

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

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

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

# attributes (context)

**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 transparencycomponents  
B triggering  
F usecolors  
D valid  
F value

D values		F enable	
B weightgray		F forcesupport	
<b>define</b>	function	F handler	
<b>effects</b>	table	T names	
N attribute		N color	
D data		N colorburn	
F enable		N colordodge	
F handler		N darken	
F register		N difference	
D registered		N exclusion	
D values		N hardlight	
<b>handlers</b>	table	N hue	
<b>list</b>	data table	N lighten	
<b>markasoverload</b>	function	N luminosity	
<b>names</b>	data table	N multiply	
<b>negatives</b>	table	N none	
N attribute		N normal	
D data		N overlay	
F enable		N saturation	
F handler		N screen	
F register		N softlight	
D registered		N none	
F set		F register	
<b>numbers</b>	data table	D registered	
<b>ofnode</b>	function	B supported	
<b>private</b>	function	F toattribute	
<b>public</b>	function	B triggering	
<b>restore</b>	function	F value	
<b>save</b>	function	D values	
<b>showcurrent</b>	function	<b>unsetvalue</b>	number
<b>states</b>	table	<b>viewerlayers</b>	table
F disabletriggering		N attribute	
F enabletriggering		F cleanup	
F finalize		D data	
F initialize		F define	
F process		F definedlayoutcomponent	
F selective		F enable	
F stacked		F forcesupport	
F stacker		F handler	
<b>system</b>	function	B hasorder	
<b>tooverloads</b>	function	D listwise	
<b>transparencies</b>	table	F register	
N attribute		D registered	
D data		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)

<b>closeout</b>	function	F fieldsurrounding
<b>codeinjections</b>	table	F flushmergelayer
F boxresourcedimensions		F getbookmarks
F registerboxresource		F getdefaultfieldvalue
F restoreboxresource		F getfieldcategory
<b>current</b>	string	F getfieldset
<b>defaults</b>	table	F getformatoption
T codeinjections		F getidentityvariable
F getpagedimensions		F getinfo
F setpagedimensions		F getpreviewfigure
T nodeinjections		F insertrenderingwindow
T registrations		F jp2
D tables		F jpg
<b>getcallbackstate</b>	function	F maptag
<b>included</b>	table	F mergebookmarks
B context		F mergecomments
B date		F mergefields
B id		F mergereferences
B metadata		F mergeviewerlayers
B pdf		F newimage
<b>install</b>	function	F png
<b>latelua</b>	function	F prerollreference
<b>nodeinjections</b>	table	F presetsymbol
<b>nothing</b>	function	F presetsymbollist
<b>openout</b>	function	F processrendering
<b>pdf</b>	table	F registerdocumentcloseaction
T codeinjections		F registerdocumentopenaction
F addbookmarks		F registeredsymbol
F analyzenormalsymbol		F registerpagecloseaction
F analyzesymbol		F registerpageopenaction
F attachmentid		F registerpattern
F bitmap		F registersymbol
F clonefield		F scanimage
F copyimage		F setattachmentsupport
F definefield		F setfieldcalculationset
F definefieldset		F setfigurealternative
F defineviewerlayer		F setfigurecolorspace
F embedfile		F setfiguremask
F embedimage		F setformat
F enabletags		F setformsmethod
F exportformdata		F setpagetransition



F settaggingsupport	F insertsound	
F setupcanvas	F insertu3d	
F setupidentity	F knockout	
F setxmpfile	F negative	
F startlayer	F overprint	
F startunicodetoactualtext	F positive	
F startunicodetoactualtextdirect	F reference	
F stoplayer	F rgbcolor	
F stopunicodetoactualtext	F spotcolor	
F stopunicodetoactualtextdirect	F startlayer	
F supportedformats	F startstackedlayer	
F unicodetoactualtext	F stoplayer	
F useviewerlayer	F stopstackedlayer	
F validfield	F transparency	
F validfieldcategory	F typesetfield	
F validfieldset	T registrations	
F wrapimage	F cmykindexcolor	
S comment	F cmykspotcolor	
T nodeinjections	F getspotcolorreference	
F addtags	F grayindexcolor	
F annotation	F grayspotcolor	
F attachfile	F rgbindexcolor	
F changestackedlayer	F rgbspotcolor	
F cmykcolor	F spotcolorname	
F comment	F transparency	
F destination	T tables	
F effect	D vfspecials	
F graycolor	<b>registrations</b>	table
F injectbitmap	<b>tables</b>	table
F insertmovie	<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

## cache (context)

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



## callback (basic tex)

**find**        function

**known**     function

**list**        function

**register**   overloaded function

**usage**      function

# callbacks (context)

**freeze** function

**functions** table

F start\_page\_number

F stop\_page\_number

**known** function

**list** data table

**pop** function

**push** function

**register** function

**report** function

**supported** table

B 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>activeoffset</b>	number	T anudatta	
<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>contextname</b>	function	T post_mark	
<b>csletters</b>	data table	T pre_mark	
<b>data</b>	data table	T ra	
<b>decomposed</b>	data table	T stress_tone_mark	
<b>description</b>	function	T twopart_mark	
<b>descriptions</b>	data table	T vowel_modifier	
<b>detailtags</b>	data table	<b>initialize</b>	function
<b>directions</b>	table	<b>is_character</b>	data table
<b>emoji</b>	table	<b>is_command</b>	data table
F compact		<b>is_letter</b>	data table
F known		<b>is_mark</b>	data table
F resolve		<b>is_punctuation</b>	data table
<b>emojized</b>	function	<b>is_spacing</b>	data table
<b>encodes</b>	data table	<b>is_symbol</b>	data table
<b>entities</b>	data table	<b>lcchars</b>	data table
<b>fallbacks</b>	data table	<b>lccode</b>	function
<b>filters</b>	data table	<b>lccodes</b>	data table
<b>fractions</b>	table	<b>lettered</b>	function
<b>fromnumber</b>	function	<b>lhash</b>	data table
<b>fschars</b>	data table	<b>linebreaks</b>	data table
<b>fscodes</b>	data table	<b>lower</b>	function
<b>getrange</b>	function	<b>mathlists</b>	data table
<b>graphemes</b>	data table	<b>mirrors</b>	table
<b>hangul</b>	data table	<b>otfscripts</b>	data table
<b>indicgroups</b>	table	<b>private</b>	table
T above_mark		<b>ranges</b>	data table
T after_half		<b>registerentities</b>	function
T after_main		<b>remap_hangul_syllable</b>	function
T after_postscript		<b>setactivecatcodes</b>	function
T after_subscript		<b>setlettercatcodes</b>	function

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

## chemistry (context)

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

## containers (context)

**cleanname** function  
**content** function  
**define** function  
**is\_usable** function

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

## converters (context)

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



**uchexnumbers**

function

F translate

**upper**

function

**weekday**

function

**verbose**

table

**word**

function

D data

**words**

function

## coroutine (basic lua)

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

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

# ctxrunner (context)

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

# data (context)

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

## debug (basic lua)

**getinfo** function

**sethook** function

**traceback** function

## dir (context)

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

<b>globpattern</b>	function
<b>ls</b>	function
<b>makedirs</b>	function
<b>mkdirs</b>	function
<b>pop</b>	function
<b>push</b>	function

## directives (context)

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

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

# document (context)

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



documentdata (context)

**variable** function

# drivers (context)

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

- F character
- F rule
- F simplerule
- F specialrule
- F updatefontstate
- S name
- T none
- T actions
- T flushers
- S name
- T pdf
- T actions
  - F cleanup
  - F convert
  - F finalize
  - F initialize
  - F outputfilename
  - F prepare
  - F wrapup

