

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 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>document</b>	table
<b>FFISUPPORTED</b>	boolean	<b>documentdata</b>	table
<b>INITEXMODE</b>	boolean	<b>dofile</b>	function
<b>LUAMAJORVERSION</b>	number	<b>drivers</b>	table
<b>LUAMINORVERSION</b>	number	<b>environment</b>	table
<b>LUATEXENGINE</b>	string	<b>error</b>	function
<b>LUATEXFORMATID</b>	number	<b>experiments</b>	table
<b>LUATEXFUNCTIONALITY</b>	number	<b>figures</b>	table
<b>LUATEXVERSION</b>	number	<b>file</b>	table
<b>LUAVERSION</b>	number	<b>fio</b>	table
<b>MP</b>	function	<b>floats</b>	table
<b>arg</b>	table	<b>flushsimplerule</b>	function
<b>assert</b>	function	<b>flushspecialrule</b>	function
<b>attributes</b>	table	<b>font</b>	table
<b>backends</b>	table	<b>fonts</b>	table
<b>basexx</b>	table	<b>functions</b>	table
<b>bit32</b>	table	<b>getmetatable</b>	function
<b>blobs</b>	table	<b>getscriptstatus</b>	function
<b>blockrequire</b>	function	<b>global</b>	table
<b>boolean</b>	table	<b>graphics</b>	table
<b>buffers</b>	table	<b>gzip</b>	table
<b>builders</b>	table	<b>images</b>	table
<b>caches</b>	table	<b>inspect</b>	function
<b>callback</b>	table	<b>interactions</b>	table
<b>callbacks</b>	table	<b>interfaces</b>	table
<b>catcodes</b>	table	<b>io</b>	table
<b>characters</b>	table	<b>ipairs</b>	function
<b>checkimage</b>	function	<b>job</b>	table
<b>chemistry</b>	table	<b>language</b>	table
<b>collectgarbage</b>	function	<b>languages</b>	table
<b>commands</b>	table	<b>layouts</b>	table
<b>containers</b>	table	<b>lfs</b>	table
<b>context</b>	function	<b>libraries</b>	table
<b>converters</b>	table	<b>lmx</b>	table
<b>coroutine</b>	table	<b>load</b>	function
<b>createmask</b>	function	<b>loadfile</b>	function
<b>ctxrunner</b>	table	<b>loadstring</b>	function
<b>data</b>	table	<b>logs</b>	table
<b>debug</b>	table	<b>lpdf</b>	table
<b>dimen</b>	function	<b>lpeg</b>	table
<b>dir</b>	table	<b>lua</b>	table
<b>directives</b>	table	<b>luatex</b>	table

<b>lxml</b>	table	<b>select</b>	function
<b>math</b>	table	<b>set</b>	table
<b>mathematics</b>	table	<b>setinspector</b>	function
<b>md5</b>	table	<b>setmetatable</b>	function
<b>metapost</b>	table	<b>sha2</b>	table
<b>mime</b>	table	<b>shipbox_ref_h</b>	number
<b>moduledata</b>	table	<b>shipbox_ref_v</b>	number
<b>modules</b>	table	<b>sio</b>	table
<b>mp</b>	function	<b>socket</b>	table
<b>mplib</b>	table	<b>sorters</b>	table
<b>next</b>	function	<b>statistics</b>	table
<b>noads</b>	table	<b>status</b>	table
<b>node</b>	table	<b>storage</b>	table
<b>nodes</b>	table	<b>streams</b>	table
<b>number</b>	table	<b>string</b>	table
<b>objects</b>	table	<b>structures</b>	table
<b>optional</b>	table	<b>table</b>	table
<b>optionalrequire</b>	function	<b>tex</b>	table
<b>os</b>	table	<b>texconditionals</b>	data table
<b>package</b>	table	<b>texconfig</b>	table
<b>pagebuilders</b>	table	<b>texconstants</b>	data table
<b>pairs</b>	function	<b>texifs</b>	data table
<b>parametersets</b>	table	<b>texio</b>	table
<b>pcall</b>	function	<b>texisdefined</b>	data table
<b>pdf</b>	table	<b>texmodes</b>	data table
<b>pdfdecode</b>	table	<b>texsystemmodes</b>	data table
<b>pdfe</b>	table	<b>thirddata</b>	table
<b>physics</b>	table	<b>toboollean</b>	function
<b>pngdecode</b>	table	<b>todecimal</b>	function
<b>poplevellevel</b>	function	<b>token</b>	table
<b>print</b>	function	<b>tokens</b>	table
<b>publications</b>	table	<b>tonumber</b>	function
<b>pushleaderlevel</b>	function	<b>tostring</b>	function
<b>rawequal</b>	function	<b>tracers</b>	table
<b>rawget</b>	function	<b>trackers</b>	table
<b>rawlen</b>	function	<b>type</b>	function
<b>rawset</b>	function	<b>typesetters</b>	table
<b>regimes</b>	table	<b>unpack</b>	function
<b>require</b>	function	<b>updaters</b>	table
<b>required</b>	function	<b>url</b>	table
<b>resolvers</b>	table	<b>userdata</b>	table
<b>ruledspace</b>	function	<b>utf</b>	table
<b>sandbox</b>	table	<b>utf8</b>	table
<b>scripts</b>	table	<b>utilities</b>	table

**visualizers**

**warn**

**xcomplex**

**xdecimal**

**xmath**

table

function

table

table

table

**xml**

**xpcall**

**xzip**

**zip**

**zlib**

table

function

table

table

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  
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  
N selector  
F setlist  
F setmodel  
F setpagecolormodel  
D sets  
F spec  
F spot  
F spotcolorname  
F spotcolorparent  
F spotcolorvalue  
B supported

F toattributes		F stacked	
F transparencycomponents		F stacker	
B triggering		<b>system</b>	function
F usecolors		<b>tooverloads</b>	function
D valid		<b>transparencies</b>	table
F value		N attribute	
D values		D data	
B weightgray		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
F disabletriggering		<b>viewerlayers</b>	table
F enabletriggering		N attribute	
F finalize		F cleanup	
F initialize		D data	
F process		F define	
F selective		F definedlayoutcomponent	
F simple		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 startlayer



- F startunicodetoactualtext
- F startunicodetoactualtextdirect
- F stoplayer
- F stopunicodetoactualtext
- F stopunicodetoactualtextdirect
- F supportedformats
- F unicodetoactualtext
- F useviewerlayer
- F validfield
- F validfieldcategory
- F validfieldset
- F wrapimage
- S comment
- T nodeinjections
  - F addtags
  - F annotation
  - F attachfile
  - F changestackedlayer
  - F cmykcolor
  - F comment
  - F destination
  - F effect
  - F graycolor
  - F injectbitmap
  - F insertmovie
  - F insertsound
  - F insertu3d
  - F knockout

- F negative
- F overprint
- F positive
- F reference
- F rgbcolor
- F spotcolor
- F startalternate
- F startlayer
- F startstackedlayer
- F stopalternate
- F stoplayer
- F stopstackedlayer
- F transparency
- F typesetfield
- T registrations
  - F cmykindexcolor
  - F cmykspotcolor
  - F getspotcolorreference
  - F grayindexcolor
  - F grayspotcolor
  - F rgbindexcolor
  - F rgbspotcolor
  - F spotcolorname
  - F transparency

T tables

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

basexx (extra lua)

**decode16**    function  
**decode64**    function  
**decode85**    function  
**decodeLZW**   function  
**decodeRL**    function

**encode16**    function  
**encode64**    function  
**encode85**    function  
**encodeLZW**   function  
**encodeRL**    function

## bit32 (basic lua)

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

**extract** function  
**lrotate** function  
**lshift** function  
**replace** function  
**rrotate** function  
**rshift** function

blobs (context)

<b>append</b>	function
<b>dimensions</b>	function
<b>dispose</b>	function
<b>new</b>	function
<b>pack</b>	function
<b>strdp</b>	function
<b>strhd</b>	function

<b>strht</b>	function
<b>strwd</b>	function
<b>tohpack</b>	function
<b>tonodes</b>	function
<b>tovpack</b>	function
<b>write</b>	function

`boolean (context)`

**tocontext**    `function`

**tonumber**    `function`

buffers (context)

<b>append</b>	function
<b>assign</b>	function
<b>collectcontent</b>	function
<b>erase</b>	function
<b>exists</b>	function
<b>get</b>	function
<b>getcontent</b>	function
<b>getlines</b>	function
<b>gettexbuffer</b>	function
<b>loadcontent</b>	function
<b>parallel</b>	table

F define
F hassomecontent
F next
F place
F reset
F save

<b>prepend</b>	function
<b>raw</b>	function
<b>run</b>	function
<b>samplefile</b>	function
<b>undent</b>	function

builders (context)

