

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** luac 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)

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

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

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

F restoreboxresource

**current** string

**defaults** table

T codeinjections

F prerollreference

F vfstartcolor

F vfstopcolor

T nodeinjections

F cmykcolor

F destination

F graycolor

F injectknockout

F injectoverprint

F reference

F rgbcolor

F spotcolor

F transparency

T registrations

F transparency

D tables

**getcallbackstate** function

**included** table

B context

B date

B id

B metadata

B pdf

**initialize** function

**latelua** function

**nodeinjections** table

**nothing** function

**openout** function

**registered** table

T pdf

T codeinjections

F addbookmarks

F analyzenormalsymbol

F analyzesymbol

F attachmentid

F bitmap

F clonefield

F copyimage

F definefield

F definefieldset

F defineviewerlayer

F embedfile

F embedimage

F enabletags

F exportformdata

F fieldsurrounding

F flushmergelayer

F getbookmarks

F getboxresourcebox

F getdefaultfieldvalue

F getfieldcategory

F getfieldset

F getformatoption

F getinfo

F getpreviewfigure

F getrefobj

F insertrenderingwindow

F jp2

F jpg

F maptag

F mergebookmarks

F mergecomments

F mergefields

F mergereferences

F 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 ruleactionbox
- F ruleactiondraw
- F ruleactionfill
- F ruleactionmp
- F ruleactionstroke
- F saveboxresource
- F scanimage
- F setattachmentsupport
- F setfieldcalculationset
- F setfigurealternative
- F setfigurecolospace
- F setfiguremask
- F setformat
- F setformsmethod
- F setpagetransition
- F settaggingsupport
- F setxmpfile
- F startlayer
- F startunicodetoactualtext
- F startunicodetoactualtextdirect
- F stoplayer
- F stopunicodetoactualtext
- F stopunicodetoactualtextdirect
- F supportedformats
- F unicodetoactualtext
- F useviewerlayer
- F validfield
- F validfieldcategory
- F validfieldset
- F vfstartcolor
- F vfstopcolor
- F wrapimage
- S name
- T nodeinjections
  - F addtags
  - F annotation
  - F attachfile

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

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

## basexx (extra lua)

**decode16**    function

**decode64**    function

**decode85**    function

**decodeLZW**   function

**decodeRL**    function

**encode16**    function

**encode64**    function

**encode85**    function

**encodeLZW**   function

**encodeRL**    function

## bit32 (basic lua)

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

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

## blobs (context)

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

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

## boolean (context)

**tocontext** function

**tonumber** function

# buffers (context)

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

# builders (context)

**checkparcontext** function

**checksidefloat** function

**kernel** table

- F collapsing
- F hyphenating
- F kerning
- F ligaturing
- F mlisttohlist

**local\_box\_filter** function

**paragraphs** table

- T constructors
  - N attribute
  - F define
  - F disable
  - F enable
  - F handler
- T methods
  - F basic
  - F default
  - F hpack
  - F oneline
- D names
- D numbers
- F set
- F start
- F stop
- T expansion
  - F trace
- F kepttogether
- F registertogether
- T solutions
  - T splitters
    - F define
    - F optimize
  - T registered
    - F reset
    - F set
    - F split
    - F start

F stop

F tag

**profiling** table

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

**vspacing** table

- D categories
- F checkstrutdepth
- F collapsevbox
- T data
  - D map
  - D skip
  - D snapmethods
- F definesnapmethod
- B fixed
- F forcepageflush
- F forcestrutdepth
- F getnofpreviouslines
- F inject
- F injectdisable
- F injectpenalty
- F injectskip
- F pagehandler
- F pageoverflow
- F popatsame
- F pushatsame
- F setmap
- F setskip
- F snapbox
- F synchronizepage
- F tocategories
- F tocategory
- F vboxhandler

## cache (context)

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



## callback (basic tex)

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

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

# callbacks (context)

**freeze** function

**functions** table

F start\_page\_number

F stop\_page\_number

**known** function

**list** data table

**pop** function

**push** function

**register** function

**report** function

**supported** table

B alignment\_filter

B append\_line\_filter

B append\_to\_vlist\_filter

B begin\_paragraph

B build\_page\_insert

B buildpage\_filter

B define\_font

B find\_format\_file

B find\_log\_file

B get\_attribute

B glyph\_run

B handle\_overload

B hpack\_filter

B hpack\_quality

B hyphenate

B insert\_par

B intercept\_lua\_error

B intercept\_tex\_error

B kerning

B ligaturing

B linebreak\_filter

B local\_box\_filter

B make\_extensible

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

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

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

# ctxrunner (context)

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

# data (context)

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

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

## 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>existsers</b>	data table	<b>N pdf</b>	
<b>exists</b>	function	<b>N png</b>	
<b>formats</b>	data table	<b>N stream</b>	
<b>found</b>	data table	<b>F wrap</b>	
<b>get</b>	function	<b>include</b>	function
<b>getinfo</b>	function	<b>includers</b>	data table
<b>getpdfinfo</b>	function	<b>initialize</b>	function
<b>getrealpage</b>	function	<b>loaded</b>	data table
<b>guess</b>	function	<b>localpaths</b>	data table
<b>guessfromstring</b>	function	<b>magics</b>	data table
<b>hash</b>	function	<b>mergegoodies</b>	function
<b>identifiers</b>	data table	<b>nofmissing</b>	number
<b>identify</b>	function	<b>nofprocessed</b>	number
<b>images</b>	table	<b>order</b>	data table
<b>F check</b>		<b>paths</b>	data table
<b>F checksize</b>		<b>patterns</b>	data table
<b>F copy</b>		<b>pop</b>	function
<b>F create</b>		<b>preferquality</b>	boolean
<b>F embed</b>		<b>programs</b>	data table
<b>F embedfromstore</b>		<b>push</b>	function
<b>F fetchdata</b>		<b>registerpattern</b>	function
<b>T keys</b>		<b>registerresource</b>	function
<b>F print</b>		<b>registersuffix</b>	function
<b>F resetdata</b>		<b>remappers</b>	data table
<b>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 reversechainedcontextsingle
F addunicodetable	F single
F avar	F gvar
F cbdt	F head
F cblc	T helpers
F cff	F axistofactors
F cff2	F cleannname
F cffcheck	F getaxisscale
T cffencoder	F getfactors
F checkhash	F getscales
F cmap	F gotodatatable
F colr	F normalizedaxis
F compact	T normalizedaxisishash
F condense	F readvariationdata
F cpal	F reportskippedtable
F ebdt	F setvariabledata
F eblc	F hhea
F ebsc	F hmtx
F expand	F hvar
F extend	F kern
F fvar	F loadfont
F gdef	F loadshapes
F getcomponents	F loca
F getinfo	F math
F glyf	F maxp
F gpos	F mvar
T gposhandlers	F name
F chainedcontext	F os/2
F context	F pack
F cursive	F parsecharstrings
F extension	F post
F marktobase	F registerextender
F marktoligature	F rehash
F marktomark	F sbix
F pair	F stat
F single	T streamreader
F gsub	F close
T gsubhandlers	F getposition
F alternate	F getsizes
F chainedcontext	F look
F context	F open
F extension	F read2dot14
F ligature	F readbyte
F multiple	F readbytes