- T flushers
- F character
- F fontchar
- F group
- F image
- F literal
- F poporientation
- F pushorientation
- F restore
- F rule
- F save
- F setmatrix
- F simplerule
- F specialrule
- F updatefontstate
- S name
- lmtxversion**      number
- outputfilename**    function
- report**                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 bleed	
<b>badname</b>	function	B crop	
<b>bases</b>	data table	B media	
<b>bitmapimage</b>	function	B none	
<b>boxnumber</b>	number	B trim	
<b>cachepaths</b>	data table	F totable	
<b>check</b>	function	T types	
<b>checkers</b>	data table	N jbig2	
<b>converters</b>	data table	N jp2	
<b>current</b>	function	N jpg	
<b>defaultdepth</b>	number	N memstream	
<b>defaultheight</b>	number	N none	
<b>defaultsearch</b>	boolean	N pdf	
<b>defaultwidth</b>	number	N png	
<b>done</b>	function	N stream	
<b>dummy</b>	function	F wrap	
<b>exists</b>	data table	<b>include</b>	function
<b>exists</b>	function	<b>includers</b>	data table
<b>formats</b>	data table	<b>initialize</b>	function
<b>found</b>	data table	<b>loaded</b>	data table
<b>get</b>	function	<b>localpaths</b>	data table
<b>getinfo</b>	function	<b>magics</b>	data table
<b>getpdfinfo</b>	function	<b>mergegoodies</b>	function
<b>getrealpage</b>	function	<b>nofmissing</b>	number
<b>guess</b>	function	<b>nofprocessed</b>	number
<b>guessfromstring</b>	function	<b>order</b>	data table
<b>hash</b>	function	<b>paths</b>	data table
<b>identifiers</b>	data table	<b>patterns</b>	data table
<b>identify</b>	function	<b>pop</b>	function
<b>images</b>	table	<b>preferquality</b>	boolean
F check		<b>programs</b>	data table
F checksize		<b>push</b>	function
F copy		<b>registerpattern</b>	function
F create		<b>registerresource</b>	function
F embed		<b>registersuffix</b>	function
T keys		<b>remappers</b>	data table
F print		<b>resources</b>	data table
F scan		<b>scale</b>	function
F serialize		<b>set</b>	function
T sizes		<b>setlookups</b>	function
B art		<b>setmemstream</b>	function

**setorder**  
**setpaths**

function  
function

**suffixes**  
**used**

data table  
data table

## file (basic lua)

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



## fio (extra lua)

<b>getposition</b>	function
<b>read2dot14</b>	function
<b>readbytes</b>	function
<b>readbytetable</b>	function
<b>readcardinal1</b>	function
<b>readcardinal1le</b>	function
<b>readcardinal2</b>	function
<b>readcardinal2le</b>	function
<b>readcardinal3</b>	function
<b>readcardinal3le</b>	function
<b>readcardinal4</b>	function
<b>readcardinal4le</b>	function
<b>readcardinaltable</b>	function
<b>readfixed2</b>	function
<b>readfixed4</b>	function
<b>readinteger1</b>	function
<b>readinteger1le</b>	function
<b>readinteger2</b>	function

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

# floats (context)

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

## font (basic tex)

<b>addcharacters</b>	function
<b>current</b>	function
<b>define</b>	function
<b>each</b>	function
<b>getfont</b>	function
<b>getfontdimen</b>	function

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

# fonts (context)

## **analyzers** table

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

## **checkers** table

- F getmissing
- 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 registermain
- F report
- F reset
- T vectors

## **constructors** table

- F addcharacters
- F addcoreunicodes
- F aftercopyingcharacters
- 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 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 getkern	F cblc

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 setvariabledata
F eblc	F hhea
F ebsc	F hmtx
F expand	F hvar
F extend	F kern
F fvar	F loadfont
F gdef	F loadshapes
F getcomponents	F loca
F getinfo	F math
F glyf	F maxp
F gpos	F mvar
T gposhandlers	F name
F chainedcontext	F os/2
F context	F pack
F cursive	F parsecharstrings
F extension	F post
F marktobase	F registerextender
F marktoligature	F rehash
F marktomark	F sbix
F pair	F stat
F single	T streamreader
F gsub	F close
T gsubhandlers	F getposition
F alternate	F getsizes
F chainedcontext	F look
F 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 axistofactors	F readcardinal2le

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 writeinteger4le	F setfeatures

N version		F checkedscript	
T vf		S defaultlookup	
T combinations		F define	
F combine		F getspecification	
T combiner		F internal	
D commands		F loadfont	
D helpers		F makespecification	
D math		T methods	
D predefined		F install	
N version		D variants	
D whatever		F read	
F hashfeatures		F register	
F hashinstance		F registered	
T hashmethods		F registersplit	
F normal		F resetnullfont	
F virtual		F resolve	
F initializefeatures		T resolvers	
D loadedfonts		F file	
N noffontsloaded		F name	
N nofsharedfonts		F spec	
N nofsharedhashes		<b>definetypface</b>	function
N nofsharedvectors		<b>dropins</b>	table
N privateoffset		F clone	
D privateslots		F nextid	
F readanddefine		F provide	
F registerfeature		F registerglyph	
F resetfeature		F registerglyphs	
B resolvevirtualtoo		F swap	
F scale		<b>encodings</b>	table
F scaled		T agl	
F setfactor		D ctxcodes	
F setfeature		D extras	
F setmathparameter		D names	
F setname		D synonyms	
B sharefonts		D unicodes	
F trytosharefont		D cache	
N version		F is_known	
<b>current</b>	function	D known	
<b>currentid</b>	function	F load	
<b>definers</b>	table	F make_unicode_vector	
F addlookup		D math	
F analyze		N version	
F applypostprocessors		<b>enhanceid</b>	function
F checkedmode		<b>expansions</b>	data table



<b>formats</b>	data table
<b>getalternate</b>	function
<b>getindices</b>	function
<b>getkern</b>	function
<b>getmultiple</b>	function
<b>getsubstitution</b>	function
<b>getters</b>	table

- T alternate
- F opentype
- T kern
- F opentype
- F type1
- F type3
- T multiple
- F opentype
- T substitution
- F opentype

**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
    - 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

<b>handlers</b>	table
<b>hashes</b>	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
- D commands
- 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 name
- F nametoslot
- F newprivateslot
- F prependcommands
- F prependcommandtable
- F privateslot
- F setdigitwidth
- F splitfontpattern
- F tochar

**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 maxbounds
- F output
- F paths
- F widthline
- F zeroline

**mp**                           table

- D cache
- B inline
- N version

**names**                       data table

**nulldata**                   data table

**privateoffsets**           table

- B keepnames
- N mathbase
- N mathextrabase
- N textbase
- N textextrabase

**protrusions**               data table

**readers**                    table

- F afm
- F check\_lua
- F check\_tfm
- F lua
- F ofm
- F opentype
- F otf
- F pfb
- D sequence
- F tfm
- F ttc
- F ttf
- F woff

**reserveid**                   function

**select**                      table

- D alternatives
- F bodyfont
- D data
- F default
- D defaults

- F definefallbackfamily
- F definefontfamily
- F definefontfamilypreset
- D extras
- F fallback
- D fallbacks
- F features
- F filefallback
- F fontdata
- F fontfallback
- F fontsynonym
- F goodies
- F mathfallback
- D methods
- D presets
- F registerfallback
- F registerfiles
- F registerfontalternative
- F registerfontfamily
- F textfallback
- F typeface
- F typescript
- F userdata

**specifiers**            table

- D contextmerged
- F contextnumber
- D contextnumbers
- D contextsetups
- F contexttostring

- F definecontext
- F mergecontext
- F presetcontext
- F registercontext
- F showcontext
- F splitcontext
- D synonyms
- D variants

**symbols**                    table

- T emoji
- F checked
- F resolved
- F uselibrary

**tables**                    table

**tracers**                   table

**treatments**               table

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

**typefaces**                table

**vfcommands**              table

- F startcolor
- F startslant
- F stopcolor
- F stopslant

# functions (context)

**dummy** function

# graphics (context)

## backgrounds table

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

## bitmaps table

- F flush
- F new

F placeholder

F tocontext

## identifiers table

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

## identify function

## 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 memstream  
    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

## linkedList data table

### pages table

- F setpagetransition
- F setupcanvas

### references table

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

## renderings data table

## soundclips data table



# interfaces (context)

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

## io (basic lua)

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

# job (context)

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

F gettobesaved  
 F getvpos  
 F hangafter  
 F hangindent  
 F height  
 F hsize  
 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**                   function  
**save**                       function  
**structure**                 table

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

**variables**                 table

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

**version**                   number

## language (basic tex)

<b>clean</b>	function
<b>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

# languages (context)

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

F check  
T data  
F disable  
F enable  
T enablers

B enables  
F found  
F load  
T methods  
N threshold

# layouts (context)

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



## lfs (extra lua)

<b>attributes</b>	overloaded function
<b>chdir</b>	overloaded function
<b>currentdir</b>	function
<b>dir</b>	overloaded function
<b>isdir</b>	overloaded function
<b>isfile</b>	overloaded function
<b>isfound</b>	function
<b>isreadabledir</b>	function
<b>isreadablefile</b>	function
<b>iswriteabledir</b>	function