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

F hyphenating  
F hyphenation  
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 keptogether  
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

**vspacing** 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

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

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

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

containers (context)

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

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

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



**verbose**

D data

F translate

table

**weekday**

**word**

**words**

function

function

function

## coroutine (basic lua)

<b>close</b>	function
<b>create</b>	function
<b>isyieldable</b>	function
<b>resume</b>	function

<b>running</b>	function
<b>status</b>	function
<b>wrap</b>	function
<b>yield</b>	function

ctxrunner (context)

<b>load</b>	function	<b>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

document (context)

<b>arguments</b>	data table
<b>files</b>	table
<b>functions</b>	table
<b>getargument</b>	function
<b>getfilename</b>	function
<b>options</b>	table

- T cmdline
- D environments
- D modes
- D modules
- T ctxfile
- D environments

D modes	
D modules	
<b>setargument</b>	function
<b>setcommandline</b>	function
<b>setdefaultargument</b>	function
<b>setenvironments</b>	function
<b>setfilename</b>	function
<b>setfilenames</b>	function
<b>setmodes</b>	function
<b>setmodules</b>	function
<b>variables</b>	data table



documentdata (context)

**variable** function

## drivers (context)

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

F updatefontstate	T pdf	
T whatsit	T actions	
S name	F cleanup	
T mpo	F convert	
T actions	F finalize	
F finalize	F initialize	
F initialize	F outputfilename	
T flushers	F prepare	
F character	F wrapup	
F popleaderlevel	T flushers	
F pushleaderlevel	F character	
F rule	F fontchar	
F simplerule	F group	
F specialrule	F image	
T whatsit	F literal	
S name	F popleaderlevel	
T mps	F poporientation	
T actions	F pushleaderlevel	
F cleanup	F pushorientation	
F convert	F restore	
F finalize	F rule	
F initialize	F save	
F outputfilename	F setmatrix	
F prepare	F setstate	
F wrapup	F simplerule	
T flushers	F specialrule	
F character	F startclipping	
F popleaderlevel	F startmatrix	
F pushleaderlevel	F startmirroring	
F rule	F startrotation	
F simplerule	F startscaling	
F specialrule	F stopclipping	
F updatefontstate	F stopmatrix	
T whatsit	F stopmirroring	
S name	F stoprotation	
T none	F stopscaling	
T actions	F updatefontstate	
T flushers	T whatsit	
F popleaderlevel	S name	
F pushleaderlevel	<b>lmtxversion</b>	number
T whatsit	<b>outputfilename</b>	function
S name	<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>jobfilefullname</b>	string	<b>texmfos</b>	string
<b>jobfilename</b>	string	<b>texos</b>	string
<b>jobfilesuffix</b>	string	<b>texroot</b>	string
<b>jobname</b>	string	<b>truefilename</b>	function
<b>kindofrun</b>	number	<b>uselua module</b>	function
<b>lmtxmode</b>	number	<b>usemodules</b>	function
<b>loadexamodes</b>	function	<b>validengines</b>	data table
<b>loadluafile</b>	function	<b>version</b>	string

experiments (context)

<b>data</b>	data table
<b>default</b>	function
<b>disable</b>	function
<b>enable</b>	function
<b>list</b>	function
<b>name</b>	string

<b>register</b>	function
<b>report</b>	function
<b>reset</b>	function
<b>show</b>	function
<b>value</b>	function

## figures (context)

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

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>readinteger2le</b>	function
<b>read2dot14</b>	function	<b>readinteger3</b>	function
<b>readbytes</b>	function	<b>readinteger3le</b>	function
<b>readbytetable</b>	function	<b>readinteger4</b>	function
<b>readcardinal1</b>	function	<b>readinteger4le</b>	function
<b>readcardinal1le</b>	function	<b>readintegertable</b>	function
<b>readcardinal2</b>	function	<b>readline</b>	function
<b>readcardinal2le</b>	function	<b>setposition</b>	function
<b>readcardinal3</b>	function	<b>skipposition</b>	function
<b>readcardinal3le</b>	function	<b>writecardinal1</b>	function
<b>readcardinal4</b>	function	<b>writecardinal1le</b>	function
<b>readcardinal4le</b>	function	<b>writecardinal2</b>	function
<b>readcardinaltable</b>	function	<b>writecardinal2le</b>	function
<b>readfixed2</b>	function	<b>writecardinal3</b>	function
<b>readfixed4</b>	function	<b>writecardinal3le</b>	function
<b>readinteger1</b>	function	<b>writecardinal4</b>	function
<b>readinteger1le</b>	function	<b>writecardinal4le</b>	function
<b>readinteger2</b>	function		



floats (context)

<b>analysemethod</b>	function
<b>checkedpagefloat</b>	function
<b>collect</b>	function
<b>consult</b>	function
<b>flush</b>	function
<b>getvariable</b>	function
<b>hasstacked</b>	function

<b>nofstacked</b>	function
<b>pop</b>	function
<b>push</b>	function
<b>resave</b>	function
<b>save</b>	function
<b>stacked</b>	function

## font (basic tex)

<b>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

**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
  - D cache

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	D pngcache
F featuresinitializer	B pngenabled
F featuresprocessor	T readers
F getactualtext	F addunicodetable
F getalternate	F avar
F getgsub	F cbdt

F cblc	F axistofactors
F cff	F cleannname
F cff2	F getaxisscale
F cffcheck	F getfactors
T cffencoder	F getscales
F checkhash	F gotodatatable
F cmap	F normalizedaxis
F colr	T normalizedaxishash
F compact	F readvariationdata
F cpal	F reportskippedtable
F ebdt	F setvariabldata
F eblc	F hhea
F ebsc	F hmtx
F expand	F hvar
F extend	F kern
F fvar	F loadfont
F gdef	F loadshapes
F getcomponents	F loca
F getinfo	F math
F glyf	F maxp
F gpos	F mvar
T gposhandlers	F name
F chainedcontext	F os/2
F context	F pack
F cursive	F parsecharstrings
F extension	F post
F marktobase	F registerextender
F marktoligature	F rehash
F marktomark	F sbix
F pair	F stat
F single	T streamreader
F gsub	F close
T gsubhandlers	F getposition
F alternate	F getsizes
F chainedcontext	F look
F context	F open
F extension	F read2dot14
F ligature	F readbyte
F multiple	F readbytes
F reversechainedcontextsingle	F readbytetable
F single	F readcardinal
F gvar	F readcardinal1
F head	F readcardinal1le
T helpers	F readcardinal2

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	N version
F writecardinal1	T pfb
F writecardinal1le	F loadvector
F writecardinal2	T tfm
F writecardinal2le	D cache
F writecardinal3	D features
F writecardinal3le	N maxnestingdepth
F writecardinal4	N maxnestingsize
F writecardinal4le	T readers
F writeinteger1	F loadpk
F writeinteger1le	F loadtfm
F writeinteger2	F loadtfmvf
F writeinteger2le	F loadvf
F writeinteger3	F pktopdf
F writeinteger3le	F showpk
F writeinteger4	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
- F load
- F make\_unicode\_vector
- D math

N version

**enhanceid** function

**expansions** data table

**formats** data table

**getalternate** function

**getindices** function

**getkern** function

**getmultiple** function

**getsubstitution** function

**getters** table

T alternate

F opentype

T kern

F opentype

F type1

F type3

T multiple

F opentype

T substitution

F opentype

**goodies** table

D colorschemes

T data

T dejavu-math

S author

S comment

S copyright

B initialized

T mathematics

T alternates

T dotless

S comment

S feature

N value

T kerns

T \*:0x1D449

T bottomright

S name

S version

D designsizes

D filenames

F getcompositions

T list

F load

F prepare\_features

F register

F registerpostprocessor

F report

T suffixes

**handlers** table

**hashes** table

D characters

D classes

D csnames

D descriptions

D dynamics

D emwidths

D exheights

D extensibles

D features

D identifiers

D italics

D lastmathids

D marks

D mathparameters

D modes

D originals

D parameters

T processes

D properties

D quads

D resources

T setdynamics

T shapes

D spaces

D spacings

T streams

D unicodes

D variants

D xheights

**helpers** table

F addextraprivate

F addprivate

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 registerfontfamily	
F ofm		F textfallback	
F opentype		F typeface	
F otf		F typescript	
F pfb		F userdata	
D sequence		<b>specifiers</b>	table
F tfm		D contextmerged	
F ttc		F contextnumber	
F ttf		D contextnumbers	
F woff		D contextsetups	
<b>reserveid</b>	function	F contexttstring	
<b>select</b>	table	F definecontext	
D alternatives		F mergecontext	
F bodyfont		F presetcontext	
D data		F registercontext	
F default		F showcontext	
D defaults		F splitcontext	
F definefallbackfamily		D synonyms	
F definefontfamily		D variants	
F definefontfamilypreset		<b>symbols</b>	table
D extras		T emoji	
F fallback		F checked	
D fallbacks		F resolved	
F features		F uselibrary	
F filefallback		<b>tables</b>	table
F fontdata		<b>tracers</b>	table
F fontfallback		<b>treatments</b>	table
F fontsynonym		F applyfixes	
F goodies		D data	
F mathfallback		S filename	
D methods		F ignoredfile	
D presets		F report	
F registerfallback		F trace	
F registerfiles		<b>typefaces</b>	table
F registerfontalternative			

functions (context)

