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)

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

lfs	table	pngdecode	table
libraries	table	popleaderlevel	function
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
05	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

texsystemmodes data table thirddata table toboolean function todecimal function token table table tokens tonumber function tostrina function table tracers trackers table type function typesetters table unpack function table updaters

table

url

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

table
table
table
table
function
table
table
table
table
table
table
table
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	<b>save</b> 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)

closeout function F analyzesymbol codeinjections table F attachmentid F registerboxresource F bitmap F restoreboxresource F clonefield current strina F copyimage defaults table F definefield T codeiniections F definefieldset F defineviewerlayer F prerollreference F embedfile F setautoprefix F vfstartcolor F embedimage F vfstopcolor F enabletags T nodeiniections F exportformdata F cmykcolor F fieldsurrounding F destination F flushmergelayer F gravcolor F getbookmarks F injectknockout F getboxresourcebox F injectoverprint F getdefaultfieldvalue F reference F getfieldcategory F getfieldset F rgbcolor F spotcolor F getformatoption F transparency F getinfo T registrations F getpreviewfigure F transparency F getrefobj D tables F insertrenderingwindow getcallbackstate function F ip2 included table F jpg B context F maptag B date F mergebookmarks B id F mergecomments B metadata F mergefields B pdf F mergereferences initialize function F mergeviewerlayers latelua function F newimage nodeinjections table F pnq nothing function F prerollreference openout function F presetsymbol registered table F presetsymbollist T pdf F processrendering T codeinjections F registerdocumentcloseaction F addbookmarks F registerdocumentopenaction F analyzenormalsymbol F registeredsymbol

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

setencryption function tables table writeout function

S name

T nodeinjections F addtags

F annotation

# 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 functions table F start page number F stop page number function known list data table pop function push function function register function report supported table B alignment\_filter B append line filter B append to vlist filter B begin paragraph B build\_page\_insert B buildpage filter B define font B find format file B find log file B get attribute B get math dictionary B get noad class

B get\_attribute
B get\_math\_dictionary
B get\_noad\_class
B glyph\_run
B handle\_overload
B hpack\_filter
B hpack\_quality
B hyphenate
B insert\_par
B intercept\_lua\_error

B intercept\_tex\_error

B kernina B ligaturing B linebreak filter B local box filter B make extensible B math rule B missing character B mlist to hlist B open data file B packed vbox filter B paragraph context B post\_linebreak\_filter B pre dump B pre linebreak filter B pre output filter B process\_character B process jobname B register extensible B show error message B show lua call B show warning message B show whatsit B start file B start run B stop file B stop run

## catcodes (context)

 register function

## characters (context)

adobename	function	T after_subscript	
bidi	data table	T anudatta	
blockrange	function	T before_half	
blocks	data table	T before_main	
can_have_space	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

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

## chemistry (context)

component	function	
define	function	
definitions data tab		
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 word

words

function function 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
alobfiles	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)

annl vancher	function	F
applyanchor		F updatefontstate
applyorientation convert	function function	T whatsit
converters	table	S name
	table	T json
F analyze		T actions
F engine		F cleanup
F lmtx		F convert
F resyncbox enable	function	F finalize
	function	F initialize
gethpos	function	F outputfilename
getpos	function	F prepare
getrpos		F wrapup
getvpos	function table	T flushers
helpers install	function	F character
instacc	table	F popleaderlevel
	table	F pushleaderlevel
T empty		F rule
T actions		F setstate
F convert		F simplerule
F prepare		F specialrule
T flushers		F updatefontstate
F popleaderlevel		T whatsit
F pushleaderleve	<b>!</b> L	S name
T whatsit		T lua
S name		T actions
T js		F cleanup
T actions		F convert
F cleanup		F finalize
F convert F finalize		F initialize
		F outputfilename
F initialize		F prepare
F outputfilename	:	F wrapup
F prepare		T flushers
F wrapup		F character
T flushers		F popleaderlevel
F character		F pushleaderlevel
F popleaderlevel		F rule
F pushleaderleve	? L	F simplerule
F rule		F specialrule
F simplerule		F updatefontstate
F specialrule		T whatsit

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	register	function
default	function	report	function
disable	function	reset	function
enable	function	show	function
list	function	value	function
name	string	values	function

#### figures (context)

applvratio function F resetstore badname function F scan bases data table F serialize bitmapimage function T sizes boxnumber number R art cachepaths data table B bleed check function B crop checkers data table B media conversions data table B none converters data table R trim current function F storedata number defaultdepth F totable defaultheight number T types defaultsearch hool ean N jbig2 defaultwidth number N jp2 function done N jpg function dummy N none existers data table N pdf exists function N png formats data table N stream found data table F wrap include aet function function aetinfo function includers data table getpdfinfo function initialize function loaded data table getrealpage function localpaths data table auess function guessfromstring function data table magics function function hash mergegoodies identifiers data table nofmissina number identify function number nofprocessed table order data table images data table F check paths F checksize patterns data table pop function F copy preferguality boolean F create data table F embed programs function F embedfromstore push F fetchdata registerpattern function function registerresource T keys registersuffix function F print data table F resetdata remappers

resources	data table	setorder	function
scale	function	setpaths	function
set	function	suffixes	data table
setconversion	function	used	data table
setlookups	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
current	function
define	function
getfont	function
getfontdimen	function
getfontspec	function
getmathindex	function

getmathspec	function
id	function
max	function
nextid	function
setfont	function
setfontdimen	function

# fonts (context)

analyzers	table	D cache
D features		F calculatescale
D initializers		F checkedfeatures
D methods		F checkedfilename
F setstate		F collectprocessors
D states		F currentfonthasfeature
B useunicodemarks		D designsizes
callbacks	table	F enhanceparameters
F callback		T enhancers
F devirtualize		T afm
checkers	table	F apply
F getmissing		F patch
D mapping		T patches
F missing		F register
F placeholder		F report
cid	table	F register
F getmap		F report
F loadfile		T otf
collections	table	F addfeature
F checkenabled		F apply
F clonevector		F enhance
F define		F patch
T definitions		T patches
F direct		F register
F found		F report
F prepare		F register
F process		F report
F register		T tfm
F registermain		F apply
F report		F patch
F reset		T patches
T vectors		F register
constructors	table	F report
F addcharacters		F register
F addcoreunicodes		F report
F aftercopyingcharac	ters	N factor
F applyfinalizers		T features
F applymanipulators		D afm
F assignmathparamete	ers	D otf
F beforecopyingchara	acters	D tfm
F beforepassingfontt	cotex	F finalize

F getfeatureaction	S defaultnodealternate
F getmathparameter	D features
F getprivate	F featuresinitializer
T handlers	F featuresprocessor
T afm	F getactualtext
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

F pluginprocessor	F chainedcontext
T plugins	F context
T text	F extension
D pngcache	F ligature
B pngenabled	F multiple
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
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F look F writecardinal2le F writecardinal3 F open F read2dot14 F writecardinal3le F readbyte F writecardinal4 F readbytes F writecardinal4le 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 readinteger1le F woff2otf F readinteger2 F registerpalette F readinteger2le F registerplugin F readinteger3 F reorderlookups F readinteger3le F scriptandlanguage F readinteger4 F setdynamics F readinteger4le F setfeatures F readintegertable T statistics F readsignedbyte D usedfeatures F readstring D sygcache F readtag B sygenabled T tables F setposition 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

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

F register		getters	table
F registered		T alternate	
F registerfallbackfo	ont	F opentype	
F registersplit		T kern	
F resetnullfont		F opentype	
F resolve		F type1	
T resolvers		F type3	
F file		T multiple	
F name		F opentype	
F spec		T substitution	
definetypeface	function	F opentype	
dropins	table	goodies	table
F clone		D colorschemes	
F getshape		T data	
F getshapes		T common-math.lfg	9
F nextid		S author	
F provide		S comment	
F registerglyph		S copyright	
F registerglyphs		B initialized	
F swap		T mathematics	
F swapone		T tweaks	
effects	table	T presets	
encodings	table	F eulertoc	alligraphic
T agl		F fallback	S
D ctxcodes		F modernto	calligraphic
D extras		F moveinte	grals
D names		F moveital	
D synonyms		F rsfstosc	•
D unicodes		F refeuerighttoscript	
D cache		F scripttocalligraphic	
F is_known		F wipeanchors	
D known		F wipeitalics	
F load	F xitsarabic		oic
F make_unicode_vector	or	S name	
D math		S version	
N version	for the co	T dejavu-math	
enhanceid	function	S author	
expansions	data table	S comment	
formats	data table	S copyright	
getalternate	function	B initialized	
getindices	function	T mathematics	
getkern	function	T alternates	
getmultiple	function	T dotless	
getsubstitution	function	S comment	

S feature	Т	processes
N value	D	properties
T bigslots	D	quads
T parameters	D	resources
N AccentBaseDepth	Т	setdynamics
N AccentTopShiftUp	Т	shapes
N DelimiterPercent	D	spaces
N DelimiterShortfall	D	spacings
N DisplayOperatorMinHei	ght T	streams
N FlattenedAccentTopShi	ftUp D	unicodes
N FractionRuleThickness	D	unislots
N PrimeRaiseComposedPer	cent D	variants
T tweaks	D	xheights
T aftercopying	help	<b>ers</b> table
S name	F	addextraprivate
S version	F	addprivate
D designsizes	F	appendcommands
D filenames	F	appendcommandtable
F getcompositions	F	checkflags
T list	F	checkmerge
F load	F	checksteps
F prepare_features	F	collectanchors
F register	F	combineglyphs
F registerpostprocessor	D	commands
F report	F	composecharacters
T suffixes	F	descriptiontoslot
handlers table	F	dimenfactor
hashes table	F	expandglyph
D characters	Т	extraprivates
D classes	F	fontpatternhassize
D csnames	F	getcoloredglyphs
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

