MP aes attributes backends basexx bit32 blobs boolean buffers builders caches 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 iob languages layouts lfs libraries lmx loaders logs lpdf lpeg lua luac luatex lxml math mathematics md5 metapost mime moduledata modules mp mplib noads mode 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 texconstants texifs texisdefined texmodes texsystemmodes thirddata tokens tracers trackers typesetters updaters url userdata utf8 utilities visualizers xcomplex xdecimal xmath xml xzip

# 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
aes	table	experiments	table
arg	table	figures	table
asnumber_p	function	file	table
assert	function	fio	table
attributes	table	floats	table
backends	table	flushsimplerule	function
basexx	table	flushspecialrule	function
bit32	table	font	table
blobs	table	fonts	table
blockrequire	function	functions	table
boolean	table	getmetatable	function
buffers	table	getscriptstatus	function
builders	table	global	table
caches	table	graphics	table
callback	table	gzip	table
callbacks	table	handledefinitions	function
catcodes	table	handletransformstring	function
characters	table	images	table
checkimage	function	inspect	function
chemistry	table	interactions	table
collectgarbage	function	interfaces	table
commands	table	io	table
containers	table	ipairs	function
context	function	job	table
converters	table	language	table
copyarray	function	languages	table
copydictionary	function	last_pdf	number
coroutine	table	layouts	table
createmask	function	lfs	table
ctxrunner	table	libraries	table

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

toboolean function todecimal function token table tokens table tonumber function tostring function tracers table trackers table function type typesetters table unpack function table updaters url table userdata table

utf table utf8 table table utilities visualizers table function warn xcomplex table xdecimal table xmath table xml table xpcall function xzip table table zip zlib table

## aes (context)

decode function
encode function

random function

# attributes (context)

<b>alternates</b> ta	ble	F	formatcolor
N attribute		F	formatgray
D data		F	getpagecolormodel
F enable		F	gray
F handler		F	graytohsv
F register		F	handler
D registered		Т	helpers
D values			F complement
<b>applyoverloads</b> fu	nction		F inbetween
<b>checkvalues</b> fu	nction		F justone
<pre>colorintents ta</pre>	ble	F	hsvtogray
N attribute		F	hsvtorgb
D data		F	hwbtorgb
F enable		F	iccprofile
F handler		F	isblack
F register		F	labtorgb
D registered		F	labtoxyz
<b>colors</b> ta	ble	N	main
N attribute		S	model
F cmyk		D	models
F cmyktogray		F	mpcolor
F cmyktorgb		F	mpnamedcolor
F colorcomponents		F	mpoptions
D counts		F	namedcolorattributes
B couple		N	none
F currentmodel		F	popset
F currentnamedmodel		F	processcolorcomponents
D data		F	pushset
N default		F	register
F defineintermediate	ecolor	D	registered
F definemultitonecol	lor	F	registerspotcolor
F defineprocesscolor	•	F	rgb
F defineprocesscolor	rdirect	F	rgbtocmyk
F definesimplegray		F	rgbtogray
F definespotcolor		F	rgbtohsv
F definetransparency	1	F	rgbtoxyz
F enable		N	selector
F filter		F	setlist
N forced		F	setmodel
F forcedmodel		F	setpagecolormodel
F forcesupport		D	sets

F spec		public	function
F spot		registervalue	function
F spotcolorname		restore	function
F spotcolorparer	nt	save	function
F spotcolorvalue	•	setcleaner	function
B supported		showcurrent	function
F toattributes		states	table
F transparencyco	omponents	F disabletrigger	ing
B triggering		F enabletriggeri	ng
F usecolors		F finalize	
D valid		F initialize	
F value		F process	
D values		F selective	
B weightgray		F simple	
F xyztolab		F stacked	
F xyztorgb		F stacker	
counts	data table	system	function
define	function	tooverloads	function
effects	table	transparencies	table
N attribute		N attribute	
D data		D data	
F enable		F enable	
F handler		F forcesupport	
F register		F handler	
D registered		T names	
D values		N color	
getvalue	function	N colorburn	
getvalues	function	N colordodge	
handlers	table	N darken	
hasvalues	function	N difference	
list	data table	N exclusion	
markasoverload	function	N hardlight	
names	data table	N hue	
negatives	table	N lighten	
N attribute		N luminosity	
D data		N multiply	
F enable		N none	
F handler		N normal	
F register		N overlay	
D registered		N saturation	
F set		N screen	
numbers	data table	N softlight	
ofnode	function	N none	
private	function	F register	

D registered
B supported
F toattribute
B triggering
F value
D values

unsetvalue number
values data table
viewerlayers table

N attribute
F cleanup
D data
F define

 ${\sf F} \ {\sf definedlayoutcomponent}$ 

F enable

 ${\sf F} \ {\sf forcesupport}$ 

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)

F analyzesymbol

closeout function F attachmentid codeinjections table F bitmap F registerboxresource F clonefield F restoreboxresource F copyimage current strina F definefield defaults table F definefieldset T codeiniections F defineviewerlaver F prerollreference F embedfile F vfstartcolor F embedimage F vfstopcolor F enabletags T nodeiniections F exportformdata F cmvkcolor F fieldsurrounding F destination F flushmergelayer F graycolor F getbookmarks F injectknockout F getboxresourcebox F injectoverprint F getdefaultfieldvalue F reference F getfieldcategory F rgbcolor F getfieldset F getformatoption F spotcolor F transparency F getinfo T registrations F getpreviewfigure F transparency F getrefobj D tables F insertrenderingwindow getcallbackstate function F jp2 included table F jpg B context F maptag B date F mergebookmarks B id F mergecomments B metadata F meraefields B pdf F mergereferences initialize function F mergeviewerlayers latelua function F newimage nodeinjections table F png nothing function F prerollreference function openout F presetsymbol registered table F presetsymbollist T pdf F processrendering F registerdocumentcloseaction T codeinjections F addbookmarks F registerdocumentopenaction F analyzenormalsymbol F registeredsymbol

F registerpagecloseaction

F registerpageopenaction F changestackedlayer F registerpattern F cmykcolor F registersymbol F comment F destination F ruleactionbox F ruleactiondraw F effect F ruleactionfill F getboxresourcedimensions F ruleactionmp F graycolor F ruleactionstroke F injectbitmap F insertu3d F saveboxresource F scanimage F knockout F setattachmentsupport F negative F setencryption F overprint F setfieldcalculationset F positive F setfigurealternative F reference F setfigurecolorspace F rgbcolor F setfiguremask F spotcolor F setformat F startalternate F setformsmethod F startlayer F setpagetransition F startstackedlayer F settaggingsupport F stopalternate F setxmpfile F stoplayer F startlaver F stopstackedlayer F startunicodetoactualtext F transparency F startunicodetoactualtextdirect F typesetfield F stoplaver F useboxresource F stopunicodetoactualtext T registrations F stopunicodetoactualtextdirect F cmykindexcolor F supportedformats F cmykspotcolor F unicodetoactualtext F getspotcolorreference F useviewerlayer F grayindexcolor F validfield F grayspotcolor F validfieldcategory F rgbindexcolor F validfieldset F rgbspotcolor F vfstartcolor F spotcolorname F vfstopcolor F transparency F wrapimage T tables registrations table S name

T nodeinjections

F annotation F attachfile

F addtags

setencryption

tables

writeout

function

function

table

# basexx (extra lua)

decode16	function	encode16	function
decode64	function	encode64	function
decode85	function	encode85	function
decodeLZW	function	encodeLZW	function
decodeRL	function	encodeRL	function

# bit32 (basic lua)

arshift	function	extract	function
band	function	lrotate	function
bnot	function	lshift	function
bor	function	replace	function
btest	function	rrotate	function
bxor	function	rshift	function

# blobs (context)

append	function	strht	function
dimensions	function	strwd	function
dispose	function	tohpack	function
new	function	tonodes	function
pack	function	tovpack	function
strdp	function	write	function
strhd	function		

# boolean (context)

tocontext function
tonumber function

# buffers (context)

append	function
assign	function
collectcontent	function
empty	function
erase	function
exists	function
get	function
getcontent	function
getlines	function
gettexbuffer	function
loadcontent	function
parallel	table

F define	
F hassomecontent	
F next	
F place	
F reset	
F save	
prepend	function
raw	function
run	function
samplefile	function
undent	function

# builders (context)

checkparcontext	function	_	+24	
checksidefloat	function		tag <b>iling</b>	table
kernel	table	•	add	table
F collapsing	tabte		distance	
F hyphenating			fixedprofile	
			get	
F kerning			list	
F ligaturing F mlisttohlist				
	function		pagehandler	
local_box_filter paragraphs	table		profilebox set	
	table		_	table
T constructors		vspa	_	table
N attribute			categories	
F define F disable			checkstrutdepth	
			collapsevbox	
F enable			data	
F handler			D map	
T methods			D skip	
F basic			D snapmethods	
F default			definesnapmethod	
F hpack			fixed	
F oneline			flushcontribution	5
D names			forcepageflush	
D numbers			forcestrutdepth	
F set			getnofpreviouslin	es
F start			inject	
F stop			injectdisable	
T expansion			injectpenalty	
F trace			injectskip	
F keeptogether			interceptsamepage	content
F registertogether			pagehandler	
T solutions			pageoverflow	
T splitters		F	popatsame	
F define		F	pushatsame	
F optimize			setmap	
T registered		F	setskip	
F reset			snapbox	
F set		F	synchronizepage	
F split		F	tocategories	
F start		F	tocategory	
F stop		F	vboxhandler	

# caches (context)

base	string	loadcontent	function
collapsecontent	function	loaddata	function
configfiles	function	more	string
contentstate	function	savecontent	function
defaults	table	savedata	function
getfirstreadablefile	function	setfirstwritablefile	function
getreadablepaths	function	setluanames	function
getwritablepath	function	treehash	function
hashed	function	usedpaths	function
is_writable	function		

## callback (basic tex)

find function
known function
list function

register overloaded function
usage function

#### callbacks (context)

freeze function B intercept tex error functions table B kerning B ligaturing F start page number F stop page number B linebreak filter function known B local\_box\_filter list data table B make extensible pop function B math rule push function B missing character register function B mlist to hlist function report B open data file supported table B paragraph context B alignment\_filter B post\_linebreak\_filter B append line filter B pre dump B append\_to\_vlist\_filter B pre linebreak filter B begin\_paragraph B pre\_output\_filter B build\_page\_insert B process\_jobname B buildpage filter B register extensible B define font B show error message B find format file B show lua call B find log file B show warning message B get attribute B show whatsit B get noad class B start file B glyph run B start run B handle overload B stop file B hpack filter B stop run B hpack\_quality B trace memory B hyphenate B vpack filter B insert par B vpack quality B intercept\_lua\_error B wrapup run

## catcodes (context)

 register function

## characters (context)

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

function setactivecatcodes setlettercatcodes function setothercatcodes function function shape shaped function shash data table shchars data table data table shcodes showstring function **specialchars** data table specials data table splits table T char

T compat

superscripts

subscripts

synonyms tex function
data table
data table
table
table
table
data table
table
data table

D accentmapping D commandmapping F defineaccents F safechar F strtextoutf F strtoutfpattern F toutf F toutfpattern textclasses table tonumber function ucchars data table uccode function uccodes data table uhash data table unicodechar function function upper verbosemarks data table

# chemistry (context)

component	function	
define	function	
definitions	data table	
format	string	
inlinechemical	function	
instance	string	

method	string
molecule	function
moleculeparser	userdata
start	function
stop	function
undefine	function

# containers (context)

cleanname	function	is_valid	function
content	function	read	function
define	function	usecache	boolean
is_usable	function	write	function

# converters (context)

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

uchexnumbers upper verbose function function table F translate

weekday function
word function
words function

# coroutine (basic lua)

close	function	running	function
create	function	status	function
isyieldable	function	wrap	function
resume	function	yield	function

## ctxrunner (context)

load function prepfiles data table
preparedfile function resolve function

# debug (basic lua)

getinfo function
sethook function

traceback function

# dir (context)

collectpattern	function
current	function
expandname	function
found	function
glob	function
globdirs	function
globfiles	function

globpattern	function
ls	function
makedirs	function
mkdirs	function
pop	function
push	function

# directives (context)

data	data table	
default	function	
disable	function	
done	table	
enable	function	
list	function	
name	string	

register	function
report	function
reset	function
show	function
value	function
values	function

#### document (context)

arguments files functions getargument getfilename options data table table table function function table

D modes
D modules
targument

function setargument setcommandline function setdefaultargument function setenvironments function setfilename function setfilenames function setmodes function setmodules function variables data table

T commandline
D environments

D modes
D modules
T ctxfile

D environments

# documentdata (context)

variable function

# drivers (context)

applyanchor	function	F updatefontstate
applyorientation	function	T whatsit
convert	function	S name
converters	table	T json
F analyze		T actions
F engine		F cleanup
F lmtx		F convert
F resyncbox		F finalize
enable	function	F initialize
gethpos	function	F outputfilename
getpos	function	F prepare
getrpos	function	F wrapup
getvpos	function	T flushers
helpers	table	F character
install	function	F popleaderlevel
instances	table	F pushleaderlevel
T empty		F rule
T actions		F setstate
F convert		F simplerule
F prepare		F specialrule
T flushers		F updatefontstate
F popleaderleve	l	T whatsit
F pushleaderlev	el	S name
T whatsit		T lua
S name		T actions
T js		F cleanup
T js T actions		F cleanup F convert
•		•
T actions		F convert
T actions F cleanup		F convert F finalize
T actions F cleanup F convert		F convert F finalize F initialize
T actions F cleanup F convert F finalize	e	F convert F finalize F initialize F outputfilename
T actions F cleanup F convert F finalize F initialize	е	F convert F finalize F initialize F outputfilename F prepare
T actions F cleanup F convert F finalize F initialize F outputfilenam	е	F convert F finalize F initialize F outputfilename F prepare F wrapup
T actions F cleanup F convert F finalize F initialize F outputfilenam F prepare	e	F convert F finalize F initialize F outputfilename F prepare F wrapup T flushers
T actions F cleanup F convert F finalize F initialize F outputfilenam F prepare F wrapup	e	F convert F finalize F initialize F outputfilename F prepare F wrapup T flushers F character
T actions F cleanup F convert F finalize F initialize F outputfilenam F prepare F wrapup T flushers		F convert F finalize F initialize F outputfilename F prepare F wrapup T flushers F character F popleaderlevel
T actions F cleanup F convert F finalize F initialize F outputfilenam F prepare F wrapup T flushers F character	ι	F convert F finalize F initialize F outputfilename F prepare F wrapup T flushers F character F popleaderlevel F pushleaderlevel
T actions F cleanup F convert F finalize F initialize F outputfilenam F prepare F wrapup T flushers F character F popleaderleve	ι	F convert F finalize F initialize F outputfilename F prepare F wrapup T flushers F character F popleaderlevel F pushleaderlevel F rule
T actions F cleanup F convert F finalize F initialize F outputfilenam F prepare F wrapup T flushers F character F popleaderleve F pushleaderleve	ι	F convert F finalize F initialize F outputfilename F prepare F wrapup T flushers F character F popleaderlevel F rule F simplerule