<b>iswriteablefile</b>	function
<b>link</b>	overloaded function
<b>mkdir</b>	overloaded function
<b>makedirs</b>	function
<b>modification</b>	function
<b>readlink</b>	function
<b>rmdir</b>	overloaded function
<b>setexecutable</b>	function
<b>symlink</b>	function
<b>touch</b>	overloaded function

# libraries (context)

**basiclua** data table  
**basictex** data table  
**builtin** data table  
**extralua** data table

**extratex** data table  
**functions** data table  
**globals** data table

# lmx (context)

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

<b>loadedfile</b>	function
<b>make</b>	function
<b>new</b>	function
<b>overloaderror</b>	function
<b>popupfile</b>	function
<b>print</b>	function
<b>pv</b>	function
<b>report</b>	function
<b>reset</b>	function
<b>result</b>	function
<b>set</b>	function
<b>show</b>	function
<b>showerror</b>	function
<b>stripcss</b>	function
<b>tv</b>	function
<b>type</b>	function
<b>urlescape</b>	function
<b>variable</b>	function
<b>variables</b>	table
S color-background-blue	
S color-background-body	
S color-background-green	
S color-background-main	
S color-background-purple	
S color-background-yellow	
S title-default	

# logs (context)

<b>application</b>	function	<b>setformatters</b>	function
<b>categories</b>	function	<b>setlogfile</b>	function
<b>direct</b>	function	<b>setmessenger</b>	function
<b>disable</b>	function	<b>setprocessor</b>	function
<b>enable</b>	function	<b>settarget</b>	function
<b>finalactions</b>	function	<b>settimedlog</b>	function
<b>flush</b>	function	<b>settranslations</b>	function
<b>loggingerrors</b>	function	<b>show</b>	function
<b>messenger</b>	function	<b>start_page_number</b>	function
<b>new</b>	function	<b>start_run</b>	function
<b>newline</b>	function	<b>starterrorlogging</b>	function
<b>poptarget</b>	function	<b>startfilelogging</b>	function
<b>private</b>	table	<b>status</b>	function
F enablepagetiming		<b>stop_page_number</b>	function
F getpagetiming		<b>stoperrorlogging</b>	function
<b>pushtarget</b>	function	<b>stopfilelogging</b>	function
<b>registerfinalactions</b>	function	<b>subdirect</b>	function
<b>report</b>	function	<b>subreport</b>	function
<b>reporter</b>	function	<b>texerrormessage</b>	function
<b>setformats</b>	function	<b>writer</b>	function

# lpdf (context)

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

N NoRotate		F color_indirect	
N NoView		<b>formats</b>	data table
N NoZoom		<b>frombytes</b>	function
N Print		<b>fromeight</b>	function
N Printable		<b>frompdfdoc</b>	function
N ReadOnly		<b>fromsixteen</b>	function
N ToggleNoView		<b>getcatalog</b>	function
N auto		<b>getcompression</b>	function
N hidden		<b>getfontname</b>	function
N printable		<b>getfontobjectnumber</b>	function
T widgets		<b>getinfo</b>	function
N Comb		<b>getmatrix</b>	function
N CommitOnSelChange		<b>getmetadata</b>	function
N DoNotScroll		<b>getnofpages</b>	function
N DoNotSpellCheck		<b>getpageproperties</b>	function
N Edit		<b>getpagereference</b>	function
N FileSelect		<b>getpagetags</b>	function
N MultiLine		<b>getpos</b>	function
N NoExport		<b>getversion</b>	function
N NoToggleToOff		<b>getxformname</b>	function
N Password		<b>graycode</b>	function
N PopUp		<b>hasmatrix</b>	function
N PushButton		<b>id</b>	function
N Radio		<b>immediateobject</b>	function
N RadiosInUnison		<b>includeimage</b>	function
N ReadOnly		<b>injectors</b>	table
N Required		F bitmap	
N RichText		F jp2	
N Sort		F jpg	
N file		F png	
N fixed		<b>injectxmpinfo</b>	function
N nocheck		<b>insertxmpinfo</b>	function
N protected		<b>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

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



# lua (basic tex)

<b>bytecode</b>	table
<b>bytedata</b>	data table
<b>bytedone</b>	table
<b>callbytecode</b>	function
<b>collectgarbage</b>	function
<b>delay</b>	function
<b>finalize</b>	function
<b>firstbytecode</b>	number
<b>flush</b>	function
<b>flushdelayed</b>	function
<b>get_functions_table</b>	function
<b>getbytecode</b>	function
<b>getcurrenttime</b>	function
<b>getfunctionstable</b>	overloaded function
<b>getpreciseseconds</b>	function
<b>getpreciseticks</b>	function
<b>getruntime</b>	function
<b>getstacktop</b>	function
<b>getstartupfile</b>	function
<b>getversion</b>	function
<b>lastbytecode</b>	number

<b>macros</b>	table
B enabled	
F loaded	
F required	
F reset	
F resolvestring	
F resolving	
F showdefinitions	
<b>messages</b>	data table
<b>newindex</b>	function
<b>newtable</b>	function
<b>numbers</b>	data table
<b>registercode</b>	function
<b>registeredcodes</b>	function
<b>registerfinalizer</b>	function
<b>registername</b>	function
<b>setbytecode</b>	function
<b>setexitcode</b>	function
<b>startupfile</b>	string
<b>version</b>	string

# 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			

# lxml (context)

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

<b>refatt</b>	function	F add	
<b>register</b>	function	F compare	
<b>registerentity</b>	function	F flush	
<b>removesetup</b>	function	F reset	
<b>replace</b>	function	F show	
<b>resetcdata</b>	function	F sort	
<b>resetsetups</b>	function	<b>splitid</b>	function
<b>resolvedentity</b>	function	<b>startraw</b>	function
<b>root</b>	function	<b>startunesescaped</b>	function
<b>save</b>	function	<b>stopraw</b>	function
<b>serialize</b>	function	<b>stopunesescaped</b>	function
<b>setaction</b>	function	<b>store</b>	function
<b>setatt</b>	function	<b>strip</b>	function
<b>setattribute</b>	function	<b>stripped</b>	function
<b>setcdata</b>	function	<b>tag</b>	function
<b>setcommandtonone</b>	function	<b>text</b>	function
<b>setcommandtotext</b>	function	<b>tobuffer</b>	function
<b>setpar</b>	function	<b>tofile</b>	function
<b>setparam</b>	function	<b>toparameters</b>	function
<b>setparameter</b>	function	<b>toverbatim</b>	function
<b>setsetup</b>	function	<b>verbatim</b>	function
<b>snippet</b>	function	<b>withindex</b>	function
<b>sorters</b>	table	<b>xmltexhandler</b>	data table

## math (basic lua)

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

# mathematics (context)

<b>addfallbacks</b>	function	<b>mapremap</b>	data table
<b>alphabets</b>	data table	<b>overloadadditions</b>	function
<b>alternatives</b>	data table	<b>overloadparameters</b>	function
<b>big</b>	function	<b>privatebase</b>	number
<b>boldmap</b>	data table	<b>registerdomain</b>	function
<b>categories</b>	table	<b>registerfallbackid</b>	function
D functions		<b>remapalphabets</b>	function
<b>charactersets</b>	data table	<b>renderings</b>	table
<b>checkaccentbaseheight</b>	function	D mappings	
<b>checkprivateparameters</b>	function	D numbers	
<b>classes</b>	data table	D sets	
<b>codes</b>	data table	<b>renderset</b>	function
<b>define</b>	function	<b>resetattributes</b>	function
<b>dimensions</b>	function	<b>resetitalics</b>	function
<b>domains</b>	table	<b>resolvefallbacks</b>	function
<b>extensiblecode</b>	function	<b>scaleparameters</b>	function
<b>extensibles</b>	data table	<b>setdomain</b>	function
<b>extrabase</b>	number	<b>setitalics</b>	function
<b>extras</b>	table	<b>setridofprime</b>	function
F add		<b>sets</b>	data table
F copy		<b>styles</b>	data table
<b>fallbacks</b>	table	<b>syncboth</b>	function
F apply		<b>syncname</b>	function
F install		<b>syncstyle</b>	function
<b>fallbackstyleattr</b>	function	<b>toname</b>	function
<b>families</b>	data table	<b>tostyle</b>	function
<b>finishfallbacks</b>	function	<b>tweakaftercopyingfont</b>	function
<b>gaps</b>	data table	<b>tweakbeforecopyingfont</b>	function
<b>getboth</b>	function	<b>tweaks</b>	table
<b>getdomain</b>	function	<b>utfmathaccent</b>	function
<b>getitalics</b>	function	<b>utfmathclass</b>	function
<b>getridofprime</b>	function	<b>utfmathcommand</b>	function
<b>getstyle</b>	function	<b>utfmathfiller</b>	function
<b>horizontalcode</b>	function	<b>utfmathstretch</b>	function
<b>initializeparameters</b>	function	<b>virtualize</b>	function
<b>makefont</b>	function	<b>virtualized</b>	data table

