

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 loaders  
logs lpdf **lpeg** **lua** luatex lxml **math**  
mathematics **md5** metapost **mime** moduledata  
modules mp **mplib** noads **node** nodes number  
objects optional **os** **package** pagebuilders  
parametersets **pdf** **pdfdecode** **pdfe** physics  
**pngdecode** publications regimes resolvers  
sandbox scripts set **sha2** **sio** **socket** sorters  
sparse statistics **status** storage streams  
**string** structures **table** **tex** texconditionals  
**texconfig** texconstants texifs **texio**  
texisdefined texmodes texsystemmodes thirddata  
**token** tokens tracers trackers typesetters  
updaters url userdata **utf8** utilities  
visualizers **xcomplex** **xdecimal** **xmath** xml **xzip**  
**zip** **zlib**

ConT<sub>E</sub>Xt LMTX

# global (alias: \_G)

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

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

## **alternates** table

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

## **applyoverloads** function

## **colorintents** table

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

## **colors** table

N attribute  
F cmyk  
F cmyktogray  
F cmyktorgb  
F colorcomponents  
D counts  
B couple  
F currentmodel  
F currentnamedmodel  
D data  
N default  
F defineintermediatecolor  
F definemultitonecolor  
F defineprocesscolor  
F defineprocesscolordirect  
F definesimplegray  
F definespotcolor  
F definetransparency  
F enable  
F filter  
N forced  
F forcedmodel  
F forcesupport  
F formatcolor

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

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

## viewerlayers table

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

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

# backends (context)

**closeout** function

**codeinjections** table

F boxresourcedimensions

F registerboxresource

F restoreboxresource

**current** string

**defaults** table

T codeinjections

T nodeinjections

T registrations

D tables

**getcallbackstate** function

**included** table

B context

B date

B id

B metadata

B pdf

**install** function

**latelua** function

**nodeinjections** table

**nothing** function

**openout** function

**pdf** table

T codeinjections

F addbookmarks

F analyzenormalsymbol

F analyzesymbol

F attachmentid

F bitmap

F clonefield

F copyimage

F definefield

F definefieldset

F defineviewerlayer

F embedfile

F embedimage

F enabletags

F exportformdata

F fieldsurrounding

F flushmergelayer

F getbookmarks

F getdefaultfieldvalue

F getfieldcategory

F getfieldset

F getformatoption

F getidentityvariable

F getinfo

F getpreviewfigure

F getrefobj

F insertrenderingwindow

F jp2

F jpg

F maptag

F mergebookmarks

F mergecomments

F mergefields

F mergereferences

F mergeviewerlayers

F newimage

F png

F prerollreference

F presetsymbol

F presetsymbollist

F processrendering

F registerdocumentcloseaction

F registerdocumentopenaction

F registeredsymbol

F registerpagecloseaction

F registerpageopenaction

F registerpattern

F registersymbol

F scanimage

F setattachmentsupport

F setfieldcalculationset

F setfigurealternative

F setfigurecolorspace

F setfiguremask

F setformat

F setformsmethod

F setpagetransition

F settaggingsupport



F setupidentity	F 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 startalternate	
F supportedformats	F startlayer	
F uncodetoactualtext	F startstackedlayer	
F useviewerlayer	F stopalternate	
F validfield	F stoplayer	
F validfieldcategory	F stopstackedlayer	
F validfieldset	F transparency	
F wrapimage	F typesetfield	
S comment	T registrations	
T nodeinjections	F cmykindexcolor	
F addtags	F cmykspotcolor	
F annotation	F getspotcolorreference	
F attachfile	F grayindexcolor	
F changestackedlayer	F grayspotcolor	
F cmykcolor	F rgbindexcolor	
F comment	F rgbspotcolor	
F destination	F spotcolorname	
F effect	F transparency	
F graycolor	T tables	
F injectbitmap	<b>registrations</b>	table
F insertmovie	<b>tables</b>	table
F insertsound	<b>writeout</b>	function
F insertu3d		

## 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>F define</b>	
<b>assign</b>	function	<b>F hassomecontent</b>	
<b>collectcontent</b>	function	<b>F next</b>	
<b>erase</b>	function	<b>F place</b>	
<b>exists</b>	function	<b>F reset</b>	
<b>get</b>	function	<b>F save</b>	
<b>getcontent</b>	function	<b>prepend</b>	function
<b>getlines</b>	function	<b>raw</b>	function
<b>gettexbuffer</b>	function	<b>run</b>	function
<b>loadcontent</b>	function	<b>samplefile</b>	function
<b>parallel</b>	table	<b>undent</b>	function

# builders (context)

<b>checkparcontext</b>	function		F tag	
<b>checksidefloat</b>	function		<b>profiling</b>	table
<b>kernel</b>	table		F add	
F collapsing			F distance	
F hyphenating			F fixedprofile	
F kerning			F get	
F ligaturing			F list	
F mlisttohtml			F pagehandler	
<b>paragraphs</b>	table		F profilebox	
T constructors			F set	
N attribute			<b>vsacing</b>	table
F define			D categories	
F disable			F checkstrutdepth	
F enable			F collapsevbox	
F handler			T data	
T methods			D map	
F basic			D skip	
F default			D snapmethods	
F hpack			F definesnapmethod	
F oneline			B fixed	
D names			F forcepageflush	
D numbers			F forcestrutdepth	
F set			F getnofpreviouslines	
F start			F inject	
F stop			F injectdisable	
T expansion			F injectpenalty	
F trace			F injectskip	
F kepttogether			F pagehandler	
F registertogether			F pageoverflow	
T solutions			F popatsame	
T splitters			F pushatsame	
F define			F setmap	
F optimize			F setskip	
T registered			F snapbox	
F reset			F synchronizepage	
F set			F tocategories	
F split			F tocategory	
F start			F vboxhandler	
F stop				

## 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 get\_attribute

B glyph\_run

B handle\_overload

B hpack\_filter

B hpack\_quality

B hyphenate

B insert\_par

B intercept\_lua\_error

B intercept\_tex\_error

B kerning

B ligaturing

B linebreak\_filter

B make\_extensible

B missing\_character

B mlist\_to\_hlist

B open\_data\_file

B paragraph\_context

B post\_linebreak\_filter

B pre\_dump

B pre\_linebreak\_filter

B pre\_output\_filter

B process\_jobname

B register\_extensible

B show\_error\_message

B show\_lua\_call

B show\_warning\_message

B show\_whatsit

B start\_file

B start\_run

B stop\_file

B stop\_run

B trace\_memory

B vpack\_filter

B vpack\_quality

B wrapup\_run

## catcodes (context)

**names** data table

**numbers** data table

**register** function

# characters (context)

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

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

## chemistry (context)

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

## containers (context)

**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**

**upper**

**verbose**

D data

function

function

table

F translate

**weekday**

**word**

**words**

function

function

function

## coroutine (basic lua)

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

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

# ctxrunner (context)

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

# data (context)

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

## debug (basic lua)

**getinfo**    function

**sethook**    function

**traceback**   function

## dir (context)

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

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

## directives (context)

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

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

# document (context)

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



# documentdata (context)

**variable** function

# drivers (context)

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

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

<b>outputfilename</b>	function
<b>report</b>	function

## environment (context)

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

# experiments (context)

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

# figures (context)

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

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



## file (basic lua)

<b>addsuffix</b>	function
<b>basename</b>	function
<b>checksum</b>	function
<b>collapsepath</b>	function
<b>copy</b>	function
<b>dirname</b>	function
<b>expandname</b>	function
<b>extname</b>	function
<b>is_qualified_path</b>	function
<b>is_readable</b>	function
<b>is_rootbased_path</b>	function
<b>is_writable</b>	function
<b>isreadable</b>	function
<b>iswritable</b>	function
<b>join</b>	function
<b>joinpath</b>	function
<b>loadchecksum</b>	function
<b>nameonly</b>	function
<b>nametotable</b>	function
<b>needs Updating</b>	function

<b>needsupdating</b>	function
<b>pathpart</b>	function
<b>readdata</b>	function
<b>removesuffix</b>	function
<b>replacesuffix</b>	function
<b>reslash</b>	function
<b>robustname</b>	function
<b>savechecksum</b>	function
<b>savedata</b>	function
<b>size</b>	function
<b>splitbase</b>	function
<b>splitname</b>	function
<b>splitpath</b>	function
<b>strip</b>	function
<b>suffix</b>	function
<b>suffixes</b>	function
<b>suffixesonly</b>	function
<b>suffixonly</b>	function
<b>syncmtimes</b>	function
<b>withinbase</b>	function

## fio (extra lua)

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

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

# floats (context)

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

## font (basic tex)

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

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

# fonts (context)

<b>analyzers</b>	table	
D features		F currentfonthasfeature
D initializers		D designsizes
D methods		F enhanceparameters
F setstate		T enhancers
D states		T afm
B useunicodemarks		F apply
<b>checkers</b>	table	F patch
F getmissing		T patches
D mapping		F register
F missing		F report
F placeholder		F register
<b>cid</b>	table	F report
F getmap		T otf
F loadfile		F addfeature
<b>collections</b>	table	F apply
F checkenabled		F enhance
F clonevector		F patch
F define		T patches
T definitions		F register
F found		F report
F prepare		F register
F process		F report
F register		T tfm
F registermain		F apply
F report		F patch
F reset		T patches
T vectors		F register
<b>constructors</b>	table	F report
F addcharacters		F register
F addcoreunicodes		F report
F aftercopyingcharacters		N factor
F applyfinalizers		T features
F applymanipulators		D afm
F assignmathparameters		D otf
F beforecopyingcharacters		D tfm
D cache		F finalize
F calculatescale		F getfeatureaction
F checkedfeatures		F getmathparameter
F checkedfilename		F getprivate
F collectprocessors		T handlers
		T afm