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

N calt	F initializefeatures	
N ccmp	D loadedfonts	
N cswh	N noffontsloaded	
N dlig	N nofsharedfonts	
N fina	N nofsharedhashes	
N init	N nofsharedvectors	
N isol	N privateoffset	
N liga	D privateslots	
N medi	F readanddefine	
N mset	F registerfeature	
N rclt	F resetfeature	
N rlig	B resolvevirtualtoo	
N version	F scale	
T pfb	F scaled	
F loadvector	F setfactor	
T tfm	F setfeature	
D cache	F setmathparameter	
D features	F setname	
N maxnestingdepth	B sharefonts	
N maxnestingsize	F trytosharefont	
T readers	N version	
F loadpk	<b>current</b>	function
F loadtfm	<b>currentid</b>	function
F loadtfmvf	<b>definers</b>	table
F loadvf	F addlookup	
F pktopdf	F analyze	
F showpk	F applypostprocessors	
F reencode	F checkedmode	
F setfeatures	F checkedscript	
N version	S defaultlookup	
T vf	F define	
T combinations	F getspecification	
F combine	F internal	
T combiner	F loadfont	
D commands	F makespecification	
D helpers	T methods	
D math	F install	
N version	D variants	
D whatever	F read	
F hashfeatures	F register	
F hashinstance	F registered	
T hashmethods	F registerfallbackfont	
F normal	F registersplit	
F virtual	F resetnullfont	



F resolve		F type3	
T resolvers		T multiple	
F file		F opentype	
F name		T substitution	
F spec		F opentype	
<b>definetypeface</b>	function	<b>goodies</b>	table
<b>dropins</b>	table	D colorschemes	
F clone		T data	
F getshape		T dejavu-math	
F getshapes		S author	
F nextid		S comment	
F provide		S copyright	
F registerglyph		B initialized	
F registerglyphs		T mathematics	
F swap		T alternates	
F swapone		T dotless	
<b>encodings</b>	table	S comment	
T agl		S feature	
D ctxcodes		N value	
D extras		T kerns	
D names		T *:0x1D449	
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	

- D features
- D identifiers
- D italics
- D lastmathids
- D marks
- D mathparameters
- D modes
- D originals
- D parameters
- T processes
- D properties
- D quads
- D resources
- T setdynamics
- T shapes
- D spaces
- D spacings
- T streams
- D unicodes
- D unislots
- D variants
- D xheights

## helpers table

- F addextraprivate
- F addprivate
- F appendcommands
- F appendcommandtable
- F checkflags
- F checkmerge
- F checksteps
- F collectanchors
- F combineglyphs
- D commands
- F composecharacters
- F descriptiontoslot
- F dimenfactor
- F expandglyph
- T extraprivates
- F fontpatternhassize
- F getcoloredglyphs
- F getdigitwidth
- F getinstancespec
- F getparameters
- F getprivatecharornode

- F getprivatenode
- F getprivates
- F getprivateslot
- F hasprivate
- F indextoslot
- F mathscriptslots
- F name
- F nametoslot
- F newprivateslot
- F prependcommands
- F prependcommandtable
- F privateslot
- F registerglyphbox
- F scalecommands
- F setboxdirectly
- F setboxglyph
- F setboxglyphs
- F setdigitwidth
- F setmetaglyph
- F setmetaglyphs
- F splitfontpattern
- F tochar
- T vfinjectors
- F startcolor
- F stopcolor
- T vfspecials
- T backgrounds
- T outlines

## infofont function

## iterators table

- F characters
- F descriptions
- F glyphs

## loggers table

- F format
- F onetimemessage
- F register
- F reportdefinedfonts
- F reportusedfeatures

## mappings table

- F addtounicode
- F fromunicode16
- F getentry
- F loadfile

F loadline		D data	
F makenameparser		F default	
D overloads		D defaults	
F reset		F definefallbackfamily	
F tounicode		F definefontfamily	
F tounicode16		F definefontfamilypreset	
F tounicode16sequence		D extras	
<b>metapost</b>	<b>table</b>	F fallback	
F boundingbox		D fallbacks	
F boxtomp		F features	
F draw		F filefallback	
F fill		F fontdata	
F glyph		F fontfallback	
F maxbounds		F fontsynonym	
F paths		F goodies	
F widthline		F mathfallback	
F zeroline		D methods	
<b>names</b>	<b>data table</b>	D presets	
<b>nulldata</b>	<b>data table</b>	F registerfallback	
<b>privateoffsets</b>	<b>table</b>	F registerfiles	
B keepnames		F registerfontalternative	
N mathbase		F registerfontfamily	
N mathextrabase		F textfallback	
N textbase		F typeface	
N textextrabase		F typescript	
<b>protrusions</b>	<b>data table</b>	F userdata	
<b>readers</b>	<b>table</b>	<b>specifiers</b>	<b>table</b>
F afm		D contextmerged	
F check_lua		F contextnumber	
F check_tfm		D contextnumbers	
F lua		D contextsetups	
F ofm		F contexttostring	
F opentype		F definecontext	
F otf		F mergecontext	
F pfb		F presetcontext	
D sequence		F registercontext	
F tfm		F showcontext	
F ttc		F splitcontext	
F ttf		D synonyms	
F woff		D variants	
<b>reserveid</b>	<b>function</b>	<b>symbols</b>	<b>table</b>
<b>select</b>	<b>table</b>	T emoji	
D alternatives		F checked	
F bodyfont		F resolved	

F uselibrary		S filename	
<b>tables</b>	table	F ignoredfile	
<b>tracers</b>	table	F report	
<b>treatments</b>	table	F trace	
F applyfixes		<b>typefaces</b>	table
D data			

# functions (context)

**dummy** function

# graphics (context)

## backgrounds table

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

## bitmaps table

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

## identifiers table

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

## identify function

## synchronizers table

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

## gzip (extra lua)

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

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

# images (context)

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



# interactions (context)

**attachments** data table

**fields** table

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

**general** table

- F getidentity
- F getidentityvariable

**help** table

- F collect
- F reference
- F register

**javascripts** table

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

D functions

D preambles

F setpreamble

F storecode

F storepreamble

F usepreamblenow

F usescripts

**linkedList**s data table

**pages** table

F setpagetransition

F setupcanvas

**references** table

F setcloseddocument

F setclosepage

F setopendocument

F setopenpage

**renderings** data table

# interfaces (context)

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

## io (basic lua)

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

# job (context)

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

F getsync	F settobesaved	
F gettobesaved	D tobesaved	
F getvpos	F upperleft	
F hangafter	F upperright	
F hangindent	F used	
F height	F whd	
F hsize	F width	
N lastx	F x	
N lasty	F xy	
F leftskip	F y	
F lowerleft	<b>register</b>	function
F lowerright	<b>save</b>	function
F markregionbox	<b>structure</b>	table
F n	D collected	
F onsamepage	T components	
F overlapping	T tobesaved	
F p	T branches	
F page	S name	
F paragraph	S type	
F parindent	<b>variables</b>	table
F position	D checksums	
F r	D collected	
F region	F getchecksum	
F registerhandlers	F makechecksum	
F replace	F restore	
F rightskip	F save	
F set	F setchecksum	
F setall	D tobesaved	
F setregionbox	<b>version</b>	number
F setspec		