**dummy** function

**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

gzip (extra lua)

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

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

images (context)

**check**        function  
**checksize** function  
**copy**        function  
**create**       function  
**embed**       function  
**keys**        table  
**print**       function  
**scan**        function  
**serialize** function  
**sizes**       table

B art  
B bleed  
B crop

B media  
B none  
B trim

**totable**     function  
**types**       table

N jbig2  
N jp2  
N jpg  
N none  
N pdf  
N png  
N stream

**wrap**        function

interactions (context)

**attachments** data table

**fields** table

F clone

F define

F defineset

F insert

**general** table

F getidentity

F setupidentity

**help** table

F collect

F reference

F register

**javascripts** table

F addtopreamble

F code

D codes

F flushpreambles

D functions

D preambles

F setpreamble

F storecode

F storepreamble

F usepreamblenow

F usescripts

**linkedlists** 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>cachedsetup</b>	data table
<b>cachesetup</b>	function
<b>cardinals</b>	table
<b>checkedspecification</b>	function
<b>complete</b>	data table
<b>constants</b>	data table
<b>corenamespaces</b>	data table
<b>currentinterface</b>	string
<b>currentresponse</b>	string
<b>definecommand</b>	function
<b>defined</b>	function
<b>doifelsemessage</b>	function
<b>elements</b>	data table
<b>floats</b>	table
<b>formats</b>	data table
<b>getmessage</b>	function
<b>getnamespace</b>	function
<b>getsetupstring</b>	function
<b>hashedsetups</b>	data table
<b>implement</b>	function
<b>integers</b>	table
<b>interfacedcommand</b>	function
<b>interfaces</b>	table
<b>knownscanner</b>	function
<b>message</b>	function
<b>nameofscanner</b>	function

<b>namesofscanners</b>	table
<b>namespaces</b>	table
F define	
F list	
<b>numbers</b>	table
<b>registernamespace</b>	function
<b>registerscanner</b>	function
<b>scanners</b>	data table
<b>setconstant</b>	function
<b>setcount</b>	function
<b>setdimen</b>	function
<b>setelement</b>	function
<b>setformat</b>	function
<b>setmacro</b>	function
<b>setmessage</b>	function
<b>setmessages</b>	function
<b>settranslation</b>	function
<b>setupstrings</b>	data table
<b>setvariable</b>	function
<b>showmessage</b>	function
<b>storedscanners</b>	data table
<b>tolist</b>	function
<b>translations</b>	data table
<b>usednamespaces</b>	data table
<b>variables</b>	data table
<b>writestatus</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	<b>parwrappers</b>	table
<b>datasets</b>	table	D collected	
D collected		D tobesaved	
F extend		<b>passes</b>	table
F getdata		F check	
F setdata		D collected	
D tobesaved		F count	
<b>disablesave</b>	function	F define	
<b>embedded</b>	table	F find	
D collected		F first	
D tobesaved		F get	
<b>fileobjreferences</b>	table	F getcollected	
D collected		F getdata	
D tobesaved		F getfield	
<b>files</b>	table	F gettobesaved	
D collected		F inlist	
F context		F last	
B forcerun		F list	
F run		F save	
D tobesaved		F savetagged	
<b>getrandomseed</b>	function	D tobesaved	
<b>initialize</b>	function	<b>positions</b>	table
<b>load</b>	function	F b_column	
<b>loadother</b>	function	F b_region	
<b>objects</b>	table	F c	
D collected		D collected	
F get		F column	
F number		F columnofpos	
F page		F copy	
F save		F depth	
F set		F e_column	
D tobesaved		F e_region	
<b>pack</b>	boolean	F enhance	
<b>packversion</b>	number	F extra	
<b>pagestates</b>	table	F get	
D collected		F getfree	
F countervalue		F gethpos	
F extend		F getpos	
F realpage		F getreserved	
F realpageorder		F getrpos	
F setstate		F gettobesaved	
D tobesaved		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 tobesaved  
 F upperleft  
 F upperright  
 F used  
 F whd  
 F width  
 F x  
 F xy  
 F y

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

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

**variables**

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

**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>postexhyphenchar</b>	function
<b>posthyphenchar</b>	function
<b>preexhyphenchar</b>	function
<b>prehyphenchar</b>	function
<b>sethjcode</b>	function

<b>associate</b>	function	<b>F setfeatures</b>	
<b>associated</b>	data table	<b>installed</b>	function
<b>association</b>	function	<b>labels</b>	table
<b>counters</b>	data table	<b>F define</b>	
<b>current</b>	function	<b>F split</b>	
<b>data</b>	data table	<b>loadable</b>	function
<b>decimals</b>	data table	<b>loadwords</b>	function
<b>define</b>	function	<b>logger</b>	table
<b>explicitthyphen</b>	function	<b>F report</b>	
<b>flatten</b>	function	<b>nofflatten</b>	function
<b>frequencies</b>	table	<b>numbers</b>	data table
<b>F averagecharwidth</b>		<b>postexhyphenchar</b>	function
<b>F getdata</b>		<b>posthyphenchar</b>	function
<b>getdata</b>	function	<b>preexhyphenchar</b>	function
<b>getnumber</b>	function	<b>prehyphenchar</b>	function
<b>hjcounts</b>	table	<b>registered</b>	data table
<b>hyphenate</b>	function	<b>replacements</b>	table
<b>hyphenators</b>	table	<b>F add</b>	
<b>T dictionaries</b>		<b>F addlist</b>	
<b>D featuresets</b>		<b>F handler</b>	
<b>F handler</b>		<b>F set</b>	
<b>T methods</b>		<b>serializediscretionary</b>	function
<b>F expanded</b>		<b>setexceptions</b>	function
<b>B none</b>		<b>setsynonym</b>	function
<b>F original</b>		<b>showdiscretionaries</b>	function
<b>F tex</b>		<b>transliteration</b>	table
<b>F traditional</b>		<b>F define</b>	
<b>F popmethod</b>		<b>F handler</b>	
<b>F pushmethod</b>		<b>F set</b>	
<b>F setmethod</b>		<b>unload</b>	function
<b>F setup</b>		<b>urls</b>	table
<b>F showhyphenationtrace</b>		<b>D characters</b>	
<b>T traditional</b>		<b>N lefthyphenmin</b>	
<b>F definefeatures</b>		<b>D mapping</b>	
<b>F gettrace</b>		<b>B packslashes</b>	
<b>F hyphenate</b>		<b>N righthyphenmin</b>	
<b>F injectthyphens</b>		<b>F setcharacters</b>	
<b>F installmethod</b>		<b>version</b>	number
<b>F lasttrace</b>		<b>visualizediscretionaries</b>	function
<b>F loadpatterns</b>		<b>words</b>	table
<b>F registerexception</b>		<b>F check</b>	
<b>F registerpattern</b>		<b>T data</b>	

F disable  
F enable  
T enablers  
B enables

F found  
F load  
T methods  
N threshold

<b>getcanvas</b>	function
<b>getpagedimensions</b>	function
<b>setupcanvas</b>	function

<b>status</b>	table
F isleftpage	
F leftorrightpageaction	

## lfs (extra lua)

<b>attributes</b>	overloaded function	<b>iswriteablefile</b>	function
<b>chdir</b>	overloaded function	<b>link</b>	overloaded function
<b>currentdir</b>	function	<b>mkdir</b>	overloaded function
<b>dir</b>	overloaded function	<b>mkdirs</b>	function
<b>isdir</b>	overloaded function	<b>modification</b>	function
<b>isfile</b>	overloaded function	<b>readlink</b>	function
<b>isfound</b>	function	<b>rmdir</b>	overloaded function
<b>isreadabledir</b>	function	<b>setexecutable</b>	function
<b>isreadablefile</b>	function	<b>symlink</b>	function
<b>iswriteabledir</b>	function	<b>touch</b>	overloaded function



libraries (context)