## md5 (extra lua)

**HEX**     function  
**dec**     function  
**hex**     function

**sum**     function  
**sumHEX** function  
**sumhex** function

# metapost (context)

<b>checkformat</b>	function	N newinternal
<b>cm</b>	function	N nullary
<b>codes</b>	table	N numeric
N addto		N of
N ampersand		N ofbinary
N and		N outertag
N assignment		N parametertype
N atleast		N plus_or_minus
N begingroup		N primarybinary
N btex		N primarydef
N capsule		N 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 special
N interim		N step
N internal		N stop
N iteration		N str
N join		N string
N leftbrace		N tag
N leftbracket		N tension
N leftdelimiter		N tertiarybinary
N let		N tertiarydef
N macrospecial		N thingstoadd
N maketext		N to
N message		N unary
N mode		N undefinedcs



N until		getParameter	function
N void		getParameterSet	function
N with		getStatistics	function
N within		getText	function
N write		graphic	function
colorinitializer	function	graphic_base_pass	function
comment	function	includesvgbuffer	function
convert	function	includesvgfile	function
currentmpx	function	installplugin	function
currentmpxstatus	function	isobject	function
defaultformat	string	lastlog	string
defaultinstance	string	load	function
defaultmethod	string	maketext	function
directrun	function	metafun	table
escaped	function	F interpolate	
exectime	table	F topath	
extensiondata	data table	mptopdf	table
filterclippath	function	F convertmpstopdf	
flush	function	N nofconverted	
flushers	table	n	number
T pdf		nofruns	number
F comment		nofscriptruns	function
F flushfigure		nvformat	function
F startfigure		pdfliterals	function
F stopfigure		pluginactions	function
F textfigure		popformat	function
flushliteral	function	popscriptrunner	function
flushnormalpath	function	popvariable	function
flushreset	function	popvariables	function
fonts	table	preparetexttextsdata	function
F define		process	function
T flusher		processing	function
F flushfigure		processplugins	function
F startfigure		processspecial	function
F stopfigure		properties	table
N instances		pushformat	function
F process		pushscriptrunner	function
format_number	function	pushvariable	function
format_string	function	pushvariables	function
formatnumber	function	reducetogray	boolean
getclippath	function	registerscript	function
getextensions	function	remappedtext	function
getextradata	function	remaptext	function
getjobdata	function	reporterror	function

<b>reportsvgfonts</b>	function
<b>reset</b>	function
<b>resetlastlog</b>	function
<b>resetplugins</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>showsvgpage</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>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 vacuumous	
<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

**qpwrp** function

**report** function

**stuff** function

**unb64** function

**unqp** function

**wrap** function

**wrapt** table

F base64

F default

F quoted-printable

F text

**wrp** function

# mp (context)

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

<b>lmt_contours_edge_set</b>	function	<b>mf_get_outline_text</b>	function
<b>lmt_contours_edge_set_by_band</b>	function	<b>mf_graphic_text</b>	function
<b>lmt_contours_edge_set_by_cell</b>	function	<b>mf_inject_blob</b>	function
<b>lmt_contours_format</b>	function	<b>mf_map_move</b>	function
<b>lmt_contours_function</b>	function	<b>mf_map_text</b>	function
<b>lmt_contours_maxmean</b>	function	<b>mf_named_color</b>	function
<b>lmt_contours_maxz</b>	function	<b>mf_outline_text</b>	function
<b>lmt_contours_minmean</b>	function	<b>mf_save_data</b>	function
<b>lmt_contours_minz</b>	function	<b>mf_script_index</b>	function
<b>lmt_contours_nofvalues</b>	function	<b>mf_start_saving_data</b>	function
<b>lmt_contours_nx</b>	function	<b>mf_stop_saving_data</b>	function
<b>lmt_contours_ny</b>	function	<b>mf_tb_dimensions</b>	function
<b>lmt_contours_range</b>	function	<b>mf_tt_dimensions</b>	function
<b>lmt_contours_shade_paths</b>	function	<b>mf_tt_initialize</b>	function
<b>lmt_contours_shade_set</b>	function	<b>mode</b>	function
<b>lmt_contours_shape_paths</b>	function	<b>n</b>	function
<b>lmt_contours_start</b>	function	<b>newhash</b>	function
<b>lmt_contours_stop</b>	function	<b>number</b>	function
<b>lmt_contours_value</b>	function	<b>numeric</b>	function
<b>lmt_contours_xrange</b>	function	<b>pair</b>	function
<b>lmt_contours_yrange</b>	function	<b>pairpoints</b>	function
<b>lmt_do_remaptext</b>	function	<b>path</b>	function
<b>lmt_function_x</b>	function	<b>pathpoints</b>	function
<b>lmt_mesh_set</b>	function	<b>points</b>	function
<b>lmt_mesh_update</b>	function	<b>positionanchor</b>	function
<b>lmt_poisson_generate</b>	function	<b>positionbox</b>	function
<b>lmt_register_glyph</b>	function	<b>positioncurve</b>	function
<b>lmt_register_glyphs</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>	

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

## mplib (extra tex)

<b>execute</b>	function	<b>inject_transform</b>	function
<b>finder</b>	function	<b>inject_whatever</b>	function
<b>finders</b>	table	<b>new</b>	overloaded function
F file		<b>pen_info</b>	function
F mpstemplate		<b>realtime logging</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>getstates</b>	function	<b>scan_integer</b>	function
<b>getstatistics</b>	function	<b>scan_next</b>	function
<b>getstatus</b>	function	<b>scan_number</b>	function
<b>gettype</b>	function	<b>scan_numeric</b>	function
<b>gettypes</b>	function	<b>scan_pair</b>	function
<b>inject_boolean</b>	function	<b>scan_path</b>	function
<b>inject_cmykcolor</b>	function	<b>scan_pen</b>	function
<b>inject_color</b>	function	<b>scan_string</b>	function
<b>inject_integer</b>	function	<b>scan_symbol</b>	function
<b>inject_number</b>	function	<b>scan_token</b>	function
<b>inject_numeric</b>	function	<b>scan_transform</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

# noads (context)

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



## node (basic tex)

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

F has_glyph	F setglue
F has_glyph_option	F setglyphdata
F hpack	F setheight
F hyphenating	F setindex
F id	F setkern
F ignore_math_skip	F setlanguage
F insert_after	F setleader
F insert_before	F setlink
F is_char	F setlist
F is_direct	F setnext
F is_glyph	F setnucleus
F is_node	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 setscript
F naturalwidth	F setshift
F new	F setsplit
F protect_glyph	F setstate
F protect_glyphs	F setsub
F protrusion_skippable	F setsubpre
F rangedimensions	F setsubtype
F remove	F setsup
F reverse	F setsuppre
F set_attribute	F settotal
F set_attributes	F setwhd
F set_synctex_fields	F setwidth
F setattributelist	F slide
F setboth	F start_of_par
F setbox	F subtypes
F setchar	F tail
F setdata	F todirect
F setdepth	F tonode
F setdirection	F toString
F setdisc	F tovaliddirect
F setexpansion	F traverse
F setfam	F traverse_char
F setfield	F traverse_content
F setfont	F traverse_glyph

