<b>documentdata</b>	table
<b>LUAMINORVERSION</b>	number	<b>dofile</b>	function
<b>LUATEXENGINE</b>	string	<b>drivers</b>	table
<b>LUATEXFORMATID</b>	number	<b>environment</b>	table
<b>LUATEXFUNCTIONALITY</b>	number	<b>error</b>	function
<b>LUATEXVERSION</b>	number	<b>experiments</b>	table
<b>LUAVERSION</b>	number	<b>fasttrack</b>	boolean
<b>MP</b>	function	<b>figures</b>	table
<b>arg</b>	table	<b>file</b>	table
<b>asnumber_p</b>	function	<b>fio</b>	table
<b>assert</b>	function	<b>floats</b>	table
<b>attributes</b>	table	<b>flushsimplerule</b>	function
<b>backends</b>	table	<b>flushspecialrule</b>	function
<b>basexx</b>	table	<b>font</b>	table
<b>bit32</b>	table	<b>fonts</b>	table
<b>blobs</b>	table	<b>functions</b>	table
<b>blockrequire</b>	function	<b>getmetatable</b>	function
<b>boolean</b>	table	<b>getscriptstatus</b>	function
<b>buffers</b>	table	<b>global</b>	table
<b>builders</b>	table	<b>graphics</b>	table
<b>caches</b>	table	<b>gzip</b>	table
<b>callback</b>	table	<b>handledefinitions</b>	function
<b>callbacks</b>	table	<b>handletransformstring</b>	function
<b>catcodes</b>	table	<b>images</b>	table
<b>characters</b>	table	<b>inspect</b>	function
<b>checkimage</b>	function	<b>interactions</b>	table
<b>chemistry</b>	table	<b>interfaces</b>	table
<b>collectgarbage</b>	function	<b>io</b>	table
<b>commands</b>	table	<b>ipairs</b>	function
<b>containers</b>	table	<b>job</b>	table
<b>context</b>	function	<b>language</b>	table
<b>converters</b>	table	<b>languages</b>	table
<b>coroutine</b>	table	<b>layouts</b>	table
<b>createmask</b>	function	<b>lfs</b>	table
<b>ctxrunner</b>	table	<b>libraries</b>	table
<b>data</b>	table	<b>lmx</b>	table
<b>debug</b>	table	<b>load</b>	function
<b>dimen</b>	function	<b>loadfile</b>	function
<b>dir</b>	table	<b>loadstring</b>	function

logs	table	regimes	table
lpdf	table	require	function
lpeg	table	required	function
lua	table	resolvers	table
luatex	table	ruledspace	function
lxml	table	sandbox	table
math	table	scripts	table
mathematics	table	select	function
md5	table	set	table
metapost	table	setinspector	function
mime	table	setmetatable	function
moduledata	table	sha2	table
modules	table	shipbox_ref_h	number
mp	function	shipbox_ref_v	number
mplib	table	sio	table
next	function	socket	table
noads	table	sorters	table
node	table	sparse	table
nodes	table	statistics	table
number	table	status	table
objects	table	storage	table
optional	table	streams	table
optionalrequire	function	string	table
os	table	structures	table
p_number_p	userdata	table	table
p_number_u	userdata	tex	table
package	table	texconditionals	data table
pagebuilders	table	texconfig	table
pairs	function	texconstants	data table
parametersets	table	texifs	data table
pcall	function	texio	table
pdf	table	texisdefined	data table
pdfdecode	table	texmodes	data table
pdfe	table	texsystemmodes	data table
physics	table	thirddata	table
pngdecode	table	toboolean	function
popleaderlevel	function	todecimal	function
print	function	token	table
publications	table	tokens	table
pushleaderlevel	function	tonumber	function
rawequal	function	tostring	function
rawget	function	tracers	table
rawlen	function	trackers	table
rawset	function	type	function

<b>typesetters</b>	table	<b>warn</b>	<b>function</b>
<b>unpack</b>	function	<b>xcomplex</b>	table
<b>updaters</b>	table	<b>xdecimal</b>	table
<b>url</b>	table	<b>xmath</b>	table
<b>userdata</b>	table	<b>xml</b>	table
<b>utf</b>	table	<b>xpcall</b>	<b>function</b>
<b>utf8</b>	table	<b>xzip</b>	table
<b>utilities</b>	table	<b>zip</b>	table
<b>visualizers</b>	table	<b>zlib</b>	table

# attributes (context)

## **alternates** table

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

## **applyoverloads** 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 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 disabletriggering	
F spotcolorname		F enabletriggering	
F spotcolorparent		F finalize	
F spotcolorvalue		F initialize	
B supported		F process	
F toattributes		F selective	
F transparencycomponents		F simple	
B triggering		F stacked	
F usecolors		F stacker	
D valid		<b>system</b>	function
F value		<b>tooverloads</b>	function
D values		<b>transparencies</b>	table
B weightgray		N attribute	
F xyztolab		D data	
F xyztorgb		F enable	
<b>define</b>	function	F forcesupport	
<b>effects</b>	table	F handler	
N attribute		T names	
D data		N color	
F enable		N colorburn	
F handler		N colordodge	
F register		N darken	
D registered		N difference	
D values		N exclusion	
<b>handlers</b>	table	N hardlight	
<b>list</b>	data table	N hue	
<b>markasoverload</b>	function	N lighten	
<b>names</b>	data table	N luminosity	
<b>negatives</b>	table	N multiply	
N attribute		N none	
D data		N normal	
F enable		N overlay	
F handler		N saturation	
F register		N screen	
D registered		N softlight	
F set		N none	
<b>numbers</b>	data table	F register	
<b>ofnode</b>	function	D registered	
<b>private</b>	function	B supported	
<b>public</b>	function	F toattribute	
<b>restore</b>	function	B triggering	
<b>save</b>	function	F value	
<b>showcurrent</b>	function	D values	
<b>states</b>	table	<b>unsetvalue</b>	number

## viewerlayers table

N attribute  
F cleanup  
D data  
F define  
F definedlayoutcomponent  
F enable  
F forcesupport  
F handler  
B hasorder  
D listwise  
F register

D registered  
F resolve\_begin  
F resolve\_end  
F resolve\_reset  
F resolve\_step  
D scopes  
F setfeatures  
F start  
F stop  
B supported  
D values

# backends (context)

**closeout** function

**codeinjections** table

F boxresourcedimensions

F registerboxresource

F restoreboxresource

**current** string

**defaults** table

T codeinjections

T nodeinjections

T registrations

D tables

**getcallbackstate** function

**included** table

B context

B date

B id

B metadata

B pdf

**install** function

**latelua** function

**nodeinjections** table

**nothing** function

**openout** function

**pdf** table

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 fieldsurrounding

F flushmergelayer

F getbookmarks

F getdefaultfieldvalue

F getfieldcategory

F getfieldset

F getformatoption

F getidentityvariable

F getinfo

F getpreviewfigure

F insertrenderingwindow

F jp2

F jpg

F maptag

F mergebookmarks

F mergecomments

F mergefields

F mergereferences

F mergeviewerlayers

F newimage

F png

F prerollreference

F presetsymbol

F presetsymbollist

F processrendering

F registerdocumentcloseaction

F registerdocumentopenaction

F registeredsymbol

F registerpagecloseaction

F registerpageopenaction

F registerpattern

F registersymbol

F scanimage

F setattachmentsupport

F setfieldcalculationset

F setfigurealternative

F setfigurecolorspace

F setfiguremask

F setformat

F setformsmethod

F setpagetransition

F settaggingsupport

F setupidentity



F setxmpfile	F knockout
F startlayer	F negative
F startunicodetoactualtext	F overprint
F startunicodetoactualtextdirect	F positive
F stoplayer	F reference
F stopunicodetoactualtext	F rgbcolor
F stopunicodetoactualtextdirect	F spotcolor
F supportedformats	F startalternate
F unicodetoactualtext	F startlayer
F useviewerlayer	F startstackedlayer
F validfield	F stopalternate
F validfieldcategory	F stoplayer
F validfieldset	F stopstackedlayer
F wrapimage	F transparency
S comment	F typesetfield
T nodeinjections	T registrations
F addtags	F cmykindexcolor
F annotation	F cmykspotcolor
F attachfile	F getspotcolorreference
F changestackedlayer	F grayindexcolor
F cmykcolor	F grayspotcolor
F comment	F rgbindexcolor
F destination	F rgbspotcolor
F effect	F spotcolorname
F graycolor	F transparency
F injectbitmap	T tables
F insertmovie	<b>registrations</b> table
F insertsound	<b>tables</b> table
F insertu3d	<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	F define	
<b>assign</b>	function	F hassomecontent	
<b>collectcontent</b>	function	F next	
<b>erase</b>	function	F place	
<b>exists</b>	function	F reset	
<b>get</b>	function	F save	
<b>getcontent</b>	function	<b>prepend</b>	function
<b>getlines</b>	function	<b>raw</b>	function
<b>gettexbuffer</b>	function	<b>run</b>	function
<b>loadcontent</b>	function	<b>samplefile</b>	function
<b>parallel</b>	table	<b>undent</b>	function

# builders (context)

**checkparcontext** function  
**checksidefloat** function  
**kernel** table

- F collapsing
- F hyphenating
- F kerning
- F ligaturing
- F mlist\_to\_hlist

**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 distance
- F fixedprofile
- F get
- F list
- F pagehandler
- F profilebox
- F set

**vsparing** table

- D categories
- F checkstrutdepth
- F collapsevbox
- T data
  - D map
  - D skip
  - D snapmethods
- F definesnapmethod
- B fixed
- F forcepageflush
- F forcestrutdepth
- F getnofpreviouslines
- F inject
- F injectdisable
- F injectpenalty
- F injectskip
- 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>savedata</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 append\_to\_vlist\_filter

B begin\_paragraph

B build\_page\_insert

B buildpage\_filter

B contribute\_filter

B define\_font

B find\_format\_file

B find\_log\_file

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 make\_extensible

B mlist\_to\_hlist

B open\_data\_file

B paragraph\_context

B post\_linebreak\_filter

B pre\_dump

B pre\_linebreak\_filter

B pre\_output\_filter

B process\_jobname

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	<b>T anudatta</b>	
<b>bidi</b>	data table	<b>T before_half</b>	
<b>blockrange</b>	function	<b>T before_main</b>	
<b>blocks</b>	data table	<b>T before_postscript</b>	
<b>casemap</b>	table	<b>T before_subscript</b>	
<b>categories</b>	data table	<b>T below_mark</b>	
<b>category</b>	function	<b>T consonant</b>	
<b>categorytags</b>	data table	<b>T dependent_vowel</b>	
<b>classifiers</b>	table	<b>T halant</b>	
<b>collapsed</b>	data table	<b>T independent_vowel</b>	
<b>combined</b>	data table	<b>T nukta</b>	
<b>contextname</b>	function	<b>T post_mark</b>	
<b>csletters</b>	data table	<b>T pre_mark</b>	
<b>data</b>	data table	<b>T ra</b>	
<b>decomposed</b>	data table	<b>T stress_tone_mark</b>	
<b>description</b>	function	<b>T twopart_mark</b>	
<b>descriptions</b>	data table	<b>T vowel_modifier</b>	
<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>private</b>	table
T after_half		<b>ranges</b>	data table
T after_main		<b>registerentities</b>	function
T after_postscript		<b>remap_hangul_syllable</b>	function
T after_subscript		<b>setactivecatcodes</b>	function

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

**cleanname** 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**

function

F translate

**upper**

function

**weekday**

function

**verbose**

table

**word**

function

D data

**words**

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

# data (context)

<b>action</b>	function	<b>prerolled</b>	string
<b>depth</b>	number	<b>width</b>	number
<b>height</b>	number		