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

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

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>layerreference</b>	function
N readonly		<b>limited</b>	function
N required		<b>linearshade</b>	function
N sorted		<b>literal</b>	function
N unavailable		<b>majorversion</b>	function
<b>flushfonts</b>	function	<b>makenametree</b>	function
<b>flushgroup</b>	function	<b>minorversion</b>	function
<b>flushobject</b>	function	<b>nofpages</b>	function
<b>flushstreamfileobject</b>	function	<b>null</b>	function
<b>flushstreamobject</b>	function	<b>number</b>	function
<b>fonts</b>	table	<b>object</b>	function
F color_direct		<b>objectcompresslevel</b>	function
F color_indirect		<b>pagereference</b>	function
<b>formats</b>	data table	<b>patternstream</b>	function

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

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



luatex (context)

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

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

<b>registerentity</b>	function
<b>removesetup</b>	function
<b>replace</b>	function
<b>resetcdata</b>	function
<b>resetsetup</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>startunesaped</b>	function
<b>stopraw</b>	function
<b>stopunesaped</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		

<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

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

N with		<b>includesvgbuffer</b>	function
N within		<b>includesvgfile</b>	function
N write		<b>installplugin</b>	function
<b>colorinitializer</b>	function	<b>isobject</b>	function
<b>comment</b>	function	<b>knownparameters</b>	table
<b>convert</b>	function	<b>lastlog</b>	string
<b>currentmpx</b>	function	<b>load</b>	function
<b>currentmpxstatus</b>	function	<b>maketext</b>	function
<b>defaultformat</b>	string	<b>metafonts</b>	table
<b>defaultinstance</b>	string	<b>metafun</b>	table
<b>defaultmethod</b>	string	F interpolate	
<b>directrun</b>	function	F topath	
<b>escaped</b>	function	<b>mptopdf</b>	table
<b>exectime</b>	table	F convertmpstopdf	
<b>extensiondata</b>	data table	N nofconverted	
<b>filterclippath</b>	function	<b>n</b>	number
<b>flush</b>	function	<b>nofruns</b>	number
<b>flushers</b>	table	<b>nofscriptruns</b>	function
T pdf		<b>nvformat</b>	function
F comment		<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
<b>flushliteral</b>	function	<b>popvariables</b>	function
<b>flushnormalpath</b>	function	<b>preparetexttextsdata</b>	function
<b>flushreset</b>	function	<b>process</b>	function
<b>fonts</b>	table	<b>processing</b>	function
F define		<b>processplugins</b>	function
<b>format_number</b>	function	<b>properties</b>	table
<b>format_string</b>	function	<b>pushformat</b>	function
<b>formatnumber</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
<b>scanparameters</b>	function
<b>scripterror</b>	function
<b>scriptindex</b>	function
<b>setextensions</b>	function
<b>setoutercolor</b>	function
<b>setparameterset</b>	function
<b>settext</b>	function
<b>setvariable</b>	function
<b>showlog</b>	boolean
<b>showsviewport</b>	function
<b>simple</b>	function
<b>splitprescript</b>	function
<b>startgraphic</b>	function
<b>startsvghashing</b>	function
<b>stopgraphic</b>	function
<b>stopsvghashing</b>	function
<b>svformat</b>	function
<b>svgcolorremapper</b>	function
<b>svgfactors</b>	table
N cm	
N em	
N ex	
N in	
N mm	
N pc	
N pt	
N px	
<b>svgglyphtomp</b>	function
<b>svgshapestomp</b>	function
<b>svgshapestopdf</b>	function
<b>svgsplitcolor</b>	function
<b>svgtomp</b>	function
<b>svgtopdf</b>	function
<b>sxsy</b>	function
<b>tex</b>	table
F get	

F reset	
F set	
F setfrombuffer	
<b>texerrors</b>	boolean
<b>texexp</b>	function
<b>theclippath</b>	function
<b>tographic</b>	function
<b>totable</b>	function
<b>types</b>	table
N boolean	
N cmykcolor	
N color	
N dependent	
N independent	
N known	
N numeric	
N pair	
N path	
N pen	
N picture	
N protodependent	
N string	
N structured	
N suffixedmacro	
N tokenlist	
N transform	
N unknownboolean	
N unknownpath	
N unknownpen	
N unknownpicture	
N unknownstring	
N unsuffixedmacro	
N vacuous	
<b>typesvgpage</b>	function
<b>unload</b>	function
<b>untagvariable</b>	function
<b>variables</b>	table

mime (extra lua)

**b64** function  
**decode** function  
**decodet** table  
    F base64  
    F quoted-printable  
**dot** function  
**encode** function  
**encodet** table  
    F base64  
    F quoted-printable  
**eol** function  
**normalize** function  
**qp** function

**qpwrap** 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)

## autoinject

### aux

F boolean  
F color  
F direct  
F direct1  
F direct2  
F direct3  
F direct4  
F draw  
F fill  
F flush  
F fprint  
F integer  
F number  
F numeric  
F pair  
F pairpoints  
F path  
F pathpoints  
F points  
F print  
F quadruple  
F quadruplepoints  
F quoted  
F size  
F string  
F transform  
F triplet  
F tripletpoints  
F vprint

### boolean

### cleaned

### color

### dataset

### datasets

F load

### dimension

### direct

### direct1

### direct2

### direct3

function

table

function

function

function

function

function

function

function

function

function

function

function

## direct4

### disposehash

### draw

### fill

### flatten

### flush

### format

### formatted

### fprint

### fromhash

### get

F hashentry

### graphformat

### inhash

### inject

F boolean

F cmykcolor

F color

F integer

F number

F numeric

F pair

F path

F quadruplet

F string

F transform

F triplet

F whatever

### integer

### isarray

### isobject

### lmt\_color\_functions

F shade

F step

### lmt\_contours\_bitmap\_get

### lmt\_contours\_bitmap\_set

### lmt\_contours\_cleanup

### lmt\_contours\_color

### lmt\_contours\_edge\_get\_band

### lmt\_contours\_edge\_get\_cell

### lmt\_contours\_edge\_paths

### lmt\_contours\_edge\_set

function

function

function

function

function

function

function

function

function

function

table

function

function

function

function

function

function

table

function

function

function

function

function

function

function

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>	
<b>mf_inject_blob</b>	function	<b>F next</b>	
<b>mf_map_move</b>	function	<b>F number</b>	

F numeric		F token	
F pair		<b>solve</b>	function
F path		<b>string</b>	function
F pen		<b>systemmode</b>	function
F property		<b>texstr</b>	function
F string		<b>texttextanchor</b>	function
F symbol		<b>texvar</b>	function
F token		<b>tohash</b>	function
F transform		<b>transform</b>	function
<b>set</b>	table	<b>triplet</b>	function
<b>size</b>	function	<b>tripletpoints</b>	function
<b>skip</b>	table	<b>vprint</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>realtimelogging</b>	boolean
<b>finish</b>	function	<b>scan_boolean</b>	function
<b>getcallbackstate</b>	function	<b>scan_cmykcolor</b>	function
<b>getcodes</b>	function	<b>scan_color</b>	function
<b>getfields</b>	function	<b>scan_expression</b>	function
<b>gethashentries</b>	function	<b>scan_integer</b>	function
<b>gethashentry</b>	function	<b>scan_next</b>	function
<b>getstates</b>	function	<b>scan_number</b>	function
<b>getstatistics</b>	function	<b>scan_numeric</b>	function
<b>getstatus</b>	function	<b>scan_pair</b>	function
<b>gettype</b>	function	<b>scan_path</b>	function
<b>gettypes</b>	function	<b>scan_pen</b>	function
<b>inject_boolean</b>	function	<b>scan_property</b>	function
<b>inject_cmykcolor</b>	function	<b>scan_string</b>	function
<b>inject_color</b>	function	<b>scan_symbol</b>	function
<b>inject_integer</b>	function	<b>scan_token</b>	function
<b>inject_number</b>	function	<b>scan_transform</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)

**handlers**            table

F align  
F alternates  
F autofences  
F classes  
F collapse  
F domains  
F families  
F fixscripts  
F italics  
F kernpairs  
F makeup  
F relocate  
F render

F resize  
F showtree  
F tags  
F unscript  
F unstack  
F variants

**process**            function

**processnested**    function

**processors**        table

F mlist\_to\_hlist

T unscript

T unstack

**processouter**      function

node (basic tex)

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



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

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>kerneling</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
<b>flush_node</b>	function	<b>unprotect_glyph</b>	function
<b>free</b>	function	<b>unprotect_glyphs</b>	function
<b>get_attribute</b>	function	<b>unset_attribute</b>	function
<b>get_glue</b>	function	<b>usedlist</b>	function
<b>get_properties_table</b>	function	<b>uses_font</b>	function
<b>getfield</b>	function	<b>values</b>	function
<b>getproperty</b>	function		

**vpack**  
**write**

**function**  
**function**

nodes (context)