F traverse_id		<b>instock</b>	function
F traverse_list		<b>inuse</b>	function
F type		<b>is_node</b>	function
F types		<b>is_zero_glue</b>	function
F unprotect_glyph		<b>kerning</b>	function
F unprotect_glyphs		<b>last_node</b>	function
F unset_attribute		<b>length</b>	function
F unset_attributes		<b>ligaturing</b>	function
F usedlist		<b>make_extensible</b>	function
F uses_font		<b>mlist_to_hlist</b>	function
F values		<b>new</b>	function
F vertical_break		<b>protect_glyph</b>	function
F vpack		<b>protect_glyphs</b>	function
F write		<b>protrusion_skippable</b>	function
<b>effective_glue</b>	function	<b>rangedimensions</b>	function
<b>end_of_math</b>	function	<b>remove</b>	function
<b>family_font</b>	function	<b>set_attribute</b>	function
<b>fields</b>	function	<b>set_glue</b>	function
<b>find_attribute</b>	function	<b>setfield</b>	function
<b>first_glyph</b>	function	<b>setProperty</b>	function
<b>flatten_discretionaries</b>	function	<b>slide</b>	function
<b>flush_list</b>	function	<b>subtypes</b>	function
<b>flush_node</b>	function	<b>tail</b>	function
<b>free</b>	function	<b>tostring</b>	function
<b>get_attribute</b>	function	<b>traverse</b>	function
<b>get_glue</b>	function	<b>traverse_id</b>	function
<b>get_properties_table</b>	function	<b>type</b>	function
<b>getfield</b>	function	<b>types</b>	function
<b>getproperty</b>	function	<b>unprotect_glyph</b>	function
<b>has_attribute</b>	function	<b>unprotect_glyphs</b>	function
<b>has_field</b>	function	<b>unset_attribute</b>	function
<b>has_glyph</b>	function	<b>usedlist</b>	function
<b>hpack</b>	function	<b>uses_font</b>	function
<b>hyphenating</b>	function	<b>values</b>	function
<b>id</b>	function	<b>vpack</b>	function
<b>insert_after</b>	function	<b>write</b>	function
<b>insert_before</b>	function		

## nodes (context)

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

F cleanuppage		<b>kerncodes</b>	data table
F export		<b>kerning</b>	function
F finalizebox		<b>keys</b>	table
F flatten		T whatsit	
F flattenline		<b>last_node</b>	function
F migrate		<b>leftmarginwidth</b>	function
F protectglyphs		<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	

N no_axis		F fullhpack
N right		F get_components
N set		F getattr
N unused_1		F getattribute
N unused_2		F getattributelist
<b>nodecodes</b>	<b>data table</b>	F getattrlist
<b>nopts</b>	<b>function</b>	F getattrs
<b>nuts</b>	<b>table</b>	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 flush_list		F getprev
F flush_node		F getprop
F free		F getreplace

F getruledata	F accent
F getscrip	F baselineskip
F getshift	F boundary
F getstate	F choice
F getsub	F cleanup
F getsubpre	F delim
F getsubtype	F delimiter
F getsup	F direction
F getsuppre	F directliteral
F getsurround	F disc
F getsynctexfields	F emptyrule
F gettotal	F fence
F getvalue	F fontkern
F getwhd	F fraction
F getwidth	F glue
F has_attribute	F gluespec
F has_dimensions	F glyph
F has_field	F hlist
F has_glyph	F indentskip
F hpack	F italickern
F hyphenating	F kern
F insert_after	F latelua
F insert_before	F leader
F insert_list_after	F lefthangskip
F is_display_math	F leftmarginkern
F is_node	F leftskip
F is_nut	F lineskip
F is_zero_glue	F literal
F ischar	F mathchar
F isdone	F mathtextchar
F isglyph	F negatedglue
F kerning	F noad
F last_node	F originliteral
F leftmarginwidth	F outlinerule
F length	F pageliteral
F ligaturing	F penalty
F link	F radical
F linked	F rawliteral
F locate	F register
F migrate	F restore
F mlist_to_hlist	F righthangskip
F nestedtracedslide	F rightmarginkern
F new	F rightskip
T pool	F rule

F save	F setattribute
F savepos	F setattributelist
F setmatrix	F setattributes
F shrink	F setattrlist
F stock	F setattrrs
F stretch	F setboth
F subbox	F setbox
F submlist	F setboxglue
F temp	F setchar
F usage	F setcomponents
T userids	F setdata
N margins.inline	F setdepth
N splitters.one	F setdirection
N splitters.two	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 rehpack	F setlist
F remove	F setnext
F repackhlist	F setnucleus
F replace	F setoffsets
F reverse	F setoptions
F rightmarginwidth	F setorientation
T rules	F setparproperty
T ruleactions	F setpenalty
F box	F setpost
F draw	F setpre
F fill	F setprev
F mp	F setprop
F stroke	F setreplace
F userrule	F setruledata
F set_attribute	F setscript
F set_components	F setshift
F setattr	F setsplit



F setstate	F glyph	
F setsub	F hlist	
F setsubpre	F list	
F setsubtype	F next	
F setup	F node	
F setsuppre	F vlist	
F setsurround	F whatsit	
F setsynctexfields	T typesetters	
F setunsetattributes	F tohbox	
F setvalue	F tohpack	
F setvisual	F tonodes	
F setvisuals	F to vbox	
F setwhd	F tovpack	
F setwidth	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	<b>packlist</b>	function
F tonut	<b>parcodes</b>	data table
F tosequence	<b>penaltycodes</b>	data table
F toString	<b>plugindata</b>	table
F tracedslide	F finalizer	
F traverse	F initializer	
F traverse_char	S name	
F traverse_content	T namespace	
F traverse_glyph	N attribute	
F traverse_id	D data	
F traverse_list	F enable	
T traversers	F handler	
F boundary	F register	
F char	D registered	
F content	D values	
F dir	F processor	
F disc	<b>points</b>	function
F glue	<b>pool</b>	table

F baselineskip		<b>repackhlist</b>	function
F cleanup		<b>replace</b>	function
F directliteral		<b>report</b>	function
F glyph		<b>rightmarginwidth</b>	function
F hlist		<b>rulecodes</b>	data table
F latelua		<b>rules</b>	table
F lineskip		D data	
F literal		F define	
F originliteral		F enable	
F register		F handler	
F restore		F process	
F rule		F userrule	
F save		<b>serialize</b>	function
F savepos		<b>serializebox</b>	function
F setmatrix		<b>set_attribute</b>	function
F special		<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
F tracer		<b>setnext</b>	function
<b>properties</b>	table	<b>setprev</b>	function
T data		<b>setunsetAttributees</b>	function
<b>protect_glyph</b>	function	<b>shifts</b>	table
<b>protect_glyphs</b>	function	D data	
<b>protrusion_skippable</b>	function	F define	
<b>pts</b>	function	F enable	
<b>radicalcodes</b>	data table	F handler	
<b>rangedimensions</b>	function	<b>showboxes</b>	function
<b>reference</b>	function	<b>showlist</b>	function
<b>references</b>	table	<b>showsimplelist</b>	function
N attribute		<b>skipcodes</b>	data table
T done		<b>slide</b>	function
F handler		<b>snapshots</b>	table
T stack		F getsamples	
<b>repack</b>	function	F resetsamples	
<b>remove</b>	function	F takesample	

<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 showactions		F glyphs	
F table		F message	
<b>tobasepoints</b>	function	F messages	
<b>tocentimeters</b>	function	F nofsteps	
<b>toxiceros</b>	function	F register	
<b>to didots</b>	function	F reset	
<b>to dimen</b>	function	F start	
<b>to inches</b>	function	F stop	
<b>to millimeters</b>	function	F stop	
<b>tonode</b>	function	T transparencies	
<b>tonodes</b>	function	F reset	
<b>tonut</b>	function	F set	
<b>topicas</b>	function	F setlist	
<b>topoints</b>	function	<b>traverse</b>	function
<b>toscaledpoints</b>	function	<b>traverse_id</b>	function
<b>tosequence</b>	function	<b>typesetters</b>	table
<b>tostring</b>	function	F hbox	

F hpack		<b>visualizebox</b>	function
F tohbox		<b>visualizers</b>	table
F tohpack		F attribute	
F tonodes		T attributes	
F tovbox		F box	
F tovpack		F handler	
F vpack		F markfonts	
<b>unprotect_glyph</b>	function	F register	
<b>unprotect_glyphs</b>	function	F setfont	
<b>unset_attribute</b>	function	F setlayer	
<b>unsetattribute</b>	function	F setruledglyph	
<b>unsetattributes</b>	function	F setvisual	
<b>usedlist</b>	function	<b>vpack</b>	function
<b>usercodes</b>	data table	<b>whatcodes</b>	data table
<b>uses_font</b>	function	<b>whatsitcodes</b>	data table
<b>vianodes</b>	function	<b>write</b>	function
<b>vianuts</b>	function		