F prependcommands	N mirror.10223
F prependcommandtable	N mirror.10764
F privateslot	N mirror.10769
F registerglyphbox	N mirror.10877
F scalecommands	N mirror.10878
F setboxdirectly	N mirror.10885
F setboxglyph	N mirror.10886
F setboxglyphs	N mirror.10887
F setdigitwidth	N mirror.10888
F setmetaglyph	N mirror.10889
F setmetaglyphs	N mirror.10890
T sharedprivates	N mirror.10891
N delimited ghost annuity	N mirror.10892
N delimited ghost check	N mirror.10901
N delimited ghost hat	N mirror.10902
N delimited ghost tilde	N mirror.10927
N delimited left annuity	N mirror.10928
N delimited right annuity	N mirror.120597
N delimited right check	N mirror.123
N delimited right hat	N mirror.12310
N delimited right tilde	N mirror.12311
N flat 0x0060 1	N mirror.125
N flat 0x00A8 1	N mirror.171
N flat 0x00AF 1	N mirror.187
N flat 0x00B4 1	N mirror.247
N flat 0x02C6 1	N mirror.40
N flat 0x02C7 1	N mirror.41
N flat 0x02D8 1	N mirror.47
N flat 0x02D9 1	N mirror.60
N flat 0x02DA 1	N mirror.62
N flat 0x02DC 1	N mirror.8242
N flat 0x20DB 1	N mirror.8243
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	mirror.8935		mirror.984862
	mirror.8936		mirror.984863
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N mirror.985138	N mirror.985182
N mirror.985139	N mirror.985183
N mirror.985140	N mirror.985184
N mirror.985141	N mirror.985200
N mirror.985142	N prime 0x2032 1
N mirror.985143	N prime 0x2032 2
N mirror.985144	N prime 0x2032 3
N mirror.985145	N prime 0x2033 1
N mirror.985146	N prime 0x2033 2
N mirror.985147	N prime 0x2033 3
N mirror.985148	N prime 0x2034 1
N mirror.985149	N prime 0x2034 2
N mirror.985150	N prime 0x2034 3
N mirror.985151	N prime 0x2035 1
N mirror.985152	N prime 0x2035 2
N mirror.985153	N prime 0x2035 3
N mirror.985154	N prime 0x2036 1
N mirror.985155	N prime 0x2036 2
N mirror.985156	N prime 0x2036 3
N mirror.985157	N prime 0x2037 1

N prime 0x2037 2		F boxtomp	
N prime 0x2037 3		F draw	
N prime 0x2057 1		F fill	
N prime 0x2057 2		F glyph	
N prime 0x2057 3		F maxbounds	
N unary minus		F paths	
N unary minus plus		F widthline	
N unary plus		F zeroline	
N unary plus minus		names	data table
N visualspace		nulldata	data table
F splitfontpattern		privateoffsets	table
F tochar		B keepnames	
T vfinjectors		N mathbase	
F startcolor		N mathextrabase	
F stopcolor		N textbase	
T vfspecials		N textextrabase	
T backgrounds		protrusions	data table
T outlines		readers	table
infofont	function	F afm	
iterators	table	F check_lua	
F characters		F check_tfm	
F descriptions		F lua	
F glyphs		F ofm	
loggers	table	F opentype	
F format		F otf	
F onetimemessage		F pfb	
F register		D sequence	
F reportdefinedfonts	i e	F tfm	
F reportusedfeatures	:	F ttc	
mappings	table	F ttf	
F addtounicode		F woff	
F fromunicode16		registersanitizer	function
F getentry		reserveid	function
F loadfile		select	table
F loadline		D alternatives	
F makenameparser			
i makenamepar ser		F bodyfont	
D overloads		F bodyfont D data	
•		·	
D overloads		D data	
D overloads F reset		D data F default	ly
D overloads F reset F tounicode F tounicodel6 F tounicodel6sequence		D data F default D defaults F definefallbackfami F definefontfamily	
D overloads F reset F tounicode F tounicode16 F tounicode16sequence metapost	e table	D data F default D defaults F definefallbackfami	
D overloads F reset F tounicode F tounicodel6 F tounicodel6sequence		D data F default D defaults F definefallbackfami F definefontfamily	

D fallbacks	F definecontext	
F features	F mergecontext	
F filefallback	F presetcontext	
F fontdata	F registercontext	
F fontfallback	F showcontext	
F fontsynonym	F splitcontext	
F goodies	D synonyms	
F mathfallback	D variants	
D methods	symbols	table
D presets	T emoji	
F registerfallback	F checked	
F registerfiles	F resolved	
F registerfontalternative	F uselibrary	
F registerfontfamily	tables	table
F textfallback	toeffect	function
F typeface	tracers	table
F typescript	treatments	table
F userdata	F applyfixes	
<b>specifiers</b> table	D data	
D contextmerged	S filename	
F contextnumber	F ignoredfile	
D contextnumbers	F report	
D contextsetups	F trace	

 ${\sf F} \ {\sf context to string}$ 

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

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

## gzip (extra lua)

compress	function	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
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 F register javascripts table F addtopreamble F code D codes

F flushpreambles

D functions D preambles F setpreamble F storecode F storepreamble F usepreamblenow F usescripts linkedlists data table pages table F setpagetransition F setupcanvas table references F setclosedocumentaction F setclosepageaction F setopendocumentaction F setopenpageaction renderings data table

#### 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

lines overloaded function

loadchunk function
loaddata function
loadlines function
newreader function
noflines function

 pathseparator string

write

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

function

# job (context)

comment	function	D tobesaved	
datasets	table	parwrappers	table
D collected		D collected	
F extend		D tobesaved	
F getdata		passes	table
F setdata		F check	
D tobesaved		D 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	
initialize	function	D tobesaved	
load	function	positions	table
loadother	function	F b_column	
objects	table	F b_region	
D collected		Fc	
F get		D collected	
F number		F column	
F page		F columnofpos	
F save		F copy	
F set		F depth	
D tobesaved		F e_column	
pack	boolean	F e_region	
packversion	number	F enhance	
pagestates	table	F extra	
D collected		F get	
F countervalue		F getcolumndata	
F extend		F getfree	
F realpage		F gethpos	
F realpageorder		F getpos	
F setstate		F getreserved	

F getrpos F setspec F getsync F settobesaved F gettobesaved D tobesaved F upperleft F getvpos F hangafter F upperright F hangindent F used F height F whd F hsize F width Fχ N lastx N lasty F xy Fу F leftskip register function F lowerleft function save F lowerright F markregionbox structure table D collected Fn F onsamepage T components F overlapping T tobesaved T branches F p S name F page S type F paragraph variables table F parindent F position D checksums D collected Fr F region F getchecksum F registerhandlers F makechecksum F restore F replace F rightskip F save

F set

F setall

F setregionbox

F setchecksum

number

D tobesaved

version

## 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

N threshold

number

version

#### layouts (context)

getcanvasfunctionstatustagetpagedimensionsfunctionF isleftpagesetupcanvasfunctionF leftorrightpageaction

table

#### 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)

 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 -	

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	usedcharacters	table
object	function	usedfontnames	table
objectcompresslevel	function	N dejavusansmonoboldttf-1	
pagereference	function	usedfontobjects	table
patternstream	function	N dejavusansmonoboldttf-1	
pdfcolor	function	usedfontstreams	table
pdftimestamp	function	T dejavusansmonoboldttf-1	
print .	function	T characters	
procset	function	T descriptions	
protectresources	boolean	T fonts	
rectangle	function	T goodies	
reference	function	S original	
registerannotation	function	T parameters	
registerdestination	function	N ascender	
registerdocumentfinalizer	function	N descender	
registerfont	function	N designsize	
registerinitializer	function	T expansion	
registerpagefinalizer	function	N shrink	
registerpattern	function	N step	
reserveobject	function	N stretch	
rgbcode	function	N extendfactor	
rotationcm	function	N extrafactor	
setcompression	function	N extraspace	
setencryption	function	N factor	
setincludecidset	function	N hfactor	
setpageorder	function	N mathsize	
setpagestate	function	N maxsize	
setpagetag	function	N minsize	
setversion	function	N mode	
sharedobject	function	N quad	
shareobject	function	N scaledpoints	
shareobjectreference	function	N size	
spotcode	function	N slant	
stream	function	N slantfactor	
string	function	N space	
toeight	function	N spaceshrink	
topdfdoc	function	N spacestretch	
tosixteen	function	N squeezefactor	
transparency	function	N textsize	
transparencycode	function	N units	
transparencygroups	table	N vfactor	
B none		N width	
transparencyvalue	function	N xheight	
unicode	function	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	К	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	M	N	Tbar
N	Mu	N	Tcaron
N	N	N	Tcommaaccent
N	Nacute	N	Theta
	Ncaron	N	Thorn
N			
	Ncommaaccent		Tilde
N	Ncommaaccent Ntilde		
N N		N N	
N N	Ntilde Nu	N N N	U
N N N	Ntilde Nu	N N N	U Ugrave
N N N N	Ntilde Nu O	N N N N	U Ugrave Uhorn
N N N N	Ntilde Nu O OE	N N N N	U Ugrave Uhorn Uhungarumlaut
N N N N N	Ntilde Nu O OE Oacute	N N N N N	U Ugrave Uhorn Uhungarumlaut Umacron
N N N N N	Ntilde Nu O OE Oacute Obreve	N N N N N	U Ugrave Uhorn Uhungarumlaut Umacron Uogonek
N N N N N N	Ntilde Nu 0 0E 0acute Obreve Ocircumflex	N N N N N N	U Ugrave Uhorn Uhungarumlaut Umacron Uogonek Upsilon
N N N N N N	Ntilde Nu 0 0E 0acute 0breve 0circumflex 0dieresis		U Ugrave Uhorn Uhungarumlaut Umacron Uogonek Upsilon Upsilon1
N N N N N N	Ntilde Nu 0 0E 0acute 0breve 0circumflex 0dieresis		U Ugrave Uhorn Uhungarumlaut Umacron Uogonek Upsilon Upsilon1 Upsilondieresis
	Ntilde Nu 0 0E 0acute 0breve 0circumflex 0dieresis 0grave 0horn		U Ugrave Uhorn Uhungarumlaut Umacron Uogonek Upsilon Upsilon1 Upsilondieresis Upsilontonos
	Ntilde Nu 0 0E 0acute 0breve 0circumflex 0dieresis 0grave 0horn 0hungarumlaut		U Ugrave Uhorn Uhungarumlaut Umacron Uogonek Upsilon Upsilon1 Upsilondieresis Upsilontonos Uring Utilde
	Ntilde Nu 0 0E 0acute 0breve 0circumflex 0dieresis 0grave 0horn 0hungarumlaut 0macron		U Ugrave Uhorn Uhungarumlaut Umacron Uogonek Upsilon Upsilon1 Upsilondieresis Upsilontonos Uring Utilde V
	Ntilde Nu 0 0E 0acute 0breve 0circumflex 0dieresis 0grave 0horn 0hungarumlaut 0macron 0mega		U Ugrave Uhorn Uhungarumlaut Umacron Uogonek Upsilon Upsilon1 Upsilondieresis Upsilontonos Uring Utilde V
	Ntilde Nu 0 0E 0acute 0breve 0circumflex 0dieresis 0grave 0horn 0hungarumlaut 0macron 0mega 0megatonos	N N N N N N N N N N N N N N N N N N N	U Ugrave Uhorn Uhungarumlaut Umacron Uogonek Upsilon Upsilon1 Upsilondieresis Upsilontonos Uring Utilde V W
N N N N N N N N N N N N N N N N N N N	Ntilde Nu  0  0E  0acute  0breve  0circumflex  Odieresis  0grave  0horn  0hungarumlaut  0macron  0mega  0megatonos  0micron	N N N N N N N N N N N N N N N N N N N	U Ugrave Uhorn Uhungarumlaut Umacron Uogonek Upsilon Upsilon1 Upsilondieresis Upsilontonos Uring Utilde V W Wacute