<b>accentcodes</b>	data table	<b>fencecodes</b>	data table
<b>aligned</b>	function	<b>fields</b>	function
<b>append</b>	function	<b>fieldtypes</b>	table
<b>apply</b>	function	<b>fillcodes</b>	data table
<b>applyvisuals</b>	function	<b>fillvalues</b>	data table
<b>astable</b>	function	<b>find_attribute</b>	function
<b>basepoints</b>	function	<b>first_glyph</b>	function
<b>boundarycodes</b>	data table	<b>firstcharacter</b>	function
<b>boxes</b>	table	<b>firstcharinbox</b>	function
F dimensions		<b>firstdirinbox</b>	function
F direct		<b>firstglyph</b>	function
F found		<b>flatten_discretionaries</b>	function
F reset		<b>flush</b>	function
F restore		<b>flush_list</b>	function
F save		<b>flush_node</b>	function
F savenode		<b>free</b>	function
<b>builders</b>	table	<b>fullhpack</b>	function
F buildpage_filter		<b>getattr</b>	function
F vpack_filter		<b>getattribute</b>	function
<b>check_discretionaries</b>	function	<b>getboth</b>	function
<b>concat</b>	function	<b>getbox</b>	function
<b>copy</b>	function	<b>getchar</b>	function
<b>copy_list</b>	function	<b>getfield</b>	function
<b>copy_node</b>	function	<b>getfont</b>	function
<b>count</b>	function	<b>getid</b>	function
<b>countall</b>	function	<b>getleader</b>	function
<b>current_attributes</b>	function	<b>getlist</b>	function
<b>delete</b>	function	<b>getnext</b>	function
<b>destinations</b>	table	<b>getprev</b>	function
N attribute		<b>getsubtype</b>	function
T done		<b>gluecodes</b>	data table
F handler		<b>glyphcodes</b>	data table
T stack		<b>handlers</b>	table
<b>dimensions</b>	function	F accessibility	
<b>dircodes</b>	data table	F backgrounds	
<b>directioncodes</b>	data table	F backgroundspage	
<b>directionvalues</b>	data table	F backgroundsvbox	
<b>dirvalues</b>	data table	F characters	
<b>disccodes</b>	data table	F checkglyphs	
<b>discretionarycodes</b>	data table	F checkparcounter	
<b>effective_glue</b>	function	F cleanuppage	
<b>end_of_math</b>	function	F export	

F finalizebox		<b>kerning</b>	function
F flatten		<b>keys</b>	table
F flattenline		T whatsit	
F migrate		<b>last_node</b>	function
F protectglyphs		<b>leftmarginwidth</b>	function
F show		<b>length</b>	function
F stripping		<b>ligaturing</b>	function
F textbackgrounds		<b>linefillers</b>	table
F unprotectglyphs		D data	
<b>has_attribute</b>	function	F define	
<b>has_field</b>	function	F enable	
<b>has_glyph</b>	function	F filler	
<b>hpack</b>	function	F handler	
<b>hyphenating</b>	function	<b>lines</b>	table
<b>idsandsubtypes</b>	function	T boxed	
<b>idstostring</b>	function	F addlinenumbers	
<b>injections</b>	table	F register	
F copy		F setup	
F getligaindex		D data	
F getthreshold		F finalize	
F handler		F number	
F installgetspaceboth		<b>link</b>	function
F installnewkern		<b>linked</b>	function
F isspace		<b>list</b>	function
F keepcounts		<b>listcodes</b>	data table
F reset		<b>listtoutf</b>	function
F resetcounts		<b>literalvalues</b>	data table
F setcursive		<b>locate</b>	function
F setkern		<b>markers</b>	table
F setligaindex		F get	
F setmark		<b>mathcodes</b>	data table
F setmove		<b>maxboxwidth</b>	function
F setposition		<b>migrations</b>	table
F setspacekerns		F setinserts	
<b>insert_after</b>	function	F setmarks	
<b>insert_before</b>	function	<b>mlist_to_hlist</b>	function
<b>insert_list_after</b>	function	<b>new</b>	function
<b>installattributehandler</b>	function	<b>noadcodes</b>	data table
<b>is_direct</b>	function	<b>noadoptions</b>	table
<b>is_display_math</b>	function	N axis	
<b>is_node</b>	function	N exact	
<b>is_nut</b>	function	N left	
<b>is_zero_glue</b>	function	N middle	
<b>kerncodes</b>	data table	N no_axis	

N right		F flush_list
N set		F flush_node
N unused_1		F free
N unused_2		F fullhpack
<b>nodecodes</b>	<b>data table</b>	F get_components
<b>nopts</b>	<b>function</b>	F getattr
<b>nuts</b>	<b>table</b>	F getattribute
F addmargins		F getattributelist
F addxoffset		F getattrlist
F addxymargins		F getattrrs
F addyoffset		F getboth
F append		F getbox
F apply		F getboxglue
F applyvisuals		F getchar
F check_discretionaries		F getcomponents
T colors		F getdata
F set		F getdepth
F concat		F getdirection
F copy		F getdisc
F copy_list		F getdiscretionary
F copy_no_components		F getexpansion
F copy_node		F getfam
F copy_only		F getfield
F copy_only_glyphs		F getfont
F copy_properties		F getglue
F copyvisual		F getglyphdata
F count		F getglyphdimensions
F count_components		F getheight
F countall		F getid
F current_attributes		F getkern
F delete		F getkerndimension
F dimensions		F getlang
F dirdimensions		F getlanguage
F effective_glue		F getleader
F end_of_math		F getlist
F exchange		F getnext
F find_attribute		F getnormalizedline
F first_glyph		F getnucleus
F firstcharacter		F getoffsets
F firstcharinbox		F getoptions
F firstglyph		F getorientation
F flatten_discretionaries		F getpenalty
F flush		F getpost
F flush_components		F getpre

F getprev	F kerning
F getprop	F last_node
F getreplace	F leftmarginwidth
F getruledata	F length
F getscale	F ligaturing
F getscales	F link
F getscript	F linked
F getshift	F locate
F getstate	F migrate
F getsub	F mlist_to_hlist
F getsubpre	F nestedtracedslide
F getsubtype	F new
F getsup	T pool
F getsuppre	F accent
F getsurround	F baselineskip
F getsynctexfields	F boundary
F gettotal	F choice
F getvalue	F cleanup
F getwhd	F delim
F getwidth	F delimiter
F getxscale	F direction
F getxyscales	F directliteral
F getyscale	F disc
F has_attribute	F emptyrule
F has_dimensions	F fence
F has_field	F fontkern
F has_glyph	F fraction
F has_glyph_option	F glue
F hpack	F gluespec
F hyphenating	F glyph
F insert_after	F hlist
F insert_before	F indentskip
F insert_list_after	F italicckern
F is_display_math	F kern
F is_node	F latelua
F is_nut	F leader
F is_zero_glue	F lefthangskip
F ischar	F leftmarginkern
F isdone	F leftskip
F isglyph	F lineskip
F isnextchar	F literal
F isnextglyph	F mathchar
F isprevchar	F mathtextchar
F isprevglyph	F negatedglue

F noad	F reverse
F originliteral	F rightmarginwidth
F outlinerule	T rules
F pageliteral	T ruleactions
F penalty	F box
F radical	F draw
F rawliteral	F fill
F register	F mp
F restore	F stroke
F righthangskip	F userrule
F rightmarginkern	F set_attribute
F rightskip	F set_components
F rule	F setattr
F save	F setattribute
F savepos	F setattributelist
F setmatrix	F setattributes
F setstate	F setattrlist
F shrink	F setattrs
F startrotation	F setboth
F stock	F setbox
F stretch	F setboxglue
F subbox	F setchar
F submlist	F setcomponents
F temp	F setdata
F usage	F setdepth
F userdefined	F setdirection
T userids	F setdisc
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_skippable	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 setoptions	F tosequence
F setorientation	F toString
F setparproperty	F tracedslide
F setpenalty	F traverse
F setpost	F traverse_char
F setpre	F traverse_content
F setprev	F traverse_glyph
F setprop	F traverse_id
F setreplace	F traverse_list
F setruledata	T traversers
F setscale	F boundary
F setscales	F char
F setscript	F content
F setshift	F dir
F setsplit	F disc
F setstate	F glue
F setsub	F glyph
F setsubpre	F hlist
F setsubtype	F list
F setup	F next
F setsuppre	F node
F setsurround	F vlist
F setsynctexfields	F whatsit
F setunsetattributes	T typesetters
F setvalue	F tohbox
F setvisual	F tohpack
F setvisuals	F tonodes
F setwhd	F to vbox
F setwidth	F to vpack
F show	F unprotect_glyph
F slide	F unprotect_glyphs
F somepenalty	F unset_attribute
F somespace	F unset_attributes
F splitbox	F unsetattribute
F start_of_par	F unsetattributes
F striprange	F untracedslide
F tail	F usedlist
F takeattr	F uses_font
F takebox	F vianodes
F takelist	F vianuts
F theprop	F vpack
F tonode	F write
F tonodes	F xscaled
F tonut	F yscaled