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

T readers	F single
F addunicodetable	F gvar
F avar	F head
F cbdt	T helpers
F cblc	F axistofactors
F cff	F cleannname
F cff2	F getaxisscale
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 readcardinal	F writeinteger1le
F readcardinal1	F writeinteger2
F readcardinal1le	F writeinteger2le
F readcardinal2	F writeinteger3
F readcardinal2le	F writeinteger3le
F readcardinal3	F writeinteger4
F readcardinal3le	F writeinteger4le
F readcardinal4	F writestring
F readcardinal4le	F stripredundant
F readcardinaltable	F svg
F readchar	N tableversion
F readcline	F unifymissing
F readcstring	F unpack
F readfixed2	F vhea
F readfixed4	F vmtx
F readinteger	F vorg
F readinteger1	F vvar
F readinteger1le	F woff2otf
F readinteger2	F registerpalette
F readinteger2le	F registerplugin
F readinteger3	F reorderlookups
F readinteger3le	F scriptandlanguage
F readinteger4	F setdynamics
F readinteger4le	F setfeatures
F readintegertable	T statistics
F readsignedbyte	D usedfeatures
F readstring	D svgcache
F readtag	B svgenabled
F setposition	T tables
F size	D baselines
F skip	D features
F skiplong	D featuretypes
F skipposition	D languages
F skipshort	D scripts
F writebyte	F texthandler
F writecardinal1	N version
F writecardinal1le	T pfb
F writecardinal2	F loadvector
F writecardinal2le	T tfm
F writecardinal3	D cache
F writecardinal3le	D features
F writecardinal4	N maxnestingdepth
F writecardinal4le	N maxnestingsize
F writeinteger1	T readers



F loadpk  
 F loadtfm  
 F loadtfmfvf  
 F loadvfvf  
 F pktopdf  
 F showpk  
 F reencode  
 F setfeatures  
 N version  
 T vf  
 T combinations  
 F combine  
 T combiner  
 D commands  
 D helpers  
 D math  
 N version  
 D whatever  
 F hashfeatures  
 F hashinstance  
 T hashmethods  
 F normal  
 F virtual  
 F initializefeatures  
 D loadedfonts  
 N noffontsloaded  
 N nofsharedfonts  
 N nofsharedhashes  
 N nofsharedvectors  
 N privateoffset  
 D privateslots  
 F readanddefine  
 F registerfeature  
 F resetfeature  
 B resolvevirtualtoo  
 F scale  
 F scaled  
 F setfactor  
 F setfeature  
 F setmathparameter  
 F setname  
 B sharefonts  
 F trytosharefont  
 N version

**current**                    function  
**currentid**                function  
**definers**                table

F addlookup  
 F analyze  
 F applypostprocessors  
 F checkedmode  
 F checkedscript  
 S defaultlookup  
 F define  
 F getspecification  
 F internal  
 F loadfont  
 F makespecification  
 T methods  
 F install  
 D variants  
 F read  
 F register  
 F registered  
 F registerfallbackfont  
 F registersplit  
 F resetnullfont  
 F resolve  
 T resolvers  
 F file  
 F name  
 F spec

**definetypface**            function  
**dropins**                table

F clone  
 F getshape  
 F getshapes  
 F nextid  
 F provide  
 F registerglyph  
 F registerglyphs  
 F swap  
 F swapone

**encodings**                table

T agl  
 D ctxcodes  
 D extras  
 D names

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

## helpers table

F addextraprivate  
F addprivate  
F appendcommands  
F appendcommandtable  
F checkflags  
F checkmerge  
F checksteps  
F collectanchors  
F combineglyphs  
D commands  
F composecharacters  
F descriptiontoslot  
F dimenfactor  
F expandglyph  
T extraprivates  
F fontpatternhassize  
F getcoloredglyphs  
F getdigitwidth  
F getinstancespec  
F getparameters  
F getprivatecharornode  
F getprivatenode  
F getprivates  
F getprivateslot  
F hasprivate  
F indextoslot  
F mathscriptslots  
F name  
F nametoslot  
F newprivateslot  
F prependcommands  
F prependcommandtable  
F privateslot  
F registerglyphbox  
F scalecommands  
F setboxdirectly  
F setboxglyph  
F setboxglyphs  
F setdigitwidth  
F setmetaglyph  
F setmetaglyphs  
F splitfontpattern  
F tochar

T vfinjectors  
F pdf  
F startcolor  
F stopcolor  
T vfspecials  
T backgrounds  
T outlines

## infofont function

## iterators table

F characters  
F descriptions  
F glyphs

## loggers table

F format  
F onetimemessage  
F register  
F reportdefinedfonts  
F reportusedfeatures

## mappings table

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

## metapost table

F boundingbox  
F boxtomp  
F draw  
F fill  
F glyph  
F maxbounds  
F paths  
F widthline  
F zeroline

## names data table

## nulldata data table

## privateoffsets table

B keepnames

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

# functions (context)

**dummy** function

# graphics (context)

## backgrounds table

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

## bitmaps table

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

## identifiers table

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

## identify function

## synchronizers table

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

## gzip (extra lua)

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

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

# images (context)

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



# interactions (context)

**attachments** data table

**fields** table

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

**general** table

- F getidentity
- F 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**s data table

**pages** table

F setpagetransition

F setupcanvas

**references** table

F setcloseddocument

F setclosepage

F setopendocument

F setopenpage

**renderings** data table

**soundclips** data table

# interfaces (context)

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

## io (basic lua)

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

# job (context)

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

F gettobesaved  
F getvpos  
F hangafter  
F hangindent  
F height  
F hsize  
N lastx  
N lasty  
F leftskip  
F lowerleft  
F lowerright  
F markregionbox  
F n  
F onsamepage  
F overlapping  
F p  
F page  
T pagedata  
F paragraph  
F parindent  
F position  
F r  
F region  
F registerhandlers  
F replace  
F rightskip  
F set  
F setall  
F setregionbox  
F setspec

F settobesaved  
D tobесaved  
F upperleft  
F upperright  
F used  
F whd  
F width  
F x  
F xy  
F y

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

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

**variables**

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

**version**

function  
function  
table

table

number

## language (basic tex)

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

<b>id</b>	function
<b>new</b>	function
<b>patterns</b>	function
<b>postexhyphenchar</b>	function
<b>posthyphenchar</b>	function
<b>preexhyphenchar</b>	function
<b>prehyphenchar</b>	function
<b>sethjcode</b>	function
<b>setwordhandler</b>	function

# languages (context)

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

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



# layouts (context)

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

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

## lfs (extra lua)

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

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

## libraries (context)

**basiclua** data table

**basictex** data table

**builtin** data table

**extralua** data table

**extratex** data table

**functions** data table

**globals** data table

# lmx (context)

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

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

# logs (context)

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

# lpdf (context)

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

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

<b>objectcompresslevel</b>	function	T dejavusansmonoboldttf-1
<b>pagereference</b>	function	T characters
<b>patternstream</b>	function	T descriptions
<b>pdfcolor</b>	function	T fonts
<b>pdftimestamp</b>	function	T goodies
<b>pdfvfimage</b>	function	S original
<b>permitdetail</b>	function	T parameters
<b>print</b>	function	N ascender
<b>procset</b>	function	N descender
<b>protectresources</b>	boolean	N designsize
<b>rectangle</b>	function	T expansion
<b>reference</b>	function	N shrink
<b>registerannotation</b>	function	N step
<b>registerdestination</b>	function	N stretch
<b>registerdocumentfinalizer</b>	function	N extendfactor
<b>registerfont</b>	function	N extra_space
<b>registerpagefinalizer</b>	function	N extrafactor
<b>registerpattern</b>	function	N factor
<b>reserveobject</b>	function	N forcedsize
<b>rgbcode</b>	function	N hfactor
<b>rotationcm</b>	function	N mathsize
<b>setcompression</b>	function	N maxsize
<b>setincludecidset</b>	function	N minsize
<b>setpageorder</b>	function	N mode
<b>setpagetag</b>	function	N quad
<b>settime</b>	function	N scaledpoints
<b>setversion</b>	function	N size
<b>sharedobject</b>	function	N slant
<b>shareobject</b>	function	N slantfactor
<b>shareobjectreference</b>	function	N space
<b>spotcode</b>	function	N space_shrink
<b>stream</b>	function	N space_stretch
<b>string</b>	function	N squeezefactor
<b>toeight</b>	function	N textsize
<b>topdfdoc</b>	function	N units
<b>tosixteen</b>	function	N vfactor
<b>transparency</b>	function	N width
<b>transparencycode</b>	function	N x_height
<b>transparencygroups</b>	table	T properties
B none		S filename
<b>transparencyvalue</b>	function	B finalized
<b>unicode</b>	function	S fontname
<b>usedcharacters</b>	table	S format
<b>usedfontstreams</b>	table	S fullname



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

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

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

N Q  
N R  
N Racute  
N Rcaron  
N Rcommaaccent  
N Rho  
N S  
N Sacute  
N Scaron  
N Scedilla  
N Scircumflex  
N Scommaaccent  
N Sigma  
N T  
N Tau  
N Tbar  
N Tcaron  
N Tcommaaccent  
N Theta  
N Thorn  
N Tilde  
N U  
N Ugrave  
N Uhorn  
N Uhungarumlaut  
N Umacron  
N Uogonek  
N Upsilon  
N Upsilonl  
N Upsilonlondieresis  
N Upsilonlontonos  
N Uring  
N Utilde  
N V  
N W  
N Wacute  
N Wcircumflex  
N Wdieresis  
N Wgrave  
N X  
N Xi  
N Y  
N Yacute  
N Ycircumflex

