MP 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 job languages layouts lfs libraries lmx logs lpdf 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 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 zip zlib

# ConT<sub>E</sub>Xt LMTX

# global (alias: \_G)

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

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

typesetters	table	warn	function
unpack	function	xcomplex	table
updaters	table	xdecimal	table
url	table	xmath	table
userdata	table	xml	table
utf	table	xpcall	function
utf8	table	xzip	table
utilities	table	zip	table
V	string	zlib	table
visualizers	table		

#### attributes (context)

F complement

applyoverloads function F inbetween function cleanup F justone colorintents table F hsvtogray N attribute F hsvtorab D data F hwbtorab F enable F iccorofile F handler F isblack F register N main S model D registered colors table D models N attribute F mpcolor F cmvk F mpnamedcolor F cmyktogray F mpoptions F cmyktorgb F namedcolorattributes F colorcomponents N none D counts F popset B couple F processcolorcomponents F currentmodel F pushset F currentnamedmodel F register D data D registered N default F registerspotcolor E defineintermediatecolor F rgb F definemultitonecolor F rgbtocmyk F defineprocesscolor F rgbtogray F defineprocesscolordirect F rgbtohsv F definesimplegray N selector F definespotcolor F setlist F definetransparency F setmodel F enable F setpagecolormodel F filter D sets N forced F spec F forcedmodel F spot F forcesupport F spotcolorname F formatcolor F spotcolorparent F formatgray F spotcolorvalue F getpagecolormodel B supported F gray F toattributes F graytohsv F transparencycomponents F handler B triggering T helpers F usecolors

D valid

F value		N attribute	
D values		D data	
B weightgray <b>define</b>	function	F enable	
effects	table	F forcesupport F handler	
N attribute	table	T names	
D data		N color	
F enable		N colorburn	
F handler		N colordodge	
F register		N darken	
D registered		N difference	
D values	4-11-	N exclusion	
handlers	table	N hardlight	
list	data table	N hue	
markasoverload	function	N lighten	
names	data table	N luminosity	
negatives	table	N multiply	
N attribute		N none	
D data		N normal	
F enable		N overlay	
F handler		N saturation	
F register		N screen	
D registered		N softlight	
F set		N none	
numbers	data table	F register	
ofnode	function	D registered	
private	function	B supported	
public	function	F toattribute	
registercleaner		B triggering	
restore	function	F value	
save	function	D values	
showcurrent	function	unsetvalue	number
states	table	viewerlayers	table
F disabletriggeri	ng	N attribute	
F enabletriggerin	g	F cleanup	
F finalize		D data	
F initialize		F define	
F process		F definedlayoutco	mponent
F selective		F enable	
F stacked		F forcesupport	
F stacker		F handler	
system	function	B hasorder	
tooverloads	function	D listwise	
transparencies	table	F register	

D registered
F resolve\_begin
F resolve\_end
F resolve\_reset

F resolve\_step

D scopes

F setfeatures

F start

F stop

B supported

D values

#### backends (context)

F embedfile

closeout function F embedimage codeinjections table F enabletags F boxresourcedimensions F exportformdata F registerboxresource F fieldsurrounding F restoreboxresource F flushmergelaver current strina F getbookmarks defaults table F getdefaultfieldvalue T codeinjections F getfieldcategory F getpagedimensions F getfieldset F getpageorigin F getformatoption F lmtxmode F getidentityvariable F setpagedimensions F getinfo F setpageorigin F getpreviewfigure T nodeinjections F insertrenderingwindow T registrations F maptag D tables F mergebookmarks included table F mergecomments B context F mergefields B date F mergereferences B id F mergeviewerlayers B metadata F newimage B pdf F prerollreference install function F presetsymbol latelua function F presetsymbollist nodeinjections table F processrendering noflatelua function F registerdocumentcloseaction nothing function F registerdocumentopenaction function openout F registeredsymbol pdf table F registerpagecloseaction T codeinjections F registerpageopenaction F addbookmarks F registersymbol F analyzenormalsymbol F scanimgage F analyzesymbol F setattachmentsupport F attachmentid F setfieldcalculationset F bitmap F setfigurealternative F clonefield F setfigurecolorspace F copyimage F setfiguremask F definefield F setformat F definefieldset F setformsmethod F defineviewerlayer F setpagetransition

F settaggingsupport

F setupcanvas F setupidentity F setxmpfile F startlayer

F startunicodetoactualtextdirect

F stopunicodetoactualtextdirect

F supportedformats F unicodetoactualtext F useviewerlaver F validfield

F validfieldcategory F validfieldset F wrapimage S comment

T nodeinjections

F addtags F annotation F attachfile

F changestackedlayer

F cmykcolor F comment F destination F effect F graycolor

F injectbitmap F insertmovie F insertsound F insertswf

F startunicodetoactualtext F stoplaver F stopunicodetoactualtext

F getspotcolorreference F grayindexcolor

F grayspotcolor F rgbindexcolor F rgbspotcolor F spotcolorname F transparency

T tables D vfspecials

F insertu3d

F knockout

F negative

F overprint

F positive

F reference

F rabcolor

F spotcolor

F startlayer

F stoplayer

F startstackedlayer

F stopstackedlayer

F transparency F typesetfield

T registrations

F cmykindexcolor

F cmykspotcolor

registrations table tables table function timestamp writeout function

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

# builders (context)

checksidefloat	function	F start	
kernel	table	F stop	
F hyphenating		F tag	
F hyphenation		profiling	table
F kerning		F add	
F ligaturing		F distance	
F mlist_to_hlist	:	F fixedprofile	:
paragraphs	table	F get	
T constructors		F list	
N attribute		F pagehandler	
F define		F profilebox	
F disable		F set	
F enable		vspacing	table
F handler		F analyze	
T methods		D categories	
F basic		F collapsevbox	1
F default		T data	
F hpack		D map	
F oneline		D skip	
D names		D snapmethod	S
D numbers		F definesnapme	ethod
F set		B fixed	
F start		F forcepageflu	
F stop		F forcestrutde	
T expansion		F getnofprevio	ouslines
F trace		F pagehandler	
F keeptogether		F pageoverflow	I
F registertogeth	ner	F popatsame	
T solutions		F pushatsame	
T splitters		F setmap	
F define		F setskip	
F optimize		F snapbox	
T registered F reset		F synchronizep	-
F reset F set		F tocategories	•
		F tocategory F vboxhandler	
F split		r vboxnandler	

# 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 list function

known function register overloaded function

#### callbacks (context)

freeze function
functions table

F process\_rule

F start\_page\_number

F stop\_page\_number

known function
list data table
pop function
push function
register function
report function

B append\_to\_vlist\_filter

B build\_page\_insert

B buildpage\_filter

B contribute\_filter

B define\_font

supported table

B find\_data\_file

B find\_format\_file

B find log file

B handle error hook

B hpack filter

B hpack quality

B hyphenate

B insert\_local\_par

B kerning

B ligaturing

B linebreak filter

B make extensible

B mlist to hlist

B new graf

B open data file

B post linebreak filter

B pre dump

B pre linebreak filter

B pre\_output\_filter

B process\_jobname

B read\_data\_file

B show error hook

B show error message

B show\_lua\_error\_hook

B show\_warning\_message

B show whatsit

B start\_file

B start\_run

B stop\_file

B stop\_run

B terminal input

B vpack filter

B vpack quality

B wrapup run

## catcodes (context)

 register function

## characters (context)

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

shape function shaped function shash data table data table shchars shcodes data table function showstring **specialchars** data table specials data table splits table

T char T compat

subscripts superscripts synonyms tex

table table data table table

D accentmapping D commandmapping F defineaccents F safechar

F toutf

upper

F toutfpattern textclasses tonumber ucchars uccode uccodes uhash unicodechar

table function data table function data table data table function function

## chemistry (context)

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

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

# containers (context)

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

# converters (context)

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

weekday function
word function
words function

# coroutine (basic lua)

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

## ctxrunner (context)

load function prepfiles data table
preparedfile function resolve function

## data (context)

action function depth number height number prerolled string
width number

# 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	name	string
default	function	register	function
disable	function	report	function
done	table	reset	function
enable	function	show	function
list	function	value	function

#### document (context)

arguments files functions getargument getfilename options

data table table table function function table

D modes D modules

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)

convert	function	F cleanup	
converters	verters table F convert		
F engine		F finalize	
Flmtx		F initialize	
enable	function	F outputfilename	
gethpos	function	F prepare	
getpos	function	F wrapup	
getrpos	function	T flushers	
getvpos	function	F character	
helpers	table	F rule	
F tomatrix		F updatefontstate	
install	function	S name	
instances	table	T lua	
T default		T actions	
T actions		F cleanup	
F convert		F convert	
F outputfi	lename	F finalize	
T flushers		F initialize	
S name		F outputfilename	
T empty		F prepare	
T actions		F wrapup	
F convert		T flushers	
F prepare		F character	
T flushers		F rule	
S name		F updatefontstate	
T js		S name	
T actions		T mps	
F cleanup		T actions	
F convert		F cleanup	
F finalize	r	F convert	
F initiali	ze	F finalize	
F outputfi	lename	F initialize	
F prepare		F outputfilename	
F wrapup		F prepare	
T flushers		F wrapup	
F character		T flushers	
F rule		F character	
F updatefontstate		F rule	
S name		F simplerule	
T json		F updatefontstate	
T actions		S name	
. 40020110			

T none
T actions
T flushers
S name
T pdf

pdf
T actions
F cleanup
F convert
F finalize
F initialize
F outputfilename
F prepare

F prepare
F wrapup
T flushers
F character
F fontchar

F group F image F literal

F poporientation
F pushorientation

F restore
F rule
F save
F setmatrix
F simplerule
F updatefontstate

S name

lmtxversion number
outputfilename function
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
jobfilefullname	string	texmfos	string
jobfilename	string	texos	string
jobfilesuffix	string	texroot	string
jobname	string	truefilename	function
kindofrun	number	useluamodule	function
lmtxmode	number	usemodules	function
loadexamodes	function	validengines	data table
loadluafile	function	version	string