S name T actions 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 fontchar F simplerule F specialrule F aroup 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 **lmtxversion** number T whatsit outputfilename function S name T pdf report function

# environment (context)

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

### experiments (context)

data	data table
default	function
disable	function
done	table
enable	function
list	function
name	string

register function
report function
reset function
show function
value function
values function

#### figures (context)

F resetstore

applyratio function F scan badname function F serialize bases data table T sizes bitmapimage function R art boxnumber number B bleed cachepaths data table B crop check function B media checkers data table R none converters data table R trim current function F storedata defaultdepth number F totable defaultheight number T types defaultsearch hool ean N jbiq2 defaultwidth number N jp2 done function N jpg function dummv N none existers data table N pdf exists function N png formats data table N stream found data table F wrap function include function get includers data table aetinfo function initialize getpdfinfo function function getrealpage function loaded data table data table function localpaths auess guessfromstring data table function magics function function hash mergegoodies identifiers data table number nofmissing identify function nofprocessed number table data table images order data table F check paths data table F checksize patterns function F copy pop preferguality boolean F create data table programs F embed function F embedfromstore push function F fetchdata registerpattern registerresource function T keys function registersuffix F print data table F resetdata remappers resources data table

scale	function	setpaths	function
set	function	suffixes	data table
setlookups	function	used	data table
setorder	function		

## file (basic lua)

addsuffix	function	needsupdating	function
basename	function	pathpart	function
checksum	function	readdata	function
collapsepath	function	removesuffix	function
сору	function	replacesuffix	function
dirname	function	reslash	function
expandname	function	robustname	function
extname	function	savechecksum	function
is_qualified_path	function	savedata	function
is_readable	function	size	function
$\verb"is_rootbased_path"$	function	splitbase	function
is_writable	function	splitname	function
isreadable	function	splitpath	function
iswritable	function	strip	function
join	function	suffix	function
joinpath	function	suffixes	function
loadchecksum	function	suffixesonly	function
nameonly	function	suffixonly	function
nametotable	function	syncmtimes	function
needs_updating	function	withinbase	function

## fio (extra lua)

read2dot14 function readinteger2 function readbytes function readinteger3 function readcardinal1 function readinteger3 function readcardinal2 function readinteger4 function readcardinal2 function readinteger4 function readcardinal2 function readinteger4 function readcardinal2 function readinteger4 function readcardinal3 function readinteger4ble function readcardinal3 function setposition function readcardinal3le function skipposition function readcardinal4 function writecardinal1 function readcardinal4le function writecardinal2 function readcardinaltable function writecardinal2 function readcardine function writecardinal2 function readcstring function writecardinal3 function	getposition	function	readinteger1le	function
readbytetable function readinteger3 function readcardinal1 function readinteger3le function readcardinal2le function readinteger4 function readcardinal2 function readinteger4le function readcardinal2le function readinteger4ble function readcardinal3 function setposition function readcardinal3le function skipposition function readcardinal4 function writecardinal1 function readcardinal4le function writecardinal1le function readcardinal4le function writecardinal2 function readcardinal4le function writecardinal2 function readcardine function writecardinal2le function	read2dot14	function	readinteger2	function
readcardinal1 function readinteger3le function readcardinal2 function readcardinal2 function readcardinal2 function readcardinal3 function readcardinal3 function setposition function readcardinal3le function skipposition function readcardinal4 function writecardinal1 function readcardinal4le function writecardinal1le function readcardinal4le function writecardinal2 function readcardinal4le function writecardinal2 function readcardinal4le function writecardinal2le function readcardinal4le function writecardinal2le function	readbytes	function	readinteger2le	function
readcardinalle function readinteger4 function readcardinal2 function readinteger4le function readcardinal2le function readcardinal3 function setposition function readcardinal3le function skipposition function readcardinal4 function writecardinal1 function readcardinal4le function writecardinal1le function readcardinal4le function writecardinal2 function readcardinaltable function writecardinal2 function readcline function writecardinal2le function	readbytetable	function	readinteger3	function
readcardinal2 function readinteger4le function readcardinal2le function readcardinal3 function setposition function readcardinal3le function skipposition function readcardinal4 function writecardinal1 function readcardinal4le function writecardinal1le function readcardinal4le function writecardinal2 function readcardinal4le function writecardinal2 function readcline function writecardinal2le function	readcardinal1	function	readinteger3le	function
readcardinal2le function readintegertable function readcardinal3 function setposition function readcardinal3le function skipposition function readcardinal4 function writecardinal1 function readcardinal4le function writecardinal1le function readcardinaltable function writecardinal2 function readcline function writecardinal2le function	readcardinal1le	function	readinteger4	function
readcardinal3 function setposition function readcardinal3le function skipposition function readcardinal4 function writecardinal1 function readcardinal4le function writecardinal1le function readcardinaltable function writecardinal2 function readcline function writecardinal2le function	readcardinal2	function	readinteger4le	function
readcardinal3le function skipposition function readcardinal4 function writecardinal1 function readcardinal4le function writecardinal1le function readcardinaltable function writecardinal2 function readcline function writecardinal2le function	readcardinal2le	function	readintegertable	function
readcardinal4 function writecardinal1 function readcardinal4le function writecardinal1le function readcardinaltable function writecardinal2 function readcline function writecardinal2le function	readcardinal3	function	setposition	function
readcardinal4le function writecardinal1le function readcardinaltable function writecardinal2 function readcline function writecardinal2le function	readcardinal3le	function	skipposition	function
readcardinaltablefunctionwritecardinal2functionreadclinefunctionwritecardinal2lefunction	readcardinal4	function	writecardinal1	function
readcline function writecardinal2le function	readcardinal4le	function	writecardinal1le	function
	readcardinaltable	function	writecardinal2	function
readcstring function writecardinal3 function	readcline	function	writecardinal2le	function
	readcstring	function	writecardinal3	function
readfixed2 function writecardinal3le function	readfixed2	function	writecardinal3le	function
readfixed4 function writecardinal4 function	readfixed4	function	writecardinal4	function
<pre>readinteger1 function writecardinal4le function</pre>	readinteger1	function	writecardinal4le	function

## floats (context)

analysemethod	function	nofstacked	function
checkedpagefloat	function	рор	function
collect	function	push	function
consult	function	resave	function
flush	function	save	function
getvariable	function	stacked	function
hasstacked	function		

## font (basic tex)

addcharacters	function	getmathspec	function
current	function	id	function
define	function	max	function
getfont	function	nextid	function
getfontdimen	function	setfont	function
getfontspec	function	setfontdimen	function

## fonts (context)

onelymens	+abla	
analyzers	table	F currentfonthasfeature
D features		D designsizes
D initializers		F enhanceparameters
D methods		T enhancers
F setstate		Tafm
D states		F apply
B useunicodemarks checkers	table	F patch
	table	T patches
F getmissing		F register
D mapping		F report
F missing		F register
F placeholder  cid	table	F report T otf
	table	F addfeature
F getmap F loadfile		
collections	table	F apply F enhance
F checkenabled	table	F patch
		·
F clonevector F define		T patches F register
T definitions		•
F found		F report F register
		F register F report
F prepare F process		T tfm
F register		
F registermain		F apply F patch
F registermain F report		T patches
F reset		F register
T vectors		F report
constructors	table	F register
F addcharacters	cabic	F report
F addcoreunicodes		N factor
F aftercopyingchara	cters	T features
F applyfinalizers	0.0.5	D afm
F applymanipulators		D otf
F assignmathparamet	ers	D tfm
F beforecopyingchar		F finalize
D cache		F getfeatureaction
F calculatescale		F getmathparameter
F checkedfeatures		F getprivate
F checkedfilename		T handlers
F collectprocessors		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 txtdirstate
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 cleanname
F cffcheck	F getaxisscale
T cffencoder	F getfactors
F checkhash	F getscales
F cmap	F gotodatatable
F colr	F normalizedaxis
F compact	T normalizedaxishash
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 getsize
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 sva F readchar N tableversion F readcline F unifymissing F readcstring F unpack F readfixed2 F vhea F readfixed4 F vmtx F readinteger F vora F readinteger1 F vvar F woff2otf F readinteger1le 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 sygcache B sygenabled F readtag 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 qsub

N calt	F initializefeatu	res
N ccmp	D loadedfonts	
N cswh	N noffontsloaded	
N dlig	N nofsharedfonts	
N fina	N nofsharedhashes	
N init	N nofsharedvector	S
N isol	N privateoffset	
N liga	D privateslots	
N medi	F readanddefine	
N mset	F registerfeature	
N rclt	F resetfeature	
N rlig	B resolvevirtualt	00
N version	F scale	
T pfb	F scaled	
F loadvector	F setfactor	
T tfm	F setfeature	
D cache	F setmathparamete	r
D features	F setname	
N maxnestingdepth	B sharefonts	
N maxnestingsize	F trytosharefont	
T readers	N version	
F loadpk	current	function
F loadtfm	currentid	function
F loadtfm F loadtfmvf	currentid definers	function table
F loadtfmvf	definers	
F loadtfmvf F loadvf	<b>definers</b> F addlookup F analyze F applypostproces	table
F loadtfmvf F loadvf F pktopdf	<b>definers</b> F addlookup F analyze	table
F loadtfmvf F loadvf F pktopdf F showpk	<b>definers</b> F addlookup F analyze F applypostproces	table
F loadtfmvf F loadvf F pktopdf F showpk F reencode F setfeatures N version	definers F addlookup F analyze F applypostproces F checkedmode F checkedscript S defaultlookup	table
F loadtfmvf F loadvf F pktopdf F showpk F reencode F setfeatures N version T vf	definers F addlookup F analyze F applypostproces F checkedmode F checkedscript S defaultlookup F define	table
F loadtfmvf F loadvf F pktopdf F showpk F reencode F setfeatures N version T vf T combinations	definers  F addlookup  F analyze  F applypostproces  F checkedmode  F checkedscript  S defaultlookup  F define  F getspecificatio	table
F loadtfmvf F loadvf F pktopdf F showpk F reencode F setfeatures N version T vf	definers F addlookup F analyze F applypostproces F checkedmode F checkedscript S defaultlookup F define	table
F loadtfmvf F loadvf F pktopdf F showpk F reencode F setfeatures N version T vf T combinations F combine T combiner	definers  F addlookup F analyze F applypostproces F checkedmode F checkedscript S defaultlookup F define F getspecificatio F internal F loadfont	table
F loadtfmvf F loadvf F pktopdf F showpk F reencode F setfeatures N version T vf T combinations F combine T combiner D commands	definers F addlookup F analyze F applypostproces F checkedmode F checkedscript S defaultlookup F define F getspecificatio F internal F loadfont F makespecificatio	table
F loadtfmvf F loadvf F pktopdf F showpk F reencode F setfeatures N version T vf T combinations F combine T combiner D commands D helpers	definers F addlookup F analyze F applypostproces F checkedmode F checkedscript S defaultlookup F define F getspecificatio F internal F loadfont F makespecificatio T methods	table
F loadtfmvf F loadvf F pktopdf F showpk F reencode F setfeatures N version T vf T combinations F combine T combiner D commands D helpers D math	definers  F addlookup F analyze F applypostproces F checkedmode F checkedscript S defaultlookup F define F getspecificatio F internal F loadfont F makespecificati T methods F install	table
F loadtfmvf F loadvf F pktopdf F showpk F reencode F setfeatures N version T vf T combinations F combine T combiner D commands D helpers D math N version	definers  F addlookup F analyze F applypostproces F checkedmode F checkedscript S defaultlookup F define F getspecificatio F internal F loadfont F makespecificati T methods F install D variants	table
F loadtfmvf F loadvf F pktopdf F showpk F reencode F setfeatures N version T vf T combinations F combine T combiner D commands D helpers D math N version D whatever	definers F addlookup F analyze F applypostproces F checkedmode F checkedscript S defaultlookup F define F getspecificatio F internal F loadfont F makespecificati T methods F install D variants F read	table
F loadtfmvf F loadvf F pktopdf F showpk F reencode F setfeatures N version T vf T combinations F combine T combiner D commands D helpers D math N version D whatever F hashfeatures	definers F addlookup F analyze F applypostproces F checkedmode F checkedscript S defaultlookup F define F getspecification F internal F loadfont F makespecification T methods F install D variants F read F register	table
F loadtfmvf F loadvf F pktopdf F showpk F reencode F setfeatures N version T vf T combinations F combine T combiner D commands D helpers D math N version D whatever F hashfeatures F hashinstance	definers F addlookup F analyze F applypostproces F checkedmode F checkedscript S defaultlookup F define F getspecification F internal F loadfont F makespecification T methods F install D variants F read F register F registered	table
F loadtfmvf F loadvf F pktopdf F showpk F reencode F setfeatures N version T vf T combinations F combine T combiner D commands D helpers D math N version D whatever F hashfeatures F hashinstance T hashmethods	F addlookup F analyze F applypostproces F checkedmode F checkedscript S defaultlookup F define F getspecification F internal F loadfont F makespecification T methods F install D variants F read F register F registered F registerfallbac	table
F loadtfmvf F loadvf F pktopdf F showpk F reencode F setfeatures N version T vf T combinations F combine T combiner D commands D helpers D math N version D whatever F hashfeatures F hashinstance T hashmethods F normal	F addlookup F analyze F applypostproces F checkedmode F checkedscript S defaultlookup F define F getspecification F internal F loadfont F makespecification T methods F install D variants F read F register F registered F registersplit	table
F loadtfmvf F loadvf F pktopdf F showpk F reencode F setfeatures N version T vf T combinations F combine T combiner D commands D helpers D math N version D whatever F hashfeatures F hashinstance T hashmethods	F addlookup F analyze F applypostproces F checkedmode F checkedscript S defaultlookup F define F getspecification F internal F loadfont F makespecification T methods F install D variants F read F register F registered F registerfallbac	table