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

<b>setnext</b>	function	F showactions	
<b>setprev</b>	function	F table	
<b>setunsetattributes</b>	function	<b>tobasepoints</b>	function
<b>shifts</b>	table	<b>tocentimeters</b>	function
D data		<b>tociceros</b>	function
F define		<b>todidots</b>	function
F enable		<b>todimen</b>	function
F handler		<b>toinches</b>	function
<b>showboxes</b>	function	<b>tomillimeters</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>slide</b>	function	<b>topicas</b>	function
<b>snapshots</b>	table	<b>topoints</b>	function
F getsamples		<b>toscaledpoints</b>	function
F resetsamples		<b>tosequence</b>	function
F takesample		<b>tostring</b>	function
<b>somepenalty</b>	function	<b>totable</b>	function
<b>somespace</b>	function	<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 glyphs		<b>unprotect_glyph</b>	function
F message		<b>unprotect_glyphs</b>	function
F messages		<b>unset_attribute</b>	function
F nofsteps		<b>unsetattribute</b>	function
F register		<b>unsetattributes</b>	function
F reset		<b>usedlist</b>	function
F start		<b>uses_font</b>	function
F stop		<b>vianodes</b>	function
F stop		<b>vianuts</b>	function
T transparencies		<b>visualizebox</b>	function
F reset		<b>visualizers</b>	table
F set		F attribute	
F setlist		T attributes	
<b>traverse</b>	function	F box	
<b>traverse_id</b>	function	F handler	
<b>typesetters</b>	table	F markfonts	
F hbox		F register	
F hpack		F setfont	
F tohbox		F setlayer	
F tohpack		F setruledglyph	
F tonodes		F setvisual	
F toinbox		<b>vpack</b>	function
F tovpack		<b>whatsitcodes</b>	data table
F vpack		<b>write</b>	function

number (context)

	function
<b>basepoints</b>	function
<b>bytetodecimal</b>	function
<b>compactfloat</b>	function
<b>decimaltobyte</b>	function
<b>dimenfactors</b>	data table
<b>formatted</b>	function
<b>formattedfloat</b>	function
<b>idiv</b>	function
<b>maxdimen</b>	number
<b>nopts</b>	function
<b>percent</b>	function
<b>points</b>	function
<b>pts</b>	function
<b>signed</b>	function
<b>sparseexponent</b>	function
<b>splitdimen</b>	function
<b>tol6dot16</b>	function

<b>tobasepoints</b>	function
<b>tobitstring</b>	function
<b>tocentimeters</b>	function
<b>tociceros</b>	function
<b>tocontext</b>	function
<b>todidots</b>	function
<b>todimen</b>	function
<b>toevenhex</b>	function
<b>toinches</b>	function
<b>tomillimeters</b>	function
<b>tonumberf</b>	function
<b>tonumberg</b>	function
<b>topics</b>	function
<b>topoints</b>	function
<b>toscaled</b>	function
<b>toscaledpoints</b>	function
<b>valid</b>	function

objects (context)

<b>data</b>	table
<b>dimensions</b>	function
<b>found</b>	function
<b>n</b>	number

<b>page</b>	function
<b>reference</b>	function
<b>register</b>	function
<b>restore</b>	function

optional (context)

**curl** table

F escape  
F fetch  
F getversion  
F initialize  
F unescape

**ghostscript** table

F execute  
F initialize

**graphicsmagick** table

F execute  
F initialize

**kpse** table

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

**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

**postgres** 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)

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

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

**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

<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>pagestotable</b>	function
<b>getinteger</b>	function	<b>readfromstream</b>	function
<b>getmemoryusage</b>	function	<b>readwholestream</b>	function
<b>getname</b>	function	<b>type</b>	function
<b>getnofobjects</b>	function	<b>unencrypt</b>	function
<b>getnofpages</b>	function		



pngdecode (extra tex)

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

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

**addtexentry** function  
**analyze** function  
**anywhere** function  
**authorcache** data table  
**authorcollapsers** data table  
**authorhashers** table

F invertedshort  
 F normal  
 F normalinverted  
 F normalshort  
 F sequential  
 F sequentialshort  
 F short

**authormap** data table  
**authortoregister** function  
**casters** table

F author  
 F keyword  
 F pagenumber  
 F range

**checkeddataset** function  
**citevariants** table

F author  
 F authornum  
 F authoryear  
 F authoryears  
 F category  
 F default  
 F entry  
 F index  
 F keywords  
 F num  
 F page  
 F short  
 F tag  
 F textnum  
 F year

**collected** data table  
**components** table

F author

**concatstate** function  
**converttoxml** function

**currentspecification** table

S author  
 T categories  
 T article  
 S category  
 T extra  
 T fields  
 S author  
 S editor  
 S journal  
 S keywords  
 S note  
 S number  
 S pages  
 S title  
 S volume  
 S year  
 T optional  
 T required  
 T sets  
 T author  
 T virtual  
 T book  
 S category  
 T extra  
 T fields  
 S address  
 S author  
 S edition  
 S editor  
 S keywords  
 S note  
 S number  
 S publisher  
 S subtitle  
 S title  
 S volume  
 S year  
 T optional  
 T required  
 T sets  
 T author

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	
S pages	F save	
S volume	<b>lastofrange</b>	function



<b>lists</b>	<b>table</b>	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>	<b>table</b>	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	
F lua		D privates	
F refman		D sets	

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

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

<b>locators</b>	data table	<b>resolve</b>	function
<b>luacnffallback</b>	string	<b>savers</b>	data table
<b>luacnfname</b>	string	<b>scandata</b>	function
<b>luacnfspec</b>	string	<b>scanfiles</b>	function
<b>luacnfstate</b>	string	<b>schemes</b>	table
<b>macros</b>	table	T cleaners	
F convertfile		F md5	
F decodecomment		F none	
F enablecomment		F strip	
F encodecomment		F cleanname	
F preprocessed		F fetchstring	
F processmk		F fetchtable	
F processmklx		F install	
F processmkvi		<b>setdynamic</b>	function
F version		<b>setenv</b>	function
<b>maxreadlevel</b>	number	<b>showpath</b>	function
<b>methodhandler</b>	function	<b>simplescanfiles</b>	function
<b>openbinfile</b>	function	<b>splitconfigurationpath</b>	function
<b>openers</b>	data table	<b>splitexpansions</b>	function
<b>openfile</b>	function	<b>splitmethod</b>	function
<b>opentexfile</b>	function	<b>splitpath</b>	function
<b>ownpath</b>	string	<b>stackpath</b>	function
<b>popextrapath</b>	function	<b>starttiming</b>	function
<b>popinputname</b>	function	<b>stoptiming</b>	function
<b>poppath</b>	function	<b>suffixes</b>	data table
<b>prefixes</b>	data table	<b>suffixmap</b>	data table
<b>prependhash</b>	function	<b>suffixofformat</b>	function
<b>pushextrapath</b>	function	<b>texdatablob</b>	function
<b>pushinputname</b>	function	<b>toppath</b>	function
<b>pushpath</b>	function	<b>unexpandedpath</b>	function
<b>registerextrapath</b>	function	<b>unexpandedpathlist</b>	function
<b>registerfile</b>	function	<b>unresolve</b>	function
<b>registerfilehash</b>	function	<b>updaterelations</b>	function
<b>registerintrees</b>	function	<b>updatescript</b>	function
<b>registermethod</b>	function	<b>uselibrary</b>	function
<b>registerzipfile</b>	function	<b>usertypes</b>	data table
<b>relations</b>	data table	<b>usezipfile</b>	function
<b>renew</b>	function	<b>validatedpath</b>	function
<b>renewcache</b>	function	<b>variable</b>	function
<b>repath</b>	function	<b>variableofformat</b>	function
<b>reset</b>	function	<b>variableofformatorsuffix</b>	function
<b>resetextrapaths</b>	function	<b>wildcardpattern</b>	function
<b>resetresolve</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-range
<b>_DATAGRAMSIZE</b>	number	S content-transfer-encoding
<b>_SETSIZE</b>	number	S content-type
<b>_SOCKETINVALID</b>	number	S cookie
<b>bind</b>	function	S date
<b>choose</b>	function	S diagnostic-code
<b>connect</b>	function	S dsn-gateway
<b>connect4</b>	function	S etag
<b>connect6</b>	function	S expect
<b>dns</b>	table	S expires
F getaddrinfo		S final-log-id
F gethostname		S final-recipient
F getnameinfo		S from
F tohostname		S host
F toip		S if-match
<b>gettime</b>	function	S if-modified-since
<b>headers</b>	table	S if-none-match
T canonic		S if-range
S accept		S if-unmodified-since
S accept-charset		S in-reply-to
S accept-encoding		S keywords
S accept-language		S last-attempt-date
S accept-ranges		S last-modified
S action		S location
S age		S max-forwards
S allow		S message-id
S alternate-recipient		S mime-version
S arrival-date		S original-envelope-id
S authorization		S original-recipient
S bcc		S pragma
S cache-control		S proxy-authenticate
S cc		S proxy-authorization
S comments		S range
S connection		S received
S content-description		S received-from-mta
S content-disposition		S references
S content-encoding		S referer
S content-id		S remote-mta
S content-language		S reply-to
S content-length		S reporting-mta
S content-location		S resent-bcc
S content-md5		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>comparers</b>	table
F basic	
<b>constants</b>	table
S defaultdigits	
S defaultlanguage	
S defaultmethod	
N digitsmaximum	
N digitsoffset	
N ignoredoffset	
N replacementoffset	
T validmethods	
B ch	
B mc	
B mm	
B pc	