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

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

N i	N lslash
N iacute	N ltshade
N ibreve	N m
N icircumflex	N macron
N idieresis	N male
N igrave	N minus
N ij	N minute
N imacron	N mu
N infinity	N multiply
N integral	N musicalnote
N integralbt	N musicalnotedbl
N integraltp	N n
N intersection	N nacute
N invbullet	N napostrophe
N invcircle	N ncaron
N invsmileface	N ncommaaccent
N iogonek	N nine
N iota	N nonbreakingspace
N iotadieresis	N nonmarkingreturn
N iotadieresis-tonos	N notdef
N iotatonos	N notelement
N itilde	N notequal
N j	N notsubset
N jcircumflex	N ntilde
N jot	N nu
N k	N numbersign
N kappa	N o
N kcommaaccent	N oacute
N kgreenlandic	N obreve
N l	N ocircumflex
N lacute	N odieresis
N lambda	N oe
N lcaron	N ogonek
N lcommaaccent	N ograve
N ldot	N ohorn
N less	N ohungarumlaut
N lessequal	N omacron
N lfblock	N omega
N lira	N omega1
N logicaland	N omegatonos
N logicalnot	N omicron
N logicalor	N omicrontonos
N longs	N one
N lozenge	N oneeighth

N onehalf  
N onequarter  
N onesuperior  
N onethird  
N openbullet  
N ordfeminine  
N ordmasculine  
N orthogonal  
N oslash  
N oslashacute  
N otilde  
N p  
N paragraph  
N parenleft  
N parenright  
N partialdiff  
N percent  
N period  
N periodcentered  
N perpendicular  
N perthousand  
N peseta  
N phi  
N phil  
N pi  
N plus  
N plusminus  
N product  
N propersubset  
N propersuperset  
N proportional  
N psi  
N q  
N question  
N questiondown  
N quotedbl  
N quotedblbase  
N quotedblleft  
N quotedblright  
N quoteleft  
N quotereversed  
N quoteright  
N quotesinglbase  
N quotesingle

N r  
N racute  
N radical  
N rcaron  
N rcommaaccent  
N reflexsubset  
N reflexsuperset  
N registered  
N revlogicalnot  
N rho  
N ring  
N rtblock  
N s  
N sacute  
N scaron  
N scedilla  
N scircumflex  
N scommaaccent  
N second  
N section  
N semicolon  
N seven  
N seveneighths  
N sfthyphen  
N shade  
N sigma  
N sigmal  
N similar  
N six  
N slash  
N smileface  
N space  
N spade  
N sterling  
N suchthat  
N summation  
N sun  
N t  
N tau  
N tbar  
N tcaron  
N tcommaaccent  
N therefore  
N theta

N theta1	N x
N thinquestion	N xi
N thorn	N y
N three	N yacute
N threeeighths	N ycircumflex
N threequarters	N ydieresis
N threesuperior	N yen
N tilde	N ygrave
N tildecomb	N z
N tonos	N zacute
N trademark	N zcaron
N triagdn	N zdotaccent
N triaglf	N zero
N triagrt	N zeta
N triagup	S version
N two	T shared
N twosuperior	T dynamics
N twothirds	T features
N u	B analyze
N ugrave	B checkmarks
N uhorn	B devanagari
N uhungarumlaut	B dummies
N umacron	B extensions
N underbar	B extrafeatures
N underbar.small	B extraprivates
N underbar.wide	B features
N underscore	B mathrules
N underscoredbl	S mode
N union	N number
N universal	B spacekern
N uogonek	B visualspace
N upblock	T processes
N upsilon	T rawdata
N upsilondieresis	S cache_uuid
N upsilondieresis-tonos	N cache_version
N upsilontonos	B compacted
N uring	S creator
N utilde	T descriptions
N v	B expanded
N w	S format
N wacute	T goodies
N wcircumflex	T lookuphash
N wdieresis	T metadata
N wgrave	N ascender



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

N italicangle	S fullname	
N maxsize	B hasmath	
N minsize	N id	
N quad	S mode	
N slant	B monospaced	
N space	S name	
N space_shrink	N private	
N space_stretch	S psname	
N units	B setitalics	
N vheight	S space	
N x_height	N subfont	
T properties	S writingmode	
S filename	<b>usedindices</b>	table
S fontname	T dejavusansmonoboldttf-1	
S format	<b>verbose</b>	function

## lpeg (basic lua)

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

# lua (basic tex)

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

# luatex (context)

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

# lxml (context)

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

<b>rawroot</b>	function
<b>rawtex</b>	function
<b>refatt</b>	function
<b>register</b>	function
<b>registerentity</b>	function
<b>removesetup</b>	function
<b>replace</b>	function
<b>resetcdata</b>	function
<b>resetsetups</b>	function
<b>resolvedentity</b>	function
<b>root</b>	function
<b>save</b>	function
<b>serialize</b>	function
<b>setaction</b>	function
<b>setatt</b>	function
<b>setattribute</b>	function
<b>setcdata</b>	function
<b>setcommandtonone</b>	function
<b>setcommandtotext</b>	function
<b>setpar</b>	function
<b>setparam</b>	function
<b>setparameter</b>	function
<b>setsetup</b>	function
<b>snippet</b>	function

<b>sorters</b>	table
F add	
F compare	
F flush	
F reset	
F show	
F sort	
<b>splitid</b>	function
<b>startraw</b>	function
<b>startunesescaped</b>	function
<b>stopraw</b>	function
<b>stopunesescaped</b>	function
<b>store</b>	function
<b>strip</b>	function
<b>stripped</b>	function
<b>tag</b>	function
<b>text</b>	function
<b>tobuffer</b>	function
<b>tofile</b>	function
<b>toparameters</b>	function
<b>toverbatim</b>	function
<b>verbatim</b>	function
<b>withindex</b>	function
<b>xmltexhandler</b>	data table

## math (basic lua)

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



# mathematics (context)

<b>addfallbacks</b>	function	<b>mapremap</b>	data table
<b>alphabets</b>	data table	<b>overloadparameters</b>	function
<b>alternatives</b>	data table	<b>privatebase</b>	number
<b>big</b>	function	<b>registerdomain</b>	function
<b>boldmap</b>	data table	<b>registerfallbackid</b>	function
<b>categories</b>	table	<b>remapalphabets</b>	function
D functions		<b>renderings</b>	table
<b>charactersets</b>	data table	D mappings	
<b>checkaccentbaseheight</b>	function	D numbers	
<b>checkprivateparameters</b>	function	D sets	
<b>classes</b>	data table	<b>renderset</b>	function
<b>codes</b>	data table	<b>resetattributes</b>	function
<b>collected</b>	function	<b>resetitalics</b>	function
<b>define</b>	function	<b>resolvefallbacks</b>	function
<b>dimensions</b>	function	<b>scaleparameters</b>	function
<b>domains</b>	table	<b>setdomain</b>	function
<b>extensiblecode</b>	function	<b>setitalics</b>	function
<b>extensibles</b>	data table	<b>setridofprime</b>	function
<b>extrabase</b>	number	<b>sets</b>	data table
<b>extras</b>	table	<b>startcollecting</b>	function
F add		<b>stopcollecting</b>	function
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)

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

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

# metapost (context)

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

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

<b>reset</b>	function	<b>svgtomp</b>	function
<b>resetlastlog</b>	function	<b>svgtopdf</b>	function
<b>resetplugins</b>	function	<b>sxsy</b>	function
<b>run</b>	function	<b>tex</b>	table
<b>runinternal</b>	function	F get	
<b>runscript</b>	function	F reset	
<b>scanparameters</b>	function	F set	
<b>scripterror</b>	function	F setfrombuffer	
<b>scriptindex</b>	function	<b>texerrors</b>	boolean
<b>setbendtolerance</b>	function	<b>texexp</b>	function
<b>setextensions</b>	function	<b>theclippath</b>	function
<b>setlogging</b>	function	<b>tographic</b>	function
<b>setoutercolor</b>	function	<b>totable</b>	function
<b>setparameterset</b>	function	<b>types</b>	table
<b>setrecord</b>	function	N boolean	
<b>settext</b>	function	N cmykcolor	
<b>setvariable</b>	function	N color	
<b>showlog</b>	boolean	N dependent	
<b>showsvgpage</b>	function	N independent	
<b>simple</b>	function	N known	
<b>splitprescript</b>	function	N numeric	
<b>startgraphic</b>	function	N pair	
<b>startsvghashing</b>	function	N path	
<b>stopgraphic</b>	function	N pen	
<b>stopsvghashing</b>	function	N picture	
<b>svformat</b>	function	N protodependent	
<b>svgcolorremapper</b>	function	N string	
<b>svgfactors</b>	table	N structured	
N %		N suffixedmacro	
N bp		N tokenlist	
N cm		N transform	
N em		N unknownboolean	
N ex		N unknownpath	
N in		N unknownpen	
N mm		N unknownpicture	
N pc		N unknownstring	
N pt		N unsuffixedmacro	
N px		N vacuous	
<b>svgglyphtomp</b>	function	<b>typesvgpage</b>	function
<b>svgshapestomp</b>	function	<b>unload</b>	function
<b>svgshapestopdf</b>	function	<b>untagvariable</b>	function
<b>svgsplitcolor</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>expandtex</b>	function
F direct1		<b>fill</b>	function
F direct2		<b>flatten</b>	function
F direct3		<b>flush</b>	function
F direct4		<b>format</b>	function
F draw		<b>formatted</b>	function
F fill		<b>fprint</b>	function
F flush		<b>fromhash</b>	function
F fprint		<b>get</b>	table
F integer		F hashentry	
F number		<b>graphformat</b>	function
F numeric		<b>inhash</b>	function
F pair		<b>inject</b>	function
F pairpoints		F boolean	
F path		F cmykcolor	
F pathpoints		F color	
F points		F integer	
F print		F number	
F quadruple		F numeric	
F quadruplepoints		F pair	
F quoted		F path	
F size		F quadruplet	
F string		F string	
F transform		F transform	
F triplet		F triplet	
F tripletpoints		F whatever	
F vprint		<b>integer</b>	function
<b>boolean</b>	function	<b>isarray</b>	function
<b>cleaned</b>	function	<b>isobject</b>	function
<b>color</b>	function	<b>lmt_color_functions</b>	table
<b>dataset</b>	function	F shade	
<b>datasets</b>	function	F step	
F load		<b>lmt_contours_bitmap_get</b>	function
<b>dimension</b>	function	<b>lmt_contours_bitmap_set</b>	function
<b>direct</b>	function	<b>lmt_contours_cleanup</b>	function
<b>direct1</b>	function	<b>lmt_contours_color</b>	function
<b>direct2</b>	function	<b>lmt_contours_edge_get_band</b>	function