1 105000		i types	
T resolvers		T multiple	
F file		F opentype	
F name		T substitution	
F spec		F opentype	
definetypeface	function	goodies	table
dropins	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	5
F swapone		T dotless	
encodings	table	S commen	t
T agl		S feature	е
D ctxcodes		N value	
D extras		T bigslots	
D names		T parameters	<b>i</b>
D synonyms		N AccentBa	seDepth
D unicodes		N Fraction	RuleThickness
D cache		N NoLimitS	ubFactor
F is_known		N NoLimitS	upFactor
D known		T tweaks	
F load		T aftercop	ying
F make_unicode_vect	or	S name	
D math		S version	
N version		D designsizes	
enhanceid	function	D filenames	
expansions	data table	F getcompositions	5
formats	data table	T list	
getalternate	function	F load	
getindices	function	F prepare_feature	es
getkern	function	F register	
getmultiple	function	F registerpostpro	ocessor
getsubstitution	function	F report	
getters	table	T suffixes	
T alternate		handlers	table
F opentype		hashes	table
T kern		D characters	
F opentype		D classes	
F type1		D csnames	

F resolve

F type3

D descriptions	F getdigitwidth
D dynamics	F getinstancespec
D emwidths	F getparameters
D exheights	F getprivatecharornode
D features	F getprivatenode
D identifiers	F getprivates
D italics	F getprivateslot
D lastmathids	F hasprivate
D marks	F indextoslot
D mathparameters	F mathscriptslots
D modes	F name
D originals	F nametoslot
D parameters	F newprivateslot
T processes	F prependcommands
D properties	F prependcommandtable
D quads	F privateslot
D resources	F registerglyphbox
T setdynamics	F scalecommands
T shapes	F setboxdirectly
D spaces	F setboxglyph
D spacings	F setboxglyphs
T streams	F setdigitwidth
D unicodes	F setmetaglyph
D unislots	F setmetaglyphs
D variants	F splitfontpattern
D xheights	F tochar
helpers table	T vfinjectors
F addextraprivate	F startcolor
F addprivate	F stopcolor
F appendcommands	T vfspecials
F appendcommandtable	T backgrounds
F checkflags	T outlines
F checkmerge	<pre>infofont function</pre>
F checksteps	<b>iterators</b> table
F collectanchors	F characters
F combineglyphs	F descriptions
D commands	F glyphs
F composecharacters	<b>loggers</b> table
F descriptiontoslot	F format
F dimenfactor	F onetimemessage
F expandglyph	F register
T extraprivates	F reportdefinedfonts
F fontpatternhassize	F reportusedfeatures
F getcoloredglyphs	mappings table

F addtounicode F fromunicode16 F getentry F loadfile		registersa reserveid select		function function table
F loadline		F bodyfon	t	
F makenameparser		D data		
D overloads		F default		
F reset		D default	S	
F tounicode		F definefa	allbackfami	ly
F tounicode16		F definef	ontfamily	
F tounicode16sequen	ce	F definef	ontfamilypr	eset
metapost	table	D extras		
F boundingbox		F fallbac	k	
F boxtomp		D fallbac	ks	
F draw		F feature	S	
F fill		F filefal	lback	
F glyph		F fontdata	a	
F maxbounds		F fontfal	lback	
F paths		F fontsyn	onym	
F widthline		F goodies		
F zeroline		F mathfal	lback	
names	data table	D methods		
nulldata	data table	D presets		
privateoffsets	table	F registe	rfallback	
B keepnames		F registe	rfiles	
N mathbase		F registe	rfontaltern	ative
N mathextrabase		•	rfontfamily	
N textbase		F textfal	lback	
N textextrabase		F typeface	е	
protrusions	data table	F typescr		
readers	table	F userdata		
F afm		specifiers	1	table
F check_lua		D context	merged	
F check_tfm		F context		
F lua		D context		
F ofm		D context:	setups	
F opentype		F context		
F otf		F definec		
F pfb		F mergeco		
D sequence		F presetc		
F tfm		F registe		
F ttc		F showcon		
F ttf		F splitco		
F woff		D synonym:	S	

D variants		treatments	table
symbols	table	F applyfixes	
T emoji		D data	
F checked		S filename	
F resolved		F ignoredfile	
F uselibrary		F report	
tables	table	F trace	
tracers	table	typefaces	table

## functions (context)

**dummy** function

### graphics (context)

backgrounds	table
F fetchmultipar	
F pair	
F path	
F point	
bitmaps	table
F flush	
F new	
F placeholder	
F tocontext	
identifiers	table
F bitmap	
F jp2	
F jpg	
F png	
identify	function

```
synchronizers table

F collapse
F collect
F extend
F getbottom
F getd
F geth
F getkind
F getsize
F gettask
```

F gettop F getw

## gzip (extra lua)

compress	function	load	function
compressed	function	save	function
decompress	function	suffix	function

## images (context)

check	function	В сгор	
checksize	function	B media	
сору	function	B none	
create	function	B trim	
embed	function	storedata	function
${\tt embedfromstore}$	function	totable	function
fetchdata	function	types	table
keys	table	N jbig2	
print	function	N jp2	
resetdata	function	N jpg	
resetstore	function	N none	
scan	function	N pdf	
serialize	function	N png	
sizes	table	N stream	
B art		wrap	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

javascripts table
 F addtopreamble

F code D codes

F register

F flushpreambles

D functions
D preambles
F setpreamble
F storecode
F storepreamble
F usepreamblenow

F usescripts

linkedlists data table pages table

F setpagetransition

F setupcanvas references table

F setclosedocumentaction
F setclosepageaction
F setopendocumentaction
F setopenpageaction

renderings data table

previous 56 next

## interfaces (context)

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

#### io (basic lua)

ask function bytes function function characters function close copydata function exists function fileseparator string flush function input overloaded function

overloaded function lines loadchunk function

loaddata function loadlines function newreader function noflines function

open overloaded function output overloaded function pathseparator string

overloaded function popen

function read readall function readnumber function readstring function savedata function size function stderr userdata stdin userdata stdout userdata function tmpfile function type

function

write

## job (context)

	_			
comment	function	D	tobesaved	
datasets	table	-	rappers	table
D collected			collected	
F extend			tobesaved	
F getdata		pass		table
F setdata			check	
D tobesaved			collected	
disablesave	function	F	count	
embedded	table	F	define	
D collected		F	find	
D tobesaved		F	first	
fileobjreferences	table	F	get	
D collected		F	getcollected	
D tobesaved		F	getdata	
files	table	F	getfield	
D collected		F	gettobesaved	
F context		F	inlist	
B forcerun		F	last	
F run		F	list	
D tobesaved		F	save	
getrandomseed	function	F	savetagged	
getrandomseed initialize	function function		savetagged tobesaved	
		D		table
initialize	function	posi	tobesaved	table
initialize load	function function	p <b>osi</b>	tobesaved <b>tions</b>	table
initialize load loadother	function function function	posi F	tobesaved tions b_column	table
initialize load loadother objects	function function function	posi F F F	tobesaved tions b_column b_region	table
initialize load loadother objects D collected	function function function	posi F F F D	tions b_column b_region c	table
<pre>initialize load loadother objects     D collected     F get</pre>	function function function	posi F F F D	tions b_column b_region c collected	table
<pre>initialize load loadother objects     D collected     F get     F number</pre>	function function function	D posi	tions b_column b_region c collected column	table
<pre>initialize load loadother objects     D collected     F get     F number     F page</pre>	function function function	D posi	tobesaved tions b_column b_region c collected column columnofpos	table
<pre>initialize load loadother objects     D collected     F get     F number     F page     F save</pre>	function function function	D posi	tobesaved tions b_column b_region c collected column columnofpos copy	table
<pre>initialize load loadother objects     D collected     F get     F number     F page     F save     F set</pre>	function function function	D posi	tions b_column b_region c collected column columnofpos copy depth	table
initialize load loadother objects  D collected F get F number F page F save F set D tobesaved	function function function table	D posi	tobesaved tions b_column b_region c collected column columnofpos copy depth e_column	table
initialize load loadother objects  D collected F get F number F page F save F set D tobesaved pack	function function table  boolean	D <b>posi</b> F F F F F F F	tobesaved tions b_column b_region c collected column columnofpos copy depth e_column e_region	table
initialize load loadother objects  D collected F get F number F page F save F set D tobesaved pack packversion	function function function table  boolean number	D posi	tobesaved tions b_column b_region c collected column columnofpos copy depth e_column e_region enhance	table
initialize load loadother objects  D collected F get F number F page F save F set D tobesaved pack packversion pagestates	function function function table  boolean number	D posi  F  F  D  F  F  F  F  F  F  F  F  F  F	tobesaved tions b_column b_region c collected column columnofpos copy depth e_column e_region enhance extra	table
initialize load loadother objects  D collected F get F number F page F save F set D tobesaved pack packversion pagestates D collected	function function function table  boolean number	D posi	tobesaved tions b_column b_region c collected column columnofpos copy depth e_column e_region enhance extra get	table
initialize load loadother objects  D collected F get F number F page F save F set D tobesaved pack packversion pagestates D collected F countervalue	function function function table  boolean number	D posi	tobesaved tions b_column b_region c collected column columnofpos copy depth e_column e_region enhance extra get getfree	table
initialize load loadother objects  D collected F get F number F page F save F set D tobesaved pack packversion pagestates D collected F countervalue F extend	function function function table  boolean number	D posi	tobesaved tions b_column b_region c collected column columnofpos copy depth e_column e_region enhance extra get getfree gethpos	table

F settobesaved F getsync 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 Fχ N lasty F xy F leftskip Fу register function F lowerleft function F lowerright save table structure F markregionbox D collected Εn F onsamepage T components F overlapping T tobesaved Fр T branches S name F page S type F paragraph variables table F parindent F position D checksums Fr D collected F region F getchecksum F registerhandlers F makechecksum F replace F restore F rightskip F save

# language (basic tex)

clean	function	id	function
clearhyphenation	function	new	function
clearpatterns	function	patterns	function
current	function	postexhyphenchar	function
gethjcode	function	posthyphenchar	function
has_language	function	preexhyphenchar	function
hyphenate	function	prehyphenchar	function
hyphenation	function	sethjcode	function
hyphenationmin	function	setwordhandler	function

## languages (context)

F injecthyphens

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

F handler

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

### layouts (context)

setupcanvas

getcanvasfunctionstatustablegetpagedimensionsfunctionFisleftpage

F leftorrightpageaction

function

#### lfs (extra lua)

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

### 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)

color	function
convert	function
convertfile	function
convertstring	function
einject	function
eprint	function
escape	function
finalized	function
finject	function
fprint	function
get	function
getvariables	function
htmfile	function
html	table
_	

F a F td F th

include function
inherited table

S color-background-four

S color-background-one

S color-background-three

S color-background-two

S title

initialize function
inject function
lmxfile function

loadedfile	function
make	function
new	function
overloaderror	function
popupfile	function
print	function
pv	function
report	function
reset	function
result	function
set	function
show	function
showerror	function
stripcss	function
tv	function
type	function
urlescape	function
variable	function
variables	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)

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

# lpdf (context)

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

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

number	function	<b>usedfontnames</b> tab	le
object	function	N dejavusansmonoboldttf-1	
objectcompresslevel	function	<b>usedfontobjects</b> tab	le
pagereference	function	N dejavusansmonoboldttf-1	
patternstream	function	<b>usedfontstreams</b> tab	le
pdfcolor	function	T dejavusansmonoboldttf-1	
pdftimestamp	function	T characters	
print	function	T descriptions	
procset	function	T fonts	
protectresources	boolean	T goodies	
rectangle	function	S original	
reference	function	T parameters	
registerannotation	function	N ascender	
registerdestination	function	N descender	
registerdocumentfinalizer	function	N designsize	
registerfont	function	T expansion	
registerinitializer	function	N shrink	
registerpagefinalizer	function	N step	
registerpattern	function	N stretch	
reserveobject	function	N extendfactor	
rgbcode	function	N extrafactor	
rotationcm	function	N extraspace	
setcompression	function	N factor	
setencryption	function	N forcedsize	
setincludecidset	function	N hfactor	
setpageorder	function	N mathsize	
setpagetag	function	N maxsize	
setversion	function	N minsize	
sharedobject	function	N mode	
shareobject	function	N quad	
shareobjectreference	function	N scaledpoints	
spotcode	function	N size	
stream	function	N slant	
string	function	N slantfactor	
toeight	function	N space	
topdfdoc	function	N spaceshrink	
tosixteen	function	N spacestretch	
transparency	function	N squeezefactor	
transparencycode	function	N textsize	
transparencygroups	table	N units	
B none	£	N vfactor	
transparencyvalue	function	N width	
unicode	function	N xheight	
usedcharacters	table	T properties	

S filename	B dflt
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
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 *

Т

B *	N Cdotaccent
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 Alphatonos	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	NI
N Cacute	N IJ
N Caron	N Iacute
N Ccaron	N Ibreve
N Ccedilla	N Icircumflex
N Ccircumflex	N Idieresis