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
N	acircumflex	N	backslash
N	acute	N	bar
N	acutecomb	N	beta
N	adieresis	N	block
N	ae	N	braceleft
N	aeacute	N	braceright
N	agrave	N	bracketleft
N	alpha	N	bracketright
N	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

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

N heart	N logicaland
N hookabovecomb	N logicalnot
N house	N logicalor
N hungarumlaut	N longs
N hyphen	N lozenge
Ni	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	N notelement
N itilde	N notequal
N j	N notsubset
N jcircumflex	N ntilde
N jot	N nu
N k	N numbersign
N kappa	N o
N kcommaaccent	N oacute
N kgreenlandic	N obreve
Νl	N ocircumflex
N lacute	N odieresis
N lambda	N oe
N lcaron	N ogonek
N lcommaaccent	N ograve
N ldot	N ohorn
N less	N ohungarumlaut
N lessequal	N omacron
N lfblock	N omega
N lira	N omegal

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

N 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 collect

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

## lxml (context)

		-1 -	
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	

function

ult

## mathematics (context)

addfallbacks	function	getstyle	function
addvariant	function	horizontalcode	function
alphabets	data table	initializeparameters	function
alternatives	data table	makefont	function
beforepassingfonttotex	function	mapremap	data table
big	function	overloadparameters	function
boldmap	data table	preset	function
categories	table	presets	table
D functions		T less	
charactersets	data table	T more	
checkaftercopyingfont	function	T zero	
classes	data table	privatebase	number
classnames	data table	registersimplematrix	function
codes	data table	remapalphabets	function
collected	function	renderings	table
define	function	D mappings	
dictionaries	table	D numbers	
D data		D sets	
D defaults		renderset	function
D groups		resetattributes	function
F groupset		scaleparameters	function
F groupsetgroup		sets	data table
D names		setsnapping	function
F registercharacter		setvariant	function
F registergroup		startcollecting	function
F registergroupset		stopcollecting	function
D sets		styles	data table
D variants		syncboth	function
dimensions	function	syncname	function
extensiblecode	function	syncstyle	function
extensibles	data table	toengineclass	function
extrabase	number	toname	function
extras	table	tostyle	function
F add		tweakaftercopyingfont	function
F copy		tweakbeforecopyingfont	function
fallbacks	table	tweaks	table
F apply		F accentdimensions	
Finstall		F action	
fallbackstyleattr	function	F addactuarian	
gaps	data table	F addarrows	
getboth	function	F addbars	

F addequals F parameters F addfourier F radicaldegreeanchors F addmirrors F replace F addparts F replacealphabets F addprivates F setoptions F setovershoots F addrules F addscripts F showinfo F bigslots F simplifykerns F staircase F checkspacing F copyaccents T subsets T datasets T acenorsuvxz T bhklt T accentdimensions T accent T d T dotless T over Τf T under T addarrows T gigy T addscripts T horizontalfences T checkspacing Τi T integrals T copyaccents T fixslashes T mw T wipecues σТ F dimensions F substitute F extendaccents F topanchors F fallbacks F version F fixaccents F wipeanchors F fixellipses F wipecues F fixintegrals F wipeitalics F fixoldschool F wipevariants F fixprimes utfmathaccent function utfmathclass function F fixradicals utfmathcommand function F fixslashes utfmathfiller function F flattenaccents utfmathstretch function F kernpairs variantcode function F kerns variantcount function F margins virtualize function F message

F moveitalics

F movelimits

virtualized

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 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

Nif

N input

N interim

N internal

N iteration

N leftbrace N leftbracket

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 onlyset

N parametertype

N pathjoin

N plusorminus

N primarybinary

N primarydef

N property

N protection

N relax

N repeatloop

N rightbrace

N rightbracket

N rightdelimiter

N runscript

N save

N scantokens

N secondarybinary

N secondarydef

N semicolon

N setbounds

N shipout

N show

N slash

N step

N stop

N str

N string

. 5 . . . . . . . . . . . . . .

N tag N tension

N tertiarybinary

N tertiarydef

N thingstoadd

N to

N typename

N unary

N undefinedcs

N until

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

remaptext	function	svgglyphtomp	function
reporterror	function	svgshapestomp	function
reportsvgfonts	function	svgshapestopdf	function
reset	function	svgsplitcolor	function
resetlastlog	function	svgtomp	function
resetplugins	function	svgtopdf	function
run	function	sxsy	function
runinternal	function	tex	table
runscript	function	F get	
scanparameters	function	F reset	
scripterror	function	F set	
scriptindex	function	F setfrombuffer	
setbendtolerance	function	texerrors	boolean
setbuffer	function	texexp	function
setextensions	function	theclippath	function
setlogging	function	tographic	function
setmovetolerance	function	totable	function
setoutercolor	function	types	table
setparameterset	function	N boolean	
setrecord	function	N cmykcolor	
settext	function	N color	
settolerance	function	N dependent	
setvariable	function	N independent	
showlog	boolean	N known	
showsvgpage	function	N nep	
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 unknownnep	
N ex		N unknownpath	
N in		N unknownpen	
N mm		N unknownpicture	
N pc		N unknownstring	
N pt		N unsuffixedmacro	
N px		N vacuous	

typesvgpage	function	variables
unload	function	
untagvariable	function	

table

#### mime (extra lua)

b64 function
decode function
decodet table
 F base64

F quoted-printable

dot function
encode function
encodet table

F base64

F quoted-printable

eol function
normalize function
qp function

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

F default

F quoted-printable

F text

wrp function

## mp (context)

autoinject	function	fprint	function
aux	function	get	table
F boolean		F hashentry	
F color		graphformat	function
F direct		inject	function
F draw		F boolean	
F fill		F cmykcolor	
F flush		F color	
F fprint		F integer	
Finteger		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	<b>lmt_contours_edge_get_band</b>	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

lmt_contours_nofvalues	function	<pre>mf_formatted_text</pre>	function
lmt_contours_nx	function	mf_get_outline_text	function
lmt_contours_ny	function	mf_graphic_text	function
lmt_contours_range	function	mf_inject_blob	function
lmt_contours_shade_paths	function	mf_map_move	function
<pre>lmt_contours_shade_set</pre>	function	mf_map_text	function
lmt_contours_shape_paths	function	mf_named_color	function
<pre>lmt_contours_start</pre>	function	mf_outline_text	function
lmt_contours_stop	function	mf_save_data	function
<pre>lmt_contours_value</pre>	function	mf_script_index	function
<pre>lmt_contours_xrange</pre>	function	mf_start_saving_data	function
<pre>lmt_contours_yrange</pre>	function	mf_stop_saving_data	function
<pre>lmt_function_x</pre>	function	mode	function
lmt_glyphshape_accent	function	n	function
<pre>lmt_glyphshape_baseline</pre>	function	number	function
lmt_glyphshape_boundingbox	function	numeric	function
lmt_glyphshape_depth	function	pair	function
lmt_glyphshape_height	function	pairpoints	function
lmt_glyphshape_italic	function	path	function
lmt_glyphshape_n	function	pathpoints	function
lmt_glyphshape_path	function	points	function
lmt_glyphshape_start	function	print	function
lmt_glyphshape_stop	function	F boolean	
lmt_glyphshape_usedbox	function	F color	
<pre>lmt_glyphshape_usedline</pre>	function	F direct	
lmt_glyphshape_width	function	F draw	
lmt_mesh_set	function	F fill	
<pre>lmt_mesh_update</pre>	function	F flush	
<pre>lmt_poisson_generate</pre>	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	

F triplet		F property	
F tripletpoints		F string	
F vprint		F symbol	
processingmode	function	F token	
quadruple	function	T tokenscanners	
quadruplepoints	function	F transform	
quoted	function	T typescanners	
report	function	F whatever	
scan	table	set	table
F boolean		size	function
F cmykcolor		skip	table
F color		F token	
F expression		solve	function
F integer		string	function
F next		systemmode	function
F number		transform	function
F numeric		triplet	function
F pair		tripletpoints	function
F path		vprint	function