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



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

## mplib (extra tex)

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

# noads (context)

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

## node (basic tex)

<b>checkdiscretionaries</b>	function	F flushlist
<b>checkdiscretionary</b>	function	F flushnode
<b>copy</b>	function	F free
<b>copy_list</b>	function	F get_attribute
<b>copylist</b>	function	F get_attributes
<b>count</b>	function	F getattribute
<b>current_attributes</b>	function	F getattributelist
<b>currentattributes</b>	function	F getattributes
<b>dimensions</b>	function	F getboth
<b>direct</b>	table	F getbox
F addmargins		F getchar
F addxoffset		F getcharspec
F addxymargins		F getdata
F addyoffset		F getdepth
F appendaftertail		F getdirection
F checkdiscretionaries		F getdisc
F checkdiscretionary		F getdiscpart
F collapsing		F getexpansion
F copy		F getfam
F copy_list		F getfield
F copylist		F getfont
F copyonly		F getglue
F count		F getglyphdata
F current_attributes		F getglyphdimensions
F currentattributes		F getheight
F dimensions		F getid
F effective_glue		F getindex
F effectiveglue		F getkern
F end_of_math		F getkerndimension
F endofmath		F getlanguage
F exchange		F getleader
F fields		F getlist
F find_node		F getnext
F findattribute		F getnormalizedline
F findattributerange		F getnucleus
F findnode		F getoffsets
F first_glyph		F getoptions
F firststglyph		F getorientation
F flattendiscretionaries		F getparstate
F flush_list		F getpenalty
F flush_node		F getpost

F getpre	F isglyph
F getprev	F isnextchar
F getpropertystable	F isnextglyph
F getproperty	F isnode
F getreplace	F isprevchar
F getscale	F isprevglyph
F getscales	F isvalid
F getscript	F iszeroglue
F getshift	F kerning
F getstate	F length
F getsub	F ligaturing
F getsubpre	F makeextensible
F getsubtype	F migrate
F getsup	F mlist_to_hlist
F getsuppre	F mlistttohlist
F getsynctexfields	F naturalhsize
F gettotal	F naturalwidth
F getwhd	F new
F getwidth	F patchattributes
F getxscale	F prependbeforehead
F getxyscales	F protect_glyph
F getyscale	F protect_glyphs
F has_attribute	F protectglyph
F has_field	F protectglyphs
F has_glyph	F protrusionskipppable
F hasattribute	F rangedimensions
F hasdimensions	F remove
F hasfield	F reverse
F hasglyph	F set_attribute
F hasglyphoption	F set_attributes
F hpack	F setattribute
F hyphenating	F setattributelist
F id	F setattributes
F ignoremathskip	F setboth
F insert_after	F setbox
F insert_before	F setchar
F insertafter	F setdata
F insertbefore	F setdepth
F is_char	F setdirection
F is_glyph	F setdisc
F is_node	F setdiscpart
F is_valid	F setexpansion
F is_zero_glue	F setfam
F ischar	F setfield

F setfont	F tostring	
F setglue	F tovaliddirect	
F setglyphdata	F traverse	
F setheight	F traverse_char	
F setindex	F traverse_content	
F setkern	F traverse_glyph	
F setlanguage	F traverse_id	
F setleader	F traverse_list	
F setlink	F traversechar	
F setlist	F traversecontent	
F setnext	F traverseglyph	
F setnucleus	F traverseid	
F setoffsets	F traverselist	
F setoptions	F type	
F setorientation	F types	
F setpenalty	F unprotect_glyph	
F setpost	F unprotect_glyphs	
F setpre	F unprotectglyph	
F setprev	F unprotectglyphs	
F setproperty	F unset_attribute	
F setreplace	F unset_attributes	
F setscales	F unsetattribute	
F setscript	F unsetattributes	
F setshift	F usedlist	
F setsplit	F uses_font	
F setstate	F usesfont	
F setsub	F values	
F setsubpre	F verticalbreak	
F setsubtype	F vpack	
F setup	F write	
F setsuppre	F xscaled	
F setsynctexfields	F yscaled	
F settotal	<b>effective_glue</b>	function
F setwhd	<b>effectiveglue</b>	function
F setwidth	<b>end_of_math</b>	function
F show	<b>endofmath</b>	function
F slide	<b>family_font</b>	function
F softenhyphens	<b>fields</b>	<b>function</b>
F start_of_par	<b>findattribute</b>	function
F startofpar	<b>first_glyph</b>	function
F subtypes	<b>firstglyph</b>	function
F tail	<b>flattendiscretionaries</b>	function
F todirect	<b>flush_list</b>	function
F tonode	<b>flush_node</b>	function

<b>flushlist</b>	function	<b>mlisttohlist</b>	function
<b>flushnode</b>	function	<b>new</b>	function
<b>free</b>	function	<b>protect_glyph</b>	function
<b>get_attribute</b>	function	<b>protect_glyphs</b>	function
<b>getattribute</b>	function	<b>protectglyph</b>	function
<b>getfield</b>	function	<b>protectglyphs</b>	function
<b>getglue</b>	function	<b>protrusionskipable</b>	function
<b>getpropertystable</b>	function	<b>rangedimensions</b>	function
<b>getproperty</b>	function	<b>remove</b>	function
<b>has_attribute</b>	function	<b>set_attribute</b>	function
<b>has_field</b>	function	<b>setattribute</b>	function
<b>has_glyph</b>	function	<b>setfield</b>	function
<b>hasattribute</b>	function	<b>setglue</b>	function
<b>hasfield</b>	function	<b>setproperty</b>	function
<b>hasglyph</b>	function	<b>show</b>	function
<b>hpack</b>	function	<b>slide</b>	function
<b>hyphenating</b>	function	<b>subtypes</b>	function
<b>id</b>	function	<b>tail</b>	function
<b>insert_after</b>	function	<b>tostring</b>	function
<b>insert_before</b>	function	<b>traverse</b>	function
<b>insertafter</b>	function	<b>traverse_id</b>	function
<b>insertbefore</b>	function	<b>traverseid</b>	function
<b>instock</b>	function	<b>type</b>	function
<b>inuse</b>	function	<b>types</b>	function
<b>is_node</b>	function	<b>unprotect_glyph</b>	function
<b>is_zero_glue</b>	function	<b>unprotect_glyphs</b>	function
<b>isnode</b>	function	<b>unprotectglyph</b>	function
<b>iszeroglue</b>	function	<b>unprotectglyphs</b>	function
<b>kerning</b>	function	<b>unset_attribute</b>	function
<b>last_node</b>	function	<b>unsetattribute</b>	function
<b>lastnode</b>	function	<b>usedlist</b>	function
<b>length</b>	function	<b>usesfont</b>	function
<b>ligaturing</b>	function	<b>values</b>	function
<b>makeextensible</b>	function	<b>vpack</b>	function
<b>mlist_to_hlist</b>	function	<b>write</b>	function

## nodes (context)

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



F finalizelist		<b>is_display_math</b>	function
F flatten		<b>is_node</b>	function
F flattenline		<b>isnode</b>	function
F migrate		<b>kerncodes</b>	data table
F protectglyphs		<b>leftmarginwidth</b>	function
F recolor		<b>linefillers</b>	table
F show		D data	
F showhyphenation		F define	
F stripping		F enable	
F textbackgrounds		F filler	
F unprotectglyphs		F handler	
F visualizehyphenation		<b>lines</b>	table
F wipe		T boxed	
<b>has_attribute</b>	function	F addlinenumbers	
<b>has_field</b>	function	F register	
<b>hasattribute</b>	function	F setup	
<b>hasfield</b>	function	D data	
<b>hpack</b>	function	F finalize	
<b>idsandsubtypes</b>	function	F number	
<b>idstostring</b>	function	<b>link</b>	function
<b>injections</b>	table	<b>linked</b>	function
F copy		<b>list</b>	function
F getligaindex		<b>listcodes</b>	data table
F getthreshold		<b>listtoutf</b>	function
F handler		<b>literalvalues</b>	data table
F installgetspaceboth		<b>locate</b>	function
F installnewkern		<b>markers</b>	table
F isspace		F get	
F keepcounts		<b>mathcodes</b>	data table
F reset		<b>mathvalues</b>	data table
F resetcounts		<b>maxboxwidth</b>	function
F setcursive		<b>migrations</b>	table
F setkern		F setinserts	
F setligaindex		F setmarks	
F setmark		<b>new</b>	function
F setmove		<b>noadcodes</b>	data table
F setposition		<b>nadoptions</b>	table
F setspacekerns		N axis	
<b>insert_after</b>	function	N exact	
<b>insert_before</b>	function	N left	
<b>insertafter</b>	function	N middle	
<b>insertbefore</b>	function	N no_axis	
<b>insertlistafter</b>	function	N right	
<b>installattributehandler</b>	function	N set	