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

F simplerule	S name	
F specialrule	T pdf	
F updatefontstate	T actions	
T whatsit	F cleanup	
S name	F convert	
T mpo	F finalize	
T actions	F initialize	
F finalize	F outputfilename	
F initialize	F prepare	
T flushers	F wrapup	
F character	T flushers	
F popleaderlevel	F character	
F pushleaderlevel	F fontchar	
F rule	F group	
F simplerule	F image	
F specialrule	F literal	
T whatsit	F popleaderlevel	
S name	F poporientation	
T mps	F pushleaderlevel	
T actions	F pushorientation	
F cleanup	F restore	
F convert	F rule	
F finalize	F save	
F initialize	F setmatrix	
F outputfilename	F setstate	
F prepare	F simplerule	
F wrapup	F specialrule	
T flushers	F startclipping	
F character	F startmatrix	
F popleaderlevel	F startmirroring	
F pushleaderlevel	F startrotation	
F rule	F startscaling	
F simplerule	F stopclipping	
F specialrule	F stopmatrix	
F updatefontstate	F stopmirroring	
T whatsit	F stoprotation	
S name	F stopscaling	
T none	F updatefontstate	
T actions	T whatsit	
T flushers	S name	
F popleaderlevel	<b>lmtxversion</b>	number
F pushleaderlevel	<b>outputfilename</b>	function
T whatsit	<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 scan</b>	
<b>badname</b>	function	<b>F serialize</b>	
<b>bases</b>	data table	<b>T sizes</b>	
<b>bitmapimage</b>	function	<b>B art</b>	
<b>boxnumber</b>	number	<b>B bleed</b>	
<b>cachepaths</b>	data table	<b>B crop</b>	
<b>check</b>	function	<b>B media</b>	
<b>checkers</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>exists</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>F resetstore</b>		<b>resources</b>	data table

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

## 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 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
- D cache
- F calculatyscale
- 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

F getmathparameter

F getprivate

T handlers

T afm

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 devanagari_remove_joiners
D rightkerned	F devanagari_reorder_matras
D texligatures	F devanagari_reorder_pre_base_reordering_consonants
F load	F devanagari_reorder_reph
T readers	F gpos_context
F getinfo	F gpos_contextchain
F loadfont	F gpos_cursive
F loadshapes	F gpos_mark2base
F setfeatures	F gpos_mark2ligature
B syncspace	F gpos_mark2mark
N version	F gpos_pair
T otf	F gpos_single
F addfeature	F gsub_alternate
F basemodeinitializer	F gsub_context
D cache	F gsub_contextchain
F collectlookups	F gsub_ligature
T coverup	F gsub_multiple
T actions	F gsub_reversecontextchain
F alternate	F gsub_single
F chainposition	F trigger_space_kerns
F chainsubstitution	T helpers
F kern	F blockligatures
F ligature	F pardirstate
F multiple	F txtfirststate
F pair	F load
F single	F loadoutlinedata
F substitution	F loadstreamdata
F register	F modeinitializer
S stepkey	D mpscache
F dataset	D pdfcache
F datasetpositionprocessor	F plugininitializer
S defaultbasealternate	F pluginprocessor
S defaultnodealternate	T plugins
D features	T text
F featuresinitializer	D pngcache
F featuresprocessor	B pngenabled
F getactualtext	T readers

F addunicodetable  
 F avar  
 F cbdt  
 F cblc  
 F cff  
 F cff2  
 F cffcheck  
 T cffencoder  
 F checkhash  
 F cmap  
 F colr  
 F compact  
 F cpal  
 F ebdt  
 F eblc  
 F ebsc  
 F expand  
 F extend  
 F fvar  
 F gdef  
 F getcomponents  
 F getinfo  
 F glyf  
 F gpos  
 T gposhandlers  
   F chainedcontext  
   F context  
   F cursive  
   F extension  
   F marktobase  
   F marktoligature  
   F marktomark  
   F pair  
   F single  
 F gsub  
 T gsubhandlers  
   F alternate  
   F chainedcontext  
   F context  
   F extension  
   F ligature  
   F multiple  
   F reversechainedcontextsingle  
   F single

F gvar  
 F head  
 T helpers  
   F axistofactors  
   F cleanname  
   F getaxisscale  
   F getfactors  
   F getscales  
   F gotodatatable  
   F normalizedaxis  
   T normalizedaxisishash  
   F readvariationdata  
   F reportskippedtable  
   F setvariabledata  
 F hhea  
 F hmtx  
 F hvar  
 F kern  
 F loadfont  
 F loadshapes  
 F loca  
 F math  
 F maxp  
 F mvar  
 F name  
 F os/2  
 F pack  
 F parsecharstrings  
 F post  
 F registerextender  
 F rehash  
 F sbix  
 F stat  
 T streamreader  
   F close  
   F getposition  
   F getsizes  
   F look  
   F open  
   F read2dot14  
   F readbyte  
   F readbytes  
   F readbytetable  
   F readcardinal

F readcardinal1	F writeinteger3
F readcardinal1le	F writeinteger3le
F readcardinal2	F writeinteger4
F readcardinal2le	F writeinteger4le
F readcardinal3	F writestring
F readcardinal3le	F stripredundant
F readcardinal4	F svg
F readcardinal4le	N tableversion
F readcardinaltable	F unifymissing
F readchar	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	N version
F writecardinal1le	T pfb
F writecardinal2	F loadvector
F writecardinal2le	T tfm
F writecardinal3	D cache
F writecardinal3le	D features
F writecardinal4	N maxnestingdepth
F writecardinal4le	N maxnestingsize
F writeinteger1	T readers
F writeinteger1le	F loadpk
F writeinteger2	F loadtfm
F writeinteger2le	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
  - 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**           function
- currentid**       function
- definers**        table

- 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
- F read
- F register
- F registered
- F registersplit
- F resetnullfont
- F resolve
- T resolvers
  - F file
  - F name
  - F spec
- definetypface**   function
- dropins**        table
- F clone
- F getshape
- F getshapes
- F nextid
- F provide
- F registerglyph
- F registerglyphs
- F swap
- F swapone
- encodings**       table
- T agl
  - D ctxcodes
  - D extras
  - D names
  - D synonyms
  - D unicodes
- D cache
- F is\_known



D known		D filenames	
F load		F getcompositions	
F make_unicode_vector		T list	
D math		F load	
N version		F prepare_features	
<b>enhanceid</b>	function	F register	
<b>expansions</b>	data table	F registerpostprocessor	
<b>formats</b>	data table	F report	
<b>getalternate</b>	function	T suffixes	
<b>getindices</b>	function	<b>handlers</b>	table
<b>getkern</b>	function	<b>hashes</b>	table
<b>getmultiple</b>	function	D characters	
<b>getsubstitution</b>	function	D classes	
<b>getters</b>	table	D csnames	
T alternate		D descriptions	
F opentype		D dynamics	
T kern		D emwidths	
F opentype		D exheights	
F type1		D extensibles	
F type3		D features	
T multiple		D identifiers	
F opentype		D italics	
T substitution		D lastmathids	
F opentype		D marks	
<b>goodies</b>	table	D mathparameters	
D colorschemes		D modes	
T data		D originals	
T dejavu-math		D parameters	
S author		T processes	
S comment		D properties	
S copyright		D quads	
B initialized		D resources	
T mathematics		T setdynamics	
T alternates		T shapes	
T dotless		D spaces	
S comment		D spacings	
S feature		T streams	
N value		D unicodes	
T kerns		D variants	
T *:0x1D449		D xheights	
T bottomright		<b>helpers</b>	table
S name		F addextraprivate	
S version		F addprivate	
D designsizes		F appendcommands	

- F appendcommandtable
- F checkflags
- F checkmerge
- F checksteps
- F collectanchors
- F combineglyphs
- D commands
- F composecharacters
- F descriptiontoslot
- F dimenfactor
- F expandglyph
- T extraprivates
- F fontpatternhassize
- F getcoloredglyphs
- F getdigitwidth
- F getinstancespec
- F getparameters
- F getprivatecharornode
- F getprivatenode
- F getprivates
- F getprivateslot
- F hasprivate
- F indextoslot
- F mathscriptslots
- F name
- F nametoslot
- F newprivateslot
- F prependcommands
- F prependcommandtable
- F privateslot
- F registerglyphbox
- F scalecommands
- F setboxglyph
- F setboxglyphs
- F setdigitwidth
- F setmetaglyph
- F setmetaglyphs
- F splitfontpattern
- F tochar
- T vfinjectors
  - F pdf
  - 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 boundingbox
  - F boxtomp
  - F draw
  - F fill
  - F glyph
  - F maxbounds
  - F paths
  - F widthline
  - F zeroline
- names** data table
- nulldata** data table
- privateoffsets** table
  - B keepnames
  - N mathbase
  - N mathextrabase
  - N textbase
  - N textextrabase
- protrusions** data table

## readers 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

## reserveid function select 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

## specifiers table

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

## symbols table

T emoji  
F checked  
F resolved  
F uselibrary

## tables table

## tracers table

## treatments table

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

## typefaces table

# 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 getsizes
- 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 setupidentity

**help** table

- F collect
- F reference
- F register

**javascripts** table

- F addtopreamble
- F code
- D codes
- F flushpreambles

D functions

D preambles

F setpreamble

F storecode

F storepreamble

F usepreamblenow

F usescripts

**linkedslists** data table

**pages** table

- F setpagetransition
- F setupcanvas

**references** table

- F setcloseddocument
- F setclosepage
- F setopendocument
- F setopenpage

**renderings** data table

**soundclips** 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 getfree	
F extend		F gethpos	
F realpage		F getpos	
F realpageorder		F getreserved	
F setstate		F getrpos	

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  
 T pagedata  
 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 tobесaved  
 F upperleft  
 F upperright  
 F used  
 F whd  
 F width  
 F x  
 F xy  
 F y

**register**  
**save**  
**structure**

D collected  
 T components  
 T tobесaved  
 T branches  
 S name  
 S type

**variables**

D checksums  
 D collected  
 F getchecksum  
 F makechecksum  
 F restore  
 F save  
 F setchecksum  
 D tobесaved

**version**

function  
 function  
 table

table

number

## language (basic tex)

<b>clean</b>	function
<b>clear_hyphenation</b>	function
<b>clear_patterns</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>posttexhyphenchar</b>	function
<b>postthyphenchar</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>nofflatted</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 define	
F injectthyphens		F handler	

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

# layouts (context)

**getcanvas**                   function  
**getpagedimensions**       function  
**setupcanvas**               function

**status**                   table  
    F isleftpage  
    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>makedirs</b>	function
<b>modification</b>	function
<b>readlink</b>	function
<b>rmdir</b>	overloaded function
<b>setexecutable</b>	function
<b>symlink</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>setformatters</b>	function
<b>categories</b>	function	<b>setlogfile</b>	function
<b>direct</b>	function	<b>setmessenger</b>	function
<b>disable</b>	function	<b>setprocessor</b>	function
<b>enable</b>	function	<b>settarget</b>	function
<b>finalactions</b>	function	<b>settimedlog</b>	function
<b>flush</b>	function	<b>settranslations</b>	function
<b>loggingerrors</b>	function	<b>show</b>	function
<b>messenger</b>	function	<b>start_page_number</b>	function
<b>new</b>	function	<b>start_run</b>	function
<b>newline</b>	function	<b>starterrorlogging</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>pushtarget</b>	function	<b>stopfilelogging</b>	function
<b>registerfinalactions</b>	function	<b>subdirect</b>	function
<b>report</b>	function	<b>subreport</b>	function
<b>reporter</b>	function	<b>texerrormessage</b>	function
<b>setformats</b>	function	<b>writer</b>	function

# lpdf (context)

<b>action</b>	function	<b>delayedobject</b>	function
<b>adddocumentcolorspace</b>	function	<b>destinationspecification</b>	function
<b>adddocumenttextgstate</b>	function	<b>dictionary</b>	function
<b>adddocumentpattern</b>	function	<b>docstring</b>	function
<b>adddocumentshade</b>	function	<b>epdf</b>	table
<b>addtocatalog</b>	function	F analyzefonts	
<b>addtoinfo</b>	function	F contenttotext	
<b>addtonames</b>	function	F expanded	
<b>addtopageattributes</b>	function	F getpagecontent	
<b>addtopageresources</b>	function	F getstructure	
<b>addtopagesattributes</b>	function	T image	
<b>addxmpinfo</b>	function	F close	
<b>annotationspecification</b>	function	F copy	
<b>array</b>	function	F new	
<b>attachmentsymbols</b>	function	F open	
<b>boolean</b>	function	F query	
<b>border</b>	function	F load	
<b>checkedkey</b>	function	F parsecontent	
<b>checkedvalue</b>	function	F plugin	
<b>circularshade</b>	function	T resolvers	
<b>cmykcode</b>	function	F destinations	
<b>collectedresources</b>	function	F embeddedfiles	
<b>color</b>	function	F javascripts	
<b>colorspace</b>	function	F layers	
<b>colorspaceconstants</b>	data table	F pages	
<b>colorspec</b>	function	F structure	
<b>colorvalue</b>	function	F widgets	
<b>colorvalues</b>	function	F stripcontent	
<b>commentsymbols</b>	function	F unload	
<b>compresslevel</b>	function	<b>escaped</b>	function
<b>constant</b>	function	<b>finalizeddocument</b>	function
<b>copyarray</b>	function	<b>finalizefonts</b>	function
<b>copyboolean</b>	function	<b>finalizepage</b>	function
<b>copyconstant</b>	function	<b>finishtransparencycode</b>	function
<b>copydictionary</b>	function	<b>flags</b>	table
<b>copyfloat</b>	function	T annotations	
<b>copyinteger</b>	function	N AutoView	
<b>copynumber</b>	function	N Hidden	
<b>copystring</b>	function	N Invisible	
<b>copyunicode</b>	function	N Locked	
<b>deferredobject</b>	function	N LockedContents	