N	Idotaccent	N	Otilde
N	Igrave	N	P
N	Imacron	N	Phi
N	Iogonek	N	Pi
N	Iota	N	Psi
N	Iotadieresis	N	Q
N	Iotatonos	N	R
N	Itilde	N	Racute
N	J	N	Rcaron
N	Jcircumflex	N	Rcommaaccent
N	K	N	Rho
N	Карра	N	S
N	Kcommaaccent	N	Sacute
N	L	N	Scaron
N	Lacute	N	Scedilla
N	Lambda	N	Scircumflex
N	Lcaron	N	Scommaaccent
N	Lcommaaccent	N	Sigma
N	Ldot	N	Т
N	Lslash	N	Tau
N	М	N	Tbar
N	Mu	N	Tcaron
N	N	N	Tcommaaccent
N	Nacute	N	Theta
N	Ncaron	N	Thorn
N	Ncommaaccent	N	Tilde
N	Ntilde	N	U
N	Nu	N	Ugrave
N	0	N	Uhorn
N	0E	N	Uhungarumlaut
N	Oacute	N	Umacron
N	0breve	N	Uogonek
N	Ocircumflex	N	Upsilon
N	Odieresis	N	Upsilon1
N	Ograve Ograve	N	Upsilondieresis
N	Ohorn	N	Upsilontonos
N	Ohungarumlaut	N	Uring
N	Omacron	N	Utilde
N	Omega	N	V
N	Omegatonos	N	W
N	Omicron	N	Wacute
N	Omicrontonos	N	Wcircumflex
N	0slash	N	Wdieresis
N	Oslashacute	N	Wgrave

N	X	N	arrowdblright
N	Xi	N	arrowdblup
N	Υ	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
Ν	acircumflex	N	backslash
N	acute	N	bar
N	acutecomb	N	beta
N	adieresis	N	block
N	ae	N	braceleft
Ν	aeacute	N	braceright
N	agrave	N	bracketleft
N	alpha	N	bracketright
N	alphatonos	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

١	1 comma	N	epsilontonos
١	l congruent	N	equal
١	l copyright	N	equivalence
١	l currency	N	estimated
1	l d	N	eta
١	l dagger	N	etatonos
1	l daggerdbl	N	eth
١	l dcaron	N	exclam
١	l dcroat	N	exclamdbl
١	l degree	N	exclamdown
١	√ delta	N	existential
1	√ diaeresis.symbols	N	f
١	l diamond	N	female
١	l dieresis	N	fi
١	l dieresistonos	N	figuredash
١	l divide	N	filledbox
١	l dkshade	N	filledrect
١	l dlLtcaron	N	five
١	I dnblock	N	fiveeighths
١	l dollar	N	fl
١	l dong	N	florin
١	l dotaccent	N	four
١	l dotbelowcomb	N	fractionslash
١	V dotlessi	N	franc
١	N dotlessj	N	g
١	<b>I</b> dotmath	N	gamma
١	l e	N	gbreve
١	l eacute	N	gcaron
١	l ebreve	N	gcircumflex
١	l ecaron	N	gcommaaccent
١	N ecircumflex	N	gdotaccent
١	l edieresis	N	germandbls
١	l edotaccent	N	gradient
١	l egrave	N	grave
١	N eight	N	gravecomb
	N element	N	greater
١	l ellipsis		greaterequal
١	N emacron		guillemotleft
	N emdash		guillemotright
	N emptyset		guilsinglleft
	l endash		guilsinglright
	l eng		h
	l eogonek		hbar
1	N epsilon	N	hcircumflex

N			
	heart	N	logicaland
N	hookabovecomb	N	logicalnot
N	house	N	logicalor
N	hungarumlaut	N	longs
N	hyphen	N	lozenge
N	i	N	lslash
N	iacute	N	ltshade
N	ibreve	N	m
N	icircumflex	N	macron
N	idieresis	N	male
N	igrave	N	minus
N	ij	N	minute
N	imacron	N	mu
N	infinity	N	multiply
N	integral	N	musicalnote
N	integralbt	N	musicalnotedbl
N	integraltp	N	n
N	intersection	N	nacute
N	invbullet	N	napostrophe
N	invcircle	N	ncaron
N	invsmileface	N	ncommaaccent
N	iogonek	N	nine
N	iota	N	nonbreakingspace
N	iotadieresis	N	nonmarkingreturn
N	iotadieresistonos	N	notdef
N	iotatonos		notelement
		Ν	
N	itilde		notequal
N N	itilde	N	
N	itilde	N N	notequal
N N	itilde j	N N N	notequal notsubset
N N	itilde j jcircumflex jot	N N N	notequal notsubset ntilde
N N N	itilde j jcircumflex jot	N N N	notequal notsubset ntilde nu numbersign
N N N N	itilde j jcircumflex jot k	N N N N	notequal notsubset ntilde nu numbersign
N N N N	itilde j jcircumflex jot k kappa	N N N N N	notequal notsubset ntilde nu numbersign
N N N N	itilde j jcircumflex jot k kappa kcommaaccent kgreenlandic	N N N N N	notequal notsubset ntilde nu numbersign o oacute
N N N N N N	itilde j jcircumflex jot k kappa kcommaaccent kgreenlandic	N N N N N N	notequal notsubset ntilde nu numbersign o oacute obreve
N N N N N N	<pre>itilde j jcircumflex jot k kappa kcommaaccent kgreenlandic l</pre>	N N N N N N	notequal notsubset ntilde nu numbersign o oacute obreve ocircumflex
N N N N N N	itilde  j jcircumflex jot k kappa kcommaaccent kgreenlandic l lacute	N N N N N N	notequal notsubset ntilde nu numbersign o oacute obreve ocircumflex odieresis
N N N N N N N	itilde  j jcircumflex jot k kappa kcommaaccent kgreenlandic l lacute lambda		notequal notsubset ntilde nu numbersign o oacute obreve ocircumflex odieresis oe
N N N N N N N N	itilde j jcircumflex jot k kappa kcommaaccent kgreenlandic l lacute lambda lcaron		notequal notsubset ntilde nu numbersign o oacute obreve ocircumflex odieresis oe ogonek
N N N N N N N N	itilde j jcircumflex jot k kappa kcommaaccent kgreenlandic l lacute lambda lcaron		notequal notsubset ntilde nu numbersign o oacute obreve ocircumflex odieresis oe ogonek ograve
N N N N N N N N N N N N N N N N N N N	itilde j jcircumflex jot k kappa kcommaaccent kgreenlandic l lacute lambda lcaron lcommaaccent		notequal notsubset ntilde nu numbersign o oacute obreve ocircumflex odieresis oe ogonek ograve ohorn
	itilde j jcircumflex jot k kappa kcommaaccent kgreenlandic l lacute lambda lcaron lcommaaccent ldot less		notequal notsubset ntilde nu numbersign o oacute obreve ocircumflex odieresis oe ogonek ograve ohorn ohungarumlaut
	itilde j jcircumflex jot k kappa kcommaaccent kgreenlandic l lacute lambda lcaron lcommaaccent ldot less lessequal	N N N N N N N N N N N N N N N N N N N	notequal notsubset ntilde nu numbersign o oacute obreve ocircumflex odieresis oe ogonek ograve ohorn ohungarumlaut omacron

N	omegatonos	N	quoteleft
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
Ν	otilde	N	ring
N	p	N	rtblock
N	paragraph	N	S
Ν	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	phi1	N	sfthyphen
N	pi	N	shade
N	plus	N	sigma
N	plusminus	N	sigma1
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 tbar Nw N tcaron N wacute N tcommaaccent N wcircumflex N therefore N wdieresis N theta N wgrave N theta1 Nx N thinguestion N xi N thorn Νy N three N yacute N threeeighths N ycircumflex N threequarters N vdieresis N threesuperior N yen N tilde N ygrave N tildecomb Νz N tonos N zacute N trademark N zcaron N triagdn N zdotaccent N triaglf N zero N zeta N triagrt S version N triagup N two T shared N twosuperior T dynamics N twothirds T features Νu B analyze N ugrave B checkmarks N uhorn B devanagari N uhungarumlaut B dummies B extensions N umacron N underbar B extrafeatures N underbar.small B extraprivates N underbar.wide B features N underscore S indic N underscoredbl B mathrules N union S mode N universal N number N uogonek B spacekern N upblock B visualspace N upsilon T processes N upsilondieresis T rawdata N upsilondieresistonos S cache\_uuid N upsilontonos N cache version N uring B compacted B condensed N utilde Νv S creator

T descriptions	N minbottomsidebearing
B expanded	N mintopsidebearing
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
	T normal
N linegap	
N maxadvanceheight	B features
N maxadvancewidth N maxextent	S mode 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 method
S subfamily	S name
S subfamilyname N subfontindex	S resolved
N units	N scalemode
S version	N size
T verticalmetrics N ascender	S source S specification
N descender	N textsize
	T unscaled
N linegap N maxadvanceheight	
N maxadvancemeight	N cache_version
	T characters
N maxextent	T characters

T descriptions	T properties	
T mathparameters	S filename	
T parameters	S fontname	
N ascender	S format	
N charwidth	S fullname	
N descender	B hasmath	
N designsize	N id	
N extraspace	S mode	
N italicangle	B monospaced	
N maxsize	S name	
N minsize	N private	
N quad	S psname	
N slant	B setitalics	
N space	S space	
N spaceshrink	N subfont	
N spacestretch	S writingmode	
N units	usedindices	table
N vheight	T dejavusansmonoboldttf-1	
N xheight	verbose	function

# lpeg (basic lua)

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

# lua (basic tex)

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

## luac (context)

inspect function
print function

#### luatex (context)

F disable

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

function

# lxml (context)

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

rawroot	function	sorters	table
rawtex	function	F add	
refatt	function	F compare	
register	function	F flush	
registerentity	function	F reset	
removesetup	function	F show	
replace	function	F sort	
resetcdata	function	splitid	function
resetsetups	function	startraw	function
resolvedentity	function	startunescaped	function
root	function	stopraw	function
save	function	stopunescaped	function
serialize	function	store	function
setaction	function	strip	function
setatt	function	stripped	function
setattribute	function	tag	function
setcdata	function	text	function
${\tt setcommandtonone}$	function	tobuffer	function
${\tt setcommand to text}$	function	tofile	function
setpar	function	toparameters	function
setparam	function	toverbatim	function
setparameter	function	verbatim	function
setsetup	function	withindex	function
snippet	function	xmltexhandler	data table

## math (basic lua)

abs	function
acos	function
asin	function
atan	function
atan2	function
ceil	function
ceiling	function
cos	function
cosd	function
cosh	function
deg	function
div	function
even	function
exp	function
floor	function
fmod	function
huge	number
initialseed	number
ldexp	function
log	function
log10	function
max	function
maxinteger	number

min	function	
mininteger	number	
mod	function	
modf	function	
odd	function	
pi	number	
pow	function	
rad	function	
random	overloaded	function
randomseed	function	
round	function	
setrandomseedi	function	
sin	function	
sind	function	
sinh	function	
sqrt	function	
tan	function	
tand	function	
tanh	function	
tointeger	function	
type	function	
ult	function	

## mathematics (context)

addfallbacks	function	T more	
addvariant	function	T zero	
alphabets	data table	privatebase	number
alternatives	data table	registerdomain	function
big	function	registerfallbackid	function
boldmap	data table	registersimplematrix	function
categories	table	remapalphabets	function
D functions		renderings	table
charactersets	data table	D mappings	
checkaccentbaseheight	function	D numbers	
classes	data table	D sets	
classnames	data table	renderset	function
codes	data table	resetattributes	function
collected	function	resetitalics	function
define	function	resolvefallbacks	function
dimensions	function	scaleparameters	function
domains	table	setdomain	function
extensiblecode	function	setitalics	function
extensibles	data table	sets	data table
extrabase	number	setvariant	function
extras	table	startcollecting	function
F add		stopcollecting	function
F copy		styles	data table
fallbacks	table	syncboth	function
F apply		syncname	function
F install		syncstyle	function
fallbackstyleattr	function	toengineclass	function
finishfallbacks	function	toname	function
gaps	data table	tostyle	function
getboth	function	tweakaftercopyingfont	function
getdomain	function	tweakbeforecopyingfont	function
getitalics	function	tweaks	table
getstyle	function	F accentdimensions	
horizontalcode	function	F action	
initializeparameters	function	F addrules	
makefont	function	F addscripts	
mapremap	data table	F checkspacing	
overloadparameters	function	F dimensions	
preset	function	F fixanchors	
presets	table	F fixprimes	
T less		F fixradicals	

F kerns
F replace
F replacements
F substitute
F substitutes
F variant
F variants
F version
F wipecues

utfmathaccent
utfmathclass
utfmathcommand
utfmathfiller
utfmathstretch
virtualize
virtualized

function function function function function function data table

# md5 (extra lua)

HEX	function	sum	function
dec	function	sumHEXA	function
hex	function	sumhexa	function

#### metapost (context)

checkformat f
checktracingonline f
cm f
codes t

function function function table

N addto
N ampersand

N and

N assignment N atleast N begingroup

N btex
N capsule
N colon
N comma
N controls
N curl

N cycle
N definedmacro
N delimiters
N endgroup
N equals
N etex
N everyjob
N exittest
N expandafter
N fiorelse
N if