F pen

### 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 showtree	
F alternates		F snap	
F autofences		F spacing	
F classes		F suspicious	
F collapse		F tags	
F dictionaries	:	F unscript	
F export		F unstack	
F families		F variants	
F fencing		process	function
F fixscripts		processnested	function
F kernpairs		processors	table
F makeup		T dictionaries	
F normalize		F mlisttohlist	
F numbers		T suspicious	
F relocate		T unscript	
F render		T unstack	
F resize		processouter	function

#### node (basic tex)

F getattribute

F getattributes

F getboth

F getattributelist

checkdiscretionaries function F getbottom checkdiscretionary function F getbox copy function F getcachestate copylist function F getchar function count F getchardict currentattributes function F getcharspec dimensions function F getchoice direct table F getclass F getdata F addmargins F addxoffset F getdegree F addxvmargins F aetdelimiter F addyoffset F getdenominator F appendaftertail F getdepth F checkdiscretionaries F getdirection F checkdiscretionary F aetdisc F collapsing F getdiscpart F getexpansion F copy F getfam F copylist F getfield F copyonly F count F getfont F currentattributes F getgeometry F dimensions F getglue F effectivealue F getglyphdata F endofmath F getglyphdimensions F exchange F getheight F fields F getid F findattribute F getindex F findattributerange F getinputfields F findnode F aetkern F firstglyph F getkerndimension F flattendiscretionaries F getlanguage F flattenleaders F getleader F flushlist F getleftdelimiter F flushnode F getlist F free F getnext F freeze F getnodes F getanchors F getnormalizedline

F getnucleus

F getoffsets

F getoptions

F getnumerator

F getorientation F ishoth F getparstate F ischar F getpenalty F isdirect F getpost F isglyph F getpre F isnext F getprev F isnextchar F getprime F isnextalvph F getpropertiestable F isnode F getproperty F isprev F getreplace F isprevchar F getrightdelimiter F isprevglyph F getscale F isspeciallist F getscales F isvalid F getscript F iszeroglue F getshift F kerning F getspeciallist F lastnode F getstate F length F getsub F ligaturing F makeextensible F getsubpre F getsubtype F migrate F getsup F mlisttohlist F getsuppre F naturalhsize F naturalwidth F gettop F gettotal F new F getusedattributes F newmathglyph F getwhd F newtextglyph F getwidth F patchattributes F getwordrange F prependbeforehead F getxscale F protectglyph F getxyscales F protectglyphs F getyscale F protrusionskippable F gluetostring F rangedimensions E hasattribute F remove F hasdimensions F repack F hasfield F reverse F hasgeometry F serialized F hasglyph F setanchors F setattribute F hasglyphoption F setattributelist F hpack F hyphenating F setattributes F id F setboth F ignoremathskip F setbottom F insertafter F setbox

F setchar

F insertbefore

F setchardict F setspeciallist F setchoice F setsplit F setclass F setstate F setdata F setsub F setdegree F setsubpre F setdelimiter F setsubtype F setdenominator F setsup F setdepth F setsuppre F setdirection F settop F setdisc F settotal F setwhd F setdiscpart F setexpansion F setwidth F setfam F show F setfield F slide F setfont F softenhyphens F setgeometry F startofpar F setglue F subtypes F setglyphdata F tail F todirect F setheight F setindex F tonode F setinputfields F tostrina F setkern F tovaliddirect F setlanguage F traverse F setleader F traversechar F setleftdelimiter F traversecontent F setlink F traverseglyph F setlist F traverseid F setnext F traverseleader F traverselist F setnucleus F setnumerator F type F setoffsets F types F setoptions F unprotectglyph F setorientation F unprotectglyphs F setpenalty F unsetattribute F unsetattributes F setpost F setpre F usedlist F setprev F usesfont F setprime F values F verticalbreak F setproperty F setreplace F vpack F setrightdelimiter F write F setscales F xscaled F yscaled F setscript effectiveglue function F setshift

endofmath	function	ligaturing	function
family_font	function	makeextensible	function
fields	function	mlisttohlist	function
findattribute	function	new	function
firstglyph	function	protectglyph	function
flattendiscretionaries	function	protectglyphs	function
flushlist	function	protrusionskippable	function
flushnode	function	rangedimensions	function
free	function	remove	function
getattribute	function	serialized	function
getcachestate	function	setattribute	function
getfield	function	setfield	function
getglue	function	setglue	function
getpropertiestable	function	setproperty	function
getproperty	function	show	function
gluetostring	function	slide	function
hasattribute	function	subtypes	function
hasfield	function	tail	function
hasglyph	function	tostring	function
hpack	function	traverse	function
hyphenating	function	traverseid	function
id	function	type	function
insertafter	function	types	function
insertbefore	function	unprotectglyph	function
instock	function	unprotectglyphs	function
inuse	function	unsetattribute	function
isnode	function	usedlist	function
iszeroglue	function	usesfont	function
kerning	function	values	function
lastnode	function	vpack	function
length	function	write	function

#### nodes (context)

accentcodes	data table	dircodes	data table
adaptive	table	directioncodes	data table
F handlehorizontal		directionvalues	data table
F handlevertical		dirvalues	data table
F set		disccodes	data table
aligned	function	discretionarycodes	data table
append	function	fencecodes	data table
apply	function	fields	function
applyvisuals	function	fieldtypes	table
astable	function	fillcodes	data table
attributecodes	data table	fillvalues	data table
basepoints	function	firstcharacter	function
boundarycodes	data table	firstcharinbox	function
boxes	table	firstdirinbox	function
F count		flush	function
F dimensions		flushlist	function
F direct		flushnode	function
F dispose		fullhpack	function
F found		getattr	function
F prune		getattribute	function
F reset		getboth	function
F restore		getbox	function
F save		getchar	function
F savenode		getfield	function
builders	table	getfont	function
F buildpage_filter		getid	function
F vbox_filter		getleader	function
F vpack_filter		getlist	function
choicecodes	data table	getnext	function
concat	function	getprev	function
copy	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	

F characters		F setmove	
F checkglyphs		F setposition	
F checkparcounter		F setspacekerns	
F cleanupbox		insertafter	function
F cleanuppage		insertbefore	function
F export		insertlistafter	function
F finalizebox		installattributehandler	function
F finalizelist		is_display_math	function
F fixmathalign		isdirect	function
F flatten		isnode	function
F flattenline		isnut	function
F mathmatrixornaments		kerncodes	data table
F mathmatrixrules		leftmarginwidth	function
F migrate		linefillers	table
F protectglyphs		F filler	
F recolor		F handler	
F show		F set	
F showhyphenation		lines	table
F showpreamble		T boxed	
F stripping		F addlinenumbers	
F textbackgrounds		F register	
F unprotectglyphs		F setup	
F visualizehyphenation		D data	
F wipe		F finalize	
hasattribute	function	F number	
hasfield	function	link	function
hpack	function	linked	function
idsandsubtypes	function	list	function
idstostring	function	listcodes	data table
injections	table	listtoutf	function
F copy		literalvalues	data table
F getligaindex		locate	function
F getthreshold		markcodes	data table
F handler		markers	table
F installgetspaceboth		F get	
F installnewkern		mathcodes	data table
F isspace		mathvalues	data table
F keepcounts		maxboxwidth	function
F reset		migrations	table
F resetcounts		F setinserts	
F setcursive		F setmarks	
F setkern		new	function
F setligaindex		noadcodes	data table
F setmark		noadoptions	table

N axis F dirdimensions N exact F effectiveglue N left F endofmath N middle F exchange N no axis F findattribute F findnode N right N set F firstcharacter F firstcharinhox N unused 1 N unused 2 F firstqlyph nodecodes data table F flattendiscretionaries function nopts F flattenleaders table nuts F flush F addmargins F flushlist F addxoffset F flushnode F addxymargins F free F addyoffset F freeze F append F fullhpack F appendaftertail F getanchors F apply F getattr F applyvisuals F getattribute F checkdiscretionaries F getattributelist F checkslide F getattributes F collapsing F getattrlist T colors F getattrs F set F getboth T components F getbottom F getbox F copynocomponents F getboxglue F copyonlyglyphs F count F getchar F flush F getchardict F get F getcharspec F set F getchoice F concat F getclass F copy F getcomponents F copy properties F getdata F copylist F getdegree F getdelimiter F copynode F copyonly F getdenominator F copyvisual F getdepth F count F getdirection F countall F getdisc F currentattributes F getdiscpart F delete F getdiscretionary F dimensions F getexpansion

F getfam F getsubpre
F getfield F getsubtype
F getfont F getsup
F getgeometry F getsuppre
F getglue F getsurround
F getglyphdata F gettop
F getglyphdimensions F gettotal
F getheight F getsualue

F getheight F getid F getvalue F getindex F getwhd F getinputfields F getwidth F getkern F getwordrange F getkerndimension F getxscale F getlang F getxyscales F getlanguage F getyscale F getleader F gluetostring F getleftdelimiter F hasattribute F hasdimensions F getlist F hasfield F getmiddle F hasgeometry F getmiddledelimiter F getnext F hasglyph F getnormalizedline F hasglyphoption

F getnucleus F hpack
F getnumerator F hyphenating
F getoffsets F ignoremathskip
F getoptions F insertafter
F getorientation F insertbefore
F getparstate F insertlistafter

F getpenalty F is display math F getpost F isboth F ischar F getpre F getprev F isdirect F getprime F isdone F isqlyph F getprop F isnext F getreplace F getrightdelimiter F isnextchar F getruledata F isnextglyph F isnode F getscale F isnut F getscales F getscript F isprev F getshift F isprevchar F getspeciallist F isprevglyph F getstate F iszeroglue