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>getmetadata</b>	function
N DoNotScroll		<b>getnofpages</b>	function
N DoNotSpellCheck		<b>getpageproperties</b>	function
N Edit		<b>getpagereference</b>	function
N FileSelect		<b>getpagetags</b>	function
N MultiLine		<b>getpos</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>id</b>	function
N Radio		<b>immediateobject</b>	function
N RadiosInUnison		<b>includeimage</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>fonts</b>	table	<b>number</b>	function
F color_direct		<b>object</b>	function

<b>objectcompresslevel</b>	function	<b>setomitcharset</b>	function
<b>pagereference</b>	function	<b>setomitcidset</b>	function
<b>patternstream</b>	function	<b>setpageorder</b>	function
<b>pdfcolor</b>	function	<b>setpagetag</b>	function
<b>pdftimestamp</b>	function	<b>settime</b>	function
<b>pdfvimage</b>	function	<b>setversion</b>	function
<b>permitdetail</b>	function	<b>shareobject</b>	function
<b>print</b>	function	<b>shareobjectreference</b>	function
<b>procset</b>	function	<b>spotcode</b>	function
<b>protectresources</b>	boolean	<b>stream</b>	function
<b>rectangle</b>	function	<b>string</b>	function
<b>reference</b>	function	<b>toeight</b>	function
<b>registerannotation</b>	function	<b>topdfdoc</b>	function
<b>registerdestination</b>	function	<b>tosixteen</b>	function
<b>registerdocumentfinalizer</b>	function	<b>transparency</b>	function
<b>registerfont</b>	function	<b>transparencycode</b>	function
<b>registerpagefinalizer</b>	function	<b>transparencygroups</b>	table
<b>registerpattern</b>	function	<b>B none</b>	
<b>reserveobject</b>	function	<b>transparencyvalue</b>	function
<b>rgbcode</b>	function	<b>unicode</b>	function
<b>rotationcm</b>	function	<b>usedcharacters</b>	table
<b>setcompression</b>	function	<b>verbose</b>	function

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

# 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>include</b>	function
<b>concat</b>	function	<b>inclusion</b>	function
<b>concatrange</b>	function	<b>inclusions</b>	function
<b>content</b>	function	<b>index</b>	function
<b>context</b>	function	<b>inlineverbatimim</b>	function
<b>convert</b>	function	<b>installsetup</b>	function
<b>count</b>	function	<b>last</b>	function
<b>delete</b>	function	<b>lastatt</b>	function
<b>depth</b>	function	<b>lastmatch</b>	function
<b>direct</b>	function	<b>lastpar</b>	function
<b>directives</b>	table	<b>load</b>	function
F after		<b>loadbuffer</b>	function
F before		<b>loaddata</b>	function
F handle		<b>loaded</b>	table
F load		<b>main</b>	function
F setup		<b>match</b>	function
<b>displayverbatimim</b>	function	<b>name</b>	function
<b>doif</b>	function	<b>namespace</b>	function
<b>doifelse</b>	function	<b>nonspace</b>	function
<b>doifelseempty</b>	function	<b>par</b>	function
<b>doifelsetext</b>	function	<b>param</b>	function
<b>doifempty</b>	function	<b>parameter</b>	function
<b>doifnot</b>	function	<b>path</b>	function
<b>doifnotempty</b>	function	<b>popmatch</b>	function
<b>doifnottext</b>	function	<b>pos</b>	function
<b>doiftext</b>	function	<b>position</b>	function
<b>element</b>	function	<b>pure</b>	function
<b>elements</b>	function	<b>pushmatch</b>	function
<b>entities</b>	data table	<b>raw</b>	function
<b>filter</b>	function	<b>rawroot</b>	function
<b>filterlist</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>mapremap</b>	data table
<b>alphabets</b>	data table	<b>overloadparameters</b>	function
<b>alternatives</b>	data table	<b>privatebase</b>	number
<b>big</b>	function	<b>registerdomain</b>	function
<b>boldmap</b>	data table	<b>registerfallbackid</b>	function
<b>categories</b>	table	<b>remapalphabets</b>	function
D functions		<b>renderings</b>	table
<b>charactersets</b>	data table	D mappings	
<b>checkaccentbaseheight</b>	function	D numbers	
<b>checkprivateparameters</b>	function	D sets	
<b>classes</b>	data table	<b>renderset</b>	function
<b>codes</b>	data table	<b>resetattributes</b>	function
<b>define</b>	function	<b>resetitalics</b>	function
<b>dimensions</b>	function	<b>resolvefallbacks</b>	function
<b>domains</b>	table	<b>scaleparameters</b>	function
<b>extensiblecode</b>	function	<b>setdomain</b>	function
<b>extensibles</b>	data table	<b>setitalics</b>	function
<b>extrabase</b>	number	<b>setridofprime</b>	function
<b>extras</b>	table	<b>sets</b>	data table
F add		<b>styles</b>	data table
F copy		<b>syncboth</b>	function
<b>fallbacks</b>	table	<b>syncname</b>	function
F apply		<b>syncstyle</b>	function
F install		<b>toname</b>	function
<b>fallbackstyleattr</b>	function	<b>tostyle</b>	function
<b>families</b>	data table	<b>tweakaftercopyingfont</b>	function
<b>finishfallbacks</b>	function	<b>tweakbeforecopyingfont</b>	function
<b>gaps</b>	data table	<b>tweaks</b>	table
<b>getboth</b>	function	<b>utfmathaccent</b>	function
<b>getdomain</b>	function	<b>utfmathclass</b>	function
<b>getitalics</b>	function	<b>utfmathcommand</b>	function
<b>getridofprime</b>	function	<b>utfmathfiller</b>	function
<b>getstyle</b>	function	<b>utfmathstretch</b>	function
<b>horizontalcode</b>	function	<b>virtualize</b>	function
<b>initializeparameters</b>	function	<b>virtualized</b>	data table
<b>makefont</b>	function		

## 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 newinternal
<b>cm</b>	function	N nullary
<b>codes</b>	table	N numeric
N addto		N of
N ampersand		N ofbinary
N and		N outertag
N assignment		N parametertype
N atleast		N plus_or_minus
N begingroup		N primarybinary
N btex		N primarydef
N capsule		N protection
N colon		N randomseed
N comma		N relax
N controls		N repeat_loop
N curl		N rightbrace
N cycle		N rightbracket
N declare		N rightdelimiter
N def		N runscript
N definedmacro		N save
N delimiters		N scantokens
N endgroup		N scope
N equals		N secondarybinary
N etex		N secondarydef
N everyjob		N semicolon
N exitif		N setbounds
N expandafter		N shipout
N fi_or_else		N show
N if		N skip
N input		N slash
N interim		N step
N internal		N stop
N iteration		N str
N join		N string
N leftbrace		N tag
N leftbracket		N tension
N leftdelimiter		N tertiarybinary
N let		N tertiarydef
N macrospecial		N thingstoadd
N maketext		N to
N message		N unary
N mode		N undefinedcs



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

<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>setextensions</b>	function	<b>texexp</b>	function
<b>setoutercolor</b>	function	<b>theclippath</b>	function
<b>setparameterset</b>	function	<b>tographic</b>	function
<b>settext</b>	function	<b>totable</b>	function
<b>setvariable</b>	function	<b>types</b>	table
<b>showlog</b>	boolean	N boolean	
<b>showsvgpage</b>	function	N cmykcolor	
<b>simple</b>	function	N color	
<b>splitprescript</b>	function	N dependent	
<b>startgraphic</b>	function	N independent	
<b>startsvghashing</b>	function	N known	
<b>stopgraphic</b>	function	N numeric	
<b>stopsvghashing</b>	function	N pair	
<b>svformat</b>	function	N path	
<b>svgcolorremapper</b>	function	N pen	
<b>svgfactors</b>	table	N picture	
N %		N protodependent	
N bp		N string	
N cm		N structured	
N em		N suffixedmacro	
N ex		N tokenlist	
N in		N transform	
N mm		N unknownboolean	
N pc		N unknownpath	
N pt		N unknownpen	
N px		N unknownpicture	
<b>svgglyphtomp</b>	function	N unknownstring	
<b>svgshapestomp</b>	function	N unsuffixedmacro	
<b>svgshapestopdf</b>	function	N vacuum	
<b>svgsplitcolor</b>	function	<b>typesvgpage</b>	function
<b>svgtomp</b>	function	<b>unload</b>	function
<b>svgtopdf</b>	function	<b>untagvariable</b>	function
<b>sxsy</b>	function	<b>variables</b>	table
<b>tex</b>	table		

## mime (extra lua)

**b64** function

**decode** function

**decodet** table

F base64

F quoted-printable

**dot** function

**encode** function

**encodet** table

F base64

F quoted-printable

**eol** function

**normalize** function

**qp** function

**qpwrp** function

**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>direct3</b>	function
<b>aux</b>	table	<b>direct4</b>	function
F boolean		<b>disposehash</b>	function
F color		<b>draw</b>	function
F direct		<b>fill</b>	function
F direct1		<b>flatten</b>	function
F direct2		<b>flush</b>	function
F direct3		<b>format</b>	function
F direct4		<b>formatted</b>	function
F draw		<b>fprint</b>	function
F fill		<b>fromhash</b>	function
F flush		<b>get</b>	table
F fprint		F hashentry	
F integer		<b>graphformat</b>	function
F number		<b>inhash</b>	function
F numeric		<b>inject</b>	function
F pair		F boolean	
F pairpoints		F cmykcolor	
F path		F color	
F pathpoints		F integer	
F points		F number	
F print		F numeric	
F quadruple		F pair	
F quadruplepoints		F path	
F quoted		F quadruplet	
F size		F string	
F string		F transform	
F transform		F triplet	
F triplet		F whatever	
F tripletpoints		<b>integer</b>	function
F vprint		<b>isarray</b>	function
<b>boolean</b>	function	<b>isobject</b>	function
<b>cleaned</b>	function	<b>lmt_color_functions</b>	table
<b>color</b>	function	F shade	
<b>dataset</b>	function	F step	
<b>datasets</b>	function	<b>lmt_contours_bitmap_get</b>	function
F load		<b>lmt_contours_bitmap_set</b>	function
<b>dimension</b>	function	<b>lmt_contours_cleanup</b>	function
<b>direct</b>	function	<b>lmt_contours_color</b>	function
<b>direct1</b>	function	<b>lmt_contours_edge_get_band</b>	function
<b>direct2</b>	function	<b>lmt_contours_edge_get_cell</b>	function