B pm	
B uc	
B zc	
B zm	
<b>definitions</b>	data table
<b>firstofsplit</b>	function
<b>packch</b>	function
<b>packuc</b>	function
<b>replacementlist</b>	function
<b>setlanguage</b>	function
<b>sort</b>	function
<b>splitters</b>	table
F utf	
<b>strip</b>	function
<b>tracers</b>	data table
<b>update</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>optionalquoted</b>	function
<b>autosingle</b>	function	<b>pack</b>	function
<b>booleanstring</b>	function	<b>packsize</b>	function
<b>byte</b>	function	<b>quote</b>	function
<b>bytepairs</b>	function	<b>quoted</b>	function
<b>bytes</b>	function	<b>rep</b>	function
<b>bytetable</b>	function	<b>replacenewlines</b>	function
<b>char</b>	function	<b>reverse</b>	function
<b>characterpairs</b>	function	<b>split</b>	function
<b>characters</b>	function	<b>splitlines</b>	function
<b>checkedsplit</b>	function	<b>splitup</b>	function
<b>collapsespaces</b>	function	<b>strip</b>	function
<b>containsws</b>	function	<b>sub</b>	function
<b>count</b>	function	<b>tformat</b>	function
<b>dawson</b>	function	<b>toHEX</b>	function
<b>dump</b>	function	<b>toboollean</b>	function
<b>erf</b>	function	<b>tobytes</b>	function
<b>erfc</b>	function	<b>tocontext</b>	function
<b>erfcx</b>	function	<b>todec</b>	function
<b>erfi</b>	function	<b>todimen</b>	function
<b>escapedpattern</b>	function	<b>tohex</b>	function
<b>escapedquotes</b>	function	<b>tonodes</b>	function
<b>explode</b>	function	<b>topattern</b>	function
<b>f6</b>	function	<b>totable</b>	function
<b>find</b>	function	<b>tounicode16</b>	function
<b>format</b>	function	<b>toutf</b>	function
<b>formatter</b>	function	<b>toutf32</b>	function
<b>formatters</b>	function	<b>toutf8</b>	function
<b>fullstrip</b>	function	<b>tracedchar</b>	function
<b>gmatch</b>	function	<b>tracedchars</b>	table
<b>gsub</b>	function	<b>unpack</b>	function
<b>is_boolean</b>	function	<b>unquote</b>	function
<b>is_empty</b>	function	<b>unquoted</b>	function
<b>itself</b>	function	<b>upper</b>	function
<b>len</b>	function	<b>utfcharacter</b>	function
<b>limit</b>	function	<b>utfcharacters</b>	function
<b>linetable</b>	function	<b>utfcharacterstable</b>	function
<b>longtostring</b>	function	<b>utflength</b>	function
<b>lower</b>	function	<b>utfpadd</b>	function
<b>match</b>	function	<b>utfpadding</b>	function
<b>nospaces</b>	function	<b>utfvalue</b>	function
<b>nspaces</b>	table	<b>utfvalues</b>	function

**utfvaluetable**  
**valid**

function  
function

**voigt**  
**voigt\_hwhm**

function  
function

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

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 tobесaved	
D stored		F userdata	
		F uservalue	
<b>itemgroups</b>	<b>table</b>	<b>marks</b>	<b>table</b>
<b>lists</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 reordered		F listindex	
T result		D numbers	

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

## pages

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

## references

- 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

## table

## table

- D runners
- F set
- F setandgetattribute
- F setcomponent
- F setinternalreference
- F setlinkmethod
- F setnextinternal
- F setnextorder
- F setreferencerealpage
- D specials
- F splitcomponent
- F splitprefix
- F splitreference
- F synchronizepage
- T testrunners
  - F inner
  - F special
  - F special operation
  - F special operation with arguments

#### T testspecials

- F deltapage
- F i
- F internal
- F page
- F realpage
- F section
- F userpage

- D tobereferred

- D tobesaved

- D tracedpages

#### T urls

- T data
- F define
- F found
- F get
- F untex

- D usedinternals

- D usedviews

- F valid

## registers

table

- F analyze
- D collected
- F compare
- F define

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

## sections

table

- F autodepth
- F cct
- D collected
- F current
- F currentblock
- F currentid
- F currentlevel
- F currentsectionindex
- F depthnumber
- F finddata
- F findnumber
- F fullnumber
- F getcurrentlevel
- F getlevel
- F getnumber
- F internalreference
- D levelmap
- D levels
- F matchingtilldepth
- F numberatdepth
- F numbers
- F popblock
- F prefixedconverted
- F pushblock
- F register
- D registered
- F reportstructure

- F save
- T sectionblockdata
  - T bodypart
    - S bookmark
- F set
- F setblock
- F setchecker
- F setentry
- 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

- F current
- F elementtag
- F finishexport
- F getextradata
- F getid
- F getmetadata
- F gettablecell
- F gettabulatecell
- F handler
- F initializeexport
- D labels
- F last
- F lastinchain
- F locatedtag
- T patterns
  - U splitter
- D properties
- F registerextradata
- F registermetadata
- F restart
- F setaspect
- F setattributefield
- F setcombination
- F setconstruct
- F setfigure
- F setfloat
- F setformulacontent
- F sethighlight
- F setitem
- F setitemgroup
- F setlist
- F setnotation
- F setnotationsymbol
- F setparagraph
- F setproperty
- F setpublication
- F setregister
- F setsorting



F setsynonym	D specifications
F settablecell	F start
F settabulatecell	F stop
F settagdelimitedsymbol	F strip
F settagssentencesymbol	D taglist
F setupexport	T usewithcare
F setuserproperties	T images

## 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		

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

<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>inimatcodes</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>modelevels</b>	table	<b>setinteraction</b>	function
N horizontal		<b>setlccode</b>	function
N math		<b>setlinedir</b>	function
N unset		<b>setlist</b>	function
N vertical		<b>setmath</b>	function
<b>modes</b>	data table	<b>setmathcode</b>	function
<b>mprint</b>	function	<b>setmathdir</b>	function
<b>muglue</b>	table	<b>setmuglue</b>	function
<b>muskip</b>	table	<b>setmuskip</b>	function

<b>setnest</b>	function	<b>takebox</b>	function
<b>setpardir</b>	function	<b>texcatcodes</b>	number
<b>setsfcode</b>	function	<b>toks</b>	table
<b>setskip</b>	function	<b>tonumber</b>	function
<b>setsynctexline</b>	function	<b>toscaled</b>	function
<b>setsynctexmode</b>	function	<b>tpacatcodes</b>	number
<b>setsynctextag</b>	function	<b>tpbcatcodes</b>	number
<b>settexmdir</b>	function	<b>tprint</b>	function
<b>settoks</b>	function	<b>trackers</b>	data table
<b>setuccode</b>	function	<b>triggerbuildpage</b>	function
<b>sfcode</b>	table	<b>txtcatcodes</b>	number
<b>shipout</b>	function	<b>type</b>	function
<b>showcontext</b>	function	<b>uccode</b>	table
<b>skip</b>	table	<b>uprint</b>	function
<b>sp</b>	function	<b>useboxresource</b>	function
<b>splitbox</b>	function	<b>vrbcacodes</b>	number
<b>sprint</b>	function	<b>write</b>	function
<b>systemmodes</b>	data table		

## texconfig (basic tex)

<b>buffer_size</b>	number	<b>max_in_open</b>	number
<b>error_line</b>	number	<b>max_pool</b>	number
<b>expand_depth</b>	number	<b>max_print_line</b>	number
<b>firstline</b>	string	<b>max_strings</b>	number
<b>formatname</b>	string	<b>nest_size</b>	number
<b>function_size</b>	number	<b>node_size</b>	number
<b>half_error_line</b>	number	<b>param_size</b>	number
<b>hash_extra</b>	number	<b>properties_size</b>	number
<b>init</b>	overloaded function	<b>save_size</b>	number
<b>kpse_init</b>	boolean	<b>shell_escape</b>	string
<b>level_chr</b>	number	<b>stack_size</b>	number
<b>level_max</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 cmdchrcs  
F cmdname  
F command  
F csname  
F expandable  
F frozen  
F index  
F name  
F protected  
F range

create function  
expand function  
expand\_macro function  
future\_expand function  
get\_active function  
get\_cmdchrcs 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