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

## lfs (extra lua)

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

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

# lpdf (context)

<b>action</b>	function	<b>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 objecttype	
<b>checkedvalue</b>	function	F parsecontent	
<b>circularshade</b>	function	F plugin	
<b>cmykcode</b>	function	T resolvers	
<b>collectedresources</b>	function	F destinations	
<b>color</b>	function	F embeddedfiles	
<b>colorspace</b>	function	F javascripts	
<b>colorspaceconstants</b>	data table	F layers	
<b>colorspec</b>	function	F pages	
<b>colorvalue</b>	function	F structure	
<b>colorvalues</b>	function	F widgets	
<b>commentsymbols</b>	function	F stripcontent	
<b>compresslevel</b>	function	F unload	
<b>constant</b>	function	F verboseobject	
<b>copyarray</b>	function	<b>escaped</b>	function
<b>copyboolean</b>	function	<b>finalizedocument</b>	function
<b>copyconstant</b>	function	<b>finalizefonts</b>	function
<b>copydictionary</b>	function	<b>finalizepage</b>	function
<b>copyfloat</b>	function	<b>finishtransparencycode</b>	function
<b>copyinteger</b>	function	<b>flags</b>	table
<b>copynumber</b>	function	T annotations	
<b>copystring</b>	function	N AutoView	
<b>copyunicode</b>	function	N Hidden	
<b>deferredobject</b>	function	N Invisible	

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

<b>number</b>	function
<b>object</b>	function
<b>objectcompresslevel</b>	function
<b>pagereference</b>	function
<b>patternstream</b>	function
<b>pdfcolor</b>	function
<b>pdftimestamp</b>	function
<b>print</b>	function
<b>procset</b>	function
<b>protectresources</b>	boolean
<b>rectangle</b>	function
<b>reference</b>	function
<b>registerannotation</b>	function
<b>registerdestination</b>	function
<b>registerdocumentfinalizer</b>	function
<b>registerfont</b>	function
<b>registerinitializer</b>	function
<b>registerpagefinalizer</b>	function
<b>registerpattern</b>	function
<b>reserveobject</b>	function
<b>rgbcode</b>	function
<b>rotationcm</b>	function
<b>setcompression</b>	function
<b>setincludecidset</b>	function
<b>setpageorder</b>	function
<b>setpagetag</b>	function
<b>setversion</b>	function
<b>sharedobject</b>	function
<b>shareobject</b>	function
<b>shareobjectreference</b>	function
<b>spotcode</b>	function
<b>stream</b>	function
<b>string</b>	function
<b>toeight</b>	function
<b>topdfdoc</b>	function
<b>tosixteen</b>	function
<b>transparency</b>	function
<b>transparencycode</b>	function
<b>transparencygroups</b>	table
B none	
<b>transparencyvalue</b>	function
<b>unicode</b>	function
<b>usedcharacters</b>	table
<b>usedfontnames</b>	table

N dejavusansmonoboldttf-1	
<b>usedfontobjects</b>	table
N dejavusansmonoboldttf-1	
<b>usedfontstreams</b>	table
T dejavusansmonoboldttf-1	
T characters	
T descriptions	
T fonts	
T goodies	
S original	
T parameters	
N ascender	
N descender	
N designsize	
T expansion	
N shrink	
N step	
N stretch	
N extendfactor	
N extra_space	
N extrafactor	
N factor	
N forcedsize	
N hfactor	
N mathsize	
N maxsize	
N minsize	
N mode	
N quad	
N scaledpoints	
N size	
N slant	
N slantfactor	
N space	
N space_shrink	
N space_stretch	
N squeezefactor	
N textsize	
N units	
N vfactor	
N width	
N x_height	
T properties	
S filename	



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

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

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

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

N congruent	N equal
N copyright	N equivalence
N currency	N estimated
N d	N eta
N dagger	N etatonos
N daggerdbl	N eth
N dcaron	N exclam
N dcroat	N exclamdbl
N degree	N exclamdown
N delta	N existential
N diaeresis.symbols	N f
N diamond	N female
N dieresis	N fi
N dieresistonos	N figuredash
N divide	N filledbox
N dkshade	N filledrect
N dLlTcaron	N five
N dnblock	N fiveeighths
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 epsilononos	N heart

N hookabovecomb  
N house  
N hungarumlaut  
N hyphen  
N i  
N iacute  
N ibreve  
N icircumflex  
N idieresis  
N igrave  
N ij  
N imacron  
N infinity  
N integral  
N integralbt  
N integraltp  
N intersection  
N invbullet  
N invcircle  
N invsmileface  
N iogonek  
N iota  
N iotadieresis  
N iotadieresis-tonos  
N iotatonos  
N itilde  
N j  
N jcircumflex  
N jot  
N k  
N kappa  
N kcommaaccent  
N kgreenlandic  
N l  
N lacute  
N lambda  
N lcaron  
N lcommaaccent  
N ldot  
N less  
N lessequal  
N lfblock  
N lira  
N logicaland

N logicalnot  
N logicalor  
N longs  
N lozenge  
N lslash  
N ltshade  
N m  
N macron  
N male  
N minus  
N minute  
N mu  
N multiply  
N musicalnote  
N musicalnotedbl  
N n  
N nacute  
N napostrophe  
N ncaron  
N ncommaaccent  
N nine  
N nonbreakingspace  
N nonmarkingreturn  
N notdef  
N notelement  
N notequal  
N notsubset  
N ntilde  
N nu  
N numbersign  
N o  
N oacute  
N obreve  
N ocircumflex  
N odieresis  
N oe  
N ogonek  
N ograve  
N ohorn  
N ohungarumlaut  
N omacron  
N omega  
N omega1  
N omegatonos

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

N tcaron	N wacute
N tcommaaccent	N wcircumflex
N therefore	N wdieresis
N theta	N wgrave
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	B condensed
N utilde	S creator
N v	T descriptions
N w	B expanded