# experiments (context)

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

function
function
function
function
function

#### figures (context)

T sizes

B art

applvratio function B bleed badname function B crop bases data table B media bitmapimage function B none boxnumber number B trim cachepaths data table F totable check function T types checkers data table N jbig2 converters data table N jp2 current function N jpg defaultdepth number N memstream defaultheight number N none defaultsearch hool ean N pdf defaultwidth number N pnq done function N stream function dummv F wrap existers data table include function includers data table exists function formats data table initialize function found data table loaded data table data table function localpaths get data table aetinfo function magics getpdfinfo function mergegoodies function getrealpage function nofmissing number nofprocessed function number auess guessfromstring order function data table function data table hash paths identifiers data table data table patterns identify function function gog table images preferguality boolean data table F check programs function F checksize push registerpattern function F copy registerresource function F create function registersuffix F embed data table remappers T keys data table F print resources scale function F scan function F serialize set

setlookups

setmemstream

function

function

setorder	function	suffixes	data	table
setpaths	function	used	data	table

## 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
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)

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

function
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	id	function
current	function	max	function
define	function	nextid	function
each	function	setfont	function
getfont	function		

## fonts (context)

1	4-11-	
analyzers	table	F collectprocessors
D features		F currentfonthasfeature
D initializers		D designsizes
D methods		D dontembed
F setstate		F enhanceparameters
D states		T enhancers
B useunicodemarks	table	Tafm
checkers	table	F apply
F getmissing		F patch
F missing		T patches
F placeholder	+abla	F register
cid	table	F report
F getmap		F register
F loadfile collections	table	F report
	table	T otf
F checkenabled		F addfeature
F clonevector		F apply
F define		F enhance
T definitions		F patch
F found		T patches
F prepare		F register
F process		F report
F registermain		F register
F report		F report
F reset		T tfm
T vectors  constructors	table	F apply
F addcharacters	table	F patch
		T patches
F addcoreunicodes B addtounicode	•	F register F report
	, manta na	F register
F aftercopyingcha		F register F report
F applymanipulato		N factor
B autocleanup	ieters	T features
F beforecopyingch	paraetors	D afm
D cache	iaracters	D otf
B cacheintex		D tfm
F calculatescale		F finalize
F checkedfeatures		B fixprotrusion
F checkedfilename		F getfeatureaction
F cleanuptable		F getmathparameter
r cleanuptable		г детшатпрагатетег

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 devanagari_remove_joiners
D rightkerned	F devanagari_reorder_matras
D texligatures	F devanagari_reorder_pre_base_reordering_consonant
F load	F devanagari_reorder_reph
T readers	F gpos_context
F getinfo	F gpos_contextchain
F loadfont	F gpos_cursive
F loadshapes	F gpos_mark2base
F setfeatures	F gpos_mark2ligature
B syncspace	F gpos_mark2mark
N version	F gpos_pair
T otf	F gpos_single
F addfeature	F gsub_alternate
F basemodeinitializer	F gsub_context
D cache	F gsub_contextchain
F collectlookups	F gsub_ligature
T coverup	F gsub_multiple
T actions	F gsub_reversecontextchain
F alternate	F gsub_single
F chainposition	F trigger_space_kerns
F chainsubstitution	T helpers
F kern	F blockligatures
F ligature	F pardirstate
F multiple	F txtdirstate
F pair	F load
F single	F loadoutlinedata
F substitution	F loadstreamdata
F register	F modeinitializer
S stepkey	D mpscache
F dataset	D pdfcache
F datasetpositionprocessor	F plugininitializer
S defaultbasealternate	F pluginprocessor
S defaultnodealternate	T plugins
D features	D pngcache

B pngenabled	F reversechainedcontextsingle
T readers	F single
F addunicodetable	F gvar
F avar	F head
F cbdt	T helpers
F cblc	F axistofactors
F cff	F cleanname
F cff2	F getaxisscale
F cffcheck	F getfactors
T cffencoder	F getscales
F checkhash	F gotodatatable
F cmap	F normalizedaxis
F colr	T normalizedaxishash
F compact	F readvariationdata
F cpal	F reportskippedtable
F ebdt	F setvariabledata
F eblc	F hhea
F ebsc	F hmtx
F expand	F hvar
F extend	F kern
F fvar	F loadfont
F gdef	F loadshapes
F getcomponents	F loca
F getinfo	F math
F glyf	F maxp
F gpos	F mvar
T gposhandlers	F name
F chainedcontext	F os/2
F context	F pack
F cursive	F parsecharstrings
F extension	F post
F marktobase	F registerextender
F marktoligature	F rehash
F marktomark	F sbix
F pair	F stat
F single	T streamreader
F gsub	F close
T gsubhandlers	F getposition
F alternate	F getsize
F chainedcontext	F look
F context	F open
F extension	F read2dot14
F ligature	F readbyte
F multiple	F readbytes

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

Floadtfmvf	S scriptpercentage
Floadvf	S scriptscriptpercentage
F pktopdf	S size
F showpk	S slantfactor
F reencode	S slantperpoint
F setfeatures	T spacing
N version	S extra
T vf	S shrink
T combinations	S stretch
F combine	S width
T combiner	S units
D commands	S vfactor
D helpers	S width
D math	S xheight
D predefined	T properties
N version	S autoitalicamount
D whatever	S cidinfo
F hashfeatures	T effect
F hashinstance	S ddelta
T hashmethods	S effect
F normal	S factor
F virtual	S hdelta
F initializefeatures	S hfactor
T keys	S vfactor
T characters	S wdelta
T descriptions	S width
T parameters	S embedding
S ascender	S encodingbytes
S descender	S filename
S designsize	S finalized
T expansion	S fontname
S auto	S format
S shrink	S fullname
S step	S hasitalics
S stretch	S hasmath
S extendfactor	S mathitalics
S factor	S mode
S hfactor	S name
S mathsize	S nostackmath
S mode	S psname
T protrusion	S textitalics
S auto	S virtualized
S quad	D loadedfonts
S scaledpoints	S namemode
5 554 COMPOTITES	5 Hamemode

N noffontsloaded		F name	
N nofsharedfonts		F spec	
N nofsharedhashes		definetypeface	function
N nofsharedvector	S	dropins	table
N privateoffset		F clone	
D privateslots		F nextid	
F readanddefine		F provide	
F registerfeature		F registerglyph	
F resetfeature		F registerglyphs	
B resolvevirtualt	00	F swap	
F scale		encodings	table
F scaled		T agl	
F setfactor		D ctxcodes	
F setfeature		D extras	
F setmathparamete	r	D names	
F setname		D synonyms	
B sharefonts		D unicodes	
F trytosharefont		D cache	
N version		F is_known	
current	function	D known	
currentid	function	F load	
definers	table	F make_unicode_ve	ctor
F addlookup		D math	
F analyze		N version	
F applypostproces	sors	enhanceid	function
F checkedmode		expansions	data table
F checkedscript		formats	data table
S defaultlookup		getalternate	function
F define		getindices	function
F getspecificatio	n	getkern	function
F internal		getmultiple	function
F loadfont		getsubstitution	function
F makespecificati	on	getters	table
T methods		T alternate	
F install		F opentype	
D variants		T kern	
F read		F opentype	
F register		F type1	
F registered		F type3	
F registersplit		T multiple	
F resetnullfont		F opentype	
F resolve		T substitution	
T resolvers		F opentype	
F file		goodies	table

D colorschemes		D	parameters
T data		Т	processes
T dejavu-math		D	properties
S author		D	quads
S comment		D	resources
S copyright		Т	setdynamics
B initialized		Т	shapes
T mathematics		D	spaces
T alternates	5	D	spacings
T dotless		Т	streams
S commen	t	D	unicodes
S feature	е	D	variants
N value		D	xheights
T kerns		help	<b>pers</b> table
S name		F	addextraprivate
S version		F	addprivate
D designsizes		F	appendcommands
D filenames		F	appendcommandtable
F getcompositions	5	F	checkflags
T list		F	checkmerge
F load		F	checksteps
F prepare_feature	es .	F	collectanchors
F register		D	commands
F registerpostpro	ocessor	F	descriptiontoslot
F report		F	dimenfactor
T suffixes		F	expandglyph
handlers	table	Т	extraprivates
hashes	table	F	fontpatternhassize
D characters		F	getcoloredglyphs
D classes		F	getdigitwidth
D csnames		F	getinstancespec
D descriptions		F	getparameters
D dynamics		F	getprivatecharornode
D emwidths		F	getprivatenode
D exheights		F	getprivates
D extensibles		F	getprivateslot
D features		F	hasprivate
D identifiers		F	indextoslot
D italics		F	name
D lastmathids		F	nametoslot
D marks		F	newprivateslot
D mathparameters		F	prependcommands
D modes		F	prependcommandtable
D originals		F	privateslot

F setdigitwidth B keepnames F splitfontpattern N mathbase F tochar N mathextrabase infofont function N textbase iterators table N textextrabase protrusions data table F characters table readers F descriptions F glyphs F afm loggers table F check lua F add placeholders F check tfm D category to placeholder F lua F format F ofm F onetimemessage F opentype F register F otf F reportdefinedfonts F pfb F reportusedfeatures D sequence mappings table F tfm F addtounicode F ttc F fromunicode16 F ttf F woff F loadfile reserveid function F loadline select table F makenameparser D overloads D alternatives F reset F bodyfont F tounicode D data F default F tounicode16 F tounicode16sequence D defaults table metapost F definefallbackfamily F boundingbox F definefontfamily F boxtomp F definefontfamilypreset F draw D extras F fill F fallback F maxbounds D fallbacks F features F output F filefallback F paths F widthline F fontdata F fontfallback F zeroline table mp F fontsynonym D cache F goodies B inline F mathfallback N version D methods data table names D presets nulldata data table F registerfallback privateoffsets table F registerfiles

F registerfontalt	ernative	D variants	
F registerfontfam	ily	symbols	table
F textfallback		T emoji	
F typeface		F checked	
F typescript		F resolved	
F userdata		F uselibrary	
specifiers	table	tables	table
D contextmerged		D data	
F contextnumber		F savefont	
D contextnumbers		F saveoriginal	
D contextsetups		tracers	table
F contexttostring		treatments	table
F definecontext		F applyfixes	
F mergecontext		D data	
F presetcontext		S filename	
F registercontext		F ignoredfile	
F showcontext		F report	
F splitcontext		F trace	