F getsub

F kerning

F lastnode F lineskip F length F literal F ligaturing F mathchar F mathtextchar F link F linked F negatedglue F noad F locate F migrate F originliteral F mlisttohlist F outlinerule F naturalhsize F pageliteral F naturalwidth F penalty F nestedtracedslide F radical F rawliteral F new F newmathglyph F register F openup F restore F patchattributes F righthangskip T pool F rightmarginkern F accent F rightskip F baselineskip F rule F save F boundary F boxrule F savepos F choice F setmatrix F cleanup F setstate F delim F shrink F delimiter F startrotation F direction F stock F directliteral F stretch F disc F strutrule F emptyrule F subbox F fence F submlist F fontkern F temp F fraction F usage F glue F userdefined F gluespec Tuserids F usernode F glyph F hlist F userrule 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 leftskip

F protectglyphs

F protrusionskippable

F rangedimensions F setfam F setfield F rawprop F reference F setfont F rehpack F setgeometry F remove F setglue F repack F setqlyphdata F repackhlist F setheight F replace F setinputfields F reverse F setkern T rules F setlang T ruleactions F setlanguage F box F setleader F draw F setleftdelimiter F fill F setlink F mp F setlist F setmiddledelimiter F stroke F userrule F setnext F serialized F setnucleus F setanchors F setnumerator F setattr F setoffsets F setattribute F setoptions F setattributelist F setorientation F setattributes F setparproperty F setattrlist F setpenalty F setattrs F setpost F setboth F setpre F setbottom F setprev F setbox F setprime F setboxglue F setprop F setchar F setreplace F setchardict F setrightdelimiter F setchoice E setruledata F setclass F setscale F setscales F setcomponents F setdata F setscript F setdegree F setshift F setdelimiter F setspeciallist F setdenominator F setsplit F setdepth F setstate F setdirection F setsub F setdisc F setsubpre F setsubtype F setdiscpart F setdiscretionary F setsup

F setsuppre

F setexpansion

F setsurround	F list	
	F mark	
F settop	F mark	
F setvalue		
F setvisual	F node	
F setvisuals	F rule	
F setwhd	F unset	
F setwidth	F vlist	
F show	F whatsit	
F slide	T treversers	
F softenhyphens	F char	
F somepenalty	F content	
F somespace	F glyph	
F splitbox	F leader	
F startofpar	Flist	
F striprange	F node	
F tail	T typesetters	
F takeattr	F tohbox	
F takebox	F tohpack	
F takelist	F tonodes	
F theprop	F tovbox	
F tonode	F tovpack	
F tonodes	F unprotectglyph	
F tonut	F unprotectglyphs	
F tosequence	F unsetattribute	
F tostring	F unsetattributes	
F tracedslide	F untracedslide	
F traverse	F usedlist	
F traversechar	F usesfont	
F traversecontent	F verticalbreak	
F traverseglyph	F vianodes	
F traverseid	F vianuts	
F traverseleader	F vpack	
F traverselist	F write	
T traversers	F xscaled	
F alignrecord	F yscaled	
F boundary	packlist	function
F char	parcodes	data table
F content	penaltycodes	data table
F dir	plugindata	table
F disc	F finalizer	
F glue	F initializer	
F glyph	S name	
F hlist	T namespace	
Fleader	N attribute	

D data		T done	
F enable		F handler	
F handler		T stack	
		rehpack	function
F register		remove	function
D registered		remove	function
D values		•	function
F processor	function	replace	
points	function table	report	function function
pool	table	rightmarginwidth rulecodes	
F baselineskip			data table
F cleanup		rules	table
F directliteral		F handler	
F glyph		F process	
F hlist		F set	
F latelua		F userrule	
F leader		serialize	function
F lineskip		serializebox	function
F literal		serialized	function
F originliteral		setattr	function
F register		setattribute	function
F restore		setboth	function
F save		setbox	function
F savepos		setboxtonaturalwd	function
F setmatrix		setchar	function
F stock		setfield	function
F usage		setfont	function
F usernode		setleader	function
F vlist	6	setlink	function
prepend · .	function	setlist	function
print	function	setnext	function
processors	table	setprev	function
F alignment_filter		setproperty	function
F append_line_filter		shifts	table
F glyph_run		F handler	
F post_linebreak_filter		F set	
F pre_linebreak_filter		showboxes	function
F trace_glyph_run_a		showlist	function
F trace_glyph_run_b		showsimplelist	function
properties	table	skipcodes	data table
T data	function	snapshots	table
pts	function	F getsamples	
radicalcodes	data table	F resetsamples	
references	table	F takesample	£ 1 '
N attribute		somepenalty	function

function function somespace totable **specialskipcodes** table totree function splitbox function toutf function table startofpar function tracers stripdiscretionaries function T colors stripping table F reset T glyphs F set F set F setlist subtypes data table F directions tail function F fontchar takeattr function T frequencies takebox function F register tasks table T pool T nodes F actions F rule F appendaction F disableaction T nuts F disablegroup F rule F enableaction F resetproperties F enablegroup Frule F setlist F freeze F freezearoup F setproperties F start F new F prependaction T steppers F removeaction F check F replaceaction F codes F restart F features F font F setaction F showactions F glyphs F table F message tobasepoints function F messages tocentimeters function F nofsteps tociceros function F register todidots function F reset todimen function F start toinches function F stop **tomillimeters** function F stop tonode function T transparencies tonodes function F reset tonut function F set topicas function F setlist topoints function traverse function function function toscaledpoints traverseid tosequence function typesetters table tostring function F hbox

N italic F hpack F tohbox N kern F tohpack N line F tonodes N marginkern F tovbox N mark F tovpack N math F vpack N mathalue unsetattribute function N mathkern usedlist function N origin vianodes function N par vianuts function N penalty visualizebox function N simple visualizers table N simplehbox F attribute N simplevbox T attributes N simplevtop F box N space F handler N strut F markfonts N user T modes N vbox N boundary N vtop N depth N whatsit N dir F register N discretionary F setfont N expansion F setlayer N fontkern F setruledglyph

N glue

N glyph

N hbox

N insert

vpack function
whatsitcodes data table
write function

F setvisual

# 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
formattedfloat	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 zstd table F getmessage F initialize F compress F decompress F open zint table

F initialize

F execute

#### os (basic lua)

localtime

name
newline

now

nofdays

pipeto

platform

function

string

string

function

function

function

string

actony	function	romovo	overloaded function
getenv		remove	
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

uname

uuid

validdate

weekday

where

which

function

function

function

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)

columnsets	table	F	sethsize	
F add		F	sethspan	
F block		F	setlines	
F check		F	setpropertie	es
F currentcolu	mn	F	setstart	
F define		F	setvsize	
F finishflush		inje	ctions	table
F flushareas		F	flushafter	
F flushcolumn		F	flushbefore	
F flushrest		F	save	
F goto		mixe	dcolumns	table
F noto		F	cleanup	
F prepareflus	h	F	finalize	
F put		F	getlist	
F registerare	a	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	
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		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		T dataset	
listvariants	table	T sequence	
F default		T key	
F index		T sequence	
F num		specifications	table
F short		T default	
F tag		S author	
load	function	S comment	
loadbibdata	function	S copyright	
loaddefinitionfile	function	S name	
loaders	table	S version	
F bbl		D virtual	£
F bib		splitauthor	function
F buffer		splitoneauthor	function
F endnote		statistics	table

N nofbytes F showdatasetfields N nofdatasets F showentry N nofdefinitions F showfields N nofshortcuts F showhashedauthors tables table F showtables D implicits F showvariants table typesetters D origins D privates F author D sets F string function D specials usedataset usedentries function D types writers table D virtuals function tags F author F keyword

F pagenumber

F range

tracers table
 F showdatasetauthors
 F showdatasetcompleteness

# regimes (context)

backmapping	data table	mapping	data table
cleanup	function	pop	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	N inter_char_hangul_penalty		
N inter_char_quart	N inter_char_quarter_shrink_factor		
N inter_char_quarter_stretch_factor			
N inter_char_shrin	nk_factor		
N inter_char_stret	ch_factor		
N inter_word_stret	ch_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	readinte
readbytes	function	readinte
readbytetable	function	readinte
readcardinal1	function	readinte
readcardinal1le	function	readinte
readcardinal2	function	readinte
readcardinal2le	function	readinte
readcardinal3	function	readinte
readcardinal3le	function	tocardin
readcardinal4	function	tocardin
readcardinal4le	function	tocardin
readcardinaltable	function	tocardin
readcline	function	tocardin
readcstring	function	tocardin
readfixed2	function	tocardin
readfixed4	function	tocardin
readinteger1	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-	bcc	protect	function
S resent-	сс	report	function
S resent-	date	select	function
S resent-	from	sink	function
S resent-	message-id	sinkt	table
S resent-	reply-to	F close-when-d	one
S resent-	sender	F default	
S resent-	to	F http-chunked	
S retry-a	fter	F keep-open	
S return-	path	skip	function
S sender		sleep	function
S server		source	function
S smtp-re	mote-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 transfe	r-encoding	tcp4	function
S upgrade		tcp6	function
S user-ago	ent	tp	table
S vary		N TIMEOUT	
S via		F connect	
S warning		try	function
S will-re	try-until	udp	function
S www-autl	henticate	udp4	function
S x-maile	r	udp6	function
F lower		url	table
F normalize	!	F absolute	
http	table	F build	
N TIMEOUT		F build_path	
S USERAGENT	•	F escape	
F genericfo	rm	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 defaultlanguage		firstofsplit	function
S defaultmethod		packch	function
N digitsmaximum		packuc	function
N digitsoffset		replacementlist	function
N ignoredoffset		setlanguage	function
N replacementoffs	et	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
${\tt gethalferrorlinestate}$	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	utfcharacter	function
match	function	utfcharacters	function
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	
F uservariable		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 rawnumber	
F touserdata		F realpage	
inserts	table	F reordered	
D data		T result	
F define		F savedlistnumber	
F getdata		F savedlistprefixednumber	
F getlocation		F savedlisttitle	
F getname		D sectionblocks	
F getnumber		F sectionnumber	
F setlocation		F size	
F setup		F title	
D stored		D tobesaved	
itemgroups	table	F userdata	
lists	table	F uservalue	
F addto		marks table	
F analyze		F number	
B autoreorder		F title	
D cached		<b>notes</b> table	
D collected		F check_spacing	
F discard		F checkpagechange	
F enhance		F define	
T enhancers		F doifonsamepageasprevious	
F filter		F get	
F formulanumber		F getdeltapage	
F getresult		F getinternal	
F groupindex		F getn	
F hasnumberdata		F getstate	
F haspagedata		F hascontent	
F hastitledata		F internal	
F iscached		F internalid	
D kinds		F listindex	
F label		D numbers	
F location		F ordered	
D names		F postpone	
F number		F resetpostponed	
D ordered		F restore	
F page		F save	
F popnesting		F setstate	
F prefix		D states	
F prefixednumber		F store	
F prefixedpage		pages table	
F process		F allmarked	
D pushed		F analyze	
F pushnesting		D collected	