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

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

## luac (context)

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

# luatex (context)

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

# lxml (context)

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

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

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



## math (basic lua)

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

# mathematics (context)

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

## md5 (extra lua)

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

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

# metapost (context)

<b>checkformat</b>	function	N 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</b>	function
N with		<b>graphic_base_pass</b>	function
N within		<b>includesvgbuffer</b>	function
N write		<b>includesvgfile</b>	function
<b>colorinitializer</b>	function	<b>installplugin</b>	function
<b>convert</b>	function	<b>isobject</b>	function
<b>currentmpx</b>	function	<b>knownparameters</b>	table
<b>currentmpxstatus</b>	function	<b>lastlog</b>	string
<b>defaultformat</b>	string	<b>load</b>	function
<b>defaultinstance</b>	string	<b>maketext</b>	function
<b>defaultmethod</b>	string	<b>metafonts</b>	table
<b>directrun</b>	function	<b>metafun</b>	table
<b>escaped</b>	function	F interpolate	
<b>exectime</b>	table	F topath	
<b>extensiondata</b>	data table	<b>mptopdf</b>	table
<b>filterclippath</b>	function	F convertmpstopdf	
<b>flush</b>	function	N nofconverted	
<b>flushers</b>	table	<b>n</b>	number
T pdf		<b>newlogger</b>	function
F flushfigure		<b>nofruns</b>	number
F startfigure		<b>nofscriptruns</b>	function
F stopfigure		<b>nvformat</b>	function
F textfigure		<b>pdfliterals</b>	function
F tocomment		<b>pluginactions</b>	function
<b>flushnormalpath</b>	function	<b>popformat</b>	function
<b>fonts</b>	table	<b>popscriptrunner</b>	function
F define		<b>popvariable</b>	function
<b>format_number</b>	function	<b>popvariables</b>	function
<b>format_string</b>	function	<b>preparetexttsdata</b>	function
<b>formatnumber</b>	function	<b>process</b>	function
<b>getbendtolerance</b>	function	<b>processing</b>	function
<b>getbuffer</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>reportsvgfonts</b>	function	<b>svgsplitcolor</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>setbuffer</b>	function	<b>theclippath</b>	function
<b>setextensions</b>	function	<b>tographic</b>	function
<b>setlogging</b>	function	<b>totable</b>	function
<b>setoutercolor</b>	function	<b>types</b>	table
<b>setparameterset</b>	function	N boolean	
<b>setrecord</b>	function	N cmykcolor	
<b>settext</b>	function	N color	
<b>setvariable</b>	function	N dependent	
<b>showlog</b>	boolean	N independent	
<b>showsvgpage</b>	function	N known	
<b>simple</b>	function	N numeric	
<b>splitprescript</b>	function	N pair	
<b>startgraphic</b>	function	N path	
<b>startsvghashing</b>	function	N pen	
<b>stopgraphic</b>	function	N picture	
<b>stopsvghashing</b>	function	N protodependent	
<b>svformat</b>	function	N string	
<b>svgcolorremapper</b>	function	N structured	
<b>svgfactors</b>	table	N suffixedmacro	
N %		N tokenlist	
N bp		N transform	
N cm		N unknownboolean	
N em		N unknownpath	
N ex		N unknownpen	
N in		N unknownpicture	
N mm		N unknownstring	
N pc		N unsuffixedmacro	
N pt		N vacuum	
N px		<b>typesvgpage</b>	function
<b>svgglyphtomp</b>	function	<b>unload</b>	function
<b>svgshapestomp</b>	function	<b>untagvariable</b>	function
<b>svgshapestopdf</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>fprint</b>	function
<b>aux</b>	function	<b>get</b>	table
F boolean		F hashentry	
F color		<b>graphformat</b>	function
F direct		<b>inject</b>	function
F draw		F boolean	
F fill		F cmykcolor	
F flush		F color	
F fprint		F integer	
F integer		F number	
F number		F numeric	
F numeric		F pair	
F pair		F path	
F pairpoints		F pt	
F path		F quadruplet	
F pathpoints		F string	
F points		F transform	
F print		F triplet	
F quadruple		F whatever	
F quadruplepoints		F whd	
F quoted		F xy	
F size		<b>integer</b>	function
F string		<b>lmt_color_functions</b>	table
F transform		F shade	
F triplet		F step	
F tripletpoints		<b>lmt_contours_bitmap_get</b>	function
F vprint		<b>lmt_contours_bitmap_set</b>	function
<b>boolean</b>	function	<b>lmt_contours_cleanup</b>	function
<b>cleaned</b>	function	<b>lmt_contours_color</b>	function
<b>color</b>	function	<b>lmt_contours_edge_get_band</b>	function
<b>dataset</b>	function	<b>lmt_contours_edge_get_cell</b>	function
<b>datasets</b>	function	<b>lmt_contours_edge_paths</b>	function
F load		<b>lmt_contours_edge_set</b>	function
<b>direct</b>	function	<b>lmt_contours_edge_set_by_band</b>	function
<b>draw</b>	function	<b>lmt_contours_edge_set_by_cell</b>	function
<b>expandtex</b>	function	<b>lmt_contours_format</b>	function
<b>fill</b>	function	<b>lmt_contours_function</b>	function
<b>flatten</b>	function	<b>lmt_contours_maxmean</b>	function
<b>flush</b>	function	<b>lmt_contours_maxz</b>	function
<b>format</b>	function	<b>lmt_contours_minmean</b>	function
<b>formatted</b>	function	<b>lmt_contours_minz</b>	function



<code>lmt_contours_nofvalues</code>	function	<code>n</code>	function
<code>lmt_contours_nx</code>	function	<code>number</code>	function
<code>lmt_contours_ny</code>	function	<code>numeric</code>	function
<code>lmt_contours_range</code>	function	<code>pair</code>	function
<code>lmt_contours_shade_paths</code>	function	<code>pairpoints</code>	function
<code>lmt_contours_shade_set</code>	function	<code>path</code>	function
<code>lmt_contours_shape_paths</code>	function	<code>pathpoints</code>	function
<code>lmt_contours_start</code>	function	<code>points</code>	function
<code>lmt_contours_stop</code>	function	<code>print</code>	function
<code>lmt_contours_value</code>	function	<code>F boolean</code>	
<code>lmt_contours_xrange</code>	function	<code>F color</code>	
<code>lmt_contours_yrange</code>	function	<code>F direct</code>	
<code>lmt_function_x</code>	function	<code>F draw</code>	
<code>lmt_mesh_set</code>	function	<code>F fill</code>	
<code>lmt_mesh_update</code>	function	<code>F flush</code>	
<code>lmt_poisson_generate</code>	function	<code>F fprint</code>	
<code>lmt_surface_do</code>	function	<code>F integer</code>	
<code>lmt_svg_include</code>	function	<code>F number</code>	
<code>mf_blob_add</code>	function	<code>F numeric</code>	
<code>mf_blob_dimensions</code>	function	<code>F pair</code>	
<code>mf_blob_index</code>	function	<code>F pairpoints</code>	
<code>mf_blob_new</code>	function	<code>F path</code>	
<code>mf_blob_raw_content</code>	function	<code>F pathpoints</code>	
<code>mf_blob_raw_dimensions</code>	function	<code>F points</code>	
<code>mf_blob_raw_reset</code>	function	<code>F print</code>	
<code>mf_blob_raw_toutf</code>	function	<code>F quadruple</code>	
<code>mf_blob_raw_wipe</code>	function	<code>F quadruplepoints</code>	
<code>mf_blob_size</code>	function	<code>F quoted</code>	
<code>mf_blob_width</code>	function	<code>F size</code>	
<code>mf_external_figure</code>	function	<code>F string</code>	
<code>mf_finish_saving_data</code>	function	<code>F transform</code>	
<code>mf_formatted_text</code>	function	<code>F triplet</code>	
<code>mf_get_outline_text</code>	function	<code>F tripletpoints</code>	
<code>mf_graphic_text</code>	function	<code>F vprint</code>	
<code>mf_inject_blob</code>	function	<code>processingmode</code>	function
<code>mf_map_move</code>	function	<code>quadruple</code>	function
<code>mf_map_text</code>	function	<code>quadruplepoints</code>	function
<code>mf_named_color</code>	function	<code>quoted</code>	function
<code>mf_outline_text</code>	function	<code>report</code>	function
<code>mf_save_data</code>	function	<code>scan</code>	table
<code>mf_script_index</code>	function	<code>F boolean</code>	
<code>mf_start_saving_data</code>	function	<code>F cmykcolor</code>	
<code>mf_stop_saving_data</code>	function	<code>F color</code>	
<code>mode</code>	function	<code>F expression</code>	