D synonyms

table

typefaces

### functions (context)

**dummy** function

## graphics (context)

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

## gzip (extra lua)

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

## images (context)

check	function	B none	
checksize	function	B trim	
сору	function	totable	function
create	function	types	table
embed	function	N jbig2	
keys	table	N jp2	
print	function	N jpg	
scan	function	N memstre	am
serialize	function	N none	
sizes	table	N pdf	
B art		N png	
B bleed		N stream	
В сгор		wrap	function
B media			

#### interactions (context)

attachments data table D functions fields table D preambles F clone F setpreamble F define F storecode F defineset F storepreamble F insert F usepreamblenow general table F usescripts linkedlists data table F getidentity pages table F setupidentity help table F setpagetransition F collect F setupcanvas table references F reference F register F setclosedocument javascripts table F setclosepage F addtopreamble F setopendocument F code F setopenpage renderings data table D codes soundclips F flushpreambles data table

## interfaces (context)

_	data table	namespaces	table
addvalidkeys	function	F define	
arrays	table	F list	
cachedsetups	data table	numbers	table
cachesetup	function	registernamespace	function
cardinals	table	registerscanner	function
checked specification	function	scanners	data table
complete	data table	setconstant	function
constants	data table	setcount	function
corenamespaces	data table	setdimen	function
currentinterface	string	setelement	function
currentresponse	string	setformat	function
definecommand	function	setmacro	function
defined	function	setmessage	function
doifelsemessage	function	setmessages	function
elements	data table	settranslation	function
floats	table	setupstrings	data table
formats	data table	setuserinterface	function
getcheckedparameters	function	setvalidkeys	function
getmessage	function	setvariable	function
getnamespace	function	showmessage	function
getsetupstring	function	storedscanners	data table
hashedsetups	data table	strings	table
implement	function	syntax	data table
integers	table	tolist	function
interfacedcommand	function	translations	data table
interfaces	table	usednamespaces	data table
invalidkey	function	variables	data table
message	function	writestatus	function

#### io (basic lua)

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

lines overloaded function

loadchunk function
loaddata function
loadlines function
newreader function
noflines function

 output overloaded function pathseparator string overloaded function popen read function readall function readnumber function readstring function savedata function size function stderr userdata stdin userdata stdout userdata tmpfile function

function

function

type

write

## job (context)

comment	function		tobesaved	
datasets	table	pass		table
D collected		-	check	
F extend			collected	
F getdata		F	count	
F setdata		F	define	
D tobesaved		F	find	
disablesave	function	F	first	
embedded	table	F	get	
D collected		F	getcollected	
D tobesaved		F	getdata	
fileobjreferences	table	F	getfield	
D collected		F	gettobesaved	
D tobesaved		F	inlist	
files	table	F	last	
D collected		F	list	
F context		F	save	
B forcerun		F	savetagged	
F run		0	tobesaved	
D tobesaved		pos	itions	table
getrandomseed	function	F	b_column	
initialize	function	F	b_region	
load	function	F	· c	
loadother	function	0	collected	
objects	table	F	column	
D collected		F	columnofpos	
F get		F	сору	
F number		F	depth	
F page		F	e_column	
F save		F	e_region	
F set		F	enhance	
D tobesaved		F	extra	
pack	boolean	F	get	
packversion	number	F	getfree	
pagestates	table		gethpos	
D collected			getpos	
F countervalue		F	getreserved	
F extend			getrpos	
F realpage			gettobesaved	
F realpageorder			getvpos	
F setstate		F	hangafter	

F hangindent	F upperright	
F height	F used	
F hsize	F whd	
F leftskip	F width	
F lowerleft	Fx	
F lowerright	F xy	
F markregionbox	Fy	
Fn	prepare	function
F onsamepage	register	function
F overlapping	save	function
Fp	structure	table
F page	D collected	
T pagedata	T components	
F paragraph	T tobesaved	
F parindent	T branches	
F position	S name	
Fr	S type	
F region	variables	table
F registerhandlers	D checksums	
F replace	D collected	
F rightskip	F getchecksum	
F set	F makechecksum	
F setall	F restore	
F setregionbox	F save	
F setspec	F setchecksum	
F settobesaved	D tobesaved	

D tobesaved F upperleft

version

number

## lang (basic tex)

clean	function	id	function
clear_hyphenation	function	new	function
clear_patterns	function	patterns	function
exceptions	function	postexhyphenchar	function
gethjcode	function	posthyphenchar	function
has_language	function	preexhyphenchar	function
hyphenate	function	prehyphenchar	function
hyphenation	function	sethjcode	function
hyphenationmin	function		

## languages (context)

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

T enablers
B enables
F found

F load

T methods

N threshold

### layouts (context)

status table
 F isleftpage

F leftorrightpageaction

## lfs (extra lua)

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

### libraries (context)

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

extratex data table
functions data table
globals data table

### lmx (context)

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
Fa	
F td	
F th	
include	function
inherited	table
S color-backgro	und-four
S color-background-one	

- S color-background-three
- S color-background-two
- S title

initialize	tunction
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
showdebuginfo	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)

1:+:	£		£
application	function	reportline	function
categories	function	reportlines	function
direct	function	setformats	function
disable	function	setformatters	function
enable	function	setlogfile	function
exporters	table	setmessenger	function
extendbanner	function	setprocessor	function
finalactions	function	setprogram	function
flush	function	settarget	function
help	function	settimedlog	function
loggingerrors	function	settranslations	function
messenger	function	show	function
new	function	simple	function
newline	function	simpleline	function
poptarget	function	simplelines	function
pushtarget	function	start_page_number	function
registerfinalactions	function	starterrorlogging	function
report	function	startfilelogging	function
reportbanner	function	status	function
reporter	function	stop_page_number	function
reporters	table	stoperrorlogging	function
F banner		stopfilelogging	function
F export		subdirect	function
F help		subreport	function
F info		system	function
F lines		texerrormessage	function
F version		writer	function

# lpdf (context)

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

N NoView		frompdfdoc	function
N NoZoom		fromsixteen	function
N Print		getcatalog	function
N Printable		getcompression	function
N ReadOnly		getfontname	function
N ToggleNoView		getfontobjnumber	function
N auto		getinfo	function
N hidden		getmapentry	function
N printable		getmetadata	function
T widgets		getnofpages	function
N Comb		getpageproperties	function
N CommitOnSelChange		getpagetags	function
N DoNotScroll		getversion	function
N DoNotSpellCheck		getxformname	function
N Edit		graycode	function
N FileSelect		id	function
N MultiLine		immediateobj	function
N NoExport		includechar	function
N NoToggleToOff		includecharlist	function
N Password		includefont	function
N PopUp		includeimage	function
N PushButton		injectors	table
N Radio		F bitmap	
N RadiosInUnison		F jp2	
N ReadOnly		F jpg	
N Required		F png	£
N RichText		injectxmpinfo	function
N Sort		insertxmpinfo	function
N file		layerreference limited	function function
N fixed		linearshade	function
N nocheck N protected		literal	function
N readonly		majorversion	function
N required		makenametree	function
N sorted		minorversion	function
N unavailable		nofpages	function
flushfonts	function	null	function
flushgroup	function	number	function
flushobject	function	obj	function
flushstreamfileobject	function	objectcompresslevel	function
flushstreamobject	function	pagereference	function
formats	data table	patternstream	function
frombytes	function	pdfcolor	function
fromeight	function	pdftimestamp	function
- <b>-</b>		<b>F</b>	

permitdetail	function	setpagetag	function
print	function	setsuppressoptionalinfo	function
procset	function	settime	function
protectresources	boolean	settrailerid	function
rectangle	function	setversion	function
reference	function	shareobject	function
registerannotation	function	shareobjectreference	function
registerdestination	function	spotcode	function
registerdocumentfinalizer	function	stream	function
registerfont	function	string	function
registerpagefinalizer	function	toeight	function
registerpattern	function	topdfdoc	function
reserveobject	function	tosixteen	function
rgbcode	function	transparency	function
rotationcm	function	transparencycode	function
setcompression	function	transparencygroups	table
setdates	function	B none	
setmapfile	function	transparencyvalue	function
setmapline	function	unicode	function
setomitcharset	function	usedcharacters	table
setomitcidset	function	verbose	function
setpageorder	function	vfimage	function

# lpeg (basic lua)

В	function	firstofsplit	function
C	function	frontstripper	function
Carg	function	instringchecker	function
Cb	function	is_lpeg	function
Cc	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)

hada anda	4-61-		4-61-
bytecode	table	macros	table
bytedata	data table	B enabled	
bytedone	table	F loaded	
callbytecode	function	F required	
collectgarbage	function	F reset	
delay	function	F resolvestring	
finalize	function	F resolving	
firstbytecode	number	F showdefinitions	
flush	function	mask	string
flushdelayed	function	messages	data table
<pre>get_functions_table</pre>	function	newindex	function
getbytecode	function	newtable	function
getcurrenttime	function	numbers	data table
getfunctionstable	overloaded function	registercode	function
getpreciseseconds	function	registeredcodes	function
getpreciseticks	function	registerfinalizer	function
getruntime	function	registername	function
getstacktop	function	setbytecode	function
getstartupfile	function	setexitcode	function
getversion	function	startupfile	string
lastbytecode	number	version	string

### luatex (context)

F disable

F enable

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

wrapup

function

# lxml (context)

- 442 - 4	for this a	£1h	£ +
addindex	function	flush	function
all	function	flushlinewise	function
applyfunction	function	flushsetups	function
applyselectors	function	flushspacewise	function
att	function	get_id	function
attribute	function	getid	function
badinclusions	function	getindex	function
chainattribute	function	id	function
checkindex	function	idsplitter	userdata
collected	function	include	function
command	function	inclusion	function
concat	function	inclusions	function
concatrange	function	index	function
content	function	inlineverbatim	function
context	function	installsetup	function
convert	function	last	function
count	function	lastatt	function
delete	function	lastmatch	function
direct	function	lastpar	function
directives	table	load	function
F after		loadbuffer	function
F before		loaddata	function
F handle		loaded	table
F load		main	function
F setup		match	function
displayverbatim	function	name	function
doif	function	namespace	function
doifelse	function	nonspace	function
doifelseempty	function	par	function
doifelsetext	function	param	function
doifempty	function	parameter	function
doifnot	function	path	function
doifnotempty	function	popmatch	function
doifnottext	function	pos	function
doiftext	function	position	function
element	function	pure	function
elements	function	pushmatch	function
entities	data table	raw	function
filter	function	rawroot	function
filterlist	function	rawtex	function
first	function	refatt	function

register	function
registerentity	function
removesetup	function
replace	function
resetcdata	function
resetsetups	function
resolvedentity	function
root	function
save	function
serialize	function
setaction	function
setatt	function
setattribute	function
setcdata	function
setcommandtonone	function
setcommandtotext	function
setpar	function
setparam	function
setparameter	function
setsetup	function
snippet	function
sorters	table