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

F splitreference	F store	
F synchronizepage	D tobesaved	
T testrunners	F unique	
Finner	F userdata	
F special	sections	table
F special operation	F autodepth	cabic
F special operation with arguments	F cct	
T testspecials	D collected	
F deltapage	F current	
Fi	F currentblock	
F internal	F currentid	
F page	F currentlevel	
F realpage	F currentsectionindex	
F section	F depthnumber	
F userpage	F finddata	
D tobereferred	F findnumber	
D tobesaved	F fullnumber	
D tracedpages	F getcurrentlevel	
T urls	F getlevel	
T data	F getnumber	
F define	F internalreference	
F found	D levelmap	
F get	D levels	
F untex	F matchingtilldepth	
D usedinternals	F numberatdepth	
D usedviews	F numbers	
F valid	F popblock	
<b>registers</b> 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 prepare	F setinitialblock	
F process	F setlevel	
F setmethod	F setnumber	
F sort	F showstructure	

F structuredata		F margintext
F title		F math
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 get		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		Flink
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 process		F registerlocation
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
F synonym		T finalizers
D tobesaved		F descriptions
tags	table	T fixes
T backend		F linenumber
T checks		T listdata
F marginanchor		T referencehash

F setattribute
T usedimages
T image
F setcombination
T image
F setconstruct
T usedstyles
T construct
F setfloat
T highlight
F setformulacontent

F current F sethighlight F elementtag F setitem F enabled F setitemgroup F exportbox F setlist F finishexport F setnotation F getextradata F setnotationsymbol F getid F setparagraph F getmetadata F setproperty

F gettablecell F setpublication
F gettabulatecell F setregister
F handler F setsorting
F initializeexport F setsynonym
D labels F settablecell
F last F settabulatecell
F lastinchain F settagdelimitedsymbol

F localexport F settagsubsentencesymbol
F locatedtag F setupexport
T patterns F setuserproperties
U splitter D specifications

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

# table (basic lua)

allkeys	function	orderedhash	function
append	function	pack	function
are_equal	function	prepend	function
collapsed	function	print	function
collapsedhash	function	remove	function
combine	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

# tex (basic tex)

attribute	table	forceinnutetateline	function
automigrationcodes	data table	forceinputstateline fprint	function
badness	function	frozenparcodes	data table
boundaries	table	aet	function
D names	cable	getalignmentcontextvalues	function
D names  D numbers		getappendlinecontextvalues	function
F system		getattribute	function
box	table	getautomigrationvalues	function
boxresources	table	qetbox	function
F getbox	cable	qetbox	function
F getdimensions		getboxurresourcebox	function
F save		getboxresourcedimensions	function
F use		getcatcode	function
catcode	table	getcharactertagvalues	function
chardef	function	getcount	function
classoptioncodes	data table	getdelcode	function
codes	table	getdelcodes	function
conditionals	data table	getdimen	function
constants	data table	getdimensionvalue	function
count	table	getdiscoptionvalues	function
cprint	function	getdiscstatevalues	function
ctdcatcodes	number	geterrorvalues	function
ctxcatcodes	number	getflagvalues	function
definefont	function	getfontoffamily	function
delcode	table	getfrozenparvalues	function
dimen	table	getglue	function
dimensiondef	function	getglyphdata	function
directives	data table	getglyphoptionvalues	function
discoptioncodes	data table	getglyphscales	function
dontcomplain	function	getglyphscript	function
enableprimitives	function	getglyphstate	function
error	function	getgroupvalues	function
expandasvalue	function	gethccode	function
experiments	data table	gethelptext	function
extraprimitives	function	gethmcode	function
fatalerror	function	gethyphenationvalues	function
flagcodes	data table	getinputstatefile	function
fontidentifier	function	getinputstateline	function
fontname	function	getinputstatemode	function
forcehmode	function	getinsertcontent	function
forceinputstatefile	function	getinsertdepth	function

getinsertdistance	function	getparmodevalues	function
getinsertheight	function	getparstate	function
getinsertlimit	function	getprimitiveorigins	function
getinsertmultiplier	function	getregisterindex	function
getinsertwidth	function	getrunstatevalues	function
getintegervalue	function	getsfcode	function
getinteraction	function	getshapingpenaltiesvalues	function
getiovalues	function	getskip	function
getkerneloptionvalues	function	getspecialmathclassvalues	function
getlargestusedmark	function	gettextcontrolvalues	function
getlccode	function	gettextdir	function
getlinedir	function	gettoks	function
getlist	function	getuccode	function
getlistanchorvalues	function	glue	table
getlistgeometryvalues	function	glyphoptioncodes	data table
getlistsignvalues	function	groupcodes	data table
getlocalbox	function	hashtokens	function
getlocallevel	function	hccode	table
getmark	function	hmcode	table
getmath	function	hyphenationcodes	data table
getmathclassoptionvalues	function	ifs	data table
getmathcode	function	inicatcodes	number
getmathcodes	function	integerdef	function
getmathcontrolvalues	function	isattribute	function
getmathdir	function	isbox	function
getmathparametervalues	function	iscount	function
getmathstylenamevalues	function	isdefined	function
getmathstylevalues	function	isdimen	function
getmathvariantvalues	function	isglue	function
getmode	function	ismuglue	function
getmodevalues	function	ismuskip	function
getmuglue	function	isprintable	function
getmuskip	function	isskip	function
getnest	function	istoks	function
getnoadoptionvalues	function	lastnodetype	function
getnormalizelinevalues	function	lccode	table
getnormalizeparvalues	function	linebreak	function
getoutputactive	function	listanchorcodes	data table
getpacktypevalues -	function	lists	table
getpagecontextvalues	function	listsigncodes	data table
getpagestate	function	luacatcodes	number
getparbeginvalues	function	magicconstants	table
getparcontextvalues	function	N assumedmathcontrol	

function N awfulbad

getpardir

N decentoriterium N maxnoffonts N defaultcatcodetable N maxnoflanguages N defaultdeadcycles N maxnofmarks N maxnofmathfamilies N defaulteqnogapstep N defaulthangafter N maxquarterword N defaultoutputbox N maxsizeofword N defaultpredisplaygap N maxspacefactor N defaultrule N maxtoksregisterindex N defaultspacefactor N mincardinal N defaulttolerance N mindatavalue N deplorable N mindimen N ejectpenalty N minhalfword N ignoredepth N mininfinity N infinitebad N mininteger N infinitepenalty N minguarterword N infinity N minspacefactor N largewidthexcess N nocatcodetable N loosecriterium N null N mathbeginclass N nullflag N mathendclass N nullfont N maxattributeregisterindex N onebp N maxboxregisterindex N presetrulethickness N maxbytecodeindex N runningrule N maxcardinal N smallstretchability N maxcategorycode N texeatbsize N maxcharactercode N texhashprime N maxcharcode N texhashsize N maxdatavalue N two N maxdimen N undefinedmathparameter N maxdimenregisterindex N unity N maxfunctionreference N unusedattributevalue N maxglueregisterindex N unusedmathfamily N maxhalfvalue N unusedmathstyle N maxhalfword N unusedscriptvalue N unusedstatevalue N maxinteger N maxintregisterindex N zeroglue mathchardef function N maxlimitedscale table mathcode N maxmarkindex mathcontrolcodes data table N maxmathclasscode N maxmathfamilyindex modelevels table

N horizontal

N math

N unset

N vertical

N maxmuglueregisterindex

N maxnewlinecharacter

N maxnofcatcodetables

N maxnofbytecodes

modes	data table	setglyphstate	function
mprint	function	sethccode	function
muglue	table	sethmcode	function
muskip	table	setinputstatefile	function
nest	table	setinputstateline	function
nilcatcodes	number	setinputstatemode	function
noadoptioncodes	data table	setinsertcontent	function
normalizelinecodes	data table	setinsertdistance	function
normalizeparcodes	data table	setinsertlimit	function
notcatcodes	number	setinsertmultiplier	function
number	function	setintegervalue	function
parcontextcodes	data table	setinteraction	function
poplocal	function	setlccode	function
popsavelevel	function	setlinedir	function
preparelinebreak	function	setlist	function
primitives	function	setlocalbox	function
print	function	setmath	function
prtcatcodes	number	setmathcode	function
pushlocal	function	setmathdir	function
pushsavelevel	function	setmuglue	function
quitlocal	function	setmuskip	function
quittoks	function	setnest	function
resetparagraph	function	setpardir	function
rlncatcodes	number	setrunstate	overloaded function
romannumeral	function	setsfcode	function
round	function	setskip	function
runlocal	function	settextdir	function
runstring	function	settoks	function
runtoks	function	setuccode	function
saveboxresource	function	sfcode	table
scale	function	shiftparshape	function
scantoks	function	shipout	function
set	function	showcontext	function
setattribute	function	skip	table
setbox	function	snapshotpar	function
setboxdir	function	sp	function
setcatcode	function	specialmathclasscodes	data table
setcount	function	splitbox	function
setdelcode	function	sprint	function
setdimen	function	stringtocodesbitmap	function
setdimensionvalue	function	systemmodes	data table
setglue	function	takebox	function
setglyphdata	function	texcatcodes	number
setglyphscript	function	textcontrolcodes	data table