<b>lmt_contours_edge_paths</b>	function	<b>mf_inject_blob</b>	function
<b>lmt_contours_edge_set</b>	function	<b>mf_map_move</b>	function
<b>lmt_contours_edge_set_by_band</b>	function	<b>mf_map_text</b>	function
<b>lmt_contours_edge_set_by_cell</b>	function	<b>mf_named_color</b>	function
<b>lmt_contours_format</b>	function	<b>mf_outline_text</b>	function
<b>lmt_contours_function</b>	function	<b>mf_save_data</b>	function
<b>lmt_contours_maxmean</b>	function	<b>mf_script_index</b>	function
<b>lmt_contours_maxz</b>	function	<b>mf_start_saving_data</b>	function
<b>lmt_contours_minmean</b>	function	<b>mf_stop_saving_data</b>	function
<b>lmt_contours_minz</b>	function	<b>mf_tb_dimensions</b>	function
<b>lmt_contours_nofvalues</b>	function	<b>mf_tt_dimensions</b>	function
<b>lmt_contours_nx</b>	function	<b>mf_tt_initialize</b>	function
<b>lmt_contours_ny</b>	function	<b>mode</b>	function
<b>lmt_contours_range</b>	function	<b>n</b>	function
<b>lmt_contours_shade_paths</b>	function	<b>newhash</b>	function
<b>lmt_contours_shade_set</b>	function	<b>number</b>	function
<b>lmt_contours_shape_paths</b>	function	<b>numeric</b>	function
<b>lmt_contours_start</b>	function	<b>pair</b>	function
<b>lmt_contours_stop</b>	function	<b>pairpoints</b>	function
<b>lmt_contours_value</b>	function	<b>path</b>	function
<b>lmt_contours_xrange</b>	function	<b>pathpoints</b>	function
<b>lmt_contours_yrange</b>	function	<b>points</b>	function
<b>lmt_function_x</b>	function	<b>positionanchor</b>	function
<b>lmt_mesh_set</b>	function	<b>positionbox</b>	function
<b>lmt_mesh_update</b>	function	<b>positioncurve</b>	function
<b>lmt_poisson_generate</b>	function	<b>positionpage</b>	function
<b>lmt_surface_do</b>	function	<b>positionpath</b>	function
<b>lmt_svg_include</b>	function	<b>positionpxy</b>	function
<b>mf_blob_add</b>	function	<b>positionregion</b>	function
<b>mf_blob_dimensions</b>	function	<b>positionwhd</b>	function
<b>mf_blob_index</b>	function	<b>positionxy</b>	function
<b>mf_blob_new</b>	function	<b>prefix</b>	function
<b>mf_blob_raw_content</b>	function	<b>print</b>	function
<b>mf_blob_raw_dimensions</b>	function	<b>processingmode</b>	function
<b>mf_blob_raw_reset</b>	function	<b>quadruple</b>	function
<b>mf_blob_raw_toutf</b>	function	<b>quadruplepoints</b>	function
<b>mf_blob_raw_wipe</b>	function	<b>quoted</b>	function
<b>mf_blob_size</b>	function	<b>report</b>	function
<b>mf_blob_width</b>	function	<b>scan</b>	table
<b>mf_external_figure</b>	function	<b>F boolean</b>	
<b>mf_finish_saving_data</b>	function	<b>F cmykcolor</b>	
<b>mf_formatted_text</b>	function	<b>F color</b>	
<b>mf_get_outline_text</b>	function	<b>F expression</b>	
<b>mf_graphic_text</b>	function	<b>F integer</b>	

F next		<b>skip</b>	table
F number		F token	
F numeric		<b>solve</b>	function
F pair		<b>string</b>	function
F path		<b>systemmode</b>	function
F pen		<b>texstr</b>	function
F property		<b>texvar</b>	function
F string		<b>tohash</b>	function
F symbol		<b>transform</b>	function
F token		<b>triplet</b>	function
F transform		<b>tripletpoints</b>	function
<b>set</b>	table	<b>vprint</b>	function
<b>size</b>	function		

## mplib (extra tex)

<b>execute</b>	function	<b>inject_whatever</b>	function
<b>finder</b>	function	<b>new</b>	overloaded function
<b>finders</b>	table	<b>pen_info</b>	function
F file		<b>propertycodes</b>	table
F mpstemplate		<b>realtime logging</b>	boolean
<b>finish</b>	function	<b>scan_boolean</b>	function
<b>get_tolerance</b>	function	<b>scan_cmykcolor</b>	function
<b>getcallbackstate</b>	function	<b>scan_color</b>	function
<b>getcodes</b>	function	<b>scan_expression</b>	function
<b>getfields</b>	function	<b>scan_integer</b>	function
<b>gethashentries</b>	function	<b>scan_next</b>	function
<b>gethashentry</b>	function	<b>scan_number</b>	function
<b>getstates</b>	function	<b>scan_numeric</b>	function
<b>getstatistics</b>	function	<b>scan_pair</b>	function
<b>getstatus</b>	function	<b>scan_path</b>	function
<b>gettype</b>	function	<b>scan_pen</b>	function
<b>gettypes</b>	function	<b>scan_property</b>	function
<b>inject_boolean</b>	function	<b>scan_string</b>	function
<b>inject_cmykcolor</b>	function	<b>scan_symbol</b>	function
<b>inject_color</b>	function	<b>scan_token</b>	function
<b>inject_integer</b>	function	<b>scan_transform</b>	function
<b>inject_number</b>	function	<b>set_tolerance</b>	function
<b>inject_numeric</b>	function	<b>showcontext</b>	function
<b>inject_pair</b>	function	<b>skip_token</b>	function
<b>inject_path</b>	function	<b>solve_path</b>	function
<b>inject_string</b>	function	<b>version</b>	function
<b>inject_transform</b>	function		

# noads (context)

<b>handlers</b>	table		F resize
F align			F showtree
F alternates			F tags
F autofences			F unscript
F classes			F unstack
F collapse			F variants
F domains		<b>process</b>	function
F families		<b>processnested</b>	function
F fixscripts		<b>processors</b>	table
F italics		F mlist_to_hlist	
F kernpairs		T unscript	
F makeup		T unstack	
F relocate		<b>processouter</b>	function
F render			



## node (basic tex)

<b>check_discretionaries</b>	function	F getcharspec
<b>check_discretionary</b>	function	F getdata
<b>copy</b>	function	F getdepth
<b>copy_list</b>	function	F getdirection
<b>count</b>	function	F getdisc
<b>current_attributes</b>	function	F getdiscpart
<b>dimensions</b>	function	F getexpansion
<b>direct</b>	table	F getfam
F addmargins		F getfield
F addxoffset		F getfont
F addxymargins		F getglue
F addyoffset		F getglyphdata
F check_discretionaries		F getglyphdimensions
F check_discretionary		F getheight
F collapsing		F getid
F copy		F getindex
F copy_list		F getkern
F copy_only		F getkerndimension
F count		F getlanguage
F current_attributes		F getleader
F dimensions		F getlist
F effective_glue		F getnext
F end_of_math		F getnormalizedline
F exchange		F getnucleus
F fields		F getoffsets
F find_attribute		F getoptions
F find_attribute_range		F getorientation
F find_node		F getparstate
F first_glyph		F getpenalty
F flatten_discretionaries		F getpost
F flush_list		F getpre
F flush_node		F getprev
F free		F getproperty
F get_attribute		F getreplace
F get_attributes		F getscale
F get_properties_table		F getscales
F get_synctex_fields		F getscript
F getattributelist		F getshift
F getboth		F getstate
F getbox		F getsub
F getchar		F getsubpre

F getsubtype	F remove
F getsup	F reverse
F getsuppre	F set_attribute
F gettotal	F set_attributes
F getwhd	F set_synctex_fields
F getwidth	F setattributelist
F getxscale	F setboth
F getxyscales	F setbox
F getyscale	F setchar
F has_attribute	F setdata
F has_dimensions	F setdepth
F has_field	F setdirection
F has_glyph	F setdisc
F has_glyph_option	F setdiscpart
F hpack	F setexpansion
F hyphenating	F setfam
F id	F setfield
F ignore_math_skip	F setfont
F insert_after	F setglue
F insert_before	F setglyphdata
F is_char	F setheight
F is_direct	F setindex
F is_glyph	F setkern
F is_next_char	F setlanguage
F is_next_glyph	F setleader
F is_node	F setlink
F is_prev_char	F setlist
F is_prev_glyph	F setnext
F is_valid	F setnucleus
F is_zero_glue	F setoffsets
F kerning	F setoptions
F last_node	F setorientation
F length	F setpenalty
F ligaturing	F setpost
F make_extensible	F setpre
F migrate	F setprev
F mlist_to_hlist	F setproperty
F naturalhsize	F setreplace
F naturalwidth	F setscales
F new	F setscript
F protect_glyph	F setshift
F protect_glyphs	F setsplit
F protrusion_skippable	F setstate
F rangedimensions	F setsub

F setsubpre		<b>flush_node</b>	function
F setsubtype		<b>free</b>	function
F setup		<b>get_attribute</b>	function
F setsuppre		<b>get_glue</b>	function
F settotal		<b>get_properties_table</b>	function
F setwhd		<b>getfield</b>	function
F setwidth		<b>getproperty</b>	function
F show		<b>has_attribute</b>	function
F slide		<b>has_field</b>	function
F start_of_par		<b>has_glyph</b>	function
F subtypes		<b>hpack</b>	function
F tail		<b>hyphenating</b>	function
F todirect		<b>id</b>	function
F tonode		<b>insert_after</b>	function
F tostring		<b>insert_before</b>	function
F tovaliddirect		<b>instock</b>	function
F traverse		<b>inuse</b>	function
F traverse_char		<b>is_node</b>	function
F traverse_content		<b>is_zero_glue</b>	function
F traverse_glyph		<b>kerning</b>	function
F traverse_id		<b>last_node</b>	function
F traverse_list		<b>length</b>	function
F type		<b>ligaturing</b>	function
F types		<b>make_extensible</b>	function
F unprotect_glyph		<b>mlist_to_hlist</b>	function
F unprotect_glyphs		<b>new</b>	function
F unset_attribute		<b>protect_glyph</b>	function
F unset_attributes		<b>protect_glyphs</b>	function
F usedlist		<b>protrusion_skippable</b>	function
F uses_font		<b>rangedimensions</b>	function
F values		<b>remove</b>	function
F vertical_break		<b>set_attribute</b>	function
F vpack		<b>set_glue</b>	function
F write		<b>setfield</b>	function
F xscaled		<b>setproperty</b>	function
F yscaled		<b>show</b>	function
<b>effective_glue</b>	function	<b>slide</b>	function
<b>end_of_math</b>	function	<b>subtypes</b>	function
<b>family_font</b>	function	<b>tail</b>	function
<b>fields</b>	function	<b>tostring</b>	function
<b>find_attribute</b>	function	<b>traverse</b>	function
<b>first_glyph</b>	function	<b>traverse_id</b>	function
<b>flatten_discretionaries</b>	function	<b>type</b>	function
<b>flush_list</b>	function	<b>types</b>	function

**unprotect\_glyph**  
**unprotect\_glyphs**  
**unset\_attribute**  
**usedlist**

function  
function  
function  
function

**uses\_font**  
**values**  
**vpack**  
**write**

function  
function  
function  
function

# nodes (context)

<b>accentcodes</b>	data table	<b>fillvalues</b>	data table
<b>aligned</b>	function	<b>firstcharacter</b>	function
<b>append</b>	function	<b>firstcharinbox</b>	function
<b>apply</b>	function	<b>firstdirinbox</b>	function
<b>applyvisuals</b>	function	<b>flush</b>	function
<b>astable</b>	function	<b>flush_list</b>	function
<b>basepoints</b>	function	<b>flush_node</b>	function
<b>boundarycodes</b>	data table	<b>fullhpack</b>	function
<b>boxes</b>	table	<b>get_attribute</b>	function
F dimensions		<b>get_properties_table</b>	function
F direct		<b>getattr</b>	function
F found		<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 vpack_filter		<b>getleader</b>	function
<b>concat</b>	function	<b>getlist</b>	function
<b>copy</b>	function	<b>getnext</b>	function
<b>copy_list</b>	function	<b>getprev</b>	function
<b>copy_node</b>	function	<b>getproperty</b>	function
<b>countall</b>	function	<b>getsubtype</b>	function
<b>current_attributes</b>	function	<b>gluecodes</b>	data table
<b>delete</b>	function	<b>glyphcodes</b>	data table
<b>destinations</b>	table	<b>handlers</b>	table
N attribute		F accessibility	
T done		F backgrounds	
F handler		F backgroundspage	
T stack		F backgroundsvbox	
<b>dircodes</b>	data table	F characters	
<b>directioncodes</b>	data table	F checkglyphs	
<b>directionvalues</b>	data table	F checkparcounter	
<b>dirvalues</b>	data table	F cleanuppage	
<b>disccodes</b>	data table	F export	
<b>discretionarycodes</b>	data table	F finalizebox	
<b>fencecodes</b>	data table	F flatten	
<b>fields</b>	function	F flattenline	
<b>fieldtypes</b>	table	F migrate	
<b>fillcodes</b>	data table	F protectglyphs	