## number (context)

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

## **postgress** table

F close  
F execute  
F getmessage  
F initialize  
F open

## **sqlite** table

F close  
F execute  
F getmessage  
F initialize  
F open

## **zint** table

F execute  
F initialize

## os (basic lua)

<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

# pagebuilders (context)

## **columnsets** table

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

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

## **injections** table

F flushafter  
F flushbefore  
F save

## **mixedcolumns** table

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

## pdf (basic tex)

`immediateobj` function

## pdf (extra tex)

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

# physics (context)

**units** table

F registerunit

D tables

## pngdecode (extra tex)

**applyfilter** function

**expand** function

**interlace** function

**splitmask** function

**tocmyk** function

# publications (context)

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

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



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

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

## regimes (context)

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

<b>mapping</b>	data table
<b>pop</b>	function
<b>process</b>	function
<b>push</b>	function
<b>toregime</b>	function
<b>translate</b>	function

# resolvers (context)

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

<b>loadtime</b>	function	<b>resetmemstream</b>	function
<b>locateformat</b>	function	<b>resetresolve</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>setmemstream</b>	function
<b>methodhandler</b>	function	<b>showpath</b>	function
<b>openbinfile</b>	function	<b>simplescanfiles</b>	function
<b>openers</b>	data table	<b>splitconfigurationpath</b>	function
<b>openfile</b>	function	<b>splitexpansions</b>	function
<b>opentexfile</b>	function	<b>splitmethod</b>	function
<b>ownpath</b>	string	<b>splitpath</b>	function
<b>popextrapath</b>	function	<b>stackpath</b>	function
<b>popinputname</b>	function	<b>starttiming</b>	function
<b>poppath</b>	function	<b>stoptiming</b>	function
<b>prefixes</b>	data table	<b>suffixes</b>	data table
<b>prependhash</b>	function	<b>suffixmap</b>	data table
<b>pushextrapath</b>	function	<b>suffixofformat</b>	function
<b>pushinputname</b>	function	<b>texdatablob</b>	function
<b>pushpath</b>	function	<b>toppath</b>	function
<b>registerextrapath</b>	function	<b>unexpandedpath</b>	function
<b>registerfile</b>	function	<b>unexpandedpathlist</b>	function
<b>registerfilehash</b>	function	<b>unresolve</b>	function
<b>registerintrees</b>	function	<b>updaterelations</b>	function
<b>registermethod</b>	function	<b>updatescript</b>	function
<b>registerzipfile</b>	function	<b>uselibrary</b>	function
<b>relations</b>	data table	<b>usertypes</b>	data table
<b>renew</b>	function	<b>usezipfile</b>	function
<b>renewcache</b>	function	<b>validatedpath</b>	function
<b>repath</b>	function	<b>variable</b>	function
<b>reset</b>	function	<b>variableofformat</b>	function
<b>resetextrapaths</b>	function		

<b>variableofformatorsuffix</b>	function
<b>wildcardpattern</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)

**read2dot14**        function  
**readbytes**        function  
**readbytetable**    function  
**readcardinal1**    function  
**readcardinal1le**   function  
**readcardinal2**    function  
**readcardinal2le**   function  
**readcardinal3**    function  
**readcardinal3le**   function  
**readcardinal4**    function  
**readcardinal4le**   function  
**readcardinaltable** function

**readfixed2**        function  
**readfixed4**        function  
**readinteger1**     function  
**readinteger1le**    function  
**readinteger2**     function  
**readinteger2le**    function  
**readinteger3**     function  
**readinteger3le**    function  
**readinteger4**     function  
**readinteger4le**    function  
**readintegertable** function

# socket (extra lua)

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

S resent-bcc  
 S resent-cc  
 S resent-date  
 S resent-from  
 S resent-message-id  
 S resent-reply-to  
 S resent-sender  
 S resent-to  
 S retry-after  
 S return-path  
 S sender  
 S server  
 S smtp-remote-recipient  
 S status  
 S subject  
 S te  
 S to  
 S trailer  
 S transfer-encoding  
 S upgrade  
 S user-agent  
 S vary  
 S via  
 S warning  
 S will-retry-until  
 S www-authenticate  
 S x-mailer  
 F lower  
 F normalize  
**http**                      table  
 N TIMEOUT  
 S USERAGENT  
 F genericform  
 F open  
 F request  
**newtry**                      function

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

# sorters (context)

**basicsorter**            function

**comparers**            table

    F basic

**constants**            table

    S defaultdigits

    S defaultlanguage

    S defaultmethod

    N digitmaximum

    N digitoffset

    N ignoredoffset

    N replacementoffset

    T validmethods

        B ch

        B mc

        B mm

        B pc

        B pm

        B uc

        B zc

        B zm

**definitions**            data table

**firstofsplit**            function

**packch**                function

**packuc**                function

**replacementlist**        function

**setlanguage**            function

**sort**                    function

**splitters**             table

    F utf

**strip**                  function

**tracers**                data table

**update**                function

## statistics (context)

<b>benchmarktimer</b>	function
<b>checkfmtstatus</b>	function
<b>currenttime</b>	function
<b>elapsed</b>	function
<b>elapsedindeed</b>	function
<b>elapsedseconds</b>	function
<b>elapsedtime</b>	function
<b>enable</b>	boolean
<b>formatruntime</b>	function
<b>hastiming</b>	function
<b>memused</b>	function
<b>register</b>	function

<b>resettiming</b>	function
<b>runtime</b>	function
<b>savefmtstatus</b>	function
<b>show</b>	function
<b>showmemory</b>	function
<b>showusage</b>	function
<b>starttiming</b>	function
<b>stoptiming</b>	function
<b>threshold</b>	number
<b>timed</b>	function
<b>tracefunction</b>	function

## status (basic tex)

<b>getbufferstate</b>	function
<b>getcallbackstate</b>	function
<b>getconstants</b>	function
<b>geterrorlinestate</b>	function
<b>geterrorstate</b>	function
<b>getexpandstate</b>	function
<b>getextrastate</b>	function
<b>getfilestate</b>	function
<b>getfontstate</b>	function
<b>gethalferrorlinestate</b>	function
<b>gethashstate</b>	function
<b>getinputstate</b>	function
<b>getlanguagestate</b>	function
<b>getlookupstate</b>	function
<b>getluastate</b>	function

<b>getmarksstate</b>	function
<b>getneststate</b>	function
<b>getnodestate</b>	function
<b>getparameterstate</b>	function
<b>getpoolstate</b>	function
<b>getreadstate</b>	function
<b>getsavestate</b>	function
<b>getsparsestate</b>	function
<b>getstringstate</b>	function
<b>gettexstate</b>	function
<b>gettokenstate</b>	function
<b>getwarningstate</b>	function
<b>iocodes</b>	table
<b>list</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>nspace</b>	table
<b>autosingle</b>	function	<b>optionalquoted</b>	function
<b>booleanstring</b>	function	<b>pack</b>	function
<b>byte</b>	function	<b>packsize</b>	function
<b>bytepairs</b>	function	<b>quote</b>	function
<b>bytes</b>	function	<b>quoted</b>	function
<b>bytetable</b>	function	<b>rep</b>	function
<b>char</b>	function	<b>replacenewlines</b>	function
<b>characterpairs</b>	function	<b>reverse</b>	function
<b>characters</b>	function	<b>split</b>	function
<b>checkedsplit</b>	function	<b>splitlines</b>	function
<b>collapsespaces</b>	function	<b>splitup</b>	function
<b>containsws</b>	function	<b>strip</b>	function
<b>count</b>	function	<b>sub</b>	function
<b>dawson</b>	function	<b>tformat</b>	function
<b>dump</b>	function	<b>toHEX</b>	function
<b>erf</b>	function	<b>toboollean</b>	function
<b>erfc</b>	function	<b>tobytes</b>	function
<b>erfcx</b>	function	<b>tocontext</b>	function
<b>erfi</b>	function	<b>todec</b>	function
<b>escapedpattern</b>	function	<b>todimen</b>	function
<b>escapedquotes</b>	function	<b>tohex</b>	function
<b>explode</b>	function	<b>tonodes</b>	function
<b>f6</b>	function	<b>topattern</b>	function
<b>find</b>	function	<b>totable</b>	function
<b>format</b>	function	<b>tounicode16</b>	function
<b>formatter</b>	function	<b>toutf</b>	function
<b>formatters</b>	function	<b>toutf32</b>	function
<b>fullstrip</b>	function	<b>toutf8</b>	function
<b>gmatch</b>	function	<b>tracedchar</b>	function
<b>gsub</b>	function	<b>tracedchars</b>	table
<b>is_boolean</b>	function	<b>unpack</b>	function
<b>is_empty</b>	function	<b>unquote</b>	function
<b>itself</b>	function	<b>unquoted</b>	function
<b>len</b>	function	<b>upper</b>	function
<b>limit</b>	function	<b>utfcharacter</b>	function
<b>linetable</b>	function	<b>utfcharacters</b>	function
<b>longtostring</b>	function	<b>utfcharacter</b> <b>table</b>	function
<b>lower</b>	function	<b>utflength</b>	function
<b>match</b>	function	<b>utfpadd</b>	function
<b>nspace</b>	function	<b>utfpadding</b>	function