F integer	T typescanners	
F next	F whatever	
F number	<b>set</b>	table
F numeric	<b>size</b>	function
F pair	<b>skip</b>	table
F path	F token	
F pen	<b>solve</b>	function
F property	<b>string</b>	function
F string	<b>systemmode</b>	function
F symbol	<b>transform</b>	function
F token	<b>triplet</b>	function
T tokenscanners	<b>tripletpoints</b>	function
F transform	<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>scanbmykcolor</b>	function
<b>getcolormodels</b>	function	<b>scanbcolor</b>	function
<b>getfields</b>	function	<b>scanexpression</b>	function
<b>gethashentries</b>	function	<b>scaninteger</b>	function
<b>gethashentry</b>	function	<b>scannext</b>	function
<b>getobjecttypes</b>	function	<b>scannumber</b>	function
<b>getstates</b>	function	<b>scannumeric</b>	function
<b>getstatistics</b>	function	<b>scanpair</b>	function
<b>getstatus</b>	function	<b>scanpath</b>	function
<b>gettolerance</b>	function	<b>scanpen</b>	function
<b>gettype</b>	function	<b>scanproperty</b>	function
<b>gettypes</b>	function	<b>scanstring</b>	function
<b>injectboolean</b>	function	<b>scansymbol</b>	function
<b>injectbmykcolor</b>	function	<b>scantoken</b>	function
<b>injectbcolor</b>	function	<b>scantransform</b>	function
<b>injectinteger</b>	function	<b>settolerance</b>	function
<b>injectnumber</b>	function	<b>showcontext</b>	function
<b>injectnumeric</b>	function	<b>skiptoken</b>	function
<b>injectpair</b>	function	<b>solvepath</b>	function
<b>injectpath</b>	function	<b>version</b>	function

# noads (context)

<b>handlers</b>	table		F 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 is_zero_glue
F getprev	F ischar
F getpropertystable	F isglyph
F getproperty	F isnextchar
F getreplace	F isnextglyph
F getscale	F isnode
F getscales	F isprevchar
F getscrip	F isprevglyph
F getshift	F isvalid
F getspeciallist	F iszeroglue
F getsstate	F kerning
F getsub	F length
F getsubpre	F ligaturing
F getsubtype	F makeextensible
F getsup	F migrate
F getsuppre	F mlist_to_hlist
F getsynctexfields	F mlisttohlist
F gettotal	F naturalhsize
F getwhd	F naturalwidth
F getwidth	F new
F getwordrange	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 protrusionskipable
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 setfam	F tail	
F setfield	F todirect	
F setfont	F tonode	
F setglue	F toString	
F setglyphdata	F tovaliddirect	
F setheight	F traverse	
F setindex	F traverse_char	
F setkern	F traverse_content	
F setlanguage	F traverse_glyph	
F setleader	F traverse_id	
F setlink	F traverse_list	
F setlist	F traversechar	
F setnext	F traversecontent	
F setnucleus	F traverseglyph	
F setoffsets	F traverseid	
F setoptions	F traverselist	
F setorientation	F type	
F setpenalty	F types	
F setpost	F unprotect_glyph	
F setpre	F unprotect_glyphs	
F setprev	F unprotectglyph	
F setproperty	F unprotectglyphs	
F setreplace	F unset_attribute	
F setscales	F unset_attributes	
F setscript	F unsetattribute	
F setshift	F unsetattributes	
F setspeciallist	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 setsyntexfields	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

<b>flattendiscretionaries</b>	function	<b>mlist_to_hlist</b>	function
<b>flush_list</b>	function	<b>mlisttohlist</b>	function
<b>flush_node</b>	function	<b>new</b>	function
<b>flushlist</b>	function	<b>protect_glyph</b>	function
<b>flushnode</b>	function	<b>protect_glyphs</b>	function
<b>free</b>	function	<b>protectglyph</b>	function
<b>get_attribute</b>	function	<b>protectglyphs</b>	function
<b>getattribute</b>	function	<b>protrusionskipable</b>	function
<b>getfield</b>	function	<b>rangedimensions</b>	function
<b>getglue</b>	function	<b>remove</b>	function
<b>getpropertystable</b>	function	<b>set_attribute</b>	function
<b>getproperty</b>	function	<b>setattribute</b>	function
<b>has_attribute</b>	function	<b>setfield</b>	function
<b>has_field</b>	function	<b>setglue</b>	function
<b>has_glyph</b>	function	<b>setproperty</b>	function
<b>hasattribute</b>	function	<b>show</b>	function
<b>hasfield</b>	function	<b>slide</b>	function
<b>hasglyph</b>	function	<b>subtypes</b>	function
<b>hpack</b>	function	<b>tail</b>	function
<b>hyphenating</b>	function	<b>tostring</b>	function
<b>id</b>	function	<b>traverse</b>	function
<b>insert_after</b>	function	<b>traverse_id</b>	function
<b>insert_before</b>	function	<b>traverseid</b>	function
<b>insertafter</b>	function	<b>type</b>	function
<b>insertbefore</b>	function	<b>types</b>	function
<b>instock</b>	function	<b>unprotect_glyph</b>	function
<b>inuse</b>	function	<b>unprotect_glyphs</b>	function
<b>is_node</b>	function	<b>unprotectglyph</b>	function
<b>is_zero_glue</b>	function	<b>unprotectglyphs</b>	function
<b>isnode</b>	function	<b>unset_attribute</b>	function
<b>iszeroglue</b>	function	<b>unsetattribute</b>	function
<b>kerning</b>	function	<b>usedlist</b>	function
<b>last_node</b>	function	<b>usesfont</b>	function
<b>lastnode</b>	function	<b>values</b>	function
<b>length</b>	function	<b>vpack</b>	function
<b>ligaturing</b>	function	<b>write</b>	function
<b>makeextensible</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 adjusters	
F handler		F aligncharacter	
T stack		F backgrounds	
<b>dircodes</b>	data table	F backgroundspace	
<b>directioncodes</b>	data table	F backgroundsvbox	
<b>directionvalues</b>	data table	F characters	
<b>dirvalues</b>	data table	F checkglyphs	
<b>disccodes</b>	data table	F checkparcounter	
<b>discretionarycodes</b>	data table	F cleanupbox	
<b>fencecodes</b>	data table	F cleanuppage	

F export		<b>insertlistafter</b>	function
F finalizebox		<b>installattributehandler</b>	function
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>markcodes</b>	data table
F isspace		<b>markers</b>	table
F keepcounts		F get	
F reset		<b>mathcodes</b>	data table
F resetcounts		<b>mathvalues</b>	data table
F setcursive		<b>maxboxwidth</b>	function
F setkern		<b>migrations</b>	table
F setligaindex		F setinserts	
F setmark		F setmarks	
F setmove		<b>new</b>	function
F setposition		<b>noadcodes</b>	data table
F setspacekerns		<b>noadoptions</b>	table
<b>insert_after</b>	function	N axis	
<b>insert_before</b>	function	N exact	
<b>insertafter</b>	function	N left	
<b>insertbefore</b>	function	N middle	

N no_axis		F effective_glue
N right		F effectiveglue
N set		F end_of_math
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 copyleft		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 getglue  
F getglyphdata  
F getglyphdimensions  
F getheight  
F getid  
F getindex  
F getkern  
F getkerndimension  
F getlang  
F getlanguage  
F getleader  
F getlist  
F getnext  
F getnormalizedline  
F getnucleus  
F getoffsets  
F getoptions  
F getorientation  
F getparstate  
F getpenalty  
F getpost  
F getpre  
F getprev  
F getprop  
F getreplace  
F getruledata  
F getscale  
F getscales  
F getscrip  
F getshift  
F getspeciallist  
F getstate  
F getsub  
F getsubpre  
F getsubtype  
F getsup  
F getsuppre  
F getsurround  
F getsyntexfields  
F gettotal  
F getvalue  
F getwhd  
F getwidth  
F getwordrange