F show		F define	
F showwhyphenation		F enable	
F stripping		F filler	
F textbackgrounds		F handler	
F unprotectglyphs		<b>lines</b>	<b>table</b>
F visualizehyphenation		T boxed	
F wipe		F addlinenumbers	
<b>has_attribute</b>	function	F register	
<b>has_field</b>	function	F setup	
<b>hpack</b>	function	D data	
<b>idsandsubtypes</b>	function	F finalize	
<b>idstousing</b>	function	F number	
<b>injections</b>	table	<b>link</b>	function
F copy		<b>linked</b>	function
F getligaindex		<b>list</b>	function
F getthreshold		<b>listcodes</b>	data table
F handler		<b>listtoutf</b>	function
F installgetspaceboth		<b>literalvalues</b>	data table
F installnewkern		<b>locate</b>	function
F isspace		<b>markers</b>	table
F keepcounts		F get	
F reset		<b>mathcodes</b>	data table
F resetcounts		<b>mathvalues</b>	data table
F setcursive		<b>maxboxwidth</b>	function
F setkern		<b>migrations</b>	table
F setligaindex		F setinserts	
F setmark		F setmarks	
F setmove		<b>new</b>	function
F setposition		<b>noadcodes</b>	data table
F setspacekerns		<b>noadoptions</b>	table
<b>insert_after</b>	function	N axis	
<b>insert_before</b>	function	N exact	
<b>insert_list_after</b>	function	N left	
<b>installattributehandler</b>	function	N middle	
<b>is_direct</b>	function	N no_axis	
<b>is_display_math</b>	function	N right	
<b>is_node</b>	function	N set	
<b>is_nut</b>	function	N unused_1	
<b>kerncodes</b>	data table	N unused_2	
<b>keys</b>	table	<b>nodecodes</b>	data table
T whatsit		<b>nopts</b>	function
<b>leftmarginwidth</b>	function	<b>nuts</b>	table
<b>linefillers</b>	table	F addmargins	
D data		F addxoffset	

F addxymargins	F getattrlist
F addyoffset	F getattr
F append	F getboth
F apply	F getbox
F applyvisuals	F getboxglue
F check_discretionaries	F getchar
F collapsing	F getcharspec
T colors	F getcomponents
F set	F getdata
F concat	F getdepth
F copy	F getdirection
F copy_list	F getdisc
F copy_no_components	F getdiscpart
F copy_node	F getdiscretionary
F copy_only	F getexpansion
F copy_only_glyphs	F getfam
F copy_properties	F getfield
F copyvisual	F getfont
F count	F getglue
F count_components	F getglyphdata
F countall	F getglyphdimensions
F current_attributes	F getheight
F delete	F getid
F dimensions	F getkern
F dirdimensions	F getkerndimension
F effective_glue	F getlang
F end_of_math	F getlanguage
F exchange	F getleader
F find_attribute	F getlist
F first_glyph	F getnext
F firstcharacter	F getnormalizedline
F firstcharinbox	F getnucleus
F firstglyph	F getoffsets
F flatten_discretionaries	F getoptions
F flush	F getorientation
F flush_components	F getpenalty
F flush_list	F getpost
F flush_node	F getpre
F free	F getprev
F fullhpack	F getprop
F get_components	F getreplace
F getattr	F getruledata
F getattribute	F getscale
F getattributelist	F getscales

F getscript  
F getshift  
F getstate  
F getsub  
F getsubpre  
F getsubtype  
F getsup  
F getsuppre  
F getsurround  
F getsynctexfields  
F gettotal  
F getvalue  
F getwhd  
F getwidth  
F getxscale  
F getxyscales  
F getyscale  
F has\_attribute  
F has\_dimensions  
F has\_field  
F has\_glyph  
F has\_glyph\_option  
F hpack  
F hyphenating  
F insert\_after  
F insert\_before  
F insert\_list\_after  
F is\_display\_math  
F is\_node  
F is\_nut  
F is\_zero\_glue  
F ischar  
F isdone  
F isglyph  
F isnextchar  
F isnextglyph  
F isprevchar  
F isprevglyph  
F kerning  
F last\_node  
F length  
F ligaturing  
F link  
F linked

F locate  
F migrate  
F mlist\_to\_hlist  
F naturalhsize  
F naturalwidth  
F nestedtracedslide  
F new  
T pool  
F accent  
F baselineskip  
F boundary  
F choice  
F cleanup  
F delim  
F delimiter  
F direction  
F directliteral  
F disc  
F emptyrule  
F fence  
F fontkern  
F fraction  
F glue  
F gluespec  
F glyph  
F hlist  
F indentskip  
F italickern  
F kern  
F latelua  
F leader  
F lefthangskip  
F leftmarginkern  
F leftskip  
F lineskip  
F literal  
F mathchar  
F mathtextchar  
F negatedglue  
F noad  
F originliteral  
F outlinerule  
F pageliteral  
F penalty



F radical	F fill
F rawliteral	F mp
F register	F stroke
F restore	F userrule
F righthangskip	F set_attribute
F rightmarginkern	F set_components
F rightskip	F setattr
F rule	F setattribute
F save	F setattributelist
F savepos	F setattributes
F setmatrix	F setattrlist
F setstate	F setattrs
F shrink	F setboth
F startrotation	F setbox
F stock	F setboxglue
F stretch	F setchar
F subbox	F setcomponents
F submlist	F setdata
F temp	F setdepth
F usage	F setdirection
F userdefined	F setdisc
T userids	F setdiscpart
F usernode	F setdiscretionary
F userrule	F setexpansion
F vlist	F setfam
F wordboundary	F setfield
F prepend	F setfont
F processranges	F setglue
F processwords	F setglyphdata
F protect_glyph	F setheight
F protect_glyphs	F setkern
F protrusion_skipable	F setlang
F rangedimensions	F setlanguage
F rawprop	F setleader
F reference	F setlink
F rehpick	F setlist
F remove	F setnext
F repackhlist	F setnucleus
F replace	F setoffsets
F reverse	F setoptions
T rules	F setorientation
T ruleactions	F setparproperty
F box	F setpenalty
F draw	F setpost

F setpre  
F setprev  
F setprop  
F setreplace  
F setruledata  
F setscale  
F setscales  
F setscript  
F setshift  
F setsplit  
F setstate  
F setsub  
F setsubpre  
F setsubtype  
F setup  
F setsuppre  
F setsurround  
F setsyntexfields  
F setunsetattributes  
F setvalue  
F setvisual  
F setvisuals  
F setwhd  
F setwidth  
F show  
F slide  
F somepenalty  
F somespace  
F splitbox  
F start\_of\_par  
F striprange  
F tail  
F takeattr  
F takebox  
F takelist  
F theprop  
F tonode  
F tonodes  
F tonut  
F tosequence  
F toString  
F tracedslide  
F traverse  
F traverse\_char

- F traverse\_content
- F traverse\_glyph
- F traverse\_id
- F traverse\_list
- T traversers
  - F boundary
  - F char
  - F content
  - F dir
  - F disc
  - F glue
  - F glyph
  - F hlist
  - F list
  - F next
  - F node
  - F vlist
  - F whatsit
- T typesetters
  - F tohbox
  - F tohpack
  - F tonodes
  - F toinbox
  - F toinbox
- F unprotect\_glyph
- F unprotect\_glyphs
- F unset\_attribute
- F unset\_attributes
- F unsetattribute
- F unsetattributes
- F untracedslide
- F usedlist
- F uses\_font
- F vianodes
- F vianuts
- F vpack
- F write
- F xscaled
- F yscaled

**cklist**

**rcodes**

**naltycodes**

**ugindata**

- F finalizer

```
function
data table
data table
table
```

F initializer		<b>references</b>	table
S name		N attribute	
T namespace		T done	
N attribute		F handler	
D data		T stack	
F enable		<b>reheap</b>	function
F handler		<b>remove</b>	function
F register		<b>repackhlist</b>	function
D registered		<b>replace</b>	function
D values		<b>report</b>	function
F processor		<b>rightmarginwidth</b>	function
<b>points</b>	function	<b>rulecodes</b>	data table
<b>pool</b>	table	<b>rules</b>	table
F baselineskip		D data	
F cleanup		F define	
F directliteral		F enable	
F glyph		F handler	
F hlist		F process	
F latelua		F userrule	
F lineskip		<b>serialize</b>	function
F literal		<b>serializebox</b>	function
F originliteral		<b>set_attribute</b>	function
F register		<b>setattr</b>	function
F restore		<b>setattribute</b>	function
F rule		<b>setattributes</b>	function
F save		<b>setboth</b>	function
F savepos		<b>setbox</b>	function
F setmatrix		<b>setboxtonaturalwd</b>	function
F stock		<b>setchar</b>	function
F usage		<b>setfield</b>	function
F vlist		<b>setfont</b>	function
<b>prepend</b>	function	<b>setleader</b>	function
<b>print</b>	function	<b>setlink</b>	function
<b>processors</b>	table	<b>setlist</b>	function
F contribute_filter		<b>setnext</b>	function
B enabled		<b>setprev</b>	function
F hpack_filter		<b>setproperty</b>	function
F post_linebreak_filter		<b>setunsetattributes</b>	function
F pre_linebreak_filter		<b>shifts</b>	table
F tracer		D data	
<b>properties</b>	table	F define	
T data		F enable	
<b>pts</b>	function	F handler	
<b>radicalcodes</b>	data table	<b>showboxes</b>	function

<b>showlist</b>	function	<b>tonode</b>	function
<b>showsimplelist</b>	function	<b>tonodes</b>	function
<b>skipcodes</b>	data table	<b>tonut</b>	function
<b>snapshots</b>	table	<b>topicsas</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>start_of_par</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	

T transparencies		<b>usedlist</b>	function
F reset		<b>vianodes</b>	function
F set		<b>vianuts</b>	function
F setlist		<b>visualizebox</b>	function
<b>traverse</b>	function	<b>visualizers</b>	table
<b>traverse_id</b>	function	F attribute	
<b>typesetters</b>	table	T attributes	
F hbox		F box	
F hpack		F handler	
F tohbox		F markfonts	
F tohpack		F register	
F tonodes		F setfont	
F tovbox		F setlayer	
F tovpack		F setruledglyph	
F vpack		F setvisual	
<b>unset_attribute</b>	function	<b>vpack</b>	function
<b>unsetattribute</b>	function	<b>whatsitcodes</b>	data table
<b>unsetattributes</b>	function	<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 initialize  
F load  
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

## **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

## **loaded** table

## **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

## **postgress** table

F close  
F execute  
F getmessage  
F initialize  
F open

## **sqlite** table

F close  
F execute  
F getmessage  
F initialize  
F open

## **zint** table

F execute  
F initialize



## os (basic lua)

<b>__getenv__</b>	function
<b>__setenv__</b>	function
<b>binsuffix</b>	string
<b>binsuffixes</b>	table
<b>clock</b>	function
<b>converttime</b>	function
<b>date</b>	overloaded function
<b>difftime</b>	function
<b>enableansi</b>	function
<b>env</b>	data table
<b>execute</b>	overloaded function
<b>exit</b>	overloaded function
<b>fulltime</b>	function
<b>getcodepage</b>	function
<b>getenv</b>	overloaded function
<b>gettimeofday</b>	function
<b>isleapyear</b>	function
<b>launch</b>	function
<b>libsuffix</b>	string
<b>localtime</b>	function
<b>name</b>	string
<b>newline</b>	string
<b>nofdays</b>	function
<b>now</b>	function
<b>pipeto</b>	function
<b>platform</b>	string
<b>remove</b>	overloaded function

<b>rename</b>	overloaded function
<b>resolvers</b>	table
<b>F bits</b>	
<b>resultof</b>	function
<b>runtime</b>	function
<b>selfarg</b>	table
<b>selfbase</b>	string
<b>selfbin</b>	string
<b>selfcore</b>	string
<b>selfdir</b>	string
<b>selfname</b>	string
<b>selfpath</b>	string
<b>setenv</b>	overloaded function
<b>setexitcode</b>	function
<b>setlocale</b>	overloaded function
<b>sleep</b>	function
<b>time</b>	function
<b>timezone</b>	function
<b>tmpname</b>	function
<b>today</b>	function
<b>type</b>	string
<b>uname</b>	function
<b>uuid</b>	function
<b>validdatetime</b>	function
<b>weekday</b>	function
<b>where</b>	function
<b>which</b>	function

## 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

pdf (basic tex)