N unused_1		F endofmath
N unused_2		F exchange
<b>nodecodes</b>	<b>data table</b>	F find_attribute
<b>nopts</b>	<b>function</b>	F findattribute
<b>nuts</b>	<b>table</b>	F findnode
F addmargins		F first_glyph
F addxoffset		F firstcharacter
F addxymargins		F firstcharinbox
F addyoffset		F firstglyph
F append		F flattendiscretionaries
F appendaftertail		F flush
F apply		F flush_list
F applyvisuals		F flush_node
F checkdiscretionaries		F flushlist
F collapsing		F flushnode
T colors		F free
F set		F fullhpack
T components		F get_attribute
F copynocomponents		F get_synctex_fields
F copyonlyglyphs		F getattr
F count		F getattribute
F flush		F getattributelist
F get		F getattributes
F set		F getattrlist
F concat		F getattrrs
F copy		F getboth
F copy_list		F getbox
F copy_node		F getboxglue
F copy_only		F getchar
F copy_properties		F getcharspec
F copylist		F getcomponents
F copynode		F getdata
F copyonly		F getdepth
F copyvisual		F getdirection
F count		F getdisc
F countall		F getdiscpart
F current_attr		F getdiscretionary
F currentattributes		F getexpansion
F delete		F getfam
F dimensions		F getfield
F dirdimensions		F getfont
F effective_glue		F getglue
F effectiveglue		F getglyphdata
F end_of_math		F getglyphdimensions

F getheight	F has_glyph
F getid	F hasattribute
F getindex	F hasdimensions
F getkern	F hasfield
F getkerndimension	F hasglyph
F getlang	F hasglyphoption
F getlanguage	F hpack
F getleader	F hyphenating
F getlist	F ignoremathskip
F getnext	F insert_after
F getnormalizedline	F insert_before
F getnucleus	F insertafter
F getoffsets	F insertbefore
F getoptions	F insertlistafter
F getorientation	F is_display_math
F getpenalty	F is_node
F getpost	F is_zero_glue
F getpre	F ischar
F getprev	F isdone
F getprop	F isglyph
F getreplace	F isnextchar
F getruledata	F isnextglyph
F getscale	F isnode
F getscales	F isprevchar
F getscrip	F isprevglyph
F getshift	F iszeroglue
F getstate	F kerning
F getsub	F length
F getsubpre	F ligaturing
F getsubtype	F link
F getsup	F linked
F getsuppre	F locate
F getsurround	F migrate
F getsyntexfields	F mlist_to_hlist
F gettotal	F mlisttohlist
F getvalue	F naturalhsize
F getwhd	F naturalwidth
F getwidth	F nestedtracedslide
F getxscale	F new
F getxyscales	F patchattributes
F getyscale	T pool
F has_attribute	F accent
F has_dimensions	F baselineskip
F has_field	F boundary

F choice	F setstate
F cleanup	F shrink
F delim	F startrotation
F delimiter	F stock
F direction	F stretch
F directliteral	F subbox
F disc	F sublist
F emptyrule	F temp
F fence	F usage
F fontkern	F userdefined
F fraction	T userids
F glue	F usernode
F gluespec	F userrule
F glyph	F vlist
F hlist	F wordboundary
F indentskip	F prepend
F italicern	F prependbeforehead
F kern	F processranges
F latelua	F processwords
F leader	F protect_glyph
F lefthangskip	F protect_glyphs
F leftmarginkern	F protectglyph
F leftskip	F protectglyphs
F lineskip	F protrusionskipable
F literal	F rangedimensions
F mathchar	F rawprop
F mathtextchar	F reference
F negatedglue	F rehpac
F noad	F remove
F originliteral	F repackhlist
F outlinerule	F replace
F pageliteral	F reverse
F penalty	T rules
F radical	T ruleactions
F rawliteral	F box
F register	F draw
F restore	F fill
F righthangskip	F mp
F rightmarginkern	F stroke
F rightskip	F userrule
F rule	F set_attribute
F save	F setattr
F savepos	F setattribute
F setmatrix	F setattributelist

F setattributes	F setsplit
F setattrlist	F setstate
F setattr	F setsub
F setboth	F setsubpre
F setbox	F setsubtype
F setboxglue	F setsup
F setchar	F setsuppre
F setcomponents	F setsurround
F setdata	F setsyntexfields
F setdepth	F setvalue
F setdirection	F setvisual
F setdisc	F setvisuals
F setdiscpart	F setwhd
F setdiscretionary	F setwidth
F setexpansion	F show
F setfam	F slide
F setfield	F softenhyphens
F setfont	F somepenalty
F setglue	F somespace
F setglyphdata	F splitbox
F setheight	F start_of_par
F setkern	F startofpar
F setlang	F striprange
F setlanguage	F tail
F setleader	F takeattr
F setlink	F takebox
F setlist	F takelist
F setnext	F theprop
F setnucleus	F tonode
F setoffsets	F tonodes
F setoptions	F tonut
F setorientation	F tosequence
F setparproperty	F toString
F setpenalty	F tracedslide
F setpost	F traverse
F setpre	F traverse_char
F setprev	F traverse_glyph
F setprop	F traverse_id
F setreplace	F traverse_list
F setruledata	F traversechar
F setscale	F traversecontent
F setscales	F traverseglyph
F setscript	F traverseid
F setshift	F traverselist

T traversers		S name	
F boundary		T namespace	
F char		N attribute	
F content		D data	
F dir		F enable	
F disc		F handler	
F glue		F register	
F glyph		D registered	
F hlist		D values	
F list		F processor	
F next		<b>points</b>	function
F node		<b>pool</b>	table
F vlist		F baselineskip	
F whatsit		F cleanup	
T typesetters		F directlliteral	
F tohbox		F glyph	
F tohpack		F hlist	
F tonodes		F latelua	
F toinbox		F lineskip	
F toinbox		F literal	
F toinbox		F originlliteral	
F unprotect_glyph		F register	
F unprotect_glyphs		F restore	
F unprotectglyph		F rule	
F unprotectglyphs		F save	
F unset_attribute		F savepos	
F unsetattribute		F setmatrix	
F unsetattributes		F stock	
F untracedslide		F usage	
F usedlist		F usernode	
F uses_font		F vlist	
F usesfont		<b>prepend</b>	function
F verticalbreak		<b>print</b>	function
F vianodes		<b>processors</b>	table
F vianuts		F contribute_filter	
F vpack		F glyph_run	
F write		F post_linebreak_filter	
F xscaled		F pre_linebreak_filter	
F yscaled		F trace_glyph_run_a	
<b>packlist</b>	function	F trace_glyph_run_b	
<b>parcodes</b>	data table	<b>properties</b>	table
<b>penaltycodes</b>	data table	T data	
<b>plugindata</b>	table	<b>pts</b>	function
F finalizer		<b>radicalcodes</b>	data table
F initializer			

<b>references</b>	table	<b>skipcodes</b>	data table
N attribute		<b>snapshots</b>	table
T done		F getsamples	
F handler		F resetsamples	
T stack		F takesample	
<b>reheap</b>	function	<b>somepenalty</b>	function
<b>remove</b>	function	<b>somespace</b>	function
<b>repackhlist</b>	function	<b>specialskipcodes</b>	table
<b>replace</b>	function	<b>splitbox</b>	function
<b>report</b>	function	<b>startofpar</b>	function
<b>rightmarginwidth</b>	function	<b>stripdiscretionaries</b>	function
<b>rulecodes</b>	data table	<b>stripping</b>	table
<b>rules</b>	table	T glyphs	
D data		F set	
F define		<b>subtypes</b>	data table
F enable		<b>tail</b>	function
F handler		<b>takeattr</b>	function
F process		<b>takebox</b>	function
F userrule		<b>tasks</b>	table
<b>serialize</b>	function	F actions	
<b>serializebox</b>	function	F appendaction	
<b>set_attribute</b>	function	F disableaction	
<b>setattr</b>	function	F disablegroup	
<b>setattribute</b>	function	F enableaction	
<b>setboth</b>	function	F enablegroup	
<b>setbox</b>	function	F freeze	
<b>setboxtonaturalwd</b>	function	F freezegroup	
<b>setchar</b>	function	F new	
<b>setfield</b>	function	F prependaction	
<b>setfont</b>	function	F removeaction	
<b>setleader</b>	function	F replaceaction	
<b>setlink</b>	function	F restart	
<b>setlist</b>	function	F setaction	
<b>setnext</b>	function	F showactions	
<b>setprev</b>	function	F table	
<b>setproperty</b>	function	<b>tobasepoints</b>	function
<b>shifts</b>	table	<b>tocentimeters</b>	function
D data		<b>tociceros</b>	function
F define		<b>todidots</b>	function
F enable		<b>todimen</b>	function
F handler		<b>toinches</b>	function
<b>showboxes</b>	function	<b>tomillimeters</b>	function
<b>showlist</b>	function	<b>tonode</b>	function
<b>showsimplelist</b>	function	<b>tonodes</b>	function