F getxscale  
F getxyscales  
F getyscale  
F has\_attribute  
F has\_dimensions  
F has\_field  
F has\_glyph  
F hasattribute  
F hasdimensions  
F hasfield  
F hasglyph  
F hasglyphoption  
F hpack  
F hyphenating  
F ignoremathskip  
F insert\_after  
F insert\_before  
F insertafter  
F insertbefore  
F insertlistafter  
F is\_display\_math  
F is\_node  
F is\_zero\_glue  
F ischar  
F isdone  
F isglyph  
F isnextchar  
F isnextglyph  
F isnode  
F isprevchar  
F isprevglyph  
F iszeroglue  
F kerning  
F length  
F ligaturing  
F link  
F linked  
F locate  
F migrate  
F mlist\_to\_hlist  
F mlisttohlist  
F naturalhsize  
F naturalwidth  
F nestedtracedslide

F new	F restore
F patchattributes	F righthangskip
T pool	F rightmarginkern
F accent	F rightskip
F baselineskip	F rule
F boundary	F save
F boxrule	F savepos
F choice	F setmatrix
F cleanup	F setstate
F delim	F shrink
F delimiter	F startrotation
F direction	F stock
F directliteral	F stretch
F disc	F subbox
F emptyrule	F sublist
F fence	F temp
F fontkern	F usage
F fraction	F userdefined
F glue	T userids
F gluespec	F usernode
F glyph	F userrule
F hlist	F vlist
F imagerule	F wordboundary
F indentskip	F prepend
F italicckern	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 rehpack
F noad	F remove
F originliteral	F repacklist
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 fill	F setprev
F mp	F setprop
F stroke	F setreplace
F userrule	F setruledata
F set_attribute	F setscale
F setattr	F setscales
F setattribute	F setscript
F setattributelist	F setshift
F setattributes	F setspeciallist
F setattrlist	F setsplit
F setattrs	F setstate
F setboth	F setsub
F setbox	F setsubpre
F setboxglue	F setsubtype
F setchar	F setup
F setcomponents	F setsuppre
F setdata	F setsurround
F setdepth	F setsynctexfields
F setdirection	F setvalue
F setdisc	F setvisual
F setdiscpart	F setvisuals
F setdiscretionary	F setwhd
F setexpansion	F setwidth
F setfam	F show
F setfield	F slide
F setfont	F softenhyphens
F setglue	F somepenalty
F setglyphdata	F somespace
F setheight	F splitbox
F setkern	F start_of_par
F setlang	F startofpar
F setlanguage	F striprange
F setleader	F tail
F setlink	F takeattr
F setlist	F takebox
F setnext	F takelist
F setnucleus	F theprop
F setoffsets	F tonode
F setoptions	F tonodes
F setorientation	F tonut
F setparproperty	F tosequence
F setpenalty	F toString
F setpost	F tracedslide
F setpre	F traverse

- F traverse\_char
- F traverse\_glyph
- F traverse\_id
- F traverse\_list
- F traversechar
- F traversecontent
- F traverseglyph
- F traverseid
- F traverselist
- T traversers
  - F alignrecord
  - F boundary
  - F char
  - F content
  - F dir
  - F disc
  - F glue
  - F glyph
  - F hlist
  - F list
  - F mark
  - F next
  - F node
  - F unset
  - F vlist
  - F whatsit
- T treversers
  - F char
  - F content
  - F glyph
  - F list
  - F node
- T typesetters
  - F tohbox
  - F tohpack
  - F tonodes
  - F tovbox
  - F tovpack
- F unprotect\_glyph
- F unprotect\_glyphs
- F unprotectglyph
- F unprotectglyphs
- F unset\_attribute
- F unsetattribute

- F unsetattributes
- F untracedslide
- F usedlist
- F uses\_font
- F usesfont
- F verticalbreak
- F vianodes
- F vianuts
- F vpack
- F write
- F xscaled
- F yscaled

**packlist**  
**parcodes**  
**penaltycodes**  
**plugindata**

- F finalizer
- F initializer
- S name
- T namespace
  - N attribute
  - D data
  - F enable
  - F handler
  - F register
  - D registered
  - D values
- F processor

**points**  
**pool**

- F baselineskip
- F cleanup
- F directliteral
- F glyph
- F hlist
- F latelua
- F lineskip
- F literal
- F originliteral
- F register
- F restore
- F save
- F savepos
- F setmatrix

function  
 data table  
 data table  
 table

function  
 table

F stock		<b>setboxtonaturalwd</b>	function
F usage		<b>setchar</b>	function
F usernode		<b>setfield</b>	function
F vlist		<b>setfont</b>	function
<b>prepend</b>	function	<b>setleader</b>	function
<b>print</b>	function	<b>setlink</b>	function
<b>processors</b>	table	<b>setlist</b>	function
F alignment_filter		<b>setnext</b>	function
F append_line_filter		<b>setprev</b>	function
F glyph_run		<b>setproperty</b>	function
F post_linebreak_filter		<b>shifts</b>	table
F pre_linebreak_filter		D data	
F trace_glyph_run_a		F define	
F trace_glyph_run_b		F enable	
<b>properties</b>	table	F handler	
T data		<b>showboxes</b>	function
<b>pts</b>	function	<b>showlist</b>	function
<b>radicalcodes</b>	data table	<b>showsimplelist</b>	function
<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>reheapack</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	



F freezgroup		F setproperties	
F new		F start	
F prependaction		T steppers	
F removeaction		F check	
F replaceaction		F codes	
F restart		F features	
F setaction		F font	
F showactions		F glyphs	
F table		F message	
<b>tobasepoints</b>	function	F messages	
<b>tocentimeters</b>	function	F nofsteps	
<b>toxiceros</b>	function	F register	
<b>todidots</b>	function	F reset	
<b>todimen</b>	function	F start	
<b>toinches</b>	function	F stop	
<b>tomillimeters</b>	function	F stop	
<b>tonode</b>	function	T transparencies	
<b>tonodes</b>	function	F reset	
<b>tonut</b>	function	F set	
<b>topicas</b>	function	F setlist	
<b>topoints</b>	function	<b>traverse</b>	function
<b>toscaledpoints</b>	function	<b>traverse_id</b>	function
<b>tosequence</b>	function	<b>traverseid</b>	function
<b>tostring</b>	function	<b>typesetters</b>	table
<b>totable</b>	function	F hbox	
<b>totree</b>	function	F hpack	
<b>toutf</b>	function	F tohbox	
<b>tracers</b>	table	F tohpack	
T colors		F tonodes	
F reset		F tovbox	
F set		F tovpack	
F setlist		F vpack	
F directions		<b>unset_attribute</b>	function
F fontchar		<b>unsetattribute</b>	function
T frequencies		<b>usedlist</b>	function
F register		<b>vianodes</b>	function
T pool		<b>vianuts</b>	function
T nodes		<b>visualizebox</b>	function
F rule		<b>visualizers</b>	table
T nuts		F attribute	
F rule		T attributes	
F resetproperties		F box	
F rule		F handler	
F setlist		F markfonts	

T modes	N penalty	
N depth	N simple	
N dir	N simplehbox	
N discretionary	N simplevbox	
N expansion	N simplevtop	
N fontkern	N space	
N glue	N strut	
N glyph	N user	
N hbox	N vbox	
N insert	N vtop	
N italic	N whatsit	
N kern	F register	
N line	F setfont	
N marginkern	F setlayer	
N mark	F setruledglyph	
N math	F setvisual	
N mathglue	<b>vpack</b>	function
N mathkern	<b>whatsitcodes</b>	data table
N origin	<b>write</b>	function
N par		