**immediateobj** function

## pdfe (extra tex)

<b>arraytotable</b>	function	<b>getnumber</b>	function
<b>close</b>	function	<b>getpage</b>	function
<b>closestream</b>	function	<b>getpages</b>	function
<b>dictionarytotable</b>	function	<b>getsize</b>	function
<b>encryptioncodes</b>	data table	<b>getstatus</b>	function
<b>getarray</b>	function	<b>getstream</b>	function
<b>getboolean</b>	function	<b>getstring</b>	function
<b>getbox</b>	function	<b>gettrailer</b>	function
<b>getcatalag</b>	function	<b>getversion</b>	function
<b>getdictionary</b>	function	<b>new</b>	function
<b>getfromarray</b>	function	<b>objectcodes</b>	data table
<b>getfromdictionary</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>pages totable</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
<b>getnofpages</b>	function		

# physics (context)

**units** table

F registerunit

D tables

## pngdecode (extra tex)

**applyfilter** function  
**expand** function  
**interlace** function

**splitmask** function  
**tocmyk** function

# publications (context)

<b>addtexentry</b>	function	<b>converttoxml</b>	function
<b>analyze</b>	function	<b>currentspecification</b>	table
<b>anywhere</b>	function	S author	
<b>authorcache</b>	data table	T categories	
<b>authorcollapsers</b>	data table	T article	
<b>authorhashers</b>	table	S category	
F invertedshort		T extra	
F normal		T fields	
F normalinverted		S author	
F normalshort		S editor	
F sequential		S journal	
F sequentialshort		S keywords	
F short		S note	
<b>authormap</b>	data table	S number	
<b>authortoregister</b>	function	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	
<b>concatstate</b>	function	T required	



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	
S page	F load	

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 authoryear	
F reference		T sequence	
F short		<b>specifications</b>	table
F used		T default	
F uservariable		S author	
<b>listvariants</b>	table	S comment	
F default		S copyright	
F index		S name	
F num		S version	
F short		D virtual	
F tag		<b>splitauthor</b>	function
<b>load</b>	function	<b>splitoneauthor</b>	function
<b>loadbibdata</b>	function	<b>statistics</b>	table
<b>loaddefinitionfile</b>	function	N nofbytes	
<b>loaders</b>	table	N nofdatasets	
F bbl		N nofdefinitions	
F bib		N nofshortcuts	
F buffer		<b>tables</b>	table
F endnote		D implicits	
F json		D origins	

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

## 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>findtexfile</b>	function
<b>appendhash</b>	function	<b>findwildcardfile</b>	function
<b>automount</b>	function	<b>findwildcardfiles</b>	function
<b>booleanvariable</b>	function	<b>formatofsuffix</b>	function
<b>cacheversion</b>	string	<b>formatofvariable</b>	function
<b>checkedvariable</b>	function	<b>formats</b>	data table
<b>cleanedpathlist</b>	function	<b>foundintree</b>	function
<b>cleanpath</b>	function	<b>foundintrees</b>	function
<b>cleanpathlist</b>	function	<b>generators</b>	data table
<b>concatinators</b>	data table	<b>get_from_content</b>	function
<b>configbanner</b>	string	<b>getenv</b>	function
<b>configurationfiles</b>	function	<b>getextrapaths</b>	function
<b>dangerous</b>	data table	<b>getfilehashes</b>	function
<b>datastate</b>	function	<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>findfiles</b>	function	<b>load</b>	function
<b>findgivenfile</b>	function	<b>loadbinfile</b>	function
<b>findgivenfiles</b>	function	<b>loaders</b>	data table
<b>findlib</b>	function	<b>loadlua lib</b>	function
<b>findpath</b>	function	<b>loadtexfile</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>unexpandedpath</b>	function
<b>pushpath</b>	function	<b>unexpandedpathlist</b>	function
<b>registerextrapath</b>	function	<b>unresolve</b>	function
<b>registerfile</b>	function	<b>updaterelations</b>	function
<b>registerfilehash</b>	function	<b>updatescript</b>	function
<b>registerintrees</b>	function	<b>uselibrary</b>	function
<b>registermethod</b>	function	<b>usertypes</b>	data table
<b>registerzipfile</b>	function	<b>usezipfile</b>	function
<b>relations</b>	data table	<b>validatedpath</b>	function
<b>renew</b>	function	<b>variable</b>	function
<b>renewcache</b>	function	<b>variableofformat</b>	function
<b>repath</b>	function	<b>variableofformatorsuffix</b>	function
<b>reset</b>	function	<b>wildcardpattern</b>	function
<b>resetextrapaths</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

**hash** 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>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

# 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 digitsmaximum		<b>packuc</b>	function
N digitsoffset		<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>getmarksstate</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>getlanguagestate</b>	function	<b>iocodes</b>	table
<b>getlookupstate</b>	function	<b>list</b>	function
<b>getluastate</b>	function	<b>resetmessages</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>nspaces</b>	table
<b>autosingle</b>	function	<b>optionalquoted</b>	function
<b>booleanstring</b>	function	<b>pack</b>	function
<b>byte</b>	function	<b>packsize</b>	function
<b>bytepairs</b>	function	<b>quote</b>	function
<b>bytes</b>	function	<b>quoted</b>	function
<b>bytetable</b>	function	<b>rep</b>	function
<b>char</b>	function	<b>replacenewlines</b>	function
<b>characterpairs</b>	function	<b>reverse</b>	function
<b>characters</b>	function	<b>split</b>	function
<b>checkedsplit</b>	function	<b>splitlines</b>	function
<b>collapsespaces</b>	function	<b>splitup</b>	function
<b>containsws</b>	function	<b>strip</b>	function
<b>count</b>	function	<b>sub</b>	function
<b>dawson</b>	function	<b>tformat</b>	function
<b>dump</b>	function	<b>toHEX</b>	function
<b>erf</b>	function	<b>toboollean</b>	function
<b>erfc</b>	function	<b>tobytes</b>	function
<b>erfcx</b>	function	<b>tocontext</b>	function
<b>erfi</b>	function	<b>todec</b>	function
<b>escapedpattern</b>	function	<b>todimen</b>	function
<b>escapedquotes</b>	function	<b>tohex</b>	function
<b>explode</b>	function	<b>tonodes</b>	function
<b>f6</b>	function	<b>topattern</b>	function
<b>find</b>	function	<b>totable</b>	function
<b>format</b>	function	<b>tounicode16</b>	function
<b>formatter</b>	function	<b>toutf</b>	function
<b>formatters</b>	function	<b>toutf32</b>	function
<b>fullstrip</b>	function	<b>toutf8</b>	function
<b>gmatch</b>	function	<b>tracedchar</b>	function
<b>gsub</b>	function	<b>tracedchars</b>	table
<b>is_boolean</b>	function	<b>unpack</b>	function
<b>is_empty</b>	function	<b>unquote</b>	function
<b>itself</b>	function	<b>unquoted</b>	function
<b>len</b>	function	<b>upper</b>	function
<b>limit</b>	function	<b>utfcharacter</b>	function
<b>linetable</b>	function	<b>utfcharacters</b>	function
<b>longtostring</b>	function	<b>utfcharactertable</b>	function
<b>lower</b>	function	<b>utflength</b>	function
<b>match</b>	function	<b>utfpadd</b>	function
<b>nospaces</b>	function	<b>utfpadding</b>	function

<b>utfvalue</b>	function	<b>valid</b>	function
<b>utfvalues</b>	function	<b>voigt</b>	function
<b>utfvaluetable</b>	function	<b>voigt_hwhm</b>	function

# structures (context)

<b>atlocation</b>	function	F next
<b>blocks</b>	table	F prev
D collected		F previous
F define		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 last		F title

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

- F listindex
- D numbers
- F ordered
- F postpone
- F resetpostponed
- F restore
- F save
- F setstate
- D states
- F store

## pages table

- F allmarked
- F analyze
- D collected
- F fraction
- F has\_changed
- 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 table

- F analyze
- 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 expandcurrent
- F export
- T files
  - T data
- F define
- F found
- F get
- F filter
- F filterdefault
- D filters
- D flaginternals
- F from
- 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
- 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**

- F analyze

table

- D collected
- F compare
- F define
- F enhance
- F extend
- F filter
- F filtercollected
- F finalize
- F findinternal
- F flush
- F get
- F prepare
- F process
- F setmethod
- F sort
- F store
- D tobesaved
- F unique
- F userdata

**sections**

- 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

table

- F register
- D registered
- F reportstructure
- F save
- T sectionblockdata
  - T bodypart
    - S bookmark
- F set
- F setblock
- F setchecker
- F setentry
- F setinitialblock
- F setlevel
- F setnumber
- F showstructure
- F structuredata
- F title
- D tobesaved
- F typesetnumber
- F userdata
- B verbose

## sets table

- F define
- F get
- F getall
- D setlist

## specials table

- D collected
- F retrieve
- F store
- D tobesaved

## synonyms table

- F analyzed
- D collected
- F compare
- F define
- F filter
- F finalize
- F flush
- F isshown
- F isused
- F meaning
- F prepare
- F process

- F register
- F registershown
- F registerused
- F resetshown
- F resetused
- F sort
- F synonym
- D tobesaved

## tags table

- T backend
- T checks
  - F marginanchor
  - F margintext
  - F math
  - F mrow
  - F mtable
- T destinationhash
- T extras
  - F adddestination
  - F addimplicit
  - F addinternal
  - F addreference
  - F combination
  - F delimitedsymbol
  - F description
  - F descriptionsymbol
  - F document
  - F float
  - F formulacontent
  - F image
  - F item
  - F itemgroup
  - F link
  - F listitem
  - F mi
  - F msub
  - F msup
  - F paragraph
  - F publication
  - F reference
  - F registerlocation
  - F registerpages
  - F registerseparator
  - F section

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

## table (basic lua)

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

# tex (basic tex)

<b>attribute</b>	table	<b>getboxresourcedimensions</b>	function
<b>badness</b>	function	<b>getcatcode</b>	function
<b>box</b>	table	<b>getcount</b>	function
<b>boxresources</b>	table	<b>getdelcode</b>	function
F getbox		<b>getdelcodes</b>	function
F getdimensions		<b>getdimen</b>	function
F save		<b>getdimensionvalue</b>	function
F use		<b>getdiscoptionvalues</b>	function
<b>catcode</b>	table	<b>geterrorvalues</b>	function
<b>chardef</b>	function	<b>getflagvalues</b>	function
<b>codes</b>	table	<b>getfontoffamily</b>	function
<b>conditionals</b>	data table	<b>getfrozenparvalues</b>	function
<b>constants</b>	data table	<b>getglue</b>	function
<b>count</b>	table	<b>getglyphdata</b>	function
<b>cprint</b>	function	<b>getglyphoptionvalues</b>	function
<b>ctdcatcodes</b>	number	<b>getglyphscript</b>	function
<b>ctxcatcodes</b>	number	<b>getglyphstate</b>	function
<b>definefont</b>	function	<b>getgroupvalues</b>	function
<b>delcode</b>	table	<b>gethelptext</b>	function
<b>dimen</b>	table	<b>gethyphenationvalues</b>	function
<b>dimensiondef</b>	function	<b>getintegervalue</b>	function
<b>directives</b>	data table	<b>getinteraction</b>	function
<b>discoptioncodes</b>	data table	<b>getiovalues</b>	function
<b>enableprimitives</b>	function	<b>getlargestusedmark</b>	function
<b>error</b>	function	<b>getlccode</b>	function
<b>experiments</b>	data table	<b>getlinedir</b>	function
<b>extraprimitives</b>	function	<b>getlist</b>	function
<b>fatalerror</b>	function	<b>getlocallevel</b>	function
<b>flagcodes</b>	data table	<b>getmark</b>	function
<b>fontidentifier</b>	function	<b>getmath</b>	function
<b>fontname</b>	function	<b>getmathcode</b>	function
<b>forcehmode</b>	function	<b>getmathcodes</b>	function
<b>forcesynctexline</b>	function	<b>getmathdir</b>	function
<b>forcesynctextag</b>	function	<b>getmathvariantvalues</b>	function
<b>fprint</b>	function	<b>getmodevalues</b>	function
<b>frozenparcodes</b>	data table	<b>getmuglue</b>	function
<b>get</b>	function	<b>getmuskip</b>	function
<b>getattribute</b>	function	<b>getnest</b>	function
<b>getbox</b>	function	<b>getnormalizevalues</b>	function
<b>getboxdir</b>	function	<b>getoutputactive</b>	function
<b>getboxresourcebox</b>	function	<b>getpagestate</b>	function