F reset F show F sort function splitid startraw function function startunescaped function stopraw stopunescaped function store function strip function stripped function tag function text function tobuffer function tofile function function toparameters toverbatim function verbatim function withindex function xmltexhandler data table

F compare F flush

### math (basic lua)

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

# md5 (extra lua)

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

#### metapost (context)

N mode

checkformat function N newinternal function cm N nullary codes table N numeric N addto N of N ampersand N ofbinary N and N outertag N assignment N parametertype N atleast N plus or minus N begingroup N primarybinary N btex N primarydef N capsule N randomseed N colon N relax N comma N repeat loop N controls N rightbrace N curl N rightbracket N cycle N rightdelimiter N declare N runscript N def N save N definedmacro N scantokens N delimiters N scope N endgroup N secondarybinary N equals N secondarydef N etex N semicolon N setbounds N everyjob N exitif N shipout N expandafter N show N fi or else N skip Nif N slash N input N special N interim N step N internal N stop N iteration N str N join N string N leftbrace N tag N leftbracket N tension N leftdelimiter N tertiarybinary N let N tertiarydef N macrospecial N thingstoadd N maketext N to N message N unary

N undefinedcs

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

reportsvgfonts	function	F setfrombuffer	
reset	function	texerrors	boolean
resetlastlog	function	texexp	function
resetplugins	function	theclippath	function
run	function	tographic	function
runscript	function	totable	function
scanparameters	function	types	table
scripterror	function	N boolean	
scriptindex	function	N cmykcolor	
setextensions	function	N color	
setoutercolor	function	N dependent	
setparameterset	function	N independent	
settext	function	N known	
setvariable	function	N numeric	
showlog	boolean	N pair	
showsvgpage	function	N path	
simple	function	N pen	
splitprescript	function	N picture	
startgraphic	function	N protodependent	
startsvghashing	function	N string	
stopgraphic	function	N structured	
stopsvghashing	function	N suffixedmacro	
svformat	function	N tokenlist	
svgcolorremapper	function	N transform	
svgglyphtomp	function	N unknownboolean	
svgshapestomp	function	N unknownpath	
svgshapestopdf	function	N unknownpen	
svgsplitcolor	function	N unknownpicture	
svgtomp	function	N unknownstring	
svgtopdf	function	N unsuffixedmacro	
sxsy	function	N vacuous	
tex	table	typesvgpage	function
F get		unload	function
F reset		untagvariable	function
F set		variables	table

### mime (extra lua)

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

F base64

F quoted-printable

eol function normalize function function qр

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

F default

F quoted-printable

F text

function wrp

# mp (context)

	fumation		function
_get_count_	function	color	function
_get_dimen_	function	dataset	function
_get_macro_ 	function	datasets	function
_get_toks_	function	F load	6
_set_count_	function	dimension	function
_set_dimen_	function	direct	function
_set_macro_	function	direct1	function
_set_toks_	function	direct2	function
autoinject	function	direct3	function
aux	table	direct4	function
F boolean		disposehash	function
F color		draw	function
F direct		fill	function
F direct1		flatten	function
F direct2		flush	function
F direct3		format	function
F direct4		formatted	function
F draw		fprint	function
F fill		fromhash	function
F flush		get	table
F fprint		getcount	function
F integer		getdimen	function
F number		getmacro	function
F numeric		gettoks	function
F pair		graphformat	function
F pairpoints		inhash	function
F path		inject	function
F pathpoints		F boolean	
F points		F cmykcolor	
F print		F color	
F quadruple		F integer	
F quadruplepoints		F number	
F quoted		F numeric	
F size		F pair	
F string		F path	
F transform		F string	
F triplet		F transform	
F tripletpoints		F whatever	
F vprint		integer	function
boolean	function	isarray	function
cleaned	function	isobject	function

<pre>lmt_color_functions</pre>	table	mf_blob_raw_content	function
F shade		mf_blob_raw_dimensions	function
F step		mf_blob_raw_reset	function
lmt_contours_bitmap_get	function	mf_blob_raw_toutf	function
<pre>lmt_contours_bitmap_set</pre>	function	mf_blob_raw_wipe	function
lmt_contours_cleanup	function	mf_blob_size	function
lmt_contours_color	function	mf_blob_width	function
<pre>lmt_contours_edge_get_band</pre>	function	mf_external_figure	function
<b>lmt_contours_edge_get_cell</b>	function	mf_finish_saving_data	function
lmt_contours_edge_paths	function	mf_formatted_text	function
<b>lmt_contours_edge_set</b>	function	mf_get_outline_text	function
<pre>lmt_contours_edge_set_by_band</pre>	function	mf_graphic_text	function
<pre>lmt_contours_edge_set_by_cell</pre>	function	mf_inject_blob	function
<pre>lmt_contours_format</pre>	function	mf_made_text	function
<pre>lmt_contours_function</pre>	function	mf_map_move	function
lmt_contours_maxmean	function	mf_map_text	function
lmt_contours_maxz	function	mf_named_color	function
lmt_contours_minmean	function	mf_outline_text	function
lmt_contours_minz	function	mf_save_data	function
<pre>lmt_contours_nofvalues</pre>	function	mf_script_index	function
lmt_contours_nx	function	mf_some_text	function
lmt_contours_ny	function	mf_start_saving_data	function
<pre>lmt_contours_range</pre>	function	mf_stop_saving_data	function
<pre>lmt_contours_shade_paths</pre>	function	mf_tb_dimensions	function
<pre>lmt_contours_shade_set</pre>	function	mf_tt_dimensions	function
<pre>lmt_contours_shape_paths</pre>	function	mf_tt_initialize	function
<pre>lmt_contours_start</pre>	function	mode	function
lmt_contours_stop	function	n	function
lmt_contours_value	function	newhash	function
lmt_contours_xrange	function	number	function
lmt_contours_yrange	function	numeric	function
lmt_do_remaptext	function	pair 	function
<pre>lmt_function_x</pre>	function	pairpoints	function
lmt_mesh_set	function	path	function
lmt_mesh_update	function	pathpoints 	function
<pre>lmt_poisson_generate</pre>	function	points	function
lmt_register_glyph	function	positionanchor	function
<pre>lmt_register_glyphs</pre>	function	positionbox 	function
lmt_surface_do	function	positioncurve	function
lmt_svg_include	function	positionpage	function
mf_blob_add	function	positionpath	function
mf_blob_dimensions	function	positionpxy	function
mf_blob_index	function	positionregion	function
mf_blob_new	function	positionwhd	function

positionxy	function	F symbol	
prefix	function	F token	
print	function	F transform	
processingmode	function	set	table
quadruple	function	setcount	function
quadruplepoints	function	setdimen	function
quoted	function	setmacro	function
report	function	settoks	function
scan	table	size	function
F boolean		string	function
F cmykcolor		systemmode	function
F color		texstr	function
F expression		textextanchor	function
F integer		texvar	function
F next		tohash	function
F number		transform	function
F numeric		triplet	function
F pair		tripletpoints	function
F path		utflen	function
F pen		utfsub	function
F string		vprint	function

# mplib (extra tex)

codes	function	scan_boolean	function
execute	function	scan_cmykcolor	function
fields	function	scan_color	function
finder	function	scan_expression	function
finders	table	scan_integer	function
F file		scan_next	function
F mpstemplate		scan_number	function
finish	function	scan_numeric	function
inject_boolean	function	scan_pair	function
<pre>inject_cmykcolor</pre>	function	scan_path	function
inject_color	function	scan_pen	function
inject_integer	function	scan_string	function
inject_number	function	scan_symbol	function
inject_numeric	function	scan_token	function
inject_pair	function	scan_transform	function
inject_path	function	solve_path	function
inject_string	function	statistics	function
<pre>inject_transform</pre>	function	status	function
inject_whatever	function	types	function
new	overloaded function	version	function
pen_info	function		

# noads (context)

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

#### node (basic tex)

F getfield

check discretionaries function F getfont check discretionary function F getglue copy function F getglyphdata copy list function F aetheiaht function count F getid function current attr F getkern dimensions function F getlang direct table F getleader F check discretionaries F getlist F check discretionary F getnext F copy F getnormalizedline F copy\_list F getnucleus F copy only F getoffsets F count F getorientation F current attr F getpenalty F dimensions F getpost F effective glue F getpre F end of math F getprev F exchange F getproperty F find attribute F getreplace F find attribute range F getshift F find node F getstate F first glyph F aetsub F flatten discretionaries F getsubpre F flush list F getsubtype F flush node F getsup F getsuppre F getwhd F get attribute F get properties table F aetwidth F get\_synctex\_fields F glyphdimensions F getattributelist F has attribute F getboth F has dimensions F getbox F has field F getchar F has glyph F getdata F hpack F getdepth F hyphenating F getdirection F ignore math skip F getdisc F insert after F getexpansion F insert before F getfam F is char