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

# structures (context)

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

F touserdata		F reordered	
<b>inserts</b>	table	T result	
D data		F savedlistnumber	
F define		F savedlistprefixednumber	
F getdata		F savedlisttitle	
F getlocation		D sectionblocks	
F getname		F sectionnumber	
F getnumber		F size	
F setlocation		F title	
F setup		D tobesaved	
D stored		F userdata	
<b>itemgroups</b>	table	F uservalue	
<b>lists</b>	table	<b>marks</b>	table
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>	table
D names		F check_spacing	
F number		F checkpagechange	
D ordered		F define	
F page		F doifonsamepageasprevious	
F popnesting		F get	
F prefix		F getdeltapage	
F prefixednumber		F getinternal	
F prefixedpage		F getn	
F process		F getstate	
D pushed		F hascontent	
F pushnesting		F internal	
F realpage		F internalid	

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

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

## registers

- F analyze
- D collected
- F compare

## table

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

## sections

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

## table



F reportstructure		F registerused	
F save		F resetshown	
T sectionblockdata		F resetused	
T bodypart		F sort	
S bookmark		F synonym	
F set		D tobesaved	
F setblock		<b>tags</b>	<b>table</b>
F setchecker		F current	
F setentry		F elementtag	
F setinitialblock		F finishexport	
F setlevel		F getextradata	
F setnumber		F getid	
F showstructure		F getmetadata	
F structuredata		F gettablecell	
F title		F gettabulatecell	
D tobesaved		F handler	
F typesetnumber		F initializeexport	
F userdata		D labels	
B verbose		F last	
<b>sets</b>	<b>table</b>	F lastinchain	
F define		F locatedtag	
F get		T patterns	
F getall		U splitter	
D setlist		D properties	
<b>specials</b>	<b>table</b>	F registerextradata	
D collected		F registermetadata	
F retrieve		F restart	
F store		F setaspect	
D tobesaved		F setattributehash	
<b>synonyms</b>	<b>table</b>	F setcombination	
F analyzed		F setconstruct	
D collected		F setfigure	
F compare		F setfloat	
F define		F setformulacontent	
F filter		F sethighlight	
F finalize		F setitem	
F flush		F setitemgroup	
F isshown		F setlist	
F isused		F setnotation	
F meaning		F setnotationsymbol	
F prepare		F setparagraph	
F process		F setproperty	
F register		F setpublication	
F registershown		F setregister	

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

## table (basic lua)

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

# tex (basic tex)

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

<b>getsynctexmode</b>	function	<b>muskip</b>	table
<b>getsynctextag</b>	function	<b>nest</b>	table
<b>gettextdir</b>	function	<b>nilcatcodes</b>	number
<b>gettoks</b>	function	<b>normalizecodes</b>	data table
<b>getuccode</b>	function	<b>notcatcodes</b>	number
<b>glue</b>	table	<b>number</b>	function
<b>glyphoptioncodes</b>	data table	<b>poplocal</b>	function
<b>groupcodes</b>	data table	<b>primitives</b>	function
<b>hashtokens</b>	function	<b>print</b>	function
<b>hyphenationcodes</b>	data table	<b>prtcategories</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>romannumeral</b>	function
<b>iscount</b>	overloaded function	<b>round</b>	function
<b>isdefined</b>	function	<b>runlocal</b>	function
<b>isdimen</b>	overloaded function	<b>runtoks</b>	function
<b>isglue</b>	function	<b>saveboxresource</b>	function
<b>ismuglue</b>	function	<b>scale</b>	function
<b>ismuskip</b>	overloaded function	<b>scantoks</b>	function
<b>isprintable</b>	function	<b>set</b>	function
<b>isskip</b>	overloaded function	<b>setattribute</b>	function
<b>istoken</b>	function	<b>setbox</b>	function
<b>istoks</b>	function	<b>setboxdir</b>	function
<b>lastnodetype</b>	function	<b>setcatcode</b>	function
<b>lccode</b>	table	<b>setcount</b>	function
<b>linebreak</b>	function	<b>setdelcode</b>	function
<b>lists</b>	table	<b>setdimen</b>	function
<b>luacatcodes</b>	number	<b>setdimensionvalue</b>	function
<b>magicconstants</b>	table	<b>setglue</b>	function
N maxdimen		<b>setglyphdata</b>	function
N running		<b>setglyphscript</b>	function
N trueinch		<b>setglyphstate</b>	function
<b>mathchardef</b>	function	<b>setintegervalue</b>	function
<b>mathcode</b>	table	<b>setinteraction</b>	function
<b>modelevels</b>	table	<b>setlccode</b>	function
N horizontal		<b>setlinedir</b>	function
N math		<b>setlist</b>	function
N unset		<b>setmath</b>	function
N vertical		<b>setmathcode</b>	function
<b>modes</b>	data table	<b>setmathdir</b>	function
<b>mprint</b>	function	<b>setmuglue</b>	function
<b>muglue</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_pool</b>	number
<b>error_line</b>	number	<b>max_print_line</b>	number
<b>expand_depth</b>	number	<b>max_strings</b>	number
<b>firstline</b>	string	<b>nest_size</b>	number
<b>formatname</b>	string	<b>node_size</b>	number
<b>function_size</b>	number	<b>param_size</b>	number
<b>half_error_line</b>	number	<b>properties_size</b>	number
<b>hash_extra</b>	number	<b>save_size</b>	number
<b>init</b>	overloaded function	<b>shell_escape</b>	string
<b>kpse_init</b>	boolean	<b>stack_size</b>	number
<b>max_in_open</b>	number	<b>token_size</b>	number

## texio (basic tex)

**closeinput** function

**terminal** function

**write** function

**write\_nl** function



# token (basic tex)

<b>accessors</b>	table	<b>get_tok</b>	function
F active		<b>get_tolerant</b>	function
F cmd		<b>getcommandid</b>	function
F cmdchrsc		<b>getcommandvalues</b>	function
F cmdname		<b>getfunctionvalues</b>	function
F command		<b>getprimitives</b>	function
F csname		<b>gobble</b>	function
F expandable		<b>gobble_dimen</b>	function
F frozen		<b>gobble_integer</b>	function
F index		<b>is_defined</b>	function
F name		<b>is_next_char</b>	function
F protected		<b>is_token</b>	function
F range		<b>new</b>	function
<b>create</b>	function	<b>peek_next</b>	function
<b>expand</b>	function	<b>peek_next_char</b>	function
<b>expand_macro</b>	function	<b>peek_next_expanded</b>	function
<b>future_expand</b>	function	<b>pop_macro</b>	function
<b>get_active</b>	function	<b>push_macro</b>	function
<b>get_cmdchrsc</b>	function	<b>put_back</b>	function
<b>get_cmdname</b>	function	<b>put_next</b>	function
<b>get_command</b>	function	<b>save_lua</b>	function
<b>get_csname</b>	function	<b>scan_argument</b>	function
<b>get_cstoken</b>	function	<b>scan_box</b>	function
<b>get_dimension</b>	function	<b>scan_cardinal</b>	function
<b>get_expandable</b>	function	<b>scan_char</b>	function
<b>get_fields</b>	function	<b>scan_cmdchr</b>	function
<b>get_flags</b>	function	<b>scan_cmdchr_expanded</b>	function
<b>get_frozen</b>	function	<b>scan_code</b>	function
<b>get_id</b>	function	<b>scan_csname</b>	function
<b>get_immutable</b>	function	<b>scan_delimited</b>	function
<b>get_index</b>	function	<b>scan_dimen</b>	function
<b>get_instance</b>	function	<b>scan_dimen_argument</b>	function
<b>get_integer</b>	function	<b>scan_float</b>	function
<b>get_macro</b>	function	<b>scan_glue</b>	function
<b>get_meaning</b>	function	<b>scan_integer</b>	function
<b>get_noaligned</b>	function	<b>scan_integer_argument</b>	function
<b>get_parameters</b>	function	<b>scan_key</b>	function
<b>get_permanent</b>	function	<b>scan_keyword</b>	function
<b>get_primitive</b>	function	<b>scan_keyword_cs</b>	function
<b>get_protected</b>	function	<b>scan_letters</b>	function
<b>get_range</b>	function	<b>scan_luacardinal</b>	function