## number (context)

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

## objects (context)

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

# optional (context)

## **curl** table

F escape  
F fetch  
F getversion  
F initialize  
F unescape

## **foreign** table

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

## **ghostscript** table

F execute  
F initialize

## **graphicsmagick** table

F execute  
F initialize

## **hb** table

F getshapers  
F getversion  
F initialize  
F loadfont  
F shapestring

## **imagemagick** table

F execute  
F initialize

## **kpse** table

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

## **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

## **postgress** table

F close  
F execute  
F getmessage  
F initialize  
F open

## **sqlite** table

F close  
F execute  
F getmessage

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

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

# physics (context)

**units** table

F registerunit

D tables

## pngdecode (extra tex)

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

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

# publications (context)

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

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

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



**tables**

D implicits  
D origins  
D privates  
D sets  
D specials  
D types  
D virtuals

**table****tags****function****tracers****table**

F showdatasetauthors  
F showdatasetcompleteness  
F showdatasetfields  
F showentry

F showfields

F showhashedauthors

F showtables

F showvariants

**typesetters****table**

F author

F string

**usedataset****function****usedentries****function****writers****table**

F author  
F keyword  
F pagenumber  
F range

## regimes (context)

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

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

# resolvers (context)

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

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

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

## sandbox (context)

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

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

# scripts (context)

**autofontfeature** table

F disable  
F enable  
F handler

**colors** data table

**decomposehangul** function

**defaults** table

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

**getdata** function

**getinjector** function

**getsplitter** function

**getstatus** function

**handlers** data table

**helpers** data table

**injectors** data table

**inserters** table

F nobreakspace\_after

F nobreakspace\_before

F space\_after

F space\_before

F zerowidthspace\_after

F zerowidthspace\_before

**installdataset** function

**installmethod** function

**numbertodataset** data table

**numbertohandler** data table

**reset** function

**set** function

**setstatus** function

**splitters** data table

## set (context)

**contains**    function

**create**     function

**tolist**     function

**tonumber**   function

**totable**    function



## sha2 (extra lua)

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

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

## sio (extra lua)

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

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

# socket (extra lua)

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

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

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

# sorters (context)

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

## sparse (context)

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

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

## statistics (context)

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

## status (basic tex)

<b>getbufferstate</b>	function	<b>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>packrowscolumns</b>	function
<b>bytepairs</b>	function	<b>packsize</b>	function
<b>bytes</b>	function	<b>quote</b>	function
<b>bytetable</b>	function	<b>quoted</b>	function
<b>char</b>	function	<b>rep</b>	function
<b>characterpairs</b>	function	<b>replacenewlines</b>	function
<b>characters</b>	function	<b>reverse</b>	function
<b>checkedsplit</b>	function	<b>split</b>	function
<b>collapsespaces</b>	function	<b>splitlines</b>	function
<b>containsws</b>	function	<b>splitup</b>	function
<b>count</b>	function	<b>strip</b>	function
<b>dawson</b>	function	<b>sub</b>	function
<b>dump</b>	function	<b>texnewlines</b>	function
<b>erf</b>	function	<b>tformat</b>	function
<b>erfc</b>	function	<b>toHEX</b>	function
<b>erfcx</b>	function	<b>toboollean</b>	function
<b>erfi</b>	function	<b>tobytes</b>	function
<b>escapedpattern</b>	function	<b>tocontext</b>	function
<b>escapedquotes</b>	function	<b>todec</b>	function
<b>explode</b>	function	<b>todimen</b>	function
<b>f6</b>	function	<b>tohex</b>	function
<b>find</b>	function	<b>tonodes</b>	function
<b>format</b>	function	<b>topattern</b>	function
<b>formatter</b>	function	<b>totable</b>	function
<b>formatters</b>	function	<b>tounicode16</b>	function
<b>fullstrip</b>	function	<b>toutf</b>	function
<b>gmatch</b>	function	<b>toutf32</b>	function
<b>gsub</b>	function	<b>toutf8</b>	function
<b>is_boolean</b>	function	<b>tracedchar</b>	function
<b>is_empty</b>	function	<b>tracedchars</b>	table
<b>itself</b>	function	<b>unescapedquotes</b>	function
<b>len</b>	function	<b>unpack</b>	function
<b>limit</b>	function	<b>unquote</b>	function
<b>linetable</b>	function	<b>unquoted</b>	function
<b>longtostring</b>	function	<b>upper</b>	function
<b>lower</b>	function	<b>utfcharacter</b>	function
<b>match</b>	function	<b>utfcharacters</b>	function
<b>nspaces</b>	function	<b>utfcharactertable</b>	function

<b>utflength</b>	function	<b>utfvaluetable</b>	function
<b>utfpadd</b>	function	<b>valid</b>	function
<b>utfpadding</b>	function	<b>voigt</b>	function
<b>utfvalue</b>	function	<b>voigt_hwhm</b>	function
<b>utfvalues</b>	function	<b>wordsplitter</b>	function

# structures (context)

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

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

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

- F has\_changed
- F in\_body
- F is\_odd
- F mark
- F marked
- F markedlist
- N nopages
- F number
- F on\_right
- F save
- D tobosaved
- F toranges

## references

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

## table

- 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
- 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

## table

- F store
- D tobesaved
- F unique
- F userdata

## sections

## table

- F autodepth
- F cct
- D collected
- F current
- F currentblock
- F currentid
- F currentlevel
- F currentsectionindex
- F depthnumber
- F finddata
- F findnumber
- F fullnumber
- F getcurrentlevel
- F getlevel
- F getnumber
- F internalreference
- D levelmap
- D levels
- F matchingtilldepth
- F numberatdepth
- F numbers
- F popblock
- F prefixedconverted
- F pushblock
- F register
- D registered
- F reportstructure
- F save
- T sectionblockdata
  - T bodypart
    - S bookmark
- F set
- F setblock
- F setchecker
- F setentry
- F setinitialblock
- F setlevel
- F setnumber
- F showstructure