<b>getparbegin</b>	function	<b>modelevels</b>	table
<b>getparcontext</b>	function	N horizontal	
<b>getpardir</b>	function	N math	
<b>getprimitiveorigins</b>	function	N unset	
<b>getrunstatevalues</b>	function	N vertical	
<b>getsfcode</b>	function	<b>modes</b>	data table
<b>getskip</b>	function	<b>mprint</b>	function
<b>getsynctexline</b>	function	<b>muglue</b>	table
<b>getsynctexmode</b>	function	<b>muskip</b>	table
<b>getsynctextag</b>	function	<b>nest</b>	table
<b>gettextdir</b>	function	<b>nilcatcodes</b>	number
<b>gettoks</b>	function	<b>normalizecodes</b>	data table
<b>getuccode</b>	function	<b>notcatcodes</b>	number
<b>glue</b>	table	<b>number</b>	function
<b>glyphoptioncodes</b>	data table	<b>poplocal</b>	function
<b>groupcodes</b>	data table	<b>primitives</b>	function
<b>hashtokens</b>	function	<b>print</b>	function
<b>hyphenationcodes</b>	data table	<b>prtcacodes</b>	number
<b>ifs</b>	data table	<b>pushlocal</b>	function
<b>inicalcodes</b>	number	<b>quitlocal</b>	function
<b>integerdef</b>	function	<b>quittoks</b>	function
<b>isattribute</b>	function	<b>resetparagraph</b>	function
<b>isbox</b>	function	<b>rlncatcodes</b>	number
<b>iscount</b>	overloaded function	<b>romannumeral</b>	function
<b>isdefined</b>	function	<b>round</b>	function
<b>isdimen</b>	overloaded function	<b>runlocal</b>	function
<b>isglue</b>	function	<b>runtoks</b>	function
<b>ismuglue</b>	function	<b>saveboxresource</b>	function
<b>ismuskip</b>	overloaded function	<b>scale</b>	function
<b>isprintable</b>	function	<b>scantoks</b>	function
<b>isskip</b>	overloaded function	<b>set</b>	function
<b>istoken</b>	function	<b>setattribute</b>	function
<b>istoks</b>	function	<b>setbox</b>	function
<b>lastnodetype</b>	function	<b>setboxdir</b>	function
<b>lccode</b>	table	<b>setcatcode</b>	function
<b>linebreak</b>	function	<b>setcount</b>	function
<b>lists</b>	table	<b>setdelcode</b>	function
<b>luacatcodes</b>	number	<b>setdimen</b>	function
<b>magicconstants</b>	table	<b>setdimensionvalue</b>	function
N maxdimen		<b>setglue</b>	function
N running		<b>setglyphdata</b>	function
N trueinch		<b>setglyphscript</b>	function
<b>mathchardef</b>	function	<b>setglyphstate</b>	function
<b>mathcode</b>	table	<b>setintegervalue</b>	function

<b>setinteraction</b>	function	<b>showcontext</b>	function
<b>setlccode</b>	function	<b>skip</b>	table
<b>setlinedir</b>	function	<b>sp</b>	function
<b>setlist</b>	function	<b>splitbox</b>	function
<b>setmath</b>	function	<b>sprint</b>	function
<b>setmathcode</b>	function	<b>systemmodes</b>	data table
<b>setmathdir</b>	function	<b>takebox</b>	function
<b>setmuglue</b>	function	<b>texcatcodes</b>	number
<b>setmuskip</b>	function	<b>toks</b>	table
<b>setnest</b>	function	<b>tonumber</b>	function
<b>setpardir</b>	function	<b>toscaled</b>	function
<b>setrunstate</b>	overloaded function	<b>tpacatcodes</b>	number
<b>setsfcode</b>	function	<b>tpbcatcodes</b>	number
<b>setskip</b>	function	<b>tprint</b>	function
<b>setsynctexline</b>	function	<b>trackers</b>	data table
<b>setsynctexmode</b>	function	<b>triggerbuildpage</b>	function
<b>setsynctextag</b>	function	<b>txtcatcodes</b>	number
<b>settexdir</b>	function	<b>type</b>	function
<b>settoks</b>	function	<b>uccode</b>	table
<b>setuccode</b>	function	<b>uprint</b>	function
<b>sfcode</b>	table	<b>useboxresource</b>	function
<b>shiftparshape</b>	function	<b>vrbcacodes</b>	number
<b>shipout</b>	function	<b>write</b>	function

## texconfig (basic tex)

<b>buffer_size</b>	number	<b>max_pool</b>	number
<b>error_line</b>	number	<b>max_print_line</b>	number
<b>expand_depth</b>	number	<b>max_strings</b>	number
<b>firstline</b>	string	<b>nest_size</b>	number
<b>formatname</b>	string	<b>node_size</b>	number
<b>function_size</b>	number	<b>param_size</b>	number
<b>half_error_line</b>	number	<b>properties_size</b>	number
<b>hash_extra</b>	number	<b>save_size</b>	number
<b>init</b>	overloaded function	<b>shell_escape</b>	string
<b>kpse_init</b>	boolean	<b>stack_size</b>	number
<b>max_in_open</b>	number	<b>token_size</b>	number



## texio (basic tex)

**closeinput**    function

**terminal**     function

**write**          function

**write\_nl**       function

# token (basic tex)

## accessors

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

## table

**create** function  
**expand** function  
**expand\_macro** function  
**future\_expand** function  
**get\_active** function  
**get\_cmdchrsc** function  
**get\_cmdname** function  
**get\_command** function  
**get\_csname** function  
**get\_cstoken** function  
**get\_dimension** function  
**get\_expandable** function  
**get\_fields** function  
**get\_flags** function  
**get\_frozen** function  
**get\_id** function  
**get\_immutable** function  
**get\_index** function  
**get\_instance** function  
**get\_integer** function  
**get\_macro** function  
**get\_meaning** function  
**get\_noaligned** function  
**get\_parameters** function  
**get\_permanent** function  
**get\_primitive** function  
**get\_protected** function  
**get\_range** function

**get\_tok** function  
**get\_tolerant** function  
**getcommandid** function  
**getcommandvalues** function  
**getfunctionvalues** function  
**getprimitives** function  
**gobble** function  
**gobble\_dimen** function  
**gobble\_integer** function  
**is\_defined** function  
**is\_next\_char** function  
**is\_token** function  
**new** function  
**peek\_next** function  
**peek\_next\_char** function  
**peek\_next\_expanded** function  
**pop\_macro** function  
**push\_macro** function  
**put\_back** function  
**put\_next** function  
**save\_lua** function  
**scan\_argument** function  
**scan\_box** function  
**scan\_cardinal** function  
**scan\_char** function  
**scan\_cmdchr** function  
**scan\_cmdchr\_expanded** function  
**scan\_code** function  
**scan\_csname** function  
**scan\_delimited** function  
**scan\_dimen** function  
**scan\_dimen\_argument** function  
**scan\_float** function  
**scan\_glue** function  
**scan\_integer** function  
**scan\_integer\_argument** function  
**scan\_key** function  
**scan\_keyword** function  
**scan\_keyword\_cs** function  
**scan\_letters** function  
**scan\_luacardinal** function

<b>scan_luainteger</b>	function	<b>scan_value</b>	function
<b>scan_luanumber</b>	function	<b>scan_word</b>	function
<b>scan_next</b>	function	<b>serialize</b>	function
<b>scan_next_char</b>	function	<b>set_char</b>	function
<b>scan_next_expanded</b>	function	<b>set_dimension</b>	function
<b>scan_real</b>	function	<b>set_integer</b>	function
<b>scan_scale</b>	function	<b>set_lua</b>	function
<b>scan_skip</b>	function	<b>set_macro</b>	function
<b>scan_string</b>	function	<b>skip_next</b>	function
<b>scan_token</b>	function	<b>skip_next_expanded</b>	function
<b>scan_token_code</b>	function	<b>type</b>	function
<b>scan_tokenlist</b>	function	<b>undefine_macro</b>	function
<b>scan_toks</b>	function		

# tokens (context)

<b>astable</b>	function	U input
<b>bits</b>	table	U loadfoundtypescriptfile
N active		U resetctxscanner
N alignment		U rlap
N begingroup		U secondoftwoarguments
N character		U setfalsevalue
N close		U setsectionblock
N comment		U setupsystem
N endgroup		U startcolumns
N endoffline		U starttabulate
N escape		U starttitle
N ignore		U startxtitle
N invalid		U stopcolumns
N letter		U stoptabulate
N mathshift		U stoptitle
N open		U stopxtitle
N other		U texsetup
N parameter		U xmlw
N space		<b>commands</b> data table
N subscript		<b>compile</b> function
N superscript		<b>constant</b> function
N whitespace		<b>converters</b> table
<b>cache</b>	table	S toboolean
U NC		S todimen
U NR		S toglue
U bf		S tonumber
U buff_finish		S tostring
U c_font_compact		<b>create</b> function
U color		<b>defined</b> function
U colordefalc		<b>flags</b> function
U colordefflc		<b>getinteger</b> function
U colordefflt		<b>getters</b> table
U colordefrlt		F box
U dofinishreference		F count
U dostarttext		F cstoken
U finishjob		F dimen
U firstofoneargument		F glue
U firstoftwoarguments		F macro
U gobbleoneargument		F meaning
U goto		F skip
U iftrue		F token

**isdefined**    function  
**istoken**     function  
**new**          function  
**pickup**      function  
**popmacro**    function  
**presets**     table

T 1 argument  
T 1 string  
T 2 arguments  
T 2 strings  
T 3 arguments  
T 3 strings  
T 4 arguments  
T 4 strings  
T 5 strings  
T 6 strings  
T 7 strings  
T 8 strings

**pushmacro**   function  
**scanners**    table

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 csname  
F delimited  
F dimen  
F dimenargument  
F dimension  
F float  
F glue  
F gluespec  
F gluevalues  
F hash

F hbox  
F integer  
F integerargument  
F ischar  
F key  
F keyword  
F keywordcs  
F letters  
F list  
F luacardinal  
F luainteger  
F luanumber  
F lxmlid  
F next  
F nextexpanded  
F number  
F optional  
F peek  
F peekchar  
F peekexpanded  
F real  
F scanclose  
F scanopen  
F skip  
F skipexpanded  
F string  
F table  
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 scandimenargument
F lua	F scandimension
F macro	F scanglue
F skip	F scangluespec
<b>shortcuts</b> table	F scangluevalues
T bits	F scanhash
N active	F scanhbox
N alignment	F scaninteger
N begingroup	F scanintegerargument
N character	F scankeyword
N close	F scankeywordcs
N comment	F scanletters
N endgroup	F scanlist
N endofline	T scanners
N escape	F argument
N ignore	F argumentasis
N invalid	F array
N letter	F boolean
N mathshift	F box
N open	F bracketed
N other	F bracketedasis
N parameter	F cardinal
N space	F char
N subscript	F cmdchr
N superscript	F cmdchrexploded
N whitespace	F code
N close	F conditional
F inspect	F count
N open	F csname
F report	F delimited
F scanargument	F dimen
F scanargumentasis	F dimenargument
F scanarray	F dimension
F scanboolean	F float
F scanbox	F glue
F scanbracketed	F gluespec
F scanbracketedasis	F gluevalues
F scancardinal	F hash
F scanclose	F hbox
F scancode	F integer
F scanconditional	F integerargument
F scancsname	F ischar
F scandelimited	F key
F scandimen	F keyword

F keywordcs	F todimen
F letters	T tokens
F list	F astable
F luacardinal	T cache
F luainteger	U NC
F luanumber	U NR
F lxmlid	U bf
F next	U buff_finish
F nextexpanded	U c_font_compact
F number	U color
F optional	U colordefalc
F peek	U colordefflc
F peekchar	U colordefflt
F peekexpanded	U colordefrlt
F real	U dofinishreference
F scanclose	U dostarttext
F scanopen	U finishjob
F skip	U firstofoneargument
F skipexpanded	U firstoftwoarguments
F string	U gobbleoneargument
F table	U goto
F token	U iftrue
F tokencode	U input
F tokenlist	U loadfoundtypescriptfile
F tokens	U resetctxscanner
F toks	U rlap
F value	U secondoftwoarguments
F vbox	U setfalsevalue
F verbatim	U setsectionblock
F vtop	U setupsystem
F whd	U startcolumns
F word	U starttabulate
F scannumber	U starttitle
F scanopen	U startxtitle
F scanoptional	U stopcolumns
F scanstring	U stoptabulate
F scantable	U stoptitle
F scantokenlist	U stopxtitle
F scantoks	U texsetup
F scanvbox	U xmlw
F scanverbatim	D commands
F scanvtop	F compile
F scanword	F constant
F toboolean	T converters