<b>tonut</b>	function	F start	
<b>topics</b>	function	F stop	
<b>topoints</b>	function	F stop	
<b>toscaledpoints</b>	function	T transparencies	
<b>tosequence</b>	function	F reset	
<b>tostring</b>	function	F set	
<b>totable</b>	function	F setlist	
<b>totree</b>	function	<b>traverse</b>	function
<b>toutf</b>	function	<b>traverse_id</b>	function
<b>tracers</b>	table	<b>traverseid</b>	function
		<b>typesetters</b>	table
T colors		F hbox	
F reset		F hpack	
F set		F tohbox	
F setlist		F tohpack	
F directions		F tonodes	
F fontchar		F toinbox	
T frequencies		F toinbox	
F register		F toinbox	
T pool		F toinbox	
T nodes		F toinbox	
F rule		F toinbox	
T nuts		F toinbox	
F rule		F toinbox	
F resetproperties		<b>unset_attribute</b>	function
F rule		<b>unsetattribute</b>	function
F setlist		<b>usedlist</b>	function
F setproperties		<b>vianodes</b>	function
F start		<b>vianuts</b>	function
T steppers		<b>visualizebox</b>	function
F check		<b>visualizers</b>	table
F codes		F attribute	
F features		T attributes	
F font		F box	
F glyphs		F handler	
F message		F markfonts	
F messages		F register	
F nofsteps		F setfont	
F register		F setlayer	
F reset		F setruledglyph	
		F setvisual	
		<b>vpack</b>	function
		<b>whatsitcodes</b>	data table
		<b>write</b>	function



## number (context)

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

## objects (context)

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

# optional (context)

## **curl** table

F escape  
F fetch  
F getversion  
F initialize  
F unescape

## **foreign** table

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

## **ghostscript** table

F execute  
F initialize

## **graphicsmagick** table

F execute  
F initialize

## **hb** table

F getshapers  
F getversion  
F initialize  
F loadfont  
F shapestring

## **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

## **lz4** table

F compress  
F decompresssize

F framecompress  
F framedecompress  
F initialize

## **lzma** table

F compress  
F decompress  
F initialize

## **lzo** table

F compress  
F decompresssize  
F initialize

## **mujs** table

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

## **mysql** table

F close  
F execute  
F getmessage  
F initialize  
F open

## **postgres** table

F close  
F execute  
F getmessage  
F initialize  
F open

## **sqlite** table

F close  
F execute  
F getmessage  
F initialize  
F open

## **zint** table

F execute	F compress
F initialize	F decompress
<b>zstd</b>	F initialize
table	

## os (basic lua)

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

## package (basic lua)

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

# pagebuilders (context)

## columnsets      table

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

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

## injections      table

- F flushafter
- F flushbefore
- F save

## mixedcolumns      table

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

pdf (basic tex)

**immediateobj** function



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

# physics (context)

**units** table

F registerunit

D tables

## pngdecode (extra tex)

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

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

# publications (context)

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

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

**variableofformat**  
**variableofformatorsuffix**

function  
function

**wildcardpattern**

function

## sandbox (context)

<b>disablelibraries</b>	function
<b>disablerunners</b>	function
<b>enable</b>	function
<b>filehandlerone</b>	function
<b>filehandlertwo</b>	function
<b>finalizer</b>	function
<b>getrunner</b>	function
<b>initializer</b>	function
<b>iohandler</b>	function
<b>logcalls</b>	function
<b>logfiles</b>	function
<b>original</b>	function
<b>overload</b>	function

<b>possiblepath</b>	function
<b>redefine</b>	function
<b>register</b>	function
<b>registerbinary</b>	function
<b>registerlibrary</b>	function
<b>registerroot</b>	function
<b>registerrunner</b>	function
<b>report</b>	function
<b>setfilenamelogger</b>	function
<b>setlogger</b>	function
<b>setreporter</b>	function
<b>settrace</b>	function
<b>validfilename</b>	function

# scripts (context)

**autofontfeature** table

F disable  
F enable  
F handler

**colors** data table

**decomposehangul** function

**defaults** table

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

**getdata** function

**getinjector** function

**getsplitter** function

**getstatus** function

**handlers** data table

**helpers** data table

**injectors** data table

**inserters** table

F nobreakspace\_after

F nobreakspace\_before

F space\_after

F space\_before

F zerowidthspace\_after

F zerowidthspace\_before

**installdataset** function

**installmethod** function

**numbertodataset** data table

**numbertohandler** data table

**reset** function

**set** function

**setstatus** function

**splitters** data table

## set (context)

**contains**    function

**create**     function

**tolist**     function

**tonumber**   function

**totable**    function

## sha2 (extra lua)

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

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

## sio (extra lua)

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

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



# socket (extra lua)

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

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

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

# sorters (context)

**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

## sparse (context)

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

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

## statistics (context)

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

## storage (context)

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

## streams (context)

<b>collect</b>	function
<b>disable</b>	function
<b>enable</b>	function
<b>flush</b>	function
<b>initialize</b>	function

<b>push</b>	function
<b>start</b>	function
<b>stop</b>	function
<b>synchronize</b>	function



## string (basic lua)

<b>autodouble</b>	function	<b>nspaces</b>	table
<b>autosingle</b>	function	<b>optionalquoted</b>	function
<b>booleanstring</b>	function	<b>pack</b>	function
<b>byte</b>	function	<b>packsize</b>	function
<b>bytepairs</b>	function	<b>quote</b>	function
<b>bytes</b>	function	<b>quoted</b>	function
<b>bytetable</b>	function	<b>rep</b>	function
<b>char</b>	function	<b>replacenewlines</b>	function
<b>characterpairs</b>	function	<b>reverse</b>	function
<b>characters</b>	function	<b>split</b>	function
<b>checkedsplit</b>	function	<b>splitlines</b>	function
<b>collapsespaces</b>	function	<b>splitup</b>	function
<b>containsws</b>	function	<b>strip</b>	function
<b>count</b>	function	<b>sub</b>	function
<b>dawson</b>	function	<b>tformat</b>	function
<b>dump</b>	function	<b>toHEX</b>	function
<b>erf</b>	function	<b>toboollean</b>	function
<b>erfc</b>	function	<b>tobytes</b>	function
<b>erfcx</b>	function	<b>tocontext</b>	function
<b>erfi</b>	function	<b>todec</b>	function
<b>escapedpattern</b>	function	<b>todimen</b>	function
<b>escapedquotes</b>	function	<b>tohex</b>	function
<b>explode</b>	function	<b>tonodes</b>	function
<b>f6</b>	function	<b>topattern</b>	function
<b>find</b>	function	<b>totable</b>	function
<b>format</b>	function	<b>tounicode16</b>	function
<b>formatter</b>	function	<b>toutf</b>	function
<b>formatters</b>	function	<b>toutf32</b>	function
<b>fullstrip</b>	function	<b>toutf8</b>	function
<b>gmatch</b>	function	<b>tracedchar</b>	function
<b>gsub</b>	function	<b>tracedchars</b>	table
<b>is_boolean</b>	function	<b>unpack</b>	function
<b>is_empty</b>	function	<b>unquote</b>	function
<b>itself</b>	function	<b>unquoted</b>	function
<b>len</b>	function	<b>upper</b>	function
<b>limit</b>	function	<b>utfcharacter</b>	function
<b>linetable</b>	function	<b>utfcharacters</b>	function
<b>longtostring</b>	function	<b>utfcharacteratable</b>	function
<b>lower</b>	function	<b>utflength</b>	function
<b>match</b>	function	<b>utfpadd</b>	function
<b>nspaces</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>allocation</b>	function	F next
<b>blocks</b>	table	F prev
D collected		F previous
F define		F raw
F print		F record
F save		F reset
F select		F restart
F setstate		F restore
D states		F save
D tobesaved		F set
F uservariable		F setlevel
<b>bookmarks</b>	table	F setoffset
T extras		F setown
F get		F setstate
F mergesections		F setvalue
F register		T specials
F reset		F userpage
F tosections		F subs
F finalize		D tobesaved
F flatten		F value
F installhandler		F way
F merge		<b>currentsectionnumber</b> function
S method		<b>descriptions</b> table
F overload		<b>documents</b> table
F place		D data
F register		F initialize
F setopened		F preset
F setup		F reset
<b>counters</b>	table	<b>floats</b> table
F add		<b>formulas</b> table
F analyze		<b>helpers</b> table
F check		F analyze
D collected		F formulanumber
F compact		F merged
F converted		F page
F currentvalue		F pageofinternal
D data		F prefix
F define		F prefixlastpage
F first		F prefixpage
F get		F simplify
F last		F title

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

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

## pages table

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

## references table

- F analyze
- F checkedfile
- F checkedfileorurl
- F checkedprogram
- F checkedrealpage
- F checkedurl
- D collected
- U componentsplitter
- F currentmetadata
- F currentorder
- D currentset
- F define
- D defined
- D derived
- F enhance
- D executers

- F expandcurrent
- F export
- T files
  - T data
- F define
- F found
- F get
- F filter
- F filterdefault
- D filters
- D flaginternals
- F from
- D functions
- F get
- F getcurrentmetadata
- F getcurrentprefixspec
- F getinnermethod
- F getinternalcachedlistreference
- F getinternallistreference
- F getinternalreference
- F getoutermethod
- D handlers
- F identify
- F import
- F inject
- F injectcurrentset
- S innermethod
- D internals
- F load
- F loadpresets
- F mark
- S outermethod
- D pages
  - U prefixsplitter
- D productdata
- T programs
  - T data
- F define
- F get
- F realpageofpage
- U referencesplitter
- D referred
- F referredpage
- F registerfinalizer