F is direct

F is_glyph	F setorientation	
F is_node	F setpenalty	
F is_valid	F setpost	
F is_zero_glue	F setpre	
F kerning	F setprev	
F last_node	F setproperty	
F length	F setreplace	
F ligaturing	F setshift	
F make_extensible	F setsplit	
F mlist_to_hlist	F setstate	
F naturalwidth	F setsub	
F new	F setsubpre	
F prepend_prevdepth	F setsubtype	
F protect_glyph	F setsup	
F protect_glyphs	F setsuppre	
F protrusion_skippable	F setwhd	
F rangedimensions	F setwidth	
F remove	F slide	
F reverse	F start_of_par	
F set_attribute	F tail	
F set_synctex_fields	F todirect	
F setattributelist	F tonode	
F setboth	F tostring	
F setbox	F tovaliddirect	
F setchar	F traverse	
F setdata	F traverse_char	
F setdepth	F traverse_glyph	
F setdirection	F traverse_id	
F setdisc	F traverse_list	
F setexpansion	F type	
F setfam	F unprotect_glyph	
F setfield	F unprotect_glyphs	
F setfont	F unset_attribute	
F setglue	F usedlist	
F setglyphdata	F uses_font	
F setheight	F vertical_break	
F setkern	F vpack	
F setlang	F write	
F setleader	effective_glue	function
F setlink	end_of_math	function
F setlist	family_font	function
F setnext	fields	function
F setnucleus	find_attribute	function
F setoffsets	first_glyph	function

fix_node_lists	function	prepend_prevdepth	function
flatten_discretionaries	function	protect_glyph	function
flush_list	function	protect_glyphs	function
flush_node	function	protrusion_skippable	function
free	function	rangedimensions	function
get_attribute	function	remove	function
get_glue	function	set_attribute	function
get_properties_table	function	set_glue	function
getfield	function	setfield	function
getnormalizeline	function	setnormalizeline	function
getproperty	function	setproperty	function
has_attribute	function	slide	function
has_field	function	subtypes	function
has_glyph	function	tail	function
hpack	function	tostring	function
hyphenating	function	traverse	function
id	function	traverse_char	function
insert_after	function	traverse_glyph	function
insert_before	function	traverse_id	function
inuse	function	traverse_list	function
is_node	function	type	function
is_zero_glue	function	types	function
kerning	function	unprotect_glyph	function
last_node	function	unprotect_glyphs	function
length	function	unset_attribute	function
ligaturing	function	usedlist	function
make_extensible	function	uses_font	function
mlist_to_hlist	function	values	function
new	function	vpack	function
<pre>optimize_unset_attribute</pre>	function	write	function

# nodes (context)

accentcodes	data table	discretionarycodes	data table
aligned	function	effective glue	function
append	function	end of math	function
apply	function	fencecodes	data table
applyvisuals	function	fields	function
astable	function	fillcodes	data table
basepoints	function	find_attribute	function
boundarycodes	data table	first_glyph	function
boxes	table	firstcharacter	function
F dimensions		firstcharinbox	function
F direct		firstdirinbox	function
F found		firstglyph	function
F reset		flatten_discretionaries	function
F restore		flush	function
F save		flush_list	function
F savenode		flush_node	function
builders	table	free	function
F buildpage_filter		fullhpack	function
F vpack_filter		getattr	function
check_discretionaries	function	getattribute	function
codes	data table	getboth	function
concat	function	getbox	function
сору	function	getchar	function
copy_list	function	getfield	function
copy_node	function	getfont	function
count	function	getid	function
countall	function	getleader	function
current_attr	function	getlist	function
delete	function	getnext	function
destinations	table	getnormalizeline	function
N attribute		getprev	function
T done		getsubtype	function
F handler		gluecodes	data table
T stack		gluevalues	data table
dimensionfields	data table	glyphcodes	data table
dimensions	function	handlers	table
dircodes	data table	F accessibility	
directioncodes	data table	F backgrounds	
directionvalues	data table	F backgroundspage	
dirvalues	data table	F backgroundsvbox	
disccodes	data table	F characters	

F checkforleaks		is_direct	function
F checkglyphs		is_display_math	function
F checkparcounter		is_node	function
F cleanupbox		is_nut	function
F cleanuppage		is_zero_glue	function
F export		kerncodes	data table
F finalizebox		kerning	function
F flatten		keys	table
F flattenline		T whatsit	
F migrate		last_node	function
F protectglyphs		leadercodes	data table
F stripping		leftmarginwidth	function
F textbackgrounds		length	function
F unprotectglyphs		ligaturing	function
has_attribute	function	linefillers	table
has_field	function	D data	
has_glyph	function	F define	
hpack	function	F enable	
hyphenating	function	F filler	
idsandsubtypes	function	F handler	
idstostring	function	lines	table
ignorablefields	data table	T boxed	
injections	table	F register	
F copy		F setup	
F getligaindex		F stage_one	
F getthreshold		F stage_two	
F handler		D data	
F installgetspaceboth		F finalize	
F installnewkern		F number	
F isspace		N scratchbox	
F keepcounts		link	function
F reset		linked	function
F resetcounts		list	function
F setcursive		listablefields	data table
F setkern		listcodes	data table
F setligaindex		listtoutf	function
F setmark		literalvalues	data table
F setmove		load	function
F setposition		localparcodes	data table
F setspacekerns		locate	function
insert_after	function	margincodes	data table
insert_before	function	marginkerncodes	data table
insert_list_after	function	markers	table
installattributehandler	function	F get	

mathcodes data table F firstcharacter maxboxwidth function F firstcharinbox mlist to hlist function F firstqlyph function new F flatten discretionaries noadcodes data table F flush noadoptions table F flush list N axis F flush node F free N exact N left F fullhpack N middle F get components N no axis F get synctex fields N right F getattr N set F getattribute N unused 1 F getattributelist N unused 2 F getattrlist nodecodes data table F getboth function nopts F getbox nuts table F getboxglue F getchar F append F apply F getcomponents F applyvisuals F getdata F check discretionaries F getdepth F concat F getdirection F getdisc F copy F copy list F getdiscretionary F copy\_no\_components F getexpansion F copy node F getfam F copy only F getfield F getfont F copy\_only\_glyphs F copy properties F getglue F copyvisual F getglyphdata F count F getheight F count components F getid F countall F getkern F current attr F getlang F delete F getlanguage F getleader F dimensions F dirdimensions F getlist F effective glue F getnext F end\_of\_math F getnormalizedline F exchange F getnucleus F find attribute F getoffsets F find node F getorientation F first glyph F getpenalty

F getpost F new T pool F getpre F accent F getprev F baselineskip F getprop F getreplace F boundary F getruledata F choice F getshift F cleanup F getstate F delim F delimiter F getsub F getsubpre F direction F directliteral F getsubtype F disc F getsup F getsuppre F emptyrule F getsurround F fence F getvalue F fontkern F getwhd F fraction F getwidth F glue F has attribute F gluespec F has dimensions F glyph F hlist F has field F has glyph F indentskip F hpack F italickern F hyphenating F kern F insert after F latelua F insert before F leader F insert\_list\_after F lefthangskip F is direct F leftmarginkern F is display math F leftskip F is node F lineskip F is nut F literal F mathchar F is zero glue Fischar F mathtextchar F isdone F negatedglue F isqlyph F noad F originliteral F kerning F last node F outlinerule F leftmarginwidth F pageliteral F penalty F length F ligaturing F radical F link F rawliteral F linked F register F locate F restore F mlist to hlist F righthangskip F nestedtracedslide F rightmarginkern

F rightskip F set\_synctex\_fields F rule F setattr F save F setattribute F setattributelist F savepos F setmatrix F setattributes F setattrlist F shrink F stretch F setboth F subbox F setbox F submlist F setboxglue F temp F setchar F usage F setcomponents T userids F setdata N margins.inline F setdepth F setdirection N splitters.one N splitters.two F setdisc F usernode F setdiscretionary F userrule F setexpansion F vlist F setfam F setfield F wordboundary F setfont F prepend F processranges F setalue F processwords F setglyphdata F protect glyph F setheight F protect glyphs F setkern F protrusion\_skippable F setlang F rangedimensions F setlanguage F setleader F rawprop F reference F setlink F rehpack F setlist F remove F setnext F repackhlist F setnucleus F replace F setoffsets F reverse F setorientation F rightmarginwidth F setparproperty T rules F setpenalty T ruleactions F setpost F box F setpre F draw F setprev F fill F setprop F mp F setreplace F stroke F setruledata F userrule F setshift F set attribute F setsplit

F setstate

F set components

F setsub	F node	
F setsubpre	F vlist	
F setsubtype	F whatsit	
F setsup	T typesetters	
F setsuppre	F tohbox	
F setsurround	F tohpack	
F setunsetattributes	F tonodes	
F setvalue	F tovbox	
F setvisual	F tovpack	
F setvisuals	F unprotect_glyph	
F setwhd	F unprotect glyphs	
F setwidth	F unset_attribute	
F slide	F unsetattribute	
F somepenalty	F unsetattributes	
F somespace	F untracedslide	
F splitbox	F usedlist	
F start_of_par	F uses font	
F striprange	- F vianodes	
Ftail	F vianuts	
F takeattr	F vpack	
F takebox	F write	
F takelist	packlist	function
	•	
F theprop	penaltycodes	data table
F theprop F tonode	penaltycodes plugindata	data table table
	<pre>penaltycodes plugindata F finalizer</pre>	
F tonode	plugindata	
F tonode F tonodes F tonut	<b>plugindata</b> F finalizer	
F tonode F tonodes F tonut F tosequence	<pre>plugindata    F finalizer    F initializer    S name</pre>	
F tonode F tonodes F tonut	<b>plugindata</b> F finalizer F initializer	
F tonode F tonodes F tonut F tosequence F tostring	<pre>plugindata    F finalizer    F initializer    S name    T namespace</pre>	
F tonode F tonodes F tonut F tosequence F tostring F tracedslide	<pre>plugindata    F finalizer    F initializer    S name    T namespace    N attribute</pre>	
F tonode F tonodes F tonut F tosequence F tostring F tracedslide F traverse F traverse_char	<pre>plugindata    F finalizer    F initializer    S name    T namespace    N attribute    D data</pre>	
F tonode F tonodes F tonut F tosequence F tostring F tracedslide F traverse	<pre>plugindata    F finalizer    F initializer    S name    T namespace    N attribute    D data    F enable</pre>	
F tonode F tonodes F tonut F tosequence F tostring F tracedslide F traverse F traverse_char F traverse_glyph	<pre>plugindata    F finalizer    F initializer    S name    T namespace    N attribute    D data    F enable    F handler</pre>	
F tonode F tonodes F tonut F tosequence F tostring F tracedslide F traverse F traverse_char F traverse_glyph F traverse_id	<pre>plugindata    F finalizer    F initializer    S name    T namespace    N attribute    D data    F enable    F handler    F register</pre>	
F tonode F tonodes F tonut F tosequence F tostring F tracedslide F traverse F traverse_char F traverse_glyph F traverse_id F traverse_list	<pre>plugindata    F finalizer    F initializer    S name    T namespace    N attribute    D data    F enable    F handler    F register    D registered</pre>	
F tonode F tonodes F tonut F tosequence F tostring F tracedslide F traverse F traverse_char F traverse_glyph F traverse_id F traverse_list T traversers	Plugindata  F finalizer F initializer S name T namespace N attribute D data F enable F handler F register D registered D values F processor	table
F tonodes F tonut F tosequence F tostring F tracedslide F traverse F traverse_char F traverse_glyph F traverse_id F traverse_list T traversers F boundary	Plugindata  F finalizer F initializer S name T namespace N attribute D data F enable F handler F register D registered D values	
F tonode F tonodes F tonut F tosequence F tostring F tracedslide F traverse F traverse_char F traverse_glyph F traverse_id F traverse_list T traversers F boundary F char	plugindata  F finalizer F initializer S name T namespace N attribute D data F enable F handler F register D registered D values F processor points	table
F tonode F tonodes F tonut F tosequence F tostring F tracedslide F traverse F traverse_char F traverse_glyph F traverse_id F traverse_list T traversers F boundary F char F dir	plugindata  F finalizer F initializer S name T namespace N attribute D data F enable F handler F register D registered D values F processor points pool	table
F tonode F tonodes F tonut F tosequence F tostring F tracedslide F traverse F traverse_char F traverse_glyph F traverse_id F traverse_list T traversers F boundary F char F dir F disc	plugindata  F finalizer F initializer S name T namespace N attribute D data F enable F handler F register D registered D values F processor points pool F baselineskip	table
F tonodes F tonodes F tonut F tosequence F tostring F tracedslide F traverse F traverse_char F traverse_glyph F traverse_id F traverse_list T traversers F boundary F char F dir F disc F glue	plugindata  F finalizer F initializer S name T namespace N attribute D data F enable F handler F register D registered D values F processor points pool F baselineskip F cleanup	table
F tonodes F tonodes F tonut F tosequence F tostring F tracedslide F traverse F traverse_char F traverse_glyph F traverse_id F traverse_list T traversers F boundary F char F dir F disc F glue F glyph	plugindata  F finalizer F initializer S name T namespace N attribute D data F enable F handler F register D registered D values F processor points pool F baselineskip F cleanup F directliteral	table
F tonodes F tonodes F tonut F tosequence F tostring F tracedslide F traverse F traverse_char F traverse_glyph F traverse_id F traverse_list T traversers F boundary F char F dir F disc F glue F glyph F hlist	plugindata  F finalizer F initializer S name T namespace N attribute D data F enable F handler F register D registered D values F processor points pool  F baselineskip F cleanup F directliteral F glyph	table