S toboolean	F scanboolean
S todimen	F scanbox
S toglue	F scanbracketed
S tonumber	F scanbracketedasis
S toString	F scancardinal
F create	F scanclose
F defined	F scancode
F flags	F scanconditional
F getinteger	F scanscname
T getters	F scandelimited
F box	F scandimen
F count	F scandimenargument
F ctoken	F scandimension
F dimen	F scanglue
F glue	F scangluespec
F macro	F scangluevalues
F meaning	F scanhash
F skip	F scanhbox
F token	F scaninteger
F isdefined	F scanintegerargument
F istoken	F scankeyword
F new	F scankeywordcs
F pickup	F scanletters
F popmacro	F scanlist
T presets	F scannumber
F pushmacro	F scanopen
F setinteger	F scanoptional
T setters	F scanstring
F box	F scantable
F char	F scantokenlist
F count	F scantoks
F dimen	F scanvbox
F glue	F scanverbatim
F lua	F scanvtop
F macro	F scanword
F skip	F toboolean
T shortcuts	F todimen
N close	F tonumber
F inspect	F toString
N open	D values
F report	F tonumber
F scanargument	F toString
F scanargumentasis	<b>values</b> data table
F scanarray	



## 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)

<b>alignments</b>	table		
F handler			T handlers
F set			F installhandler
<b>breakpoints</b>	table		F processmath
F define			F set
F handler			F setcolor
D mapping			F setmath
T methods			F tomode
T numbers			<b>firstlines</b>
F set			table
F setreplacement			T actions
<b>cases</b>	table		F default
T actions			F line
F handler			F word
F register			F handler
F set			F set
<b>characteralign</b>	table		<b>fontkerns</b>
F handler			table
F resetcharacteralign			F handler
F setcharacteralign			<b>initials</b>
<b>characters</b>	table		table
F handler			T actions
T methods			F default
F replacensp			F addanchortoline
F replacenspaces			F addtoline
<b>checkers</b>	table		F calculatedelta
F handler			F checkline
F reset			F handler
F set			F moveinline
<b>cleaners</b>	table		F set
F handler			<b>injectors</b>
F set			table
<b>digits</b>	table		F check
T actions			T list
F handler			F mark
F set			F reset
<b>directions</b>	table		F set
F getfences			F show
F getglobal			<b>italics</b>
F getmethod			table
F handler			F enablemath
			F enabletext
			F forcevariant
			F handler
			F reset
			F set
			<b>kerns</b>
			table

D factors		F register	
F handler		F reset	
F keepligature		F split	
D mapping		F startapply	
F set		F stopapply	
<b>manipulators</b>	<b>table</b>	F stripped	
F apply		F toString	
F applyspecification		<b>rubies</b>	<b>table</b>
T methods		F attach	
F Word		F check	
F Words		<b>showsuspects</b>	<b>function</b>
F abbreviatedjournal		<b>spacings</b>	<b>table</b>
F expandedjournal		F define	
F lowercase		F handler	
F stripperperiod		D mapping	
F uppercase		T numbers	
T patterns		T frenchpunctuation	
U list		T characters	
U pair		S name	
F splitspecification		N number	
<b>margins</b>	<b>table</b>	F reset	
F finalhandler		F set	
F globalhandler		F setup	
F localhandler		<b>wrappers</b>	<b>table</b>
F save		F handler	
<b>marksuspects</b>	<b>function</b>	<b>xtables</b>	<b>table</b>
<b>paragraphs</b>	<b>table</b>	F cleanup	
F addanchortoline		F construct	
F addtoline		F create	
F calculatedelta		F finish_row	
F checkline		F flush	
F handler		F initialize_construct	
F moveinline		F initialize_reflow_height	
F set		F initialize_reflow_width	
<b>periodkerns</b>	<b>table</b>	F next_row	
D factors		F reflow_height	
F handler		F reflow_width	
D mapping		F set_construct	
F set		F set_reflow_height	
<b>processors</b>	<b>table</b>	F set_reflow_width	
F apply			

## 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 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 unittotxml

randomizer    table
F get
F getnumber
F getseed
F popseed
F pushseed
F reuseseed
F setseed
F setseedi

```

## **randomizers**      table

F poisson

## **sequencers**      table

F appendaction

F appendgroup

F compile

F disableaction

F disablegroup

F enableaction

F enablegroup

D functions

F localize

F new

F nodeprocessor

F prependaction

F prependgroup

F removeaction

F replaceaction

F setkind

F toString

## **setters**      table

F disable

F enable

F initialize

F list

F new

F register

F report

F reset

F show

## **stacker**      table

F new

## **storage**      table

F allocate

F checked

F mark

F marked

F setinitializer

F sparse

## **streams**      table

F close

F getposition

F getsize

F getstring

F look

F open

F openstring

F read2dot14

F read2dot4

F readbyte

F readbytes

F readbytetable

F readcardinal

F readcardinal1

F readcardinal2

F readcardinal2le

F readcardinal3

F readcardinal3le

F readcardinal4

F readcardinal4le

F readcardinaltable

F readchar

F readfixed2

F readfixed4

F readinteger

F readinteger1

F readinteger2

F readinteger2le

F readinteger3

F readinteger3le

F readinteger4

F readinteger4le

F readintegertable

F readsignedbyte

F readstring

F setposition

F size

F skip

F skipbytes

F skiplong

F skipshort

## **strings**      table

F collapse

F collapsecrlf

T formatters

F add

F new

F newcollector

- F newrepeater
- F nice
- T striplinepatterns
  - U collapse
  - U prune
  - U prune and collapse
  - U prune and no empty
  - U prune and to space
  - U retain
  - U retain and collapse
  - U retain and no empty
- F striplines
- F striplong
- F tabtospace
- T tracers

**tables**                      table

- F accesstable
- F definedtable
- F definetable
- F encapsulate

- F insertaftervalue
- F insertbeforevalue
- F migratetable
- F removevalue
- F replacevalue

**templates**                      table

- F load
- F replace
- F replacer
- F resolve

**zipfiles**                      table

- F close
- F found
- F gunzipfile
- F hash
- F list
- F open
- F unzip
- F unzipdir
- F zipdir

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

<b>__tostring</b>	function	<b>i</b>	function
<b>__unm</b>	function	<b>imag</b>	function
<b>abs</b>	function	<b>log</b>	function
<b>acos</b>	function	<b>new</b>	function
<b>acosh</b>	function	<b>pow</b>	function
<b>arg</b>	function	<b>proj</b>	function
<b>asin</b>	function	<b>real</b>	function
<b>asinh</b>	function	<b>sin</b>	function
<b>atan</b>	function	<b>sinh</b>	function
<b>atanh</b>	function	<b>sqrt</b>	function
<b>conj</b>	function	<b>tan</b>	function
<b>cos</b>	function	<b>tanh</b>	function
<b>cosh</b>	function	<b>topair</b>	function
<b>exp</b>	function	<b>tostring</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 tonumber
F __idiv		F tostring
T __index		F trim
F __add		F __le
F __band		F __lt
F __bor		F __mod
F __bxor		F __mul
F __div		S __name
F __eq		F __pow
F __idiv		F __shl
F __le		F __shr
F __lt		F __sub
F __mod		F __tostring
F __mul		F __unm
S __name		F abs
F __pow		F band
F __shl		F bor
F __shr		F bxor
F __sub		F conj
F __tostring		F copy
F __unm		F exp
F abs		F getprecision
F band		F ln
F bor		F log
F bxor		F max
F conj		F min
F copy		F minus
F exp		F new

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 tonumber		<b>ln</b>	function
F tostring		<b>log</b>	function
F trim		<b>max</b>	function
<b>__le</b>	function	<b>min</b>	function
<b>__lt</b>	function	<b>minus</b>	function
<b>__mod</b>	function	<b>new</b>	function
<b>__mul</b>	function	<b>plus</b>	function
<b>__name</b>	string	<b>pow</b>	function
<b>__pow</b>	function	<b>rotate</b>	function
<b>__shl</b>	function	<b>setprecision</b>	function
<b>__shr</b>	function	<b>shift</b>	function
<b>__sub</b>	function	<b>sqrt</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
<b>band</b>	function		



## xmath (extra lua)

<b>acos</b>	function	<b>isnormal</b>	function
<b>acosh</b>	function	<b>j0</b>	function
<b>asin</b>	function	<b>j1</b>	function
<b>asinh</b>	function	<b>jn</b>	function
<b>atan</b>	function	<b>ldexp</b>	function
<b>atan2</b>	function	<b>lgamma</b>	function
<b>atanh</b>	function	<b>log</b>	function
<b>cbrt</b>	function	<b>log10</b>	function
<b>ceil</b>	function	<b>log1p</b>	function
<b>copysign</b>	function	<b>log2</b>	function
<b>cos</b>	function	<b>logb</b>	function
<b>cosh</b>	function	<b>modf</b>	function
<b>deg</b>	function	<b>nan</b>	number
<b>erf</b>	function	<b>nearbyint</b>	function
<b>erfc</b>	function	<b>nextafter</b>	function
<b>exp</b>	function	<b>pi</b>	number
<b>exp2</b>	function	<b>pow</b>	function
<b>expm1</b>	function	<b>rad</b>	function
<b>fabs</b>	function	<b>remainder</b>	function
<b>fdim</b>	function	<b>remquo</b>	function
<b>floor</b>	function	<b>round</b>	function
<b>fma</b>	function	<b>scalbn</b>	function
<b>fmax</b>	function	<b>sin</b>	function
<b>fmin</b>	function	<b>sinh</b>	function
<b>fmod</b>	function	<b>sqrt</b>	function
<b>frexp</b>	function	<b>tan</b>	function
<b>gamma</b>	function	<b>tanh</b>	function
<b>hypot</b>	function	<b>tgamma</b>	function
<b>inf</b>	number	<b>trunc</b>	function
<b>isfinite</b>	function	<b>y0</b>	function
<b>isinf</b>	function	<b>y1</b>	function
<b>isnan</b>	function	<b>yn</b>	function

# xml (context)

<b>addentitiesdoctype</b>	function	F fontspecification	
<b>addspecialcode</b>	function	F mappedstylevalue	
<b>after</b>	function	F padding	
<b>all</b>	function	F size	
<b>applylpath</b>	function	F style	
<b>applyselector</b>	function	F stylevalue	
<b>assign</b>	function	F todimension	
<b>attribute</b>	function	F variant	
<b>badinclusions</b>	function	F weight	
<b>before</b>	function	<b>defaulthandlers</b>	table
<b>body</b>	function	D file	
<b>builtinentities</b>	table	D parsedxml	
B amp		D string	
B apos		D tex	
B gt		D texline	
B lt		D texspace	
B quot		D verbose	
<b>cdata</b>	function	<b>defaultprotocol</b>	string
<b>cdatatotext</b>	function	<b>delete</b>	function
<b>checkbom</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
<del><b>collect_elements</b></del>	<del>function</del>	<b>empty</b>	function
<b>collect_tags</b>	function	<b>entities</b>	data table
<del><b>collect_texts</b></del>	<del>function</del>	<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>expressions</b>	table
<b>content</b>	function	F attribute	
<b>convert</b>	function	F boolean	
<b>copy</b>	function	F child	
<b>count</b>	function	F contains	
<b>cprint</b>	function	F count	
<b>css</b>	table	F error	
F applyselector		F find	
F colorspecification		F hasclass	
F dimension		F idstring	
F family		F lower	

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
F text		<b>inheritattributes</b>	function
F upper		<b>inheritedconvert</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 &	
<b>privatecodes</b>	table	S '	
<b>privatetoken</b>	function	S <	

<code>S &gt;</code>		<code>tocdata</code>	function
<code>S \</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>specialhandler</code>	table	<code>traverse</code>	function
<code>sprint</code>	function	<code>unescaped</code>	function
<code>string</code>	function	<code>unescapedentitylpeg</code>	userdata
<code>strip</code>	function	<code>unprivatized</code>	function
<code>strip_whitespace</code>	function	<code>unspecialized</code>	function
<code>stripelement</code>	function	<code>wipe</code>	function
<code>stripleadingspaces</code>	function	<code>withelement</code>	function
<code>table</code>	function	<code>withelements</code>	function
<code>text</code>	function	<code>wrap</code>	function
<code>textonly</code>	function	<code>xmlns</code>	table
<code>texttocdata</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