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

**registers**

- F analyze

table

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

**sections**

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

table

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

## sets table

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

## specials table

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

## synonyms table

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

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

## tags table

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

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



## 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>getboxresourcebox</b>	function
<b>badness</b>	function	<b>getboxresourcedimensions</b>	function
<b>box</b>	table	<b>getcatcode</b>	function
<b>boxresources</b>	table	<b>getcount</b>	function
F getbox		<b>getdelcode</b>	function
F getdimensions		<b>getdelcodes</b>	function
F save		<b>getdelimtermodevalues</b>	function
F use		<b>getdimen</b>	function
<b>catcode</b>	table	<b>getdimensionvalue</b>	function
<b>chardef</b>	function	<b>getdiscoptionvalues</b>	function
<b>codes</b>	table	<b>getdiscstatevalues</b>	function
<b>conditionals</b>	data table	<b>geterrorvalues</b>	function
<b>constants</b>	data table	<b>getflagvalues</b>	function
<b>count</b>	table	<b>getfontoffamily</b>	function
<b>cprint</b>	function	<b>getfrozenparvalues</b>	function
<b>ctdcatcodes</b>	number	<b>getglue</b>	function
<b>ctxcatcodes</b>	number	<b>getglyphdata</b>	function
<b>definefont</b>	function	<b>getglyphoptionvalues</b>	function
<b>delcode</b>	table	<b>getglyphscript</b>	function
<b>dimen</b>	table	<b>getglyphstate</b>	function
<b>dimensiondef</b>	function	<b>getgroupvalues</b>	function
<b>directives</b>	data table	<b>gethelptext</b>	function
<b>discoptioncodes</b>	data table	<b>gethyphenationvalues</b>	function
<b>enableprimitives</b>	function	<b>getinsertcontent</b>	function
<b>error</b>	function	<b>getinsertdepth</b>	function
<b>expandasvalue</b>	function	<b>getinsertdistance</b>	function
<b>experiments</b>	data table	<b>getinsertheight</b>	function
<b>extraprimitives</b>	function	<b>getinsertlimit</b>	function
<b>fatalerror</b>	function	<b>getinsertmultiplier</b>	function
<b>flagcodes</b>	data table	<b>getinsertwidth</b>	function
<b>fontidentifier</b>	function	<b>getintegervalue</b>	function
<b>fontname</b>	function	<b>getinteraction</b>	function
<b>forcehmode</b>	function	<b>getiovalues</b>	function
<b>forcesynctexline</b>	function	<b>getlargestusedmark</b>	function
<b>forcesynctextag</b>	function	<b>getlccode</b>	function
<b>fprint</b>	function	<b>getlinedir</b>	function
<b>frozenparcodes</b>	data table	<b>getlist</b>	function
<b>get</b>	function	<b>getlocallevel</b>	function
<b>getattribute</b>	function	<b>getmark</b>	function
<b>getbox</b>	function	<b>getmath</b>	function
<b>getboxdir</b>	function	<b>getmathcode</b>	function

<b>getmathcodes</b>	function	<b>isdefined</b>	function
<b>getmathcontrolvalues</b>	function	<b>isdimen</b>	overloaded function
<b>getmathdir</b>	function	<b>isglue</b>	function
<b>getmathflattenvalues</b>	function	<b>ismuglue</b>	function
<b>getmathoptionvalues</b>	function	<b>ismuskip</b>	overloaded function
<b>getmathparametervalues</b>	function	<b>isprintable</b>	function
<b>getmathstylenamevalues</b>	function	<b>isskip</b>	overloaded function
<b>getmathstylevalues</b>	function	<b>istoken</b>	function
<b>getmathvariantvalues</b>	function	<b>istoks</b>	function
<b>getmodevalues</b>	function	<b>lastnodetype</b>	function
<b>getmuglue</b>	function	<b>lccode</b>	table
<b>getmuskip</b>	function	<b>linebreak</b>	function
<b>getnest</b>	function	<b>lists</b>	table
<b>getnormalizevalues</b>	function	<b>luacatcodes</b>	number
<b>getoutputactive</b>	function	<b>magicconstants</b>	table
<b>getpacktypevalues</b>	function	N maxdimen	
<b>getpagestate</b>	function	N running	
<b>getparbeginvalues</b>	function	N trueinch	
<b>getparcontextvalues</b>	function	<b>mathchardef</b>	function
<b>getpardir</b>	function	<b>mathcode</b>	table
<b>getparmodevalues</b>	function	<b>mathcontrolcodes</b>	data table
<b>getprimitiveorigins</b>	function	<b>mathflattenccodes</b>	data table
<b>getregisterindex</b>	function	<b>mathoptioncodes</b>	data table
<b>getrunstatevalues</b>	function	<b>modelevels</b>	table
<b>getsfcode</b>	function	N horizontal	
<b>getskip</b>	function	N math	
<b>getsyntexline</b>	function	N unset	
<b>getsyntexmode</b>	function	N vertical	
<b>getsyntextag</b>	function	<b>modes</b>	data table
<b>gettextcontrolvalues</b>	function	<b>mprint</b>	function
<b>gettextdir</b>	function	<b>muglue</b>	table
<b>gettoks</b>	function	<b>muskip</b>	table
<b>getuccode</b>	function	<b>nest</b>	table
<b>glue</b>	table	<b>nilcatcodes</b>	number
<b>glyphoptioncodes</b>	data table	<b>normalizecodes</b>	data table
<b>groupcodes</b>	data table	<b>notcatcodes</b>	number
<b>hashtokens</b>	function	<b>number</b>	function
<b>hyphenationcodes</b>	data table	<b>parcontextcodes</b>	data table
<b>ifs</b>	data table	<b>poplocal</b>	function
<b>inicatcodes</b>	number	<b>primitives</b>	function
<b>integerdef</b>	function	<b>print</b>	function
<b>isattribute</b>	function	<b>prtcacodes</b>	number
<b>isbox</b>	function	<b>pushlocal</b>	function
<b>iscount</b>	overloaded function	<b>quitlocal</b>	function

<b>quittoks</b>	function	<b>setrunstate</b>	overloaded function
<b>resetparagraph</b>	function	<b>setsfcode</b>	function
<b>rlncatcodes</b>	number	<b>setskip</b>	function
<b>romannumeral</b>	function	<b>setsynctexline</b>	function
<b>round</b>	function	<b>setsynctexmode</b>	function
<b>runlocal</b>	function	<b>setsynctextag</b>	function
<b>runtoks</b>	function	<b>settextdir</b>	function
<b>saveboxresource</b>	function	<b>settoks</b>	function
<b>scale</b>	function	<b>setuccode</b>	function
<b>scantoks</b>	function	<b>sfcode</b>	table
<b>set</b>	function	<b>shiftparshape</b>	function
<b>setattribute</b>	function	<b>shipout</b>	function
<b>setbox</b>	function	<b>showcontext</b>	function
<b>setboxdir</b>	function	<b>skip</b>	table
<b>setcatcode</b>	function	<b>snapshotpar</b>	function
<b>setcount</b>	function	<b>sp</b>	function
<b>setdelcode</b>	function	<b>splitbox</b>	function
<b>setdimen</b>	function	<b>sprint</b>	function
<b>setdimensionvalue</b>	function	<b>stringtocodesbitmap</b>	function
<b>setglue</b>	function	<b>systemmodes</b>	data table
<b>setglyphdata</b>	function	<b>takebox</b>	function
<b>setglyphscript</b>	function	<b>texcatcodes</b>	number
<b>setglyphstate</b>	function	<b>textcontrolcodes</b>	data table
<b>setinsertcontent</b>	function	<b>toks</b>	table
<b>setinsertdistance</b>	function	<b>tonumber</b>	function
<b>setinsertlimit</b>	function	<b>toscaled</b>	function
<b>setinsertmultiplier</b>	function	<b>tpacatcodes</b>	number
<b>setintegervalue</b>	function	<b>tpbcacodes</b>	number
<b>setinteraction</b>	function	<b>tprint</b>	function
<b>setlcode</b>	function	<b>trackers</b>	data table
<b>setlinedir</b>	function	<b>triggerbuildpage</b>	function
<b>setlist</b>	function	<b>txtcatcodes</b>	number
<b>setmath</b>	function	<b>type</b>	function
<b>setmathcode</b>	function	<b>uccode</b>	table
<b>setmathdir</b>	function	<b>uprint</b>	function
<b>setmuglue</b>	function	<b>useboxresource</b>	function
<b>setmuskip</b>	function	<b>vrbcacodes</b>	number
<b>setnest</b>	function	<b>write</b>	function
<b>setpardir</b>	function		