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

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

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

<b>getlocallevel</b>	function	<b>hashtokens</b>	function
<b>getmark</b>	function	<b>hyphenationcodes</b>	data table
<b>getmath</b>	function	<b>ifs</b>	data table
<b>getmathcode</b>	function	<b>inicatcodes</b>	number
<b>getmathcodes</b>	function	<b>integerdef</b>	function
<b>getmathcontrolvalues</b>	function	<b>isattribute</b>	function
<b>getmathdir</b>	function	<b>isbox</b>	function
<b>getmathflattenvalues</b>	function	<b>iscount</b>	overloaded function
<b>getmathoptionvalues</b>	function	<b>isdefined</b>	function
<b>getmathparametervalues</b>	function	<b>isdimen</b>	overloaded function
<b>getmathstylenamevalues</b>	function	<b>isglue</b>	function
<b>getmathstylevalues</b>	function	<b>ismuglue</b>	function
<b>getmathvariantvalues</b>	function	<b>ismuskip</b>	overloaded function
<b>getmode</b>	function	<b>isprintable</b>	function
<b>getmodevalues</b>	function	<b>isskip</b>	overloaded function
<b>getmuglue</b>	function	<b>istoken</b>	function
<b>getmuskip</b>	function	<b>istoks</b>	function
<b>getnest</b>	function	<b>lastnodetype</b>	function
<b>getnormalizevalues</b>	function	<b>lccode</b>	table
<b>getoutputactive</b>	function	<b>linebreak</b>	function
<b>getpacktypevalues</b>	function	<b>lists</b>	table
<b>getpagecontextvalues</b>	function	<b>luacatcodes</b>	number
<b>getpagestate</b>	function	<b>magicconstants</b>	table
<b>getparbeginvalues</b>	function	N awfulbad	
<b>getparcontextvalues</b>	function	N decentcriterium	
<b>getpardir</b>	function	N defaultcatcodetable	
<b>getparmodevalues</b>	function	N defaultdeadcycles	
<b>getparstate</b>	function	N defaulteqnogapstep	
<b>getprimitiveorigins</b>	function	N defaultthangafter	
<b>getregisterindex</b>	function	N defaulttoutputbox	
<b>getrunstatevalues</b>	function	N defaultpdisplaygap	
<b>getsfcode</b>	function	N defaultrule	
<b>getshapingpenaltiesvalues</b>	function	N defaultspacefactor	
<b>getskip</b>	function	N defaulttolerance	
<b>getsynctexline</b>	function	N deplorable	
<b>getsynctexmode</b>	function	N ejectpenalty	
<b>getsynctextag</b>	function	N ignoredepth	
<b>gettextcontrolvalues</b>	function	N infinitebad	
<b>gettextdir</b>	function	N infinitepenalty	
<b>gettoks</b>	function	N infinity	
<b>getuccode</b>	function	N largewidthexcess	
<b>glue</b>	table	N loosecriterium	
<b>glyphoptioncodes</b>	data table	N maxbytecodeindex	
<b>groupcodes</b>	data table	N maxcardinal	

N maxcategorycode	N unity	
N maxcharactercode	N unusedattributevalue	
N maxcharcode	N unusedscriptvalue	
N maxdatavalue	N unusedstatevalue	
N maxdimen	N zeroglua	
N maxfunctionreference	<b>mathchardef</b>	function
N maxhalfvalue	<b>mathcode</b>	table
N maxhalfword	<b>mathcontrolcodes</b>	data table
N maxinteger	<b>mathflattencodes</b>	data table
N maxmarkindex	<b>mathoptioncodes</b>	data table
N maxmathclasscode	<b>modelevels</b>	table
N maxmathfamilyindex	N horizontal	
N maxnewlinecharacter	N math	
N maxnofbytecodes	N unset	
N maxnofcatcodetables	N vertical	
N maxnoffonts	<b>modes</b>	data table
N maxnoflanguages	<b>mprint</b>	function
N maxnofmarks	<b>muglua</b>	table
N maxnofmathfamilies	<b>muskup</b>	table
N maxnofregisters	<b>nest</b>	table
N maxquarterword	<b>nilcatcodes</b>	number
N maxregisterindex	<b>normalizecodes</b>	data table
N maxsizeofword	<b>notcatcodes</b>	number
N maxspacefactor	<b>number</b>	function
N mincardinal	<b>parcontextcodes</b>	data table
N mindatavalue	<b>poplocal</b>	function
N mindimen	<b>primitives</b>	function
N minhalfword	<b>print</b>	function
N mininfinity	<b>prtcacodes</b>	number
N mininteger	<b>pushlocal</b>	function
N minquarterword	<b>quitlocal</b>	function
N minspacefactor	<b>quittoks</b>	function
N nocatcodetable	<b>resetparagraph</b>	function
N null	<b>rlncatcodes</b>	number
N nullflag	<b>romannumeral</b>	function
N nullfont	<b>round</b>	function
N onebp	<b>runlocal</b>	function
N presetrulethickness	<b>runstring</b>	function
N runningrule	<b>runtoks</b>	function
N smallstretchability	<b>saveboxresource</b>	function
N texeqtbsize	<b>scale</b>	function
N texhashprime	<b>scantoks</b>	function
N texhashsize	<b>set</b>	function
N two	<b>setattribute</b>	function

<b>setbox</b>	function	<b>settextdir</b>	function
<b>setboxdir</b>	function	<b>settoks</b>	function
<b>setcatcode</b>	function	<b>setuccode</b>	function
<b>setcount</b>	function	<b>sfcode</b>	table
<b>setdelcode</b>	function	<b>shiftparshape</b>	function
<b>setdimen</b>	function	<b>shipout</b>	function
<b>setdimensionvalue</b>	function	<b>showbox</b>	function
<b>setglue</b>	function	<b>showcontext</b>	function
<b>setglyphdata</b>	function	<b>skip</b>	table
<b>setglyphscript</b>	function	<b>snapshotpar</b>	function
<b>setglyphstate</b>	function	<b>sp</b>	function
<b>setinsertcontent</b>	function	<b>splitbox</b>	function
<b>setinsertdistance</b>	function	<b>sprint</b>	function
<b>setinsertlimit</b>	function	<b>stringtocodesbitmap</b>	function
<b>setinsertmultiplier</b>	function	<b>systemmodes</b>	data table
<b>setintegervalue</b>	function	<b>takebox</b>	function
<b>setinteraction</b>	function	<b>texcatcodes</b>	number
<b>setlccode</b>	function	<b>textcontrolcodes</b>	data table
<b>setlinedir</b>	function	<b>toks</b>	table
<b>setlist</b>	function	<b>tonumber</b>	function
<b>setlocalbox</b>	function	<b>toscaled</b>	function
<b>setmath</b>	function	<b>tpacatcodes</b>	number
<b>setmathcode</b>	function	<b>tpbcatcodes</b>	number
<b>setmathdir</b>	function	<b>tprint</b>	function
<b>setmuglue</b>	function	<b>trackers</b>	data table
<b>setmuskip</b>	function	<b>triggerbuildpage</b>	function
<b>setnest</b>	function	<b>txtcatcodes</b>	number
<b>setpardir</b>	function	<b>type</b>	function
<b>setrunstate</b>	overloaded function	<b>urrcode</b>	table
<b>setsfcode</b>	function	<b>uprint</b>	function
<b>setskip</b>	function	<b>useboxresource</b>	function
<b>setsynctexline</b>	function	<b>vrbcacodes</b>	number
<b>setsynctexmode</b>	function	<b>write</b>	function
<b>setsynctextag</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)

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

## token (basic tex)

<b>create</b>	function	<b>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 endoffline
- N escape
- N ignore
- N invalid
- N letter
- N mathshift
- N open
- N other
- N parameter
- N space
- N subscript
- N superscript
- N whitespace

## cache table

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

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

## commands data table

## compile function

## constant function

## converters table

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

## create function

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

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

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

- shortcuts** table

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

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

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



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

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

## tracers (context)

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

**showlines**    function

## trackers (context)

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

# typesetters (context)

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

## updaters (context)

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

## url (context)

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

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



## utf8 (basic lua)

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

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

# utilities (context)

## **debugger**            table

F disable  
F enable  
F savestats  
F showstats  
F showtraceback

## **files**                table

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

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

## **formatters**           table

F formatcolumns  
F list  
F stripzeros

## **ghostscript**           table

F convert  
F statistics

## **graphicmagick**        table

F convert  
F statistics

## **graphicsmagick**      table

F convert  
F statistics

## **lua**                    table

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

## packers table

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

## parsers table

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

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

## randomizer table

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

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

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