N internal
N iteration
N leftbrace
N leftbracket

N input

N interim

N leftdelimiter
N let
N macrodef
N macrospecial

N maketext N message

N mode N newinternal N nullary N numeric

N of

N ofbinary N parametert

N parametertype N pathjoin N plusorminus N primarybinary N primarydef N property

N protection
N randomseed
N relax
N repeatloop

N rightbrace N rightbracket N rightdelimiter

N runscript N save

N scantokens
N secondarybinary
N secondarydef
N semicolon

N shipout
N show
N slash
N step
N stop
N str
N string

N setbounds

N tag N tension

N tertiarybinary N tertiarydef N thingstoadd

N to N typename N unary

N undefinedcs

N until

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

reportsvgfonts	function	svgsplitcolor	function
reset	function	svgtomp	function
resetlastlog	function	svgtopdf	function
resetplugins	function	sxsy	function
run	function	tex	table
runinternal	function	Fget	tabte
runscript	function	F reset	
scanparameters	function	F set	
scripterror	function	F setfrombuffer	
scriptindex	function	texerrors	boolean
setbendtolerance	function	texexp	function
setbuffer	function	theclippath	function
setextensions	function	tographic	function
setlogging	function	totable	function
setoutercolor	function	types	table
setparameterset	function	N boolean	
setrecord	function	N cmykcolor	
settext	function	N color	
setvariable	function	N dependent	
showlog	boolean	N independent	
showsvgpage	function	N known	
simple	function	N numeric	
splitprescript	function	N pair	
startgraphic	function	N path	
startsvghashing	function	N pen	
stopgraphic	function	N picture	
stopsvghashing	function	N protodependent	
svformat	function	N string	
svgcolorremapper	function	N structured	
svgfactors	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 vacuous	£
N px	£	typesvgpage	function
svgglyphtomp	function	unload	function
svgshapestomp	function	untagvariable	function
svgshapestopdf	function	variables	table

#### mime (extra lua)

b64 function decode function decodet table F base64 F quoted-printable function dot function encode encodet table

F base64

F quoted-printable

eol function normalize function function qр

qpwrp function function report stuff function unb64 function unqp function function wrap table wrapt F base64

F default

F quoted-printable

F text

function wrp

# mp (context)

	£	£i.u.	function
autoinject	function function	fprint	function table
<b>aux</b> F boolean	Tunction	get	table
		F hashentry	function
F color		graphformat inject	function
F direct		-	Tunction
F draw		F boolean	
F fill		F cmykcolor	
F flush		F color	
F fprint		Finteger	
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		integer	function
F string		<pre>lmt_color_functions</pre>	table
F transform		F shade	
F triplet		F step	
F tripletpoints		lmt_contours_bitmap_get	function
F vprint		lmt_contours_bitmap_set	function
boolean	function	lmt_contours_cleanup	function
cleaned	function	lmt_contours_color	function
color	function	lmt_contours_edge_get_band	function
dataset	function	lmt_contours_edge_get_cell	function
datasets	function	lmt_contours_edge_paths	function
F load		lmt_contours_edge_set	function
direct	function	<pre>lmt_contours_edge_set_by_band</pre>	function
draw	function	<pre>lmt_contours_edge_set_by_cell</pre>	function
expandtex	function	lmt_contours_format	function
fill	function	<pre>lmt_contours_function</pre>	function
flatten	function	lmt_contours_maxmean	function
flush	function	lmt_contours_maxz	function
format	function	lmt_contours_minmean	function
formatted	function	lmt_contours_minz	function

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

F integer	T typescanners	
F next	F whatever	
F number	set	table
F numeric	size	function
F pair	skip	table
F path	F token	
F pen	solve	function
F property	string	function
F string	systemmode	function
F symbol	transform	function
F token	triplet	function
T tokenscanners	tripletpoints	function
F transform	vprint	function

### mplib (extra tex)

injectpath

function

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

version

function

## noads (context)

handlers	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		process	function
F families		processnested	function
F fixscripts		processors	table
F italics		F mlisttohlist	
F kernpairs		T unscript	
F makeup		T unstack	
F relocate		processouter	function

#### node (basic tex)

checkdiscretionaries fu checkdiscretionary fu copy fu copylist fu count fu currentattributes fu dimensions fu direct ta

F addmargins
F addxoffset
F addxymargins
F addyoffset
F appendaftertail
F checkdiscretionaries
F checkdiscretionary
F collapsing
F copy
F copylist

F copyonly
F count
F currentattributes
F dimensions
F effectiveglue
F endofmath
F exchange
F fields
F findattribute
F findattribute

F findnode

F firstglyph
F flattendiscretionaries
F flushlist
F flushnode
F free
F getanchors
F getattribute
F getattributelist
F getattributes
F getboth
F getbox

F getcachestate

function function function function function function function table

F getdepth
F getdirection
F getdisc
F getdiscpart
F getexpansion
F getfam
F getfield
F getfont
F getgeometry
F getglue
F getglyphdata
F getglyphdimensions
F getheight
F getid

F getchar

F getdata

F getcharspec

F getkern
F getkerndimension
F getlanguage
F getleader
F getlist
F getnext
F getnormalizedline
F getnucleus

F getinputfields

F getindex

F getoffsets
F getoptions
F getorientation
F getparstate
F getpenalty
F getpost
F getpre
F getprev
F getpropertiestable

F getproperty
F getreplace
F getscale
F getscales
F getscript

F getshift F migrate F getspeciallist F mlisttohlist F getstate F naturalhsize F getsub F naturalwidth F getsubpre F new F getsubtype F newmathqlyph F getsup F newtextglyph F patchattributes F getsuppre F gettotal F prependbeforehead F getusedattributes F protectglyph F getwhd F protectglyphs F getwidth F protrusionskippable F getwordrange F rangedimensions F getxscale F remove F getxyscales F reverse F getyscale F serialized F hasattribute F setanchors F hasdimensions F setattribute F hasfield F setattributelist F setattributes F hasgeometry F hasglyph F setboth F hasglyphoption F setbox F setchar F hpack F hyphenating F setdata F id F setdepth F ignoremathskip F setdirection F insertafter F setdisc F insertbefore F setdiscpart F is direct F setexpansion F ischar F setfam F isqlyph F setfield F isnextchar F setfont F isnextglyph F setgeometry F isnode F setglue F isprevchar F setglyphdata F isprevglyph F setheight F isspeciallist F setindex F setinputfields F isvalid F iszeroglue F setkern F kerning F setlanguage F lastnode F setleader F length F setlink

F ligaturing

F makeextensible

F setlist

F setnext

E antonial and	Etattattailita	
F setnucleus F setoffsets	F unsetattribute F unsetattributes	
F setorisets	F usedlist	
•	F usesfont	
F setorientation		
F setpenalty	F values	
F setpost	F verticalbreak	
F setpre	F vpack	
F setprev	F write	
F setproperty	F xscaled	
F setreplace	F yscaled	£
F setscales	effectiveglue	function
F setscript	endofmath	function
F setshift	family_font	function
F setspeciallist	fields	function
F setsplit	findattribute	function
F setstate	firstglyph	function
F setsub	flattendiscretionaries	function
F setsubpre	flushlist	function
F setsubtype	flushnode	function
F setsup	free	function
F setsuppre	getattribute	function
F settotal	getcachestate	function
F setwhd	getfield	function
F setwidth	getglue	function
F show	getpropertiestable	function
F slide	getproperty	function
F softenhyphens	hasattribute	function
F startofpar	hasfield	function
F subtypes	hasglyph	function
F tail	hpack	function
F todirect	hyphenating	function
F tonode	id	function
F tostring	insertafter	function
F tovaliddirect	insertbefore	function
F traverse	instock	function
F traversechar	inuse	function
F traversecontent	isnode	function
F traverseglyph	iszeroglue	function
F traverseid	kerning	function
F traverselist	lastnode	function
F type	length	function
F types	ligaturing	function
F unprotectglyph	makeextensible	function
F unprotectglyphs	mlisttohlist	function
,	<del>-</del>	

new	function	tail	function
protectglyph	function	tostring	function
protectglyphs	function	traverse	function
protrusionskippable	function	traverseid	function
rangedimensions	function	type	function
remove	function	types	function
serialized	function	unprotectglyph	function
setattribute	function	unprotectglyphs	function
setfield	function	unsetattribute	function
setglue	function	usedlist	function
setproperty	function	usesfont	function
show	function	values	function
slide	function	vpack	function
subtypes	function	write	function

### nodes (context)

discretionarycodes

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

F export

data table

F finalizebox		leftmarginwidth	function
F finalizelist		linefillers	table
F flatten		F filler	
F flattenline		F handler	
F migrate		F set	
F protectglyphs		lines	table
F recolor		T boxed	
F show		F addlinenumbers	
F showhyphenation		F register	
F stripping		F setup	
F textbackgrounds		D data	
F unprotectglyphs		F finalize	
F visualizehyphenation		F number	
F wipe		link	function
hasattribute	function	linked	function
hasfield	function	list	function
hpack	function	listcodes	data table
idsandsubtypes	function	listtoutf	function
idstostring	function	literalvalues	data table
injections	table	locate	function
F copy		markcodes	data table
F getligaindex		markers	table
F getthreshold		F get	
F handler		mathcodes	data table
F installgetspaceboth		mathvalues	data table
F installnewkern		maxboxwidth	function
F isspace		migrations	table
F keepcounts		F setinserts	
F reset		F setmarks	
F resetcounts		new	function
F setcursive		noadcodes	data table
F setkern		noadoptions	table
F setligaindex		N axis	
F setmark		N exact	
F setmove		N left	
F setposition		N middle	
F setspacekerns		N no_axis	
insertafter	function	N right	
insertbefore	function	N set	
insertlistafter	function	N unused_1	
installattributehandler	function	N unused_2	
is_display_math	function	nodecodes	data table
isnode	function	nopts	function
kerncodes	data table	nuts	table

F addmargins F flushnode F addxoffset F free F addxymargins F fullhpack F addyoffset F getanchors F append F getattr F appendaftertail F getattribute F apply F getattributelist F applyvisuals F getattributes F checkdiscretionaries F getattrlist F checkslide F getattrs F collapsing F aetboth T colors F getbox F set F getboxglue T components F getchar F copynocomponents F getcharspec F copyonlyglyphs F getcomponents F count F getdata F flush F getdepth F get F getdirection F set F getdisc F concat F getdiscpart F copy F getdiscretionary F copy\_properties F getexpansion F getfam F copylist F copynode F getfield F copyonly F getfont F copyvisual F getgeometry F count F getglue F countall F getglyphdata F currentattributes F getglyphdimensions F delete F getheight F dimensions F getid F dirdimensions F getindex F effectiveglue F getinputfields F endofmath F getkern F exchange F getkerndimension F findattribute F getlang F findnode F getlanguage F firstcharacter F getleader F firstcharinbox F getlist F firstglyph F getnext F flattendiscretionaries F getnormalizedline F flush F getnucleus

F getoffsets

F flushlist

F getoptions F ischar F getorientation F isdone F getparstate F isqlyph F getpenalty F isnextchar F getpost F isnextqlyph F getpre F isnode F isprevchar F getprev F isprevglyph F getprop F getreplace F iszeroglue F getruledata F kerning F lastnode F getscale F lenath F getscales F getscript F ligaturing F getshift F link F getspeciallist F linked F getstate F locate F getsub F migrate F mlisttohlist F getsubpre F naturalhsize F getsubtype F naturalwidth F getsup F getsuppre F nestedtracedslide F getsurround F new F gettotal F newmathglyph F getusedattributes F patchattributes F getvalue Toool F getwhd F accent F getwidth F baselineskip F getwordrange F boundary F getxscale F boxrule F getxyscales F choice F getyscale F cleanup E hasattribute F delim F hasdimensions F delimiter F hasfield F direction F hasgeometry F directliteral F hasglyph F disc F hasglyphoption F emptyrule F fence F hpack F hyphenating F fontkern F ignoremathskip F fraction F insertafter F glue F insertbefore F gluespec F insertlistafter F glyph F is display math F hlist

F vlist F imagerule F indentskip F wordboundary F italickern F prepend F kern F prependbeforehead F latelua F processranges F leader F processwords F lefthangskip F protectglyph F leftmarginkern F protectglyphs F leftskip F protrusionskippable F lineskip F rangedimensions F literal F rawprop F mathchar F reference F mathtextchar F rehpack F negatedglue F remove F noad F repackhlist F originliteral F replace F outlinerule F reverse F pageliteral T rules F penalty T ruleactions F box F radical F rawliteral F draw F register F fill F restore F mp F righthangskip F stroke F rightmarginkern Fuserrule F serialized F rightskip F rule F setanchors F save F setattr F setattribute F savepos F setmatrix F setattributelist F setattributes F setstate F shrink F setattrlist F startrotation F setattrs F stock F setboth F stretch F setbox F strutrule F setboxglue F subbox F setchar F submlist F setcomponents F temp F setdata F usage F setdepth F userdefined F setdirection T userids F setdisc F usernode F setdiscpart F userrule F setdiscretionary

F setexpansion F setwhd F setfam F setwidth F setfield F show F setfont F slide F setgeometry F softenhyphens F setglue F somepenalty F setglyphdata F somespace F setheight F splitbox F setinputfields F startofpar F setkern F striprange F setland F tail F setlanguage F takeattr F setleader F takebox F setlink F takelist F setlist F theprop F setnext F tonode F setnucleus F tonodes F setoffsets F tonut F setoptions F tosequence F setorientation F tostring F setparproperty F tracedslide F setpenalty F traverse F traversechar F setpost F traversecontent F setpre F setprev F traverseglyph F setprop F traverseid F setreplace F traverselist F setruledata T traversers F setscale F alignrecord F setscales F boundary F setscript F char F setshift F content F setspeciallist F dir F disc F setsplit F setstate F glue F setsub F glyph F hlist F setsubpre F list F setsubtype F mark F setsup F setsuppre F next F setsurround F node F setvalue F unset F setvisual F vlist F setvisuals F whatsit