# texconfig (basic tex)

<b>buffer</b> <b>size</b>	table	<b>language</b> <b>size</b>	table
N size		N size	
N step		N step	
<b>error</b> <b>line</b> <b>size</b>	table	<b>mark</b> <b>size</b>	table
N size		N size	
<b>expand</b> <b>size</b>	table	N step	
N size		<b>nest</b> <b>size</b>	table
<b>file</b> <b>size</b>	table	N size	
N size		N step	
N step		<b>node</b> <b>size</b>	table
<b>first</b> <b>line</b>	string	N size	
<b>font</b> <b>size</b>	table	N step	
N size		<b>param</b> <b>eter</b> <b>size</b>	table
N step		N size	
<b>format</b> <b>name</b>	string	N step	
<b>function</b> <b>size</b>	number	<b>pool</b> <b>size</b>	table
<b>half</b> <b>error</b> <b>line</b> <b>size</b>	table	N size	
N size		N step	
<b>hash</b> <b>size</b>	table	<b>prop</b> <b>erti</b> <b>ess</b> <b>ize</b>	number
N size		<b>save</b> <b>size</b>	table
N step		N size	
<b>init</b>	overloaded function	N step	
<b>input</b> <b>size</b>	table	<b>shell_</b> <b>escape</b>	string
N size		<b>string</b> <b>size</b>	table
N step		N size	
<b>insert</b> <b>size</b>	table	N step	
N size		<b>token</b> <b>size</b>	table
N step		N size	
<b>kpse_</b> <b>init</b>	boolean	N step	

## texio (basic tex)

**closeinput**

function

**terminal**

function

**write**

function

**write\_nl**

function

**writeln**

function

**writeselector**

function

**writeselectorlf**

function

**writeselectornl**

function

## token (basic tex)

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

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



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

# tokens (context)

## accessors table

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

## astable function

## bits table

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

## cache table

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

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

## commands data table

## compile function

## constant function

## converters table

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

## create function

<b>defined</b>	function	F cmdchrexploded
<b>flags</b>	function	F code
<b>getinteger</b>	function	F conditional
<b>getters</b>	table	F count
F box		F csname
F count		F delimited
F ctoken		F dimen
F dimen		F dimenargument
F glue		F dimension
F macro		F float
F meaning		F glue
F skip		F gluespec
F token		F gluevalues
<b>gobble</b>	function	F hash
<b>isdefined</b>	function	F hbox
<b>istoken</b>	function	F integer
<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 nextchar
T 6 strings		F nextexpanded
T 7 strings		F number
T 8 strings		F optional
<b>pushmacro</b>	function	F peek
<b>scanners</b>	table	F peekchar
F argument		F peekexpanded
F argumentasis		F real
F array		F scanclose
F boolean		F scanopen
F box		F skip
F bracketed		F skipexpanded
F bracketedasis		F string
F cardinal		F table
F char		F token
F cmdchr		F tokencode

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

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

**shortcuts** table

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

F report  
 F scanargument  
 F scanargumentasis  
 F scanarray  
 F scanboolean  
 F scanbox  
 F scanbracketed  
 F scanbracketedasis  
 F scancardinal  
 F scanclose  
 F scancode  
 F scanconditional  
 F scanscsname  
 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 csname

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

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

F scangluespec  
F scangluevalues  
F scanhash  
F scanhbox  
F scaninteger  
F scanintegerargument  
F scankeyword  
F scankeywordcs  
F scanletters  
F scanlist  
F scannumber  
F scanopen  
F scanoptional  
F scanstring  
F scantable

F scantokenlist

F scantoks

F scanvbox

F scanverbatim

F scanvtop

F scanword

F toboolean

F todimen

F tonumber

F tostring

D values

F tonumber

F tostring

**values**      data table

## tracers (context)

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

**showlines**    function



## trackers (context)

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

# typesetters (context)

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

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

## updaters (context)

**apply**      function

**register**   function

## url (context)

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

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

## utf8 (basic lua)

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

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

# utilities (context)

## **debugger**            table

F disable  
F enable  
F savestats  
F showstats  
F showtraceback

## **files**                table

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

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

## **formatters**           table

F formatcolumns  
F list  
F stripzeros

## **ghostscript**           table

F convert  
F statistics

## **graphicmagick**        table

F convert  
F statistics

## **graphicsmagick**      table

F convert  
F statistics

## **lua**                    table

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

## packers table

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

## parsers table

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

- B paper
- B rightpage
- B text
- F iterator
- F keq\_to\_hash
- F listitem
- F make\_settings\_to\_hash\_pattern
- F mergehashes
- F options\_to\_array
- F options\_to\_hash
- T patterns
  - U settings\_to\_array
  - U settings\_to\_hash\_a
  - U settings\_to\_hash\_b
  - U settings\_to\_hash\_c
  - U settings\_to\_hash\_d
  - U unittotex
- F process\_stripped\_settings
- F rfc4180splitter
- F runtime
- F settings\_to\_array
- F settings\_to\_array\_obey\_fences
- F settings\_to\_array\_with\_repeat
- F settings\_to\_hash
- F settings\_to\_hash\_colon\_too
- F settings\_to\_hash\_strict
- F settings\_to\_hash\_tolerant
- F settings\_to\_numbers
- F settings\_to\_set
- F simple\_hash\_to\_string
- F splitmethod
- F splitthousands
- F stepper
- F stripped\_settings\_to\_array
- F totime
- F unittotex
- F unittoxml

## randomizer table

- F get
- F getnumber
- F 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 readbyte
- F readbytes
- F readbytetable
- F readcardinal
- F readcardinal1
- F readcardinal11e
- F readcardinal12e
- F readcardinal2
- F readcardinal21e
- F readcardinal3
- F readcardinal31e
- F readcardinal4
- F readcardinal41e
- F readcardinaltable
- F readchar
- F readcline
- F readcstring
- F readfixed2
- F readfixed4
- F readinteger
- F readinteger1
- F readinteger11e
- F readinteger2
- F readinteger21e
- F readinteger3
- F readinteger31e
- F readinteger4
- F readinteger41e
- F readintegertable
- F readsignedbyte
- F readstring
- F setposition
- F size
- F skip
- F skipbytes
- F skiplong
- F skipshort
- F tocardinal1
- F tocardinal11e

F tocardinal2  
 F tocardinal2le  
 F tocardinal3  
 F tocardinal3le  
 F tocardinal4  
 F tocardinal4le

## 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

## tar table

T archives  
 F closearchive  
 T files  
 F fetch  
 F hash  
 F list  
 F pack  
 F unpack  
 F openarchive  
 T registeredfiles  
 T streams  
 F fetch  
 F hash  
 F list  
 F pack  
 F unpack  
 T strings  
 F fetch  
 F hash  
 F list  
 F pack  
 F unpack

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

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

## xdecimal (extra lua)

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

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

## xmath (extra lua)

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



## xml (context)

<b>addentitiesdoctype</b>	function	F family	
<b>addspecialcode</b>	function	F fontspecification	
<b>after</b>	function	F mappedstylevalue	
<b>all</b>	function	F padding	
<b>applylpath</b>	function	F size	
<b>applyselector</b>	function	F style	
<b>assign</b>	function	F stylevalue	
<b>attribute</b>	function	F todimension	
<b>badinclusions</b>	function	F variant	
<b>before</b>	function	F weight	
<b>body</b>	function	<b>defaulthandlers</b>	table
<b>builtinentities</b>	table	D file	
B amp		D parsedxml	
B apos		D string	
B gt		D tex	
B lt		D texline	
B quot		D texspace	
<b>CDATA</b>	function	D verbose	
<b>CDATATOTEXT</b>	function	<b>defaultprotocol</b>	string
<b>checkbom</b>	function	<b>delete</b>	function
<b>checkedempty</b>	function	<b>delete_element</b>	function
<b>checkerror</b>	function	<b>despecialized</b>	function
<b>checknamespace</b>	function	<b>each</b>	function
<b>checkns</b>	function	<b>each_element</b>	function
<b>cleansed</b>	function	<b>elements</b>	function
<b>collect</b>	function	<b>elementtocdata</b>	function
<b>collect_elements</b>	function	<b>empty</b>	function
<b>collect_tags</b>	function	<b>entities</b>	data table
<b>collect_texts</b>	function	<b>erase</b>	function
<b>collected</b>	function	<b>errorhandler</b>	function
<b>collecttexts</b>	function	<b>escaped</b>	function
<b>compactelement</b>	function	<b>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 lower		F upper	
F name		F upperall	
F number		F xml	
F oneof		T xml	
F print		F all	
F quit		F att	
F tag		F attribute	
F text		F attributes	
F undefined		F cdata	
F upper		F chainattribute	
<b>fillin</b>	function	F count	
<b>filter</b>	function	F default	
<b>finalizers</b>	table	F elements	
F paragraphs		F empty	
T tex		F first	
F all		F function	
F attribute		F index	
F chainattribute		F last	
F chainpath		F lowerall	
F command		F match	
F concat		F name	
F concatrange		F position	
F context		F reverse	
F count		F table	
F ctxtext		F tag	
F default		F tags	
F depth		F text	
F first		F texts	
F function		F upperall	
F index		<b>first</b>	function
F last		<b>found</b>	function
F lettered		<b>functions</b>	table
F lower		F classes	
F lowerall		F hasclass	
F match		<b>getbuffer</b>	function
F name		<b>gethandlers</b>	function
F param		<b>gethandlersfunction</b>	function
F parameter		<b>helpers</b>	table
F position		F recursetext	
F reverse		<b>include</b>	function
F stripped		<b>inclusion</b>	function
F tag		<b>inclusions</b>	function
F tags		<b>index</b>	function
F text		<b>inheritattributes</b>	function

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

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

## xzip (extra lua)

**adler32**            function

**compress**        function

**compresssize**    function

**crc32**            function

**decompress**      function

**decompresssize** function

## zip (extra lua)

**archives**

table

**closearchive**

function

**openarchive**

function

**registeredfiles**

table

## zlib (extra lua)

**adler32**            function

**compress**        function

**compresssize**    function

**crc32**            function

**decompress**      function

**decompresssize** function