F lineskip		F define	
F literal		F enable	
F originliteral		F handler	
F register		F userrule	
F restore		save	function
F rule		serialize	function
F save		serializebox	function
F savepos		set_attribute	function
F setmatrix		setattr	function
F special		setattribute	function
F usage		setattributes	function
F vlist		setboth	function
prepend	function	setbox	function
print	function	setboxtonaturalwd	function
processors	table	setchar	function
F contribute_filter		setfield	function
B enabled		setfont	function
F hpack_filter		setleader	function
F post_linebreak_filter		setlink	function
F pre_linebreak_filter		setlist	function
F tracer		setnext	function
properties	table	setnormalizeline	function
T data		setprev	function
protect_glyph	function	setunsetattributes	function
protect_glyphs	function	shifts	table
protrusion_skippable	function	D data	
pts	function	F define	
radicalcodes	data table	F enable	
rangedimensions	function	F handler	
reference	function	show	function
references	table	showboxes	function
N attribute		showcodes	function
T done		showlist	function
F handler		showsimplelist	function
T stack		skipcodes	data table
rehpack	function	skipvalues	data table
remove	function	slide	function
repackhlist	function	snapshots	table
replace	function	<pre>snapshots F getparameters</pre>	table
replace report	function function	•	table
replace report rightmarginwidth	function function function	F getparameters	table
replace report rightmarginwidth rulecodes	function function function data table	F getparameters F getsamples	
replace report rightmarginwidth	function function function	F getparameters F getsamples F resetsamples	table function function

**splitbox** function function totable start of par function totree function stripdiscretionaries function toutf function table table stripping tracers T glyphs T characters F set F collect data table subtypes F equal tail function F start takeattr function F string takehox function F unicodes tasks table T colors F actions F reset F appendaction F set F disableaction F setlist F disablegroup F directions F enableaction F fontchar F enablegroup T frequencies F freeze F register F freezegroup T pool T nodes F new F prependaction F rule F removeaction T nuts F replaceaction F rule F restart F resetproperties F setaction Frule F showactions F setlist F table F setproperties tobasepoints function F start tocentimeters function T steppers tociceros function F check todidots function F codes todimen function F features toinches function F font tomillimeters function F glyphs tonewciceros function F message tonewdidots function F messages tonode function F nofsteps tonodes function F register tonut function F reset topicas function F start function topoints F stop toscaledpoints function F stop tosequence function T transparencies

F reset

function

tostring

traverse_glyph function traverse_id function vianodes function traverse_list function vianuts function traversers table visualizebox function  F char F glyph F attribute F list F node F box  typesetters table F hbox F handler F hbox F hpack F tohbox F tohpack F tohpack F tonodes F tonodes F tovbox F setruledglyph F tovbox F setvisual				
traverse function usedlist function traverse_char function usercodes data table traverse_glyph function uses_font function traverse_id function vianodes function traverse_list function vianuts function traversers table visualizebox function F char F glyph F attribute F list T attributes F node table F handler  F hbox F markfonts F hpack F register F tohbox F setfont F tohpack F setfont F tonodes F setruledglyph F tovbox F tovbox F setvisual	F set		unsetattribute	function
traverse_char function usercodes data table traverse_glyph function uses_font function traverse_id function vianodes function traverse_list function vianuts function traversers table visualizebox function F char F glyph F attribute F list T attributes F node F box  typesetters table F handler F hbox F markfonts F hpack F register F tohbox F setfont F tohpack F setlayer F tonodes F setruledglyph F tovbox F tovbox F setvisual	F setlist		unsetattributes	function
traverse_glyph function traverse_id function vianodes function traverse_list function vianuts function traversers table visualizebox function  F char F glyph F attribute F list F node F box  typesetters table F hbox F handler F hbox F hpack F tohbox F tohpack F tohpack F tonodes F tonodes F tovbox F setruledglyph F tovbox F setvisual	traverse	function	usedlist	function
traverse_id function vianodes function traverse_list function vianuts function traversers table visualizebox function F char visualizers table F glyph F attribute F list T attributes F node F box  typesetters table F handler F hbox F markfonts F hpack F register F tohbox F setfont F tohpack F setlayer F tohpack F setruledglyph F tovbox F setvisual	traverse_char	function	usercodes	data table
traverse_list function vianuts function traversers table visualizebox function F char visualizers table F glyph F attribute F list T attributes F node  typesetters table F handler F hbox F hpack F markfonts F hpack F register F tohbox F tohpack F setfont F tohpack F setlayer F tonodes F tonodes F tovbox F setvisual	traverse_glyph	function	uses_font	function
traversers table visualizebox function F char visualizers table F glyph F attribute F list T attributes F node F box  typesetters table F handler F hbox F markfonts F hpack F register F tohbox F setfont F tohpack F setlayer F tonodes F setruledglyph F tovbox F setvisual	traverse_id	function	vianodes	function
F char  F glyph  F attribute  F list  T attributes  F node  F box  typesetters  table  F handler  F hbox  F markfonts  F hpack  F tohbox  F tohbox  F setfont  F tohpack  F tohpack  F tonodes  F tonodes  F tovbox  T attributes  F box  F box  F setfont  F setlayer  F tonodes  F setruledglyph  F tovbox	traverse_list	function	vianuts	function
F glyph F list T attributes F node F box  typesetters table F handler F hbox F markfonts F hpack F tohbox F tohbox F tohpack F tohpack F tohpack F tonodes F tonodes F tovbox F setruledglyph F tovbox F setvisual	traversers	table	visualizebox	function
F list T attributes F node F box  typesetters table F handler  F hbox F markfonts F hpack F register F tohbox F setfont F tohpack F setlayer F tonodes F setruledglyph F tovbox F setvisual	F char		visualizers	table
F node  typesetters table F handler F hbox F markfonts F hpack F tohbox F tohpack F tohpack F tohpack F tohpack F tonodes F tonodes F tovbox F setruledglyph F tovbox F setvisual	F glyph		F attribute	
typesetters table F handler  F hbox F markfonts  F hpack F register  F tohbox F setfont  F tohpack F setlayer  F tonodes F setruledglyph  F tovbox F setvisual	F list		T attributes	
F hbox F markfonts F hpack F register F tohbox F setfont F tohpack F setlayer F tonodes F setruledglyph F tovbox F setvisual	F node		F box	
F hpack F register F tohbox F setfont F tohpack F setlayer F tonodes F setruledglyph F tovbox F setvisual	typesetters	table	F handler	
F tohbox F setfont F tohpack F setlayer F tonodes F setruledglyph F tovbox F setvisual	F hbox		F markfonts	
F tohpack F setlayer F tonodes F setruledglyph F tovbox F setvisual	F hpack		F register	
F tonodes F setruledglyph F tovbox F setvisual	F tohbox		F setfont	
F tovbox F setvisual	F tohpack		F setlayer	
	F tonodes		F setruledglyph	
F townsk vpack function	F tovbox		F setvisual	
- corpack	F tovpack		vpack	function
F vpack whatcodes data table	F vpack		whatcodes	data table
<pre>unprotect_glyph function whatsitcodes data table</pre>	unprotect_glyph	function	whatsitcodes	data table
<pre>unprotect_glyphs function write function</pre>	unprotect_glyphs	function	write	function
<pre>unset_attribute function</pre>	unset_attribute	function		

### number (context)

	function	tobitstring	function
basepoints	function	tocentimeters	function
bytetodecimal	function	tociceros	function
compactfloat	function	tocontext	function
decimaltobyte	function	todidots	function
dimenfactors	data table	todimen	function
formatted	function	toevenhex	function
formattedfloat	function	toinches	function
idiv	function	tomillimeters	function
maxdimen	number	tonewciceros	function
nopts	function	tonewdidots	function
percent	function	tonumberf	function
points	function	tonumberg	function
pts	function	topicas	function
signed	function	topoints	function
sparseexponent	function	toscaled	function
splitdimen	function	toscaledpoints	function
to16dot16	function	valid	function
tobasepoints	function		