T treversers		F baselineskip	
F char		F cleanup	
F content		F directliteral	
F glyph		F glyph	
F list		F hlist	
F node		F latelua	
T typesetters		F leader	
F tohbox		F lineskip	
F tohpack		F literal	
F tonodes		F originliteral	
F tovbox		F register	
F tovpack		F restore	
F unprotectglyph		F save	
F unprotectglyphs		F savepos	
F unsetattribute		F setmatrix	
F unsetattributes		F stock	
F untracedslide		F usage	
F usedlist		F usernode	
F usesfont		F vlist	
F verticalbreak		prepend	function
F vianodes		print	function
F vianuts		processors	table
F vpack		F alignment_filter	
F write		F append_line_filter	
F xscaled		F glyph_run	
F yscaled		F post_linebreak_filter	
packlist	function	F pre_linebreak_filter	
parcodes	data table	F trace_glyph_run_a	
penaltycodes	data table	F trace_glyph_run_b	
plugindata	table	properties	table
F finalizer		T data	
F initializer		pts	function
S name		radicalcodes	data table
T namespace		references	table
N attribute		N attribute	
D data		T done	
F enable		F handler	
F handler		T stack	
F register		rehpack	function
D registered		remove	function
D values		repackhlist	function
F processor		replace	function
points	function	report	function
pool	table	rightmarginwidth	function

rulecodes	data table	tail	function
rules	table	takeattr	function
F handler		takebox	function
F process		tasks	table
F set		F actions	
F userrule		F appendaction	
serialize	function	F disableaction	
serializebox	function	F disablegroup	
serialized	function	F enableaction	
setattr	function	F enablegroup	
setattribute	function	F freeze	
setboth	function	F freezegroup	
setbox	function	F new	
setboxtonaturalwd	function	F prependaction	
setchar	function	F removeaction	
setfield	function	F replaceaction	
setfont	function	F restart	
setleader	function	F setaction	
setlink	function	F showactions	
setlist	function	F table	
setnext	function	tobasepoints	function
setprev	function	tocentimeters	function
setproperty	function	tociceros	function
shifts	table	todidots	function
F handler		todimen	function
F set		toinches	function
showboxes	function	tomillimeters	function
showlist	function	tonode	function
showsimplelist	function	tonodes	function
skipcodes	data table	tonut	function
snapshots	table	topicas	function
F getsamples		topoints	function
F resetsamples		toscaledpoints	function
F takesample		tosequence	function
somepenalty	function	tostring	function
somespace	function	totable	function
specialskipcodes	table	totree	function
splitbox	function	toutf	function
startofpar	function	tracers	table
stripdiscretionaries	function	T colors	
stripping	table	F reset	
T glyphs		F set	
F set		F setlist	
subtypes	data table	F directions	

vianodes F fontchar vianuts T frequencies visualizebox F register visualizers T pool T nodes F attribute F rule T attributes T nuts F box F rule F handler F markfonts F resetproperties F rule T modes F setlist N depth F setproperties N dir F start N discretionary T steppers N expansion F check N fontkern F codes N glue F features N glyph F font N hbox N insert F glyphs N italic F message F messages N kern F nofsteps N line F register N marginkern F reset N mark F start N math F stop N mathalue F stop N mathkern T transparencies N origin F reset N par F set N penalty F setlist N simple function traverse N simplehbox function traverseid N simplevbox typesetters table N simplevtop F hbox N space F hpack N strut F tohbox N user F tohpack N vbox F tonodes N vtop F tovbox N whatsit F tovpack F register F vpack F setfont unsetattribute function F setlayer usedlist function F setruledglyph

function function function table F setvisual write function

vpack whatsitcodes function data table

## number (context)

	function	to16dot16	function
basepoints	function	tobasepoints	function
bytetodecimal	function	tobitstring	function
compactfloat	function	tocentimeters	function
decimaltobyte	function	tociceros	function
dimenfactors	data table	tocontext	function
formatted	function	todidots	function
$for {\tt mattedfloat}$	function	todimen	function
idiv	function	toevenhex	function
maxdimen	number	toinches	function
nopts	function	tomillimeters	function
nubasepoints	function	tonumberf	function
nupoints	function	tonumberg	function
percent	function	topicas	function
points	function	topoints	function
pts	function	toscaled	function
signed	function	toscaledpoints	function
sparseexponent	function	valid	function
splitdimen	function		

# objects (context)

data	table	page	function
dimensions	function	reference	function
found	function	register	function
n	number	restore	function

# optional (context)

curl	table	F load	
F escape		loaded	table
F fetch		lz4	table
F getversion		F compress	
F initialize		F decompresssize	
F unescape		F framecompress	
foreign	table	F framedecompres	s
F abivalues		F initialize	
F getbuffer		lzma	table
F initialize		F compress	
F load		F decompress	
F newbuffer		F initialize	
F totable		lzo	table
F types		F compress	
ghostscript	table	F decompresssize	
F execute		F initialize	
F initialize		mujs	table
graphicsmagick	table	F dofile	
F execute		F execute	
F initialize		F initialize	
hb	table	F reset	
F getshapers		F setclosefile	
F getversion		F setconsole	
F initialize		F setfindfile	
F loadfont		F setopenfile	
F shapestring		F setreadfile	
imagemagick	table	F setseekfile	
F execute		mysql	table
F initialize		F close	
kpse	table	F execute	
F expand_braces		F getmessage	
F expand_path		F initialize	
F expand_var		F open	
F find_file		postgress	table
F find_files		F close	
F get_file_types		F execute	
F initialize		F getmessage	
F readable_file		F initialize	
F set_program_na	me	F open	
F var_value		sqlite	table
library	table	F close	

F execute F initialize
F getmessage zstd table
F initialize F compress
F open F decompress
zint table F initialize

F execute

#### os (basic lua)

nofdays

pipeto
platform

now

function

function

function

string

getenv	function	remove	overloaded function
setenv	function	rename	overloaded function
binsuffix	string	resultof	function
binsuffixes	table	runtime	function
bits	number	selfarg	table
clock	function	selfbase	string
converttime	function	selfbin	string
date	overloaded function	selfcore	string
difftime	function	selfdir	string
enableansi	function	selfname	string
env	data table	selfpath	string
execute	overloaded function	setenv	overloaded function
exit	overloaded function	setexitcode	function
fulltime	function	setlocale	overloaded function
getcodepage	function	sleep	function
getenv	overloaded function	time	function
gettimeofday	function	timezone	function
isleapyear	function	tmpname	function
launch	function	today	function
libsuffix	string	type	string
localtime	function	uname	function
name	string	uuid	function
newline	string	validdate	function

weekday

where

which

function
function

function

# package (basic lua)

config	string	loadlib	function
cpath	string	luapaths	function
extralibpath	function	path	string
extralibpaths	function	poplibpath	function
extraluapath	function	popluapath	function
extraluapaths	function	preload	table
helpers	table	pushlibpath	function
libpaths	function	pushluapath	function
loaded	table	searchers	table
loaders	table	searchpath	function

# pagebuilders (context)

<pre>columnsets table</pre>	F sethsize
F add	F sethspan
F block	F setlines
F check	F setproperties
F currentcolumn	F setstart
F define	F setvsize
F finishflush	<pre>injections table</pre>
F flushareas	F flushafter
F flushcolumn	F flushbefore
F flushrest	F save
F goto	<b>mixedcolumns</b> table
F noto	F cleanup
F prepareflush	F finalize
F put	F getlist
F registerarea	F getrest
F reset	F getsplit
F setarea	F setsplit

## pdf (basic tex)

immediateobj function

# pdfe (extra tex)

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

# physics (context)

units table

F registerunit

D tables

# pngdecode (extra tex)

applyfilter	function	splitmask	function
expand	function	tocmyk	function
interlace	function	tomask	function

# publications (context)

addtexentry	function	concatstate	function
analyze	function	converttoxml	function
anywhere	function	currentspecification	table
authorcache	data table	S author	cubic
authorcollapsers	data table	T categories	
authorhashers	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	
authormap	data table	S note	
authortoregister	function	S number	
btx	table	S pages	
casters	table	S title	
F author		S volume	
F keyword		S year	
F pagenumber		T optional	
F range		T required	
checkeddataset	function	T sets	
citevariants	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	d-4- 4-61-	S title	
collected	data table	S volume	
components	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	datasets	table
S subtitle	detailed	table
S title	endnotes_to_btx	function
S year	enhancer	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	enhancers	table
S institution	F details	
S organization	F order	
S subtitle	F suffixes	
S title	finder	function
S year	firstofrange	function
T optional	found	function
T required	get	function
T sets	getcasted	function
T authors	getdetail	function
T virtual	getdirect	function
S comment	getfaster	function
S copyright	getfield	function
T fields	getfuzzy	function
S name	getindex	function
T types	inspectors	data table
S author	journals	table
S editor	F abbreviated	
S keywords	F add	
S number	F expanded	

S

S T

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

tables	table	F showfields	
D implicits		F showhashedauthors	
D origins		F showtables	
D privates		F showvariants	
D sets		typesetters	table
D specials		F author	
D types		F string	
D virtuals		usedataset	function
tags	function	usedentries	function
tracers	table	writers	table
F showdatasetauthors		F author	
F showdatasetcompletene	ess	F keyword	

F showdatasetfields

F showentry

F pagenumber

F range

# regimes (context)

backmapping	data table	mapping	data table
cleanup	function	рор	function
disable	function	process	function
enable	function	push	function
fromregime	function	toregime	function
list	function	translate	function

## resolvers (context)

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

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

usertypes

usezipfile

data table

function

function

data table

registerzipfile

relations

validatedpath	function	variableofformatorsuffix	function
variable	function	wildcardpattern	function
variableofformat	function		