<b>scan_luainteger</b>	function	<b>scan_value</b>	function
<b>scan_luanumber</b>	function	<b>scan_word</b>	function
<b>scan_next</b>	function	<b>serialize</b>	function
<b>scan_next_char</b>	function	<b>set_char</b>	function
<b>scan_next_expanded</b>	function	<b>set_dimension</b>	function
<b>scan_real</b>	function	<b>set_integer</b>	function
<b>scan_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

# tokens (context)

**astable** function

**bits** table

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

**cache** table

U NC  
U NR  
U bf  
U color  
U colordefalc  
U colordefflc  
U colordefflt  
U colordefrlt  
U dofinishreference  
U dostarttext  
U finishjob  
U firstofoneargument  
U firstoftwoarguments  
U gobbleoneargument  
U goto  
U iftrue  
U input  
U loadfoundtypescriptfile

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

**commands** data table

**compile** function

**constant** function

**converters** table

S toboolean  
S todimen  
S toglue  
S tonumber  
S toString

**create** function

**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 color
F nextexpanded	U colordefalc
F number	U colordefflc
F optional	U colordefflt
F peek	U colordefrlt
F peekchar	U dofinishreference
F peekexpanded	U dostarttext
F real	U finishjob
F scanclose	U firstofoneargument
F scanopen	U firstoftwoarguments
F skip	U gobbleoneargument
F skipexpanded	U goto
F string	U iftrue
F table	U input
F token	U loadfoundtypescriptfile
F tokencode	U resetctxscanner
F tokenlist	U rlap
F tokens	U secondoftwoarguments
F toks	U setfalsevalue
F value	U setsectionblock
F vbox	U setupsystem
F verbatim	U startcolumns
F vtop	U starttabulate
F whd	U starttitle
F word	U startxtitle
F scannumber	U stopcolumns
F scanopen	U stoptabulate
F scanoptional	U stoptitle
F scanstring	U stopxtitle
F scantable	U texsetup
F scantokenlist	U xmlw
F scantoks	D commands
F scanvbox	F compile
F scanverbatim	F constant
F scanvtop	T converters
F scanword	S toboolean
F toboolean	S todimen
F todimen	S toglue
T tokens	S tonumber

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

## tracers (context)

**printerror** function

**printwarning** function

**showlines** function



## trackers (context)

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

# typesetters (context)

## alignments table

- F handler
- F set

## breakpoints table

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

## cases table

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

## characteralign table

- F handler
- F resetcharacteralign
- F setcharacteralign

## characters table

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

## checkers table

- F handler
- F reset
- F set

## cleaners table

- F handler
- F set

## digits table

- T actions
- F handler
- F set

## directions table

- F getfences
- F getglobal
- F getmethod
- F handler

- T handlers
- F installhandler
- F 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)

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

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

# utilities (context)

## debugger

table

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

## files

table

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

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

## formatters

table

- F formatcolumns
- F list
- F stripzeros

## garbagecollector

table

- F check
- N criterium
- B enabled

## ghostscript

table

- F convert
- F statistics

## graphicmagick

table

- F convert
- F statistics

## graphicsmagick

table

- F convert

## **lua** **table**

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

## **packers** **table**

F hashed  
F new  
F pack  
F simplehashed  
F strip  
F unpack  
N version

## **parsers** **table**

F add\_settings\_to\_array  
F arguments\_to\_table  
F array\_to\_string  
F csvsplitter  
F getparameters  
F groupedsplitat  
F hash\_to\_string  
T hashes  
T settings\_to\_set  
T text,hidden,paper,page,leftpage,rightpage  
B hidden

B leftpage

B page

B paper

B rightpage

B text

F iterator

F keq\_to\_hash

F listitem

F make\_settings\_to\_hash\_pattern

F mergehashes

F options\_to\_array

F options\_to\_hash

T patterns

U settings\_to\_array

U settings\_to\_hash\_a

U settings\_to\_hash\_b

U settings\_to\_hash\_c

U settings\_to\_hash\_d

U unittotex

F process\_stripped\_settings

F rfc4180splitter

F runtime

F settings\_to\_array

F settings\_to\_array\_obey\_fences

F settings\_to\_array\_with\_repeat

F settings\_to\_hash

F settings\_to\_hash\_colon\_too

F settings\_to\_hash\_strict

F settings\_to\_hash\_tolerant

F settings\_to\_numbers

F settings\_to\_set

F simple\_hash\_to\_string

F splitmethod

F splitthousands

F stepper

F stripped\_settings\_to\_array

F totime

F unittotex

F unittoxml

## **randomizer** **table**

F get

F getnumber

F getseed

F popseed



- F pushseed
- F reuseseed
- F setseed
- F setseedi
- randomizers**           table
  - F poisson
- sequencers**           table
  - F appendaction
  - F appendgroup
  - F compile
  - F disableaction
  - F disablegroup
  - F enableaction
  - F enablegroup
  - D functions
  - F localize
  - F new
  - F nodeprocessor
  - F prependaction
  - F prependgroup
  - F removeaction
  - F replaceaction
  - F setkind
  - F tostring
- setters**           table
  - F disable
  - F enable
  - F initialize
  - F list
  - F new
  - F register
  - F report
  - F reset
  - F show
- stacker**           table
  - F new
- storage**           table
  - F allocate
  - F checked
  - F mark
  - F marked
  - F setinitializer
  - F sparse
- streams**           table

- F close
- F getposition
- F getsize
- F getstring
- F look
- F open
- F openstring
- F read2dot14
- F read2dot4
- F readbyte
- F readbytes
- F readbytetable
- F readcardinal
- F readcardinal1
- F readcardinal2
- F readcardinal2le
- F readcardinal3
- F readcardinal3le
- F readcardinal4
- F readcardinal4le
- F readcardinaltable
- F readchar
- F readfixed2
- F readfixed4
- F readinteger
- F readinteger1
- F readinteger2
- F readinteger2le
- F readinteger3
- F readinteger3le
- F readinteger4
- F readinteger4le
- F readintegertable
- F readsignedbyte
- F readstring
- F setposition
- F size
- F skip
- F skipbytes
- F skiplong
- F skipshort
- strings**           table
  - F collapse
  - F collapseCrLf

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

**tables**                      table

- F accesstable
- F definedtable

- F definetable
- F encapsulate
- F insertaftervalue
- F insertbeforevalue
- F migratetable
- F removevalue
- F replacevalue

**templates**                      table

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

**zipfiles**                      table

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

## visualizers (context)

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

## xcomplex (extra lua)

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

**\_\_tostring** function  
**\_\_unm** function  
**abs** function  
**acos** function  
**acosh** function  
**arg** function  
**asin** function  
**asinh** function  
**atan** function  
**atanh** function  
**conj** function  
**cos** function  
**cosh** function  
**exp** function

**i** function  
**imag** function  
**log** function  
**new** function  
**pow** function  
**proj** function  
**real** function  
**sin** function  
**sinh** function  
**sqrt** function  
**tan** function  
**tanh** function  
**topair** function  
**tostring** function

## xdecimal (extra lua)

<b>__add</b>	function	F min
<b>__band</b>	function	F minus
<b>__bor</b>	function	F new
<b>__bxor</b>	function	F plus
<b>__div</b>	function	F pow
<b>__eq</b>	function	F rotate
<b>__index</b>	table	F setprecision
F __add		F shift
F __band		F sqrt
F __bor		F tonumber
F __bxor		F tostring
F __div		F trim
F __eq		F __le
T __index		F __lt
F __add		F __mul
F __band		S __name
F __bor		F __pow
F __bxor		F __shl
F __div		F __shr
F __eq		F __sub
F __le		F __tostring
F __lt		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 ln		F rotate
F log		F setprecision
F max		F shift

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

## xmath (extra lua)

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

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



# xml (context)

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

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

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

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

## xzip (extra lua)

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

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

## zip (extra lua)

**archives**            table  
**closearchive**      function

**openarchive**        function  
**registeredfiles** table

## zlib (extra lua)

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

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