# objects (context)

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

# optional (context)

curl	table	F setseekfile	
F escape		mysql	table
F fetch		F close	
F getversion		F execute	
F initialize		F getmessage	
F unescape		F initialize	
ghostscript	table	F open	
F execute		postgress	table
F initialize		F close	
graphicsmagick	table	F execute	
F execute		F getmessage	
F initialize		F initialize	
loaded	table	F open	
mujs	table	sqlite	table
F dofile		F close	
F execute		F execute	
F initialize		F getmessage	
F reset		F initialize	
F setclosefile		F open	
F setconsole		zint	table
F setfindfile		F execute	
F setopenfile		F initialize	
F setreadfile			

### os (basic lua)

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

# package (basic lua)

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

# pagebuilders (context)

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

### pdf (basic tex)

immediateobj function

# pdfe (extra tex)

arraytotable	function	
close	function	
closestream	function	
dictionarytotable	function	
encryptioncodes	data table	
getarray	function	
getboolean	function	
getbox	function	
getcatalog	function	
getdictionary	function	
getfromarray	function	
getfromdictionary	function	
getfromreference	function	
getfromstream	function	
getinfo	function	
getinteger	function	
getmemoryusage	function	
getname	function	
getnofobjects	function	
getnofpages	function	

getnumber	function
getpage	function
getpages	function
getsize	function
getstatus	function
getstream	function
getstring	function
gettrailer	function
getversion	function
new	function
objectcodes	data table
open	function
openfile	function
openstream	function
pagestotable	function
readfromstream	function
readwholestream	function
type	function
unencrypt	function

# physics (context)

units table

F registerunit

D tables

#### pngdecode (extra tex)

applyfilter function
expand function
interlace function

splitmask function
tocmyk function

# publications (context)

addtexentry	function	converttoxml	function
analyze	function	currentspecification	table
anywhere	function	S author	
authorcache	data table	T categories	
authorcollapsers	data table	T article	
authorhashers	table	S category	
F invertedshort		T extra	
F normal		T fields	
F normalinverted		S author	
F normalshort		S editor	
F sequential		S journal	
F sequentialshort		S keywords	
F short		S note	
authormap	data table	S number	
authortoregister	function	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	
Fauthor	£	T optional	
concatstate	function	T required	

T sets	S pages		
T author	S volume		
T editionset	S version		
T virtual	D virtual		
T demo-a	T virtualfields		
S category	B authornum		
T extra	B authoryear		
T fields	B authoryears		
S author	B num		
S institution	B suffix		
S organization	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 page	F load		

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 authoryear	
F reference		T sequence	
F short		specifications	table
F used		T default	
F uservariable		S author	
listvariants	table	S comment	
F default		S copyright	
F index		S name	
F num		S version	
F short		D virtual	
F tag		splitauthor	function
load	function	splitoneauthor	function
loadbibdata	function	statistics	table
loaddefinitionfile	function	N nofbytes	
loaders	table	N nofdatasets	
F bbl		N nofdefinitions	
F bib		N nofshortcuts	
F buffer		tables	table
F endnote		D implicits	
F json		D origins	

D privates F showtables D sets F showvariants typesetters table D specials F author D types F string D virtuals function function tags usedataset table usedentries function tracers writers table F showdatasetauthors F showdatasetcompleteness F author

F showdatasetauthors
F showdatasetcompleteness
F showdatasetfields
F showentry
F showfields
F showhashedauthors

F author
F keyword
F pagenumber
F range

# regimes (context)

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

## resolvers (context)

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

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

variable

variableofformat

function

function

function

function

repath

reset

variableofformatorsuffix function wildcardpattern

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	hash	table
F disable		injectors	data table
F enable		inserters	table
F handler		F nobreakspace_aft	er
categorytonumber	data table	F nobreakspace_bef	ore
colors	data table	F space_after	
decomposehangul	function	F space_before	
defaults	table	F zerowidthspace_a	fter
N inter_char_half_shrink_factor F zerowidthspace_before		efore	
N inter_char_half_stretch_factor insta		installdataset	function
N inter_char_hangu	l_penalty	installmethod	function
N inter_char_quart	er_shrink_factor	numbertocategory	data table
N inter_char_quart	er_stretch_factor	numbertodataset	data table
N inter_char_shrin	k_factor	numbertohandler	data table
N inter_char_stret	ch_factor	reset	function
N inter_word_stret	ch_factor	set	function
handlers	data table	splitters	data table

## 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	readfixed2	function
readbytes	function	readfixed4	function
readbytetable	function	readinteger1	function
readcardinal1	function	readinteger1_le	function
readcardinal1le	function	readinteger2	function
readcardinal2	function	readinteger2_le	function
readcardinal2le	function	readinteger3	function
readcardinal3	function	readinteger3_le	function
readcardinal3le	function	readinteger4	function
readcardinal4	function	readinteger4_le	function
readcardinal4le	function	readintegertable	function
readcardinaltable	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-ag	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 defaultlanguag	e	firstofsplit	function
S defaultmethod		packch	function
N digitsmaximum		packuc	function
N digitsoffset		replacementlist	function
N ignoredoffset		setlanguage	function
N replacementoff	set	sort	function
T validmethods		splitters	table
B ch		F utf	
B mc		strip	function
B mm		tracers	data table
Врс		update	function

## statistics (context)

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

## status (basic tex)

constants function
list function

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

utfvalue	function	valid	function
utfvalues	function	voigt	function
utfvaluetable	function	voigt_hwhm	function

## structures (context)

atlocation	function	F next	
blocks	table	F prev	
D collected		F previous	
F define		F raw	
F print		F record	
F save		F reset	
F select		F restart	
F setstate		F restore	
D states		F save	
D tobesaved		F set	
F uservariable		F setlevel	
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	function
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 last		F title	

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

F listindex		T files
T numbers		T data
F ordered		F define
F postpone		F found
F resetpostponed		F get
F restore		F filter
F save		F filterdefault
F setstate		D filters
D states		D flaginternals
F store		F from
pages	table	D functions
F allmarked		F get
F analyze		F getcurrentmetadata
D collected		F getcurrentprefixspec
F fraction		F getinnermethod
F in_body		F getinternalcachedlistreference
F is_odd		F getinternallistreference
F mark		F getinternalreference
F marked		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 checkedfile		F loadpresets
F checkedfileorurl		F mark
F checkedprogram		S outermethod
F checkedrealpage		D pages
F checkedurl		U prefixsplitter
D collected		D productdata
U componentsplitter		T programs
F currentmetadata		T data
F currentorder		F define
D currentset		F get
F define		F realpageofpage
D defined		U referencesplitter
D derived		D referred
F enhance		F referredpage
D executers		F registerfinalizer
F expandcurrent		F registerinitializer
F export		F registerpage

F reset		F defir	ie
D runners		F enhar	ice
F set		F exter	ıd
F setandgetattribu	ıte	F filte	·r
F setcomponent		F filte	ercollected
F setinternalrefer	rence	F final	ize
F setlinkmethod		F findi	nternal
F setnextinternal		F flush	I
F setnextorder		F get	
F setreferencereal	page	F prepa	re
D specials		F proce	:SS
F splitcomponent		F setme	thod
F splitprefix		F sort	
F splitreference		F store	!
F synchronizepage		D tobes	aved
T testrunners		F uniqu	ie
F inner		F usero	
F special		sections	table
F special operat	ion	F autoc	epth
F special operat	ion with arguments	F cct	
T testspecials		D colle	ected
F deltapage		F curre	ent
Γi		F curre	entblock
F internal		F curre	ntid
F page			entlevel
F realpage			entsectionindex
F section		F depth	
F userpage		F findo	
D tobereferred		F findr	
D tobesaved		F fullr	
D tracedpages		_	ırrentlevel
T urls		F getle	
T data		F getnu	
F define F found			nalreference
		D level	•
F get		D level	
F untex D usedinternals			ingtilldepth eratdepth
D usedviews		F numbe	
F valid		F popbl	
registers	table		.xedconverted
F analyze		F pushb	
D collected		F regis	
F compare		D regis	
i compare		D regis	

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

F setsorting
F setsynonym
F settablecell
F settabulatecell
F settagdelimitedsymbol
F settagsubsentencesymbol
F setupexport

F setuserproperties

D specifications
F start
F stop
F strip
D taglist
T usewithcare
T images

# table (basic lua)

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

# tex (basic tex)

-			
attribute	table	getdelcodes	function
badness	function	getdimen	function
box	table	getfontoffamily	function
boxresources	table	getglue	function
F getbox		getglyphdata	function
F getdimensions		gethelptext	function
F save		getinteraction	function
F use		getlccode	function
catcode	table	getlist	function
chardef	function	getlocallevel	function
conditionals	data table	getmath	function
constants	data table	getmathcode	function
count	table	getmathcodes	function
cprint	function	getmodevalues	function
ctdcatcodes	number	getmuglue	function
ctxcatcodes	number	getmuskip	function
definefont	function	getnest	function
delcode	table	getpagestate	function
dimen	table	getsfcode	function
directives	data table	getskip	function
enableprimitives	function	gettoks	function
error	function	getuccode	function
extraprimitives	function	glue	table
fatalerror	function	hashtokens	function
fontidentifier	function	ifs	data table
fontname	function	inicatcodes	number
force_synctex_line	function	isattribute	function
force_synctex_tag	function	isbox	function
forcehmode	function	iscount	overloaded function
fprint	function	isdefined	function
get	function	isdimen	overloaded function
<pre>get_synctex_line</pre>	function	isglue	function
<pre>get_synctex_mode</pre>	function	ismuglue	function
get_synctex_tag	function	ismuskip	overloaded function
getattribute	function	isskip	overloaded function
getbox	function	istoken	function
getboxresourcebox	function	istoks	function
getboxresourcedimensions	function	lastnodetype	function
getcatcode	function	lccode	table
getcount	function	linebreak	function
getdelcode	function	lists	table

luacatcodes	number	setglyphdata	function
magicconstants	table	setinteraction	function
N maxdimen		setlccode	function
N running		setlinedir	function
N trueinch		setlist	function
mathchardef	function	setmath	function
mathcode	table	setmathcode	function
modelevels	table	setmathdir	function
N horizontal		setmuglue	function
N math		setmuskip	function
N unset		setnest	function
N vertical		setpardir	function
modes	data table	setsfcode	function
muglue	table	setskip	function
muskip	table	settextdir	function
nest	table	settoks	function
nilcatcodes	number	setuccode	function
notcatcodes	number	sfcode	table
number	function	shipout	function
primitives	function	show_context	function
print	function	skip	table
prtcatcodes	number	sp	function
quittoks	function	splitbox	function
resetparagraph	function	sprint	function
romannumeral	function	systemmodes	data table
round	function	takebox	function
runtoks	function	texcatcodes	number
saveboxresource	function	toks	table
scale	function	tonumber	function
scantoks	function	toscaled	function
set	function	tpacatcodes	number
set_synctex_line	function	tpbcatcodes	number
set_synctex_mode	function	tprint	function
set_synctex_no_files	function	trackers	data table
set_synctex_tag	function	triggerbuildpage	function
setattribute	function	txtcatcodes	number
setbox	function	type	function
setboxdir	function	uccode	table
setcatcode	function	uprint	function
setcount	function	useboxresource	function
setdelcode	function	vrbcatcodes	number
setdimen	function	write	function
setglue	function		