toks
tonumber
toscaled
tpacatcodes
tpbcatcodes
tprint
trackers
triggerbuildpage

table
function
function
number
number
function
data table
function

txtcatcodes
type
uccode
uprint
useboxresource
vrbcatcodes
write

number
function
table
function
function
number
function

#### texconfig (basic tex)

firstline string
formatname string
functionsize number

kpse\_init boolean
nodesize table

N size

N step

propertiessize number
shell\_escape string
tokensize table

N size 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
get_instance	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	grab	function
get_protected	function	is_defined	function
get_range	function	is_next_char	function
get_tok	function	is_token	function
get_tolerant	function	isdefined isnextchar	function
getactive	function function	istoken	function
getcmdchrcs	function	new	function function
getcmdname getcommand	function	peek next	function
getcommandid	function	peek_next char	function
getcommandvalues	function	peek_next_expanded	function
getcommandvatues	function	peek_next peeknext	function
getcstame	function	peeknextchar	function
getdimension	function	peeknextexpanded	function
ge curmens ron	Tunction	pecklicatexpallueu	Tunction

pop_macro	function	scan_word	function
popmacro	function	scanargument	function
push macro	function	scanbox	function
pushmacro	function	scancardinal	function
put_back	function	scanchar	function
	function	scancidal	function
put_next	function		function
putback	function	scancmdchrexpanded	function
putnext		scancode	function
save_lua	function	scancsname scandelimited	
savelua	function		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

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

# tokens (context)

accessors	table	П	color		
F active	caste		colordefa	1.0	
F cmd			colordefflc		
F cmdchrcs			colordefflt		
F cmdname F command			colordefrlt dofinishreference		
		_	dostartte		
F csname					
F expandab	te		finishjob		
F frozen			J firstofoneargument		
F index		U firstoftwoarguments			
F name			gobbleoneargument		
F protected	d		goto		
F range			iftrue		
astable	function		input		
bits	table			typescriptfile	
N active		U	resetctxs	canner	
N alignmen	t	U	rlap		
N begingro	up	U	secondoftwoarguments		
N characte	r	U	setfalsevalue		
N close		U	setsectionblock		
N comment		U	setupsystem		
N endgroup		U	startcolumns		
N endofline	e	U	starttabulate		
N escape		U	starttitle		
N ignore		U	startxtitle		
N invalid		U	stopcolum	ns	
N letter		U	stoptabulate		
N mathshif	t	U	stoptitle		
N open		U	stopxtitl	e	
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	ce	conv	erters	table	
cache	table	S	toboolean		
U NC		S	todimen		
U NR		S	toglue		
U bf		S	tonumber		
U buff_fin:	ish	S	tostring		
U c_font_c	ompact	crea	ite	function	

defined	function	F	cmdchrexpanded
flags	function	F	code
getinteger	function	F	conditional
getters	table	F	count
F box		F	csname
F count		F	csnameunchecked
F cstoken		F	delimited
F dimen		F	dimen
F glue		F	dimenargument
F macro		F	dimension
F meaning		F	float
F skip		F	glue
F token		F	gluespec
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 argumentasis		F	peekexpanded
F array		F	real
F boolean		F	scanclose
F box		F	scanopen
F bracketed		F	skip
F bracketedasis		F	skipexpanded
F cardinal		F	string
F char		F	table
F cmdchr		F	token

F tokencode 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 scandelimited

F count

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)

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

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

F startapply

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)

F disable F enable F enable F savestats F showstats F showstats F showtraceback  files F close F getposition F getposition F getsize F look F getsize F writeardinall F open F read2dot14 F readbyte F readbyte F readbyte F readbyte F readordinall F readcardinall F readcardinal F readcardinal F readcard F readcardinal F readcard F readcar	debugger	table		F readsignedbyte	
F enable F savestats F showstats F showstraceback F showtraceback F sclose F close F getposition F getposition F getsize F writeardinal1 F open F read2dot14 F read2dot14 F read2dot14 F readbyte F readbyte F readdytes F readotardinal1 F readcardinal1 F readcardinal2 F readcardinal1 F readcardinal1 F readcardinal2 F readcardinal2 F readcardinal1 F readcardinal2 F readcardinal2 F readcardinal2 F readcardinal3 F reitecardinal4 F readcardinal4 F r		tabte			:
F savestats F showtraceback F showtraceback F skip  files table F close F skipposition F getposition F getposition F getposition F getposition F getsize F look F writecardinal F open F writecardinal F writecardinal F readdytes F readbyte F readbyte F readbyte F readbyte F readbyte F readordinal F readcardinal F readcard				-	
F showstats F skip  files table F skip  F close F getposition F getsize F look F getposition F getsize F look F writebyte F look F writecardinal1 F open F writecardinal2 F readbyte F readbyte F readdyte F readdyte F readdyte F readdyte F readdyte F readcardinal3 F readcardinal1 F readcardinal1 F readcardinal1 F readcardinal2 F readcardinal2 F readcardinal3 F reitecardinal4 F readcardinal2 F readcardinal3 F writecardinal4 F readcardinal3 F writecardinal4 F readcardinal4 F readcardinal4 F readcardinal5 F readcardinal6 F writeinteger2 F readcardinal8 F readcardinal8 F readcardinal9 F re				-	
F showtraceback  Files table F skiplong F close F getposition F getposition F getsize F look F writecardinal1 F open F read2dot14 F read3yte F readbyte F readbyte F readout14 F readout14 F readout14 F readout14 F readout16 F read2dot14 F readbyte F read3yte F read3yte F read4 F read6und18 F readcardinal1 F readcardinal1 F readcardinal1 F readcardinal2 F readcardinal2 F readcardinal2 F readcardinal3 F readcardinal2 F readcardinal3 F readcardinal3 F readcardinal3 F readcardinal4 F readcardinal5 F readcardinal6 F readcardinal7 F readcardinal8 F readcardinal8 F readcardinal8 F readcardinal9 F readcardinal4 F readcardinal6 F readcardinal7 F readcardinal8 F readcardin8 F				•	
Files table Files per table Fi		ı.			
F close F getposition F getposition F getsize F look F writebyte F look F writecardinall F open F writecardinalle F read2dot14 F readbyte F readbyte F readbyte F readbyte F readbytes F readbytes F readbytes F readcardinal F readcar				•	
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F readcardinaltable F readchar F readcline F readcline F readcstring F readfixed2 F readfixed4 F readinteger F readinteger F readinteger1 F readinteger1 F readinteger2 F readinteger2 F readinteger2 F readinteger3 F readinteger3 F readinteger4 F readinteger4 F readinteger4 F readinteger6 F readinteger7 F readinteger7 F readinteger8 F readinteger9 F r	F readcardinal	F readcardinal4		F writeinteger3l	.e
F readchar F readcline F readcstring F readfixed2 F readfixed4 F readinteger F readinteger1 F readinteger2 F readinteger2 F readinteger2 F readinteger2 F readinteger3 F readinteger3 F readinteger4 F statistics	F readcardinal	F readcardinal4le		F writeinteger4	
F readcline F readcstring F readfixed2 F readfixed4 F readinteger F readinteger1 F readinteger2 F readinteger2 F readinteger2 F readinteger3 F readinteger3 F readinteger4 F statistics F readinteger4 F statistics F readinteger4 F statistics F table F statistics F readinteger4 F statistics	F readcardinal	table		F writeinteger4l	.e
F readcstring F readfixed2 F list F readfixed4 F stripzeros F readinteger F readinteger1 F readinteger1 F readinteger2 F readinteger2 F readinteger2 F readinteger3 F readinteger3 F readinteger3 F readinteger4 F readinteger4 F readinteger4 F readinteger4 F readinteger4 F statistics F readinteger4 F statistics F statistics F statistics F statistics F statistics F statistics	F readchar			F writestring	
F readfixed2 F readfixed4 F readinteger F readinteger F readinteger1 F readinteger2 F readinteger2 F readinteger2 F readinteger3 F readinteger3 F readinteger4 F statistics	F readcline		•	formatters	table
F readinteger F readinteger F readinteger1 F readinteger1 F readinteger1e F readinteger2 F readinteger2 F readinteger2 F readinteger3 F readinteger3 F readinteger4 F statistics F statistics F statistics F statistics F statistics F statistics	F readcstring			F formatcolumns	
F readinteger ghostscript table F readinteger1 F convert F readinteger2 graphicmagick table F readinteger2 F convert F readinteger3 F statistics F readinteger3 F statistics F readinteger4 F convert F readinteger4 F convert F readinteger4 F statistics	F readfixed2			F list	
F readinteger1 F readinteger2 F readinteger2 F readinteger2 F readinteger3 F readinteger3 F readinteger3 F readinteger4 F readinteger4 F readinteger4 F readinteger4 F readinteger4 F readinteger4 F statistics F statistics F statistics	F readfixed4			F stripzeros	
F readinteger1le F readinteger2  F readinteger2 F readinteger2le F readinteger3 F readinteger3 F readinteger3 F readinteger4 F statistics	F readinteger		9	ghostscript	table
F readinteger2  F readinteger2le  F readinteger3  F readinteger3  F readinteger3  F readinteger4  F readinteger4  F readinteger4  F readinteger4  F statistics	F readinteger1			F convert	
F readinteger2le F convert F readinteger3 F statistics F readinteger3le <b>graphicsmagick</b> table F readinteger4 F convert F readinteger4le F statistics	F readinteger1	le		F statistics	
F readinteger3 F readinteger3le F readinteger4 F readinteger4 F readinteger4le F statistics	F readinteger2		9	graphicmagick	table
F readinteger3le graphicsmagick table F readinteger4 F convert F readinteger4le F statistics	F readinteger2	le		F convert	
F readinteger4 F convert F readinteger4le F statistics	F readinteger3			F statistics	
F readinteger4le F statistics	F readinteger3	le	9	graphicsmagick	table
	F readinteger4			F convert	
F readintegertable lua table	F readinteger4	le		F statistics	
1 Tedainteger table	F readintegerta	able	1	lua	table