## sandbox (context)

disablelibraries	function	possiblepath	function
disablerunners	function	redefine	function
enable	function	register	function
filehandlerone	function	registerbinary	function
filehandlertwo	function	registerlibrary	function
finalizer	function	registerroot	function
getrunner	function	registerrunner	function
initializer	function	report	function
iohandler	function	setfilenamelogger	function
logcalls	function	setlogger	function
logfiles	function	setreporter	function
original	function	settrace	function
overload	function	validfilename	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_hangu	ul_penalty
N inter_char_quart	ter_shrink_factor
N inter_char_quart	ter_stretch_factor
N inter_char_shrin	nk_factor
N inter_char_stret	tch_factor
N inter_word_stret	tch_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
                  function
setstatus
```

data table

splitters

## set (context)

contains function
create function
tolist function

tonumber function
totable function

# sha2 (extra lua)

HASH256	function	hash256	function
HASH384	function	hash384	function
HASH512	function	hash512	function
HEX256	function	hex256	function
HEX384	function	hex384	function
HEX512	function	hex512	function
digest256	function	sum256	function
digest384	function	sum384	function
digest512	function	sum512	function

# sio (extra lua)

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

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

#### socket (extra lua)

S content-location

**BLOCKSIZE** number S content-md5 DATAGRAMSIZE number S content-range SETSIZE number S content-transfer-encoding **SOCKETINVALID** number S content-type bind function S cookie function choose S date connect function S diagnostic-code function connect4 S dsn-gateway connect6 function S etag dns 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 aettime function S if-match headers table S if-modified-since T canonic S if-none-match S if-range S accept S accept-charset S if-unmodified-since S accept-encoding S in-reply-to S accept-language S keywords S last-attempt-date S accept-ranges 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 remote-mta S content-language S content-length S reply-to

S reporting-mta

S resent-b	сс	protect	function
S resent-c	c	report	function
S resent-d	ate	select	function
S resent-f	rom	sink	function
S resent-m	essage-id	sinkt	table
S resent-r	eply-to	F close-when-d	lone
S resent-s	ender	F default	
S resent-t	0	F http-chunked	
S retry-af	ter	F keep-open	
S return-p	ath	skip	function
S sender		sleep	function
S server		source	function
S smtp-rem	ote-recipient	sourcet	table
S status		F by-length	
S subject		F default	
S te		F http-chunked	
S to		F until-closed	
S trailer		tcp	function
S transfer	-encoding	tcp4	function
S upgrade		tcp6	function
S user-age	nt	tp	table
S vary		N TIMEOUT	
S via		F connect	
S warning		try	function
S will-ret	ry-until	udp	function
S www-auth	enticate	udp4	function
S x-mailer		udp6	function
F lower		url	table
F normalize		F absolute	
http	table	F build	
N TIMEOUT		F build_path	
S USERAGENT		F escape	
F genericfor	~m	F parse	
F open		F parse_path	
F request		F unescape	
newtry	function		

#### sorters (context)

basicsorter	function	B pm	
comparers	table	B uc	
F basic		B zc	
constants	table	B zm	
S defaultdigits		definitions	data table
S defaultlanguag	e	firstofsplit	function
S defaultmethod		packch	function
N digitsmaximum		packuc	function
N digitsoffset		replacementlist	function
N ignoredoffset		setlanguage	function
N replacementoff	set	sort	function
T validmethods		splitters	table
B ch		F utf	
B mc		strip	function
B mm		tracers	data table
Врс		update	function

# sparse (context)

concat	function	range	function
get	function	restore	function
max	function	set	function
min	function	traverse	function
new	function	wipe	function

## statistics (context)

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

### status (basic tex)

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

# storage (context)

allocate	function	
data	table	
mark	function	
marked	function	
max	number	
min	number	
nofmodules	number	

noftables	number	
register	function	
shared	data table	
storedfunctions	data table	
strip	boolean	
tofmodules	number	
toftables	number	

# streams (context)

collect	function	push	function
disable	function	start	function
enable	function	stop	function
flush	function	synchronize	function
initialize	function		

# string (basic lua)

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

utflength	function	utfvaluetable	function
utfpadd	function	valid	function
utfpadding	function	voigt	function
utfvalue	function	voigt_hwhm	function
utfvalues	function	wordsplitter	function

### structures (context)

atlocation	function	F last	
blocks	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	
Fuservariable		F setlevel	
bookmarks	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		currentsectionnumber	
S method		descriptions	table
F overload		documents	table
F place		D data	
F register		F initialize	
F setopened		F preset	
F setup		F reset	
counters	table	floats	table
F add		formulas	table
F analyze		helpers	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 realpage
F touserdata		F reordered
inserts	table	T result
D data		F savedlistnumber
F define		F savedlistprefixednumber
F getdata		F savedlisttitle
F getlocation		D sectionblocks
F getname		F sectionnumber
F getnumber		F size
F setlocation		F title
F setup		D tobesaved
D stored		F userdata
itemgroups	table	F uservalue
lists	table	marks table
F addto		F number
F analyze		F title
B autoreorder		<b>notes</b> table
D cached		F check_spacing
D collected		F checkpagechange
F discard		F define
F enhance		F doifonsamepageasprevious
T enhancers		F get
F filter		F getdeltapage
F formulanumber		F getinternal
F getresult		F getn
F groupindex		F getstate
F hasnumberdata		F hascontent
F haspagedata		F internal
F hastitledata		F internalid
F iscached		F listindex
D kinds		D numbers
F label		F ordered
F location		F postpone
D names		F resetpostponed
F number		F restore
D ordered		F save
F page		F setstate
F popnesting		D states
F prefix		F store
F prefixednumber		<b>pages</b> table
F prefixedpage		F allmarked
F process		F analyze
D pushed		D collected
F pushnesting		F fraction

F in_body		F getinternalcachedlistreference
F is_odd		F getinternallistreference
F mark		F getinternalreference
F marked		F getoutermethod
F markedlist		D handlers
N nofpages		F identify
F number		F import
F on_right		F inject
F save		F injectcurrentset
D tobesaved		S innermethod
F toranges		D internals
references	table	F load
F analyze		F loadpresets
F checkedfile		F mark
F checkedfileorurl		S outermethod
F checkedprogram		D pages
F checkedrealpage		U prefixsplitter
F checkedurl		D productdata
D collected		T programs
U componentsplitter		T data
F currentmetadata		F define
F currentorder		F get
D currentset		F realpageofpage
F define		U referencesplitter
D defined		D referred
D derived		F referredpage
F enhance		F registerfinalizer
D executers		F registerinitializer
F export		F registerpage
T files		F reset
T data		D runners
F define		F set
F found		F setandgetattribute
F get		F setcomponent
F filter		F setinternalreference
F filterdefault		F setlinkmethod
D filters		F setnextinternal
D flaginternals		F setnextorder
F from		F setreferencerealpage
D functions		D specials
F get		F splitcomponent
F getcurrentmetadata		F splitprefix
F getcurrentprefixspec		F splitreference
F getinnermethod		F synchronizepage

T testrunners F unique Finner F userdata sections table F special F autodepth F special operation F special operation with arguments F cct D collected T testspecials F deltapage F current Εí F currenthlock F internal F currentid F currentlevel F page F realpage F currentsectionindex F section F depthnumber F userpage F finddata D tobereferred F findnumber F fullnumber D tobesaved D tracedpages F getcurrentlevel T urls F getlevel T data F getnumber F define F internalreference F found D levelmap F aet D levels F untex F matchingtilldepth D usedinternals F numberatdepth D usedviews F numbers F valid F popblock registers table F prefixedconverted F analyze F pushblock D collected F register F compare D registered F define F reportstructure F enhance F save F extend T sectionblockdata F filter T bodypart F filtercollected S bookmark F finalize F set F findinternal F setblock F flush F setchecker F get F setentry F setinitialblock F prepare F process F setlevel F setmethod F setnumber F sort F showstructure F structuredata F store

F title

D tobesaved

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

T image F setcombination
T usedstyles F setconstruct
T construct F setfigure
T highlight F setfloat
current F setformulacontent

F current
F current
F setformulacon
F elementtag
F sethighlight
F enabled
F exportbox
F finishexport
F getextradata
F setnotation
F getid
F setnotationsy

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 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 registerextradata F start
F registermetadata F stop
F restart F strip
F setaspect D taglist
F setattributehash T usewithcare

# table (basic lua)

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

# tex (basic tex)

attribute	table	getappendlinecontextvalues	function
automigrationcodes	data table	getattribute	function
badness	function	getautomigrationvalues	function
box	table	getbox	function
boxresources	table	getboxdir	function
F getbox		getboxresourcebox	function
F getdimensions		getboxresourcedimensions	function
F save		getcatcode	function
F use		getcount	function
catcode	table	getdelcode	function
chardef	function	getdelcodes	function
classoptioncodes	data table	getdelimitermodevalues	function
codes	table	getdimen	function
conditionals	data table	getdimensionvalue	function
constants	data table	getdiscoptionvalues	function
count	table	getdiscstatevalues	function
cprint	function	geterrorvalues	function
ctdcatcodes	number	getflagvalues	function
ctxcatcodes	number	getfontoffamily	function
definefont	function	getfrozenparvalues	function
delcode	table	getglue	function
dimen	table	getglyphdata	function
dimensiondef	function	getglyphoptionvalues	function
directives	data table	getglyphscales	function
discoptioncodes	data table	getglyphscript	function
dontcomplain	function	getglyphstate	function
enableprimitives	function	getgroupvalues	function
error	function	gethelptext	function
expandasvalue	function	gethyphenationvalues	function
experiments	data table	getinputstatefile	function
extraprimitives	function	getinputstateline	function
fatalerror	function	getinputstatemode	function
flagcodes	data table	getinsertcontent	function
fontidentifier	function	getinsertdepth	function
fontname	function	getinsertdistance	function
forcehmode	function	getinsertheight	function
forceinputstatefile	function	getinsertlimit	function
forceinputstateline	function function	getinsertmultiplier	function function
fprint	data table	getinsertwidth	function
frozenparcodes		getintegervalue	
get	function	getinteraction	function

getiovalues	function	gettextdir	function
getlargestusedmark	function	gettoks	function
getlccode	function	getuccode	function
getlinedir	function	glue	table
getlist	function	glyphoptioncodes	data table
getlistanchorvalues	function	groupcodes	data table
getlistgeometryvalues	function	hashtokens	function
getlistsignvalues	function	hyphenationcodes	data table
getlocalbox	function	ifs	data table
getlocallevel	function	inicatcodes	number
getmark	function	integerdef	function
getmark	function	isattribute	function
•	function	ishox	function
getmathclassoptionvalues	function	iscount	overloaded function
getmathcode		isdefined	
getmathcodes	function		function
getmathcontrolvalues	function	isdimen	overloaded functio
getmathdir	function	isglue	function
getmathparametervalues	function	ismuglue 	function
getmathstylenamevalues	function	ismuskip	overloaded functio
getmathstylevalues	function	isprintable	function
getmathvariantvalues 	function	isskip	overloaded functio
getmode	function	istoken	function
getmodevalues	function	istoks	function
getmuglue	function	lastnodetype -	function
getmuskip	function	lccode	table
getnest	function	linebreak	function
getnoadoptionvalues	function	listanchorcodes	data table
getnormalizevalues	function	lists	table
getoutputactive	function	listsigncodes	data table
getpacktypevalues -	function	luacatcodes	number
getpagecontextvalues	function	magicconstants	table
getpagestate	function	N assumedmathcontrol	
getparbeginvalues	function	N awfulbad	
getparcontextvalues	function	N decentcriterium	
getpardir	function	N defaultcatcodetable	
getparmodevalues	function	N defaultdeadcycles	
getparstate	function	N defaulteqnogapstep	
getprimitiveorigins	function	N defaulthangafter	
getregisterindex	function	N defaultoutputbox	
getrunstatevalues	function	N defaultpredisplaygap	
getsfcode	function	N defaultrule	
getshapingpenaltiesvalues	function	N defaultspacefactor	

N defaulttolerance

N deplorable

function

getskip

gettextcontrolvalues function

N ejectpenalty	N mininfinity	
N ignoredepth	N mininteger	
N infinitebad	N minquarterword	
N infinitepenalty	N minspacefactor	
N infinity	N nocatcodetable	
N largewidthexcess	N null	
N loosecriterium	N nullflag	
N mathbeginclass	N nullfont	
N mathendclass	N onebp	
N maxattributeregisterindex	N presetrulethickness	
N maxboxregisterindex	N runningrule	
N maxbytecodeindex	N smallstretchability	
N maxcardinal	N texeqtbsize	
N maxcategorycode	N texhashprime	
N maxcharactercode	N texhashsize	
N maxcharcode	N two	
N maxdatavalue	N unity	
N maxdimen	N unusedattributevalue	
N maxdimenregisterindex	N unusedmathfamily	
N maxfunctionreference	N unusedmathstyle	
N maxglueregisterindex	N unusedscriptvalue	
N maxhalfvalue	N unusedstatevalue	
N maxhalfword	N zeroglue	
N maxinteger	mathchardef	function
N maxintregisterindex	mathcode	table
N maxmarkindex	mathcontrolcodes	data table
N maxmathclasscode	modelevels	table
N maxmathfamilyindex	N horizontal	
N maxmuglueregisterindex	N math	
N maxnewlinecharacter	N unset	
N maxnofbytecodes	N vertical	
N maxnofcatcodetables	modes	data table
N maxnoffonts	mprint	function
N maxnoflanguages	muglue	table
N maxnofmarks	muskip	table
N maxnofmathfamilies	nest	table
N maxquarterword	nilcatcodes	number
N maxsizeofword	noadoptioncodes	data table
N maxspacefactor	normalizecodes	data table
N maxtoksregisterindex	notcatcodes	number
N mincardinal	number	function
N mindatavalue	parcontextcodes	data table
N mindimen	poplocal	function
N minhalfword	popsavelevel	function

primitives	function	setmath	function
print	function	setmathcode	function
prtcatcodes	number	setmathdir	function
pushlocal	function	setmuglue	function
pushsavelevel	function	setmuskip	function
quitlocal	function	setnest	function
quittoks	function	setpardir	function
resetparagraph	function	setrunstate	overloaded functio
rlncatcodes	number	setsfcode	function
romannumeral	function	setskip	function
round	function	settextdir	function
runlocal	function	settoks	function
runstring	function	setuccode	function
runtoks	function	sfcode	table
saveboxresource	function	shiftparshape	function
scale	function	shipout	function
scantoks	function	showcontext	function
set	function	skip	table
setattribute	function	snapshotpar	function
setbox	function	sp	function
setboxdir	function	splitbox	function
setcatcode	function	sprint	function
setcount	function	stringtocodesbitmap	function
setdelcode	function	systemmodes	data table
setdimen	function	takebox	function
setdimensionvalue	function	texcatcodes	number
setglue	function	textcontrolcodes	data table
setglyphdata	function	toks	table
setglyphscript	function	tonumber	function
setglyphstate	function	toscaled	function
setinputstatefile	function	tpacatcodes	number
setinputstateline	function	tpbcatcodes	number
setinputstatemode	function	tprint	function
setinsertcontent	function	trackers	data table
setinsertdistance	function	triggerbuildpage	function
setinsertlimit	function	txtcatcodes	number
setinsertmultiplier	function	type	function
setintegervalue	function	uccode	table
setinteraction	function	uprint	function
setlccode	function	useboxresource	function
setlinedir	function	vrbcatcodes	number
setlist	function	write	function

function

setlocalbox

# texconfig (basic tex)

buffersize	table	languagesize	table
N size		N size	
N step		N step	
errorlinesize	table	marksize	table
N size		N size	
expandsize	table	N step	
N size		nestsize	table
filesize	table	N size	
N size		N step	
N step		nodesize	table
firstline	string	N size	
fontsize	table	N step	
N size		parametersize	table
N step		N size	
formatname	string	N step	
functionsize	number	poolsize	table
halferrorlinesize	table	N size	
N size		N step	
hashsize	table	propertiessize	number
N size		savesize	table
N step		N size	
init	overloaded function	N step	
inputsize	table	shell_escape	string
N size		stringsize	table
N step		N size	
insertsize	table	N step	
N size		tokensize	table
N step		N size	
kpse_init	boolean	N step	

# texio (basic tex)

closeinput	function	writenl	function
setlogfile	function	writeselector	function
terminal	function	writeselectorlf	function
write	function	writeselectornl	function
write nl	function		

# token (basic tex)

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

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

setlua	function	skipnextexpanded	function