## table

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  
scan\_luainteger function  
scan\_luanumber function



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

tokens (context)

**astable**      function  
**bits**          table

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

**cache**          table

U NC  
U NR  
U bf  
U buff\_finish  
U c\_font\_compact  
U color  
U colordefalc  
U colordeflfc  
U colordefflt  
U colordefrlt  
U dofinishreference  
U dostarttext  
U finishjob  
U firstofoneargument  
U firstoftwoarguments  
U gobbleoneargument  
U goto  
U iftrue  
U input

U loadfoundtypescriptfile  
U resetctxscanner  
U rlap  
U secondoftwoarguments  
U setfalsevalue  
U setsectionblock  
U setupsystem  
U startcolumns  
U starttabulate  
U starttitle  
U startxtitle  
U stopcolumns  
U stoptabulate  
U stoptitle  
U stopxtitle  
U texsetup  
U xmlw

**commands**      data table

**compile**        function

**constant**      function

**converters**    table

S toboolean  
S todimen  
S toglue  
S tonumber  
S toString

**create**          function

**defined**        function

**flags**           function

**getinteger**    function

**getters**        table

F box  
F count  
F cstoken  
F dimen  
F glue  
F macro  
F meaning  
F skip  
F token

**isdefined**      function

**istoken**        function

<b>new</b>	function	F integerargument
<b>pickup</b>	function	F ischar
<b>popmacro</b>	function	F key
<b>presets</b>	table	F keyword
T 1 argument		F keywordcs
T 1 string		F letters
T 2 arguments		F list
T 2 strings		F luacardinal
T 3 arguments		F luainteger
T 3 strings		F luanumber
T 4 arguments		F lxmlid
T 4 strings		F next
T 5 strings		F nextexpanded
T 6 strings		F number
T 7 strings		F optional
T 8 strings		F peek
<b>pushmacro</b>	function	F peekchar
<b>scanners</b>	table	F peekexpanded
F argument		F real
F argumentasis		F scanclose
F array		F scanopen
F boolean		F skip
F box		F skipexpanded
F bracketed		F string
F bracketedasis		F table
F cardinal		F token
F char		F tokencode
F cmdchr		F tokenlist
F cmdchrexplained		F tokens
F code		F toks
F conditional		F value
F count		F vbox
F csname		F verbatim
F delimited		F vtop
F dimen		F whd
F dimenargument		F word
F dimension		<b>setinteger</b> function
F float		<b>setters</b> table
F glue		F box
F gluespec		F char
F gluevalues		F count
F hash		F dimen
F hbox		F glue
F integer		F lua

F macro  
 F skip  
**shortcuts**    table  
 T bits  
   N active  
   N alignment  
   N begingroup  
   N character  
   N close  
   N comment  
   N endgroup  
   N endofline  
   N escape  
   N ignore  
   N invalid  
   N letter  
   N mathshift  
   N open  
   N other  
   N parameter  
   N space  
   N subscript  
   N superscript  
   N whitespace  
 N close  
 F inspect  
 N open  
 F report  
 F scanargument  
 F scanargumentasis  
 F scanarray  
 F scanboolean  
 F scanbox  
 F scanbracketed  
 F scanbracketedasis  
 F scancardinal  
 F scanclose  
 F scancode  
 F scanconditional  
 F scancname  
 F scandelimited  
 F scandimen  
 F scandimenargument  
 F scandimension

F scanglue  
 F scangluespec  
 F scangluevalues  
 F scanhash  
 F scanhbox  
 F scaninteger  
 F scanintegerargument  
 F scankeyword  
 F scankeywordcs  
 F scanletters  
 F scanlist  
 T scanners  
   F argument  
   F argumentasis  
   F array  
   F boolean  
   F box  
   F bracketed  
   F bracketedasis  
   F cardinal  
   F char  
   F cmdchr  
   F cmdchrexploded  
   F code  
   F conditional  
   F count  
   F cname  
   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 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
F todimen	S toboolean
T tokens	S todimen

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

tracers (context)

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

**showlines**    function

trackers (context)

<b>data</b>	data table
<b>default</b>	function
<b>disable</b>	function
<b>done</b>	table
<b>dumphashtofile</b>	function
<b>enable</b>	function
<b>list</b>	function

<b>name</b>	string
<b>register</b>	function
<b>report</b>	function
<b>reset</b>	function
<b>savehash</b>	function
<b>show</b>	function
<b>value</b>	function



**alignments**            table

- F handler
- F set

**breakpoints**           table

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

**cases**                   table

- T actions
- F handler
- F register
- F set

**characteralign**   table

- F handler
- F resetcharacteralign
- F setcharacteralign

**characters**            table

- F handler
- T methods
- F replacensp
- F replacenspaces

**checkers**              table

- F handler
- F reset
- F set

**cleaners**              table

- F handler
- F set

**digits**                table

- T actions
- F handler
- F set

**directions**           table

- F getfences
- F getglobal
- F getmethod
- F handler
- T handlers

- F installhandler
- F processmath
- F set
- F setcolor
- F setmath
- F tomode

**firstlines**            table

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

**fontkerns**            table

- F handler

**initials**              table

- T actions
- F default
- F addanchortoline
- F addtoline
- F calculatedelta
- F checkline
- F handler
- F moveinline
- F set

**injectors**            table

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

**italics**                table

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

**kerns**                 table

- D factors
- F handler

F keepligature  
D mapping  
F set  
**manipulators**      table

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

**margins**              table  
F finalhandler  
F globalhandler  
F localhandler  
F save

**marksuspects**      function  
**paragraphs**        table

F addanchortoline  
F addtoline  
F calculatedelta  
F checkline  
F handler  
F moveinline  
F set

**periodkerns**        table  
D factors  
F handler  
D mapping  
F set

**processors**        table  
F apply  
F register

F reset  
F split  
F startapply  
F stopapply  
F stripped  
F tostring

**rubies**              table

F attach  
F check

**showsuspects**      function  
**spacings**            table

F define  
F handler  
D mapping  
T numbers  
T frenchpunctuation  
T characters  
S name  
N number

F reset  
F set  
F setup

**wrappers**            table

F handler

**xtables**             table

F cleanup  
F construct  
F create  
F finish\_row  
F flush  
F initialize\_construct  
F initialize\_reflow\_height  
F initialize\_reflow\_width  
F next\_row  
F reflow\_height  
F reflow\_width  
F set\_construct  
F set\_reflow\_height  
F set\_reflow\_width

updaters (context)

**apply**      function

**register**   function

url (context)

<b>addscheme</b>	function
<b>barepath</b>	function
<b>construct</b>	function
<b>decode</b>	function
<b>encode</b>	function
<b>escape</b>	function
<b>filename</b>	function

<b>hashed</b>	function
<b>hasscheme</b>	function
<b>query</b>	function
<b>split</b>	function
<b>toquery</b>	function
<b>unescape</b>	function
<b>unescapeget</b>	function

utf8 (basic lua)

<b>char</b>	function
<b>charpattern</b>	string
<b>codepoint</b>	function

<b>codes</b>	function
<b>len</b>	function
<b>offset</b>	function

## debugger table

F disable  
F enable  
F savestats  
F showstats  
F showtraceback

## files table

F close  
F getposition  
F getsizes  
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

## garbagecollector table

F check  
N criterium  
B enabled

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

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

## xdecimal (extra lua)

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

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

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



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
F upperall		<b>inject</b>	function
F xml		<b>inject_element</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 <	
<b>process</b>	function	S >	
<b>process_attributes</b>	function	S \	

s {		toelement	function
s		tostring	function
s }		totable	function
s ~		toxml	function
specialhandler	table	tprint	function
sprint	function	traverse	function
string	function	unescaped	function
strip	function	unescapedentitylpeg	userdata
strip_whitespace	function	unprivatized	function
stripelement	function	unspecialized	function
stripleadingspaces	function	wipe	function
table	function	withelement	function
text	function	withelements	function
textonly	function	wrap	function
texttocdata	function	xmlns	table
tocdata	function		

xzip (extra lua)

**adler32**      function  
**compress**    function  
**crc32**        function

**decompress**   function  
**expandsize**   function

zip (extra lua)

**archives**

table

**openarchive**

function

**closearchive**

function

**registeredfiles**

table

`zlib (extra lua)`

**adler32**      function  
**compress**    function  
**crc32**        function

**decompress**   function  
**expandsize**   function