F checkmemory F compile B text F loadedluacode F iterator F loadstring F keq_to_hash F loadstripped N nofstrippedbytes F make_settings_to_hash_pattern N nofstrippedchunks F registerfinalizer F registerfinalizer F options_to_array B stripcode F options_to_hash T strippedchunks F strippedloadstring U settings_to_hash_a S lua U settings_to_hash_b
F loadedluacode F loadstring F loadstripped F loadstripped F loadstripped F loadstripped F listitem N nofstrippedbytes F make_settings_to_hash_pattern N nofstrippedchunks F registerfinalizer F options_to_array B stripcode F options_to_hash T strippedchunks F strippedchunks F strippedloadstring U settings_to_hash_a S lua U settings_to_hash_b
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
F loadstripped  N nofstrippedbytes  F make_settings_to_hash_pattern  N nofstrippedchunks  F registerfinalizer  B stripcode  T strippedchunks  F strippedchunks  F strippedloadstring  T suffixes  S lua  F listitem  F make_settings_to_hash_pattern  F options_to_array  F options_to_hash  T patterns  U settings_to_array  U settings_to_hash_a  U settings_to_hash_b
N nofstrippedbytes  N nofstrippedchunks  F mergehashes  F registerfinalizer  B stripcode  T strippedchunks  F strippedchunks  F options_to_array  T suffixes  U settings_to_hash_a  U settings_to_hash_b
N nofstrippedchunks F registerfinalizer F options_to_array B stripcode F options_to_hash T strippedchunks F strippedloadstring U settings_to_array T suffixes U settings_to_hash_a U settings_to_hash_b
F registerfinalizer  B stripcode  T strippedchunks  F strippedloadstring  T suffixes  S lua  F options_to_array  F options_to_hash  U settings_to_array  U settings_to_hash_a
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
T strippedchunks  F strippedloadstring  U settings_to_array  T suffixes  U settings_to_hash_a  U settings_to_hash_b
F strippedloadstring U settings_to_array T suffixes U settings_to_hash_a S lua U settings_to_hash_b
T suffixes U settings_to_hash_a S lua U settings_to_hash_b
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
<pre>packers table F settings_to_array_with_repeat</pre>
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
parsers table F splitmethod
F add_settings_to_array F splitthousands
F arguments_to_table F stepper
F array_to_string F stripped_settings_to_array
F csvsplitter F totime
F getparameters F unittotex
F groupedsplitat F unittoxml
F hash_to_string randomizer table
T hashes F get
T settings_to_set F getnumber
T text,hidden,paper,page,leftpage,rightpage F getrepeatable
B hidden F getrepeatableseed
B leftpage F getseed
B page F newrepeatable

F popseed		F sparse	
F pushseed		streams	table
F repeatable		F close	
F reuseseed		F getposition	on
F setseed		F getsize	
F setseedi		F getstring	
randomizers	table	F look	
F poisson		F open	
sequencers	table	F openstring	9
F appendaction		F read2dot14	4
F appendgroup		F readbyte	
F compile		F readbytes	
F disableaction		F readbyteta	able
F disablegroup		F readcardi	nal
F enableaction		F readcardi	nal1
F enablegroup		F readcardi	nal1le
D functions		F readcardi	nal2
F localize		F readcardi	nal2le
F new		F readcardi	nal3
F nodeprocessor		F readcardi	nal3le
F prependaction		F readcardi	nal4
F prependgroup		F readcardi	nal4le
F removeaction		F readcardi	naltable
F replaceaction		F readchar	
F setkind		F readcline	
F tostring		F readcstri	ng
setters	table	F readfixed	2
F disable		F readfixed	4
F enable		F readintege	er
F initialize		F readintege	er1
F list		F readintege	er1le
F new		F readintege	
F register		F readintege	
F report		F readintege	
F reset		F readintege	
F show		F readintege	
stacker	table	F readintege	
F new		F readintege	
storage	table	F readsigned	•
F allocate		F readstring	
F checked		F setpositio	on
F mark		F size	
F marked		F skip	
F setinitialize	-	F skipbytes	

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	F ln
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		Fle
Fbor		Flt
Fbxor		Fmod
Fdiv		Fmul
Feq		Sname
Fidiv		Fpow
Fle		Fshl
Flt		Fshr
Fmod		Fsub
Fmul		Ftostring
Sname		Funm
Fpow		F abs
Fshl		F band
Fshr		F bor
Fsub		F bxor
Ftostring		F conj
Funm		F copy
F abs		F exp
F band		F getprecision
F bor		Fln
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
ě	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	yθ	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	<b>function</b>
checkerror	function	despecialized	function
checknamespace	function	each	function
checkns	function	each_element	<b>function</b>
cleansed	function	elements	function
collect	function	elementtocdata	function
<pre>collect_elements</pre>	<del>function</del>	empty	function
collect_tags	function	entities	data table
collect_texts	<del>function</del>	erase	function
collected	function	errorhandler	function
collecttexts	function	escaped	function
compactelement	function	expand	function
content	function	expressions	table
convert	function	F attribute	
сору	function	F boolean	
count	function	F child	
cprint	function	F contains	
CSS	table	F count	
F applyselector		F error	
F colorspecification		F find	
F dimension		F hasclass	

F idstring		F text	
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

inheritattributes	function	privatecodes	table
inheritedconvert	function	privatetoken	function
inject	function	process	function
inject_element	function	process_attributes	function
inject_element after	function	process_elements	function
inject_element_before		processattributes	function
injectafter	function	profiled	table
injectarter	function	pure	function
insert	function	pushmatch	function
insert_element	function	raw	function
insert_element_after	function	registerentity	function
insert_element_before		registerns	function
insertafter	function	reindex	function
insertbefore	function		function
insertcdata	function	remap_name remap_namespace	function
insertcomment	function	remap_tag	function
inspect	function	remap_tag remapname	function
is valid	function	remaphamespace	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	function
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 &	
F		- ~	

texttocdata function  tocdata function  toelement function  tostring function  totable function  toxml function  traverse function  traverse function  traverse function  specialhandler table unescaped function  sprint function unescapedentitylpeg userdata  string function unprivatized function  strip function unspecialized function  strip_whitespace function  stripleadingspaces function withelement function  stripleadingspaces function wrap function  table function xmlns table				
toelement function  tostring function  totable function  toxml function  traverse function  traverse function  traverse function  specialhandler table unescaped function  sprint function unescapedentitylpeg userdata  string function unprivatized function  strip function unspecialized function  strip_whitespace function  strip_whitespace function wipe function  stripleadingspaces function withelement function  stripleadingspaces function withelements function  table function wrap function	S '		texttocdata	function
tostring function  function	S <		tocdata	function
s {     totable function     s   toxml function     s }     traverse function     specialhandler table unescaped function     sprint function unescapedentitylpeg userdata     string function unprivatized function     strip function unspecialized function     strip_whitespace function wipe function     stripelement function withelement function     stripleadingspaces function withelements function     table function wrap function	S >		toelement	function
s   toxml function  s } tprint function  s ~ traverse function  specialhandler table unescaped function  sprint function unescapedentitylpeg userdata  string function unprivatized function  strip function unspecialized function  strip_whitespace function wipe function  stripelement function withelement function  stripleadingspaces function withelements function  table function wrap function	S \		tostring	function
tprint function  traverse function  specialhandler table unescaped function  sprint function unescapedentitylpeg userdata  string function unprivatized function  strip function unspecialized function  strip_whitespace function wipe function  stripelement function withelement function  stripleadingspaces function withelements function  table function wrap function	S {		totable	function
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specialhandlertableunescapedfunctionsprintfunctionunescapedentitylpeguserdatastringfunctionunprivatizedfunctionstripfunctionunspecializedfunctionstrip_whitespacefunctionwipefunctionstripelementfunctionwithelementfunctionstripleadingspacesfunctionwithelementsfunctiontablefunctionwrapfunction	S }		tprint	function
sprintfunctionunescapedentitylpeguserdatastringfunctionunprivatizedfunctionstripfunctionunspecializedfunctionstrip_whitespacefunctionwipefunctionstripelementfunctionwithelementfunctionstripleadingspacesfunctionwithelementsfunctiontablefunctionwrapfunction	S ~		traverse	function
stringfunctionunprivatizedfunctionstripfunctionunspecializedfunctionstrip_whitespacefunctionwipefunctionstripelementfunctionwithelementfunctionstripleadingspacesfunctionwithelementsfunctiontablefunctionwrapfunction	specialhandler	table	unescaped	function
stripfunctionunspecializedfunctionstrip_whitespacefunctionwipefunctionstripelementfunctionwithelementfunctionstripleadingspacesfunctionwithelementsfunctiontablefunctionwrapfunction	sprint	function	unescapedentitylpeg	userdata
strip_whitespacefunctionwipefunctionstripelementfunctionwithelementfunctionstripleadingspacesfunctionwithelementsfunctiontablefunctionwrapfunction	string	function	unprivatized	function
stripelementfunctionwithelementfunctionstripleadingspacesfunctionwithelementsfunctiontablefunctionwrapfunction	strip	function	unspecialized	function
stripleadingspacesfunctionwithelementsfunctiontablefunctionwrapfunction	strip_whitespace	<del>function</del>	wipe	function
table function wrap function	stripelement	function	withelement	function
	stripleadingspaces	function	withelements	function
text function xmlns table	table	function	wrap	function
	text	function	xmlns	table

function

textonly

# 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