setmacro	function	type	function
skip_next	function	undefine_macro	function
skip_next_expanded	function	undefinemacro	function
skipnext	function		

# tokens (context)

accessors	table	II	color	
F active			colordef	alc
F cmd			colordef	
F cmdchrcs			colordef	
F cmdname			colordef	
F command				reference
F csname		_	dostartt	
F expandab	le		finishjo	
F frozen			-	neargument
F index				woarguments
F name				eargument
F protected	d		goto	ca. gamene
F range			iftrue	
astable	function		input	
bits	table		•	dtypescriptfile
N active			resetctx	
N alignment	t	U	rlap	
N begingro	up	U	secondof	twoarguments
N characte	r	U	setfalse	value
N close		U	setsecti	onblock
N comment		U	J setupsystem	
N endgroup		U	startcol	umns
N endofline	e	U	starttab	ulate
N escape		U	starttit	le
N ignore		U	startxti	tle
N invalid		U	stopcolu	mns
N letter		U	stoptabu	late
N mathshif	t	U	stoptitl	e
N open		U	stopxtit	le
N other		U	texsetup	
N paramete	r	U	xmlw	
N space		comm	ands	data table
N subscrip	t	comp	ile	function
N supersor	ipt	cons	tant	function
N whitespa		conv	erters	table
cache	table	S	toboolea	n
U NC		S	todimen	
U NR			toglue	
U bf		S	tonumber	
U buff_fin:	ish		tostring	
U c_font_co	ompact	crea	ite	function

4-644	function	_	
defined	function		cmdchrexpanded
flags	function		code
getinteger	function		conditional
getters	table		count
F box			csname
F count			csnameunchecked
F cstoken			delimited
F dimen		F	dimen
F glue			dimenargument
F macro		F	dimension
F meaning		F	float
F skip		F	glue
F token		F	gluespec
gobble	function	F	gluevalues
isdefined	function	F	hash
istoken	function	F	hbox
new	function	F	integer
pickup	function	F	integerargument
popmacro	function	F	ischar
presets	table	F	key
T 1 argumen	t	F	keyword
T 1 string		F	keywordcs
T 2 argumen	ts	F	letters
T 2 strings		F	list
T 3 argumen	ts	F	luacardinal
T 3 strings		F	luainteger
T 4 argumen	ts	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
pushmacro	function	F	optional
scanners	table	F	peek
F argument		F	peekchar
F argumenta	sis	F	peekexpanded
F array		F	real
F boolean		F	scanclose
F box		F	scanopen
F bracketed		F	skip
F bracketed	asis	F	skipexpanded
F cardinal		F	string
F char		F	table
F cmdchr		F	token

F tokencode N open F tokenlist F report F tokens F scanargument F toks F scanargumentasis F value F scanarray F vbox F scanboolean F verbatim F scanbox F scanbracketed F vtop F scanbracketedasis F whd F word F scancardinal setinteger function F scanclose table setters F scancode F box F scanconditional F char F scancsname F count F scancsnameunchecked F dimen F scandelimited F glue F scandimen F scandimenargument F lua F scandimension F macro F skip F scanglue shortcuts table F scangluespec T bits F scangluevalues N active F scanhash N alignment F scanhbox N begingroup F scaninteger N character F scanintegerargument N close F scankeyword N comment F scankeywordcs N endgroup F scanletters N endofline F scanlist N escape T scanners N ignore F argument N invalid F argumentasis N letter F array N mathshift F boolean F box N open N other F bracketed F bracketedasis N parameter F cardinal N space N subscript F char N superscript F cmdchr N whitespace F cmdchrexpanded N close F code F inspect 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 aobble 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 F hox U setupsystem U startcolumns F char U starttabulate F count U starttitle F dimen U startxtitle F alue 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 F scanbox S toglue S tonumber F scanbracketed S tostring F scanbracketedasis F scancardinal F create F defined F scanclose F flags F scancode F getinteger F scanconditional T getters F scancsname F box F scancsnameunchecked F count F scandelimited

F scandimen F scanstring F scandimenargument F scantable F scantokenlist F scandimension F scanglue F scantoks F scangluespec F scanvbox F scangluevalues F scanverbatim F scanhash F scanvtop F scanhbox F scanword F scaninteger F toboolean 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 values data table

F scanoptional

### tracers (context)

printerror function printwarning function

showlines function

# trackers (context)

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

# typesetters (context)

-14	4-11-		
alignments	table	T handlers	
F handler		F installhandler	
F set		F processmath	
breakpoints	table	F set	
F define		F setcolor	
F handler		F setmath	
D mapping		F tomode	
T methods		firstlines	table
T numbers		T actions	
F set		F default	
F setreplacement		F line	
cases	table	F word	
T actions		F handler	
F handler		F set	
F register		fontkerns	table
F set		F handler	
characteralign	table	initials	table
F handler		T actions	
F resetcharacter	align	F default	
F setcharacteral	ign	F handler	
characters	table	F set	
F handler		injectors	table
T methods		F check	
F replacenbsp		T list	
F replacenbspace	s	F mark	
checkers	table	F reset	
F handler		F set	
F reset		F show	
F set		italics	table
cleaners	table	F enablemath	
F handler		F enabletext	
F set		F forcevariant	
digits	table	F handler	
T actions		F reset	
F handler		F set	
F set		kerns	table
directions	table	D factors	
F getfences		F handler	
F getglobal		F keepligature	
F getmethod		D mapping	
F handler		F set	

localboxes table F startapply F handler F stopapply manipulators table F stripped F apply F tostring rubies table F applyspecification F attach T methods F Word F check function F Words showsuspects spacings table F abbreviatedjournal F expandedjournal F define F handler F lowercase F stripperiod D mapping F uppercase T numbers T patterns T frenchpunctuation U list T characters U pair S name F splitspecification N number margins table F reset F finalhandler F set F globalhandler F setup table F localhandler svnchronize F save F handler marksuspects function wrappers table paragraphs table F handler xtables table F addanchortoline F addtoline F cleanup F calculatedelta F construct F checkline F create F moveinline F finish row periodkerns table F flush D factors F initialize construct F handler F initialize reflow height D mapping F initialize reflow width F set F next row table processors F reflow height F apply F reflow width F register F set construct F reset F set reflow height

F split

F set\_reflow\_width

### updaters (context)

apply function
register function

# url (context)

addscheme	function	hashed	function
barepath	function	hasscheme	function
construct	function	query	function
decode	function	split	function
encode	function	toquery	function
escape	function	unescape	function
filename	function	unescapeget	function

# utf8 (basic lua)

char	function	codes	function
charpattern	string	len	function
codepoint	function	offset	function

# utilities (context)

debugger	table	F readsignedbyte	
F disable	cable	F readstring	
F enable		F readtag	
F savestats		•	
F savestats		F setposition F size	
F showtraceback files	table	F skip	
	tabte	F skiplong	
F close		F skipposition	
F getposition		F skipshort	
F getsize		F writebyte	
F look		F writecardinal1	
F open		F writecardinal1	
F read2dot14		F writecardinal2	
F readbyte		F writecardinal2	
F readbytes		F writecardinal3	
F readbytetable		F writecardinal3	
F readcardinal		F writecardinal4	
F readcardinal1	_	F writecardinal4	le
F readcardinal1	le	F writeinteger1	
F readcardinal2		F writeinteger1l	е
F readcardinal2	le	F writeinteger2	
F readcardinal3		F writeinteger2l	е
F readcardinal3	le	F writeinteger3	
F readcardinal4		F writeinteger3l	е
F readcardinal4		F writeinteger4	
F readcardinalta	able	F writeinteger4l	е
F readchar		F writestring	
F readcline		formatters	table
F readcstring		F formatcolumns	
F readfixed2		F list	
F readfixed4		F stripzeros	
F readinteger		ghostscript	table
F readinteger1		F convert	
F readinteger1le	e	F statistics	
F readinteger2		graphicmagick	table
F readinteger2le	e	F convert	
F readinteger3		F statistics	
F readinteger3le	e	graphicsmagick	table
F readinteger4		F convert	
F readinteger4le	e	F statistics	
F readintegertal	ble	lua	table

	B paper
F checkmemory	B rightpage
F compile	B text
F loadedluacode	F iterator
F loadstring	F keq_to_hash
F loadstripped	F listitem
N nofstrippedbytes	F make_settings_to_hash_pattern
N nofstrippedchunks	F mergehashes
F registerfinalizer	F options_to_array
B stripcode	F options_to_hash
T strippedchunks	T patterns
F strippedloadstring	U settings_to_array
T suffixes	U settings_to_hash_a
S lua	U settings_to_hash_b
S luc	U settings_to_hash_c
S lui	U settings_to_hash_d
S luj	U unittotex
S luv	F process_stripped_settings
S tma	F rfc4180splitter
S tmc	F runtime
S tua	F settings_to_array
S tuc	F settings_to_array_obey_fences
<b>packers</b> table	F settings_to_array_with_repeat
F hashed	F settings_to_hash
F new	F settings_to_hash_colon_too
F pack	F settings_to_hash_strict
F simplehashed	F settings_to_hash_tolerant
F strip	F settings_to_numbers
F unpack	F settings_to_set
N version	F simple_hash_to_string
N version parsers table	F simple_hash_to_string F splitmethod
N version  parsers table  F add_settings_to_array	<pre>F simple_hash_to_string F splitmethod F splitthousands</pre>
N version  parsers table  F add_settings_to_array  F arguments_to_table	<pre>F simple_hash_to_string F splitmethod F splitthousands F stepper</pre>
N version  parsers table  F add_settings_to_array  F arguments_to_table  F array_to_string	<pre>F simple_hash_to_string F splitmethod F splitthousands F stepper F stripped_settings_to_array</pre>
N version  parsers table  F add_settings_to_array  F arguments_to_table  F array_to_string  F csvsplitter	<pre>F simple_hash_to_string F splitmethod F splitthousands F stepper F stripped_settings_to_array F totime</pre>
N version  parsers table  F add_settings_to_array  F arguments_to_table  F array_to_string  F csvsplitter  F getparameters	<pre>F simple_hash_to_string F splitmethod F splitthousands F stepper F stripped_settings_to_array F totime F unittotex</pre>
N version  parsers table  F add_settings_to_array  F arguments_to_table  F array_to_string  F csvsplitter  F getparameters  F groupedsplitat	<pre>F simple_hash_to_string F splitmethod F splitthousands F stepper F stripped_settings_to_array F totime F unittotex F unittoxml</pre>
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	F simple_hash_to_string F splitmethod F splitthousands F stepper F stripped_settings_to_array F totime F unittotex F unittoxml randomizer table
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	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
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	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
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	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
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	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
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	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 popseed		F sparse	
F pushseed		streams	table
F repeatable		F close	
F reuseseed		F getposi	tion
F setseed		F getsize	
F setseedi		F getstri	
randomizers	table	F look	
F poisson		F open	
sequencers	table	F openstr	ing
F appendaction		F read2do	_
F appendgroup		F readbyt	e
F compile		F readbyt	
F disableaction		F readbyt	etable
F disablegroup		F readcar	dinal
F enableaction		F readcar	dinal1
F enablegroup		F readcar	dinal1le
D functions		F readcar	dinal2
F localize		F readcar	dinal2le
F new		F readcar	dinal3
F nodeprocessor		F readcar	dinal3le
F prependaction		F readcar	dinal4
F prependgroup		F readcar	dinal4le
F removeaction		F readcar	dinaltable
F replaceaction		F readcha	r
F setkind		F readcli	ne
F tostring		F readcst	ring
setters	table	F readfix	ed2
F disable		F readfix	ed4
F enable		F readint	eger
F initialize		F readint	eger1
F list		F readint	eger1le
F new		F readint	eger2
F register		F readint	eger2le
F report		F readint	eger3
F reset		F readint	eger3le
F show		F readint	eger4
stacker	table	F readint	eger4le
F new		F readint	egertable
storage	table	F readsig	nedbyte
F allocate		F readstr	ing
F checked		F setposi	tion
F mark		F size	
F marked		F skip	
F setinitialize	-	F skipbyt	es

F removevalue F skiplong F skipshort F replacevalue tar table F tocardinal1 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 strinas table 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 unpack F nice T strings T striplinepatterns 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 templates table U retain U retain and collapse F load U retain and no empty F replace F striplines F replacer F resolve F striplong zipfiles table F tabtospace T tracers F close tables table F found F accesstable F hash F definedtable F list F definetable F open F encapsulate F unzip F insertaftervalue F unzipdir F insertbeforevalue F zipdir

F migratetable

# visualizers (context)

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

# xcomplex (extra lua)

_		
Ι	function	F sqrt
add	function	F tan
div	function	F tanh
eq	function	F topair
inde	<b>ex</b> table	F tostring
FΙ		F totable
F _	_add	Fmul
F _	_div	Sname
F _	_eq	Fpow
Т_	_index	Fsub
F	I	Ftostring
F	add	Funm
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	Fi
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	mul function
F	sinh	<b>name</b> string

pow	function	i	function
sub	function	imag	function
tostring	function	log	function
unm	function	new	function
abs	function	pow	function
acos	function	proj	function
acosh	function	real	function
arg	function	sin	function
asin	function	sinh	function
asinh	function	sqrt	function
atan	function	tan	function
atanh	function	tanh	function
conj	function	topair	function
cos	function	tostring	function
cosh	function	totable	function
exp	function		

## xdecimal (extra lua)

add	function		F getprecision
band	function		Fln
bor	function		F log
bxor	function		F max
div	function		F min
eq	function		F minus
idiv	function		F new
index	table		F plus
Fadd			F pow
Fband			F rotate
Fbor			F setprecision
Fbxor			F shift
Fdiv			F sqrt
Feq			F toengstring
Fidiv			F tonumber
Tindex			F tostring
Fadd			F trim
Fband		F	le
Fbor		F	lt
Fbxor		F	mod
Fdiv		F	mul
Feq		S	name
Fidiv		F	pow
Fle		F	shl
Flt		F	shr
Fmod		F	sub
Fmul		F	tostring
Sname		F	unm
Fpow		F	abs
Fshl		F	band
Fshr		F	bor
Fsub		F	bxor
Ftostring		F	conj
Funm		F	сору
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		band	function
F plus		bor	function
F pow		bxor	function
F rotate		conj	function
F setprecisio	n	сору	function
F shift		exp	function
F sqrt		getprecision	function
F toengstring		ln	function
F tonumber		log	function
F tostring		max	function
F trim		min	function
le	function	minus	function
lt	function	new	function
mod	function	plus	function
mul	function	pow	function
name	string	rotate	function
pow	function	setprecision	function
shl	function	shift	function
shr	function	sqrt	function
sub	function	toengstring	function
tostring	function	tonumber	function
unm	function	tostring	function
abs	function	trim	function

## xmath (extra lua)

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

## xml (context)

addentitiesdoctype	function	F family	
addspecialcode	function	F fontspecification	
after	function	F mappedstylevalue	
all	function	F padding	
applylpath	function	F size	
applyselector	function	F style	
assign	function	F stylevalue	
attribute	function	F todimension	
badinclusions	function	F variant	
before	function	F weight	
body	function	defaulthandlers	table
builtinentities	table	D file	
B amp		D parsedxml	
B apos		D string	
B gt		D tex	
B lt		D texline	
B quot		D texspace	
cdata	function	D verbose	
cdatatotext	function	defaultprotocol	string
checkbom	function	delete	function
checkedempty	function	delete_element	<del>function</del>
checkerror	function	despecialized	function
checknamespace	function	each	function
checkns	function	each_element	<del>function</del>
cleansed	function	elements	function
collect	function	elementtocdata	function
collect_elements	<del>function</del>	empty	function
collect_tags	function	entities	data table
<del>collect_texts</del>	<del>function</del>	erase	function
collected	function	errorhandler	function
collecttexts	function	escaped	function
compactelement	function	expressions	table
content	function	F attribute	
convert	function	F boolean	
сору	function	F child	
count	function	F contains	
cprint	function	F count	
CSS	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	
fillin	function	F count	
filter	function	F default	
finalizers	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		first	function
F last		found	function
F lettered		functions	table
F lower		F classes	
F lowerall		F hasclass	
F match		getbuffer	function
F name		gethandlers	function
F param		gethandlersfunction	function
F parameter		helpers	table
F position		F recursetext	
F reverse		include	function
F stripped		inclusion	function
F tag		inclusions	function
F tags		index	function
F text		inheritattributes	function

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

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

# xzip (extra lua)

adler32	function	crc32	function
compress	function	decompress	function
compresssize	function	decompresssize	function

### zip (extra lua)

archives table
closearchive function

openarchive function
registeredfiles table

# zlib (extra lua)

adler32	function	crc32	function
compress	function	decompress	function
compresssize	function	decompresssize	function