# texconfig (basic tex)

error_line	number	max_in_open	number
expand_depth	number	max_print_line	number
fix_mem_init	number	max_strings	number
formatname	string	nest_size	number
function_size	number	param_size	number
half_error_line	number	<pre>properties_size</pre>	number
hash_extra	number	save_size	number
init	overloaded function	shell_escape	string
kpse_init	boolean	stack_size	overloaded number

## texio (basic tex)

closeinput function write function write\_nl function

# token (basic tex)

biggest_char	function	scan_argument	function
command_id	function	scan_box	function
create	function	scan_char	function
expand	function	scan_code	function
future_expand	function	scan_csname	function
get_active	function	scan_dimen	function
get_cmdname	function	scan_float	function
get_command	function	scan_glue	function
get_csname	function	scan_int	function
get_expandable	function	scan_key	function
get_frozen	function	scan_keyword	function
get_id	function	scan_keyword_cs	function
get_index	function	scan_luacardinal	function
get_macro	function	scan_luainteger	function
get_meaning	function	scan_luanumber	function
get_mode	function	scan_real	function
get_next	function	scan_skip	function
get_next_token	function	scan_string	function
get_pool_list	function	scan_token	function
get_protected	function	scan_token_code	function
get_tok	function	scan_tokenlist	function
gobble_dimen	function	scan_toks	function
gobble_int	function	scan_value	function
is_defined	function	scan_word	function
is_next_char	function	set_char	function
is_token	function	set_lua	function
new	function	set_macro	function
peek_next_char	function	skip_next	function
pop_macro	function	to_string	function
push_macro	function	type	function
put_back	function	values	function
put_next	function		

#### tokens (context)

astable function U loadfoundtypescriptfile userdata bgroup U resetctxscanner table bits U rlap N active U scratchcounter N alignment U scratchdimen N begingroup U scratchmuskip N character U scratchskip U scratchtoken N close N comment U secondoftwoarguments N endgroup U setfalsevalue N endofline U setsectionblock N escape U setupsystem N ignore U startcolumns N invalid U starttabulate N letter U starttitle N mathshift U startxtitle N open U stopcolumns N other U stoptabulate U stoptitle N parameter N space U stopxtitle N subscript U texsetup N superscript II xmlw collectors table N whitespace cache table T data U NC F defaultwords U NR F dowithwords F flush U bf F install U color U colordefalc F register U colordefflc T registered U colordefflt F show U colordefrlt F test commands data table U dofinishreference U dostarttext compile function constant function U finishjob table U firstofoneargument converters U firstoftwoarguments S toboolean U gobbleoneargument S todimen U goto S toglue U iftrue S tonumber U input S tostring

create	function	F	float	
defined	function	F	glue	
egroup	userdata	F	gluespec	
getters	table	F	hash	
F box		F	hbox	
F count		F	integer	
F dimen		F	ischar	
F glue		F	key	
F macro		F	keyword	
F meaning		F	keywordcs	
F skip		F	list	
F token		F	luacardin	al
hbox	userdata	F	luaintege	r
isdefined	function	F	luanumber	
istoken	function	F	lxmlid	
letter	function	F	number	
letters	function	F	peek	
new	function	F	real	
other	function	F	scanclose	
pickup	function	F	scanopen	
popmacro	function	F	skip	
presets	table	F	string	
T 1 string		F	table	
T 2 strings		F	token	
T 3 strings		F	tokencode	
T 4 strings		F	tokenlist	
T 5 strings		F	tokens	
T 6 strings		F	toks	
T 7 strings			value	
T 8 strings			vbox	
printlist	function		verbatim	
pushmacro	function		vtop	
scanners	table		whd	
F argument			word	4-61-
F array		sett		table
F boolean			box	
F box			char	
F char			count	
F code			dimen	
F condition	al		glue	
F count			lua	
F csname			macro	
F dimen			skip	±===1 -
F dimension		shor	tcuts	table

T bits F boolean N active F box N alignment F char F code N begingroup N character F conditional F count N close N comment F csname N endaroup F dimen N endofline F dimension N escape F float N ignore F glue N invalid F gluespec N letter F hash N mathshift F hbox N open F integer N other F ischar F key N parameter F keyword N space N subscript F keywordcs N superscript F list N whitespace F luacardinal N close F luainteger F inspect F luanumber F lxmlid N open F report F number F scanargument F peek F real F scanarray F scanboolean F scanclose F scanbox F scanopen F scanclose F skip F scancode F string F scanconditional F table F scancsname F token F scandimen F tokencode F scandimension F tokenlist F scanhash F tokens F scanhbox F toks F scaninteger F value F scankeyword F vbox F scankeywordcs F verbatim F scanlist F vtop T scanners F whd F argument F word

F array

F scannumber

_	
F scanopen	U starttabulate
F scanstring	U starttitle
F scantable	U startxtitle
F scantokenlist	U stopcolumns
F scanvbox	U stoptabulate
F scanverbatim	U stoptitle
F scanvtop	U stopxtitle
F scanword	U texsetup
F toboolean	U xmlw
F todimen	T collectors
T tokens	F defaultwords
F astable	F dowithwords
U bgroup	F flush
T cache	F install
U NC	F register
U NR	F show
U bf	F test
U color	D commands
U colordefalc	F compile
U colordefflc	F constant
U colordefflt	T converters
U colordefrlt	S toboolean
U dofinishreference	S todimen
U dostarttext	S toglue
U finishjob	S tonumber
U firstofoneargument	S tostring
U firstoftwoarguments	F create
U gobbleoneargument	F defined
U goto	U egroup
U iftrue	T getters
U input	F box
U loadfoundtypescriptfile	F count
U resetctxscanner	F dimen
U rlap	F glue
U scratchcounter	F macro
U scratchdimen	F meaning
U scratchmuskip	F skip
U scratchskip	F token
U scratchtoken	U hbox
U secondoftwoarguments	F isdefined
U setfalsevalue	F istoken
U setsectionblock	F letter
U setupsystem	F letters
U startcolumns	F new

F other	F scand	imension
F pickup	F scanh	ash
F popmacro	F scanh	box
T presets	F scani	nteger
F printlist	F scank	eyword
F pushmacro	F scank	eywordcs
T setters	F scanl	ist
F box	F scann	umber
F char	F scand	pen
F count	F scans	tring
F dimen	F scant	able
F glue	F scant	okenlist
F lua	F scanv	box
F macro	F scanv	erbatim
F skip	F scanv	top
T shortcuts	F scanw	ord
N close	F toboo	lean
F inspect	F todim	ien
N open	F tonum	ber
F report	F tostr	ing
F scanargument	D values	
F scanarray	U vbox	
F scanboolean	U vtop	
F scanbox	F tonumber	
F scanclose	F tostring	
F scancode	values	data table
F scanconditional	vbox	userdata

F scancsname F scandimen vtop

userdata

#### tracers (context)

count function
cs function
dimen function
knownlist function
lists table

T context
T internals

T scratch

name function

primitive function
printerror function
printwarning function
showlines function
strings table

S undefined

toks function
type function

# trackers (context)

data	data table	name	string
default	function	register	function
disable	function	report	$ \hbox{function} $
done	table	reset	function
dumphashtofile	function	savehash	$ \hbox{function} $
enable	function	show	function
list	function	value	function

# typesetters (context)

alignments	table	T handlers	
F handler	table		
		F installhandler	
F set	table	F processmath	
breakpoints	tabte	F set	
F define		F setcolor	
F handler		F setmath	
D mapping		F tomode	±-61-
T methods		firstlines	table
T numbers		T actions	
F set		F default	
F setreplacement		F line	
cases	table	F word	
T actions		F handler	
F handler		F set	
F register		fontkerns	table
F set		F handler	
characteralign	table	initials	table
F handler		T actions	
F resetcharacter	align	F default	
F setcharacteral	ign	F addanchortoline	е
characters	table	F addtoline	
F handler		F calculatedelta	
T methods		F checkline	
F replacenbsp		F handler	
F replacenbspace	s	F moveinline	
checkers	table	F normalize	
F handler		F set	
F reset		injectors	table
F set		F check	
cleaners	table	T list	
F handler		F mark	
F set		F reset	
digits	table	F set	
T actions		F show	
F handler		italics	table
F set		F enablemath	
directions	table	F enabletext	
F getfences		F forcevariant	
F getglobal		F handler	
F getmethod		F reset	
F handler		F set	

kerns	table	F apply	
D factors		F register	
F handler		F reset	
F keepligature		F split	
D mapping		F startapply	
F set		F stopapply	
manipulators	table	F stripped	
F apply		F tostring	
F applyspecifica	ation	rubies	table
T methods		F attach	
F Word		F check	
F Words		showsuspects	function
F abbreviatedj	ournal	spacings	table
F expandedjour		F define	
F lowercase		F handler	
F stripperiod		D mapping	
F uppercase		T numbers	
T patterns		T frenchpunctu	ation
U list		T characters	
U pair		S name	
F splitspecifica	ation	N number	
margins	table	F reset	
F finalhandler		F set	
F globalhandler		F setup	
F localhandler		wrappers	table
F save		F handler	
marksuspects	function	xtables	table
paragraphs	table	F cleanup	
F addanchortoli	ne	F construct	
F addtoline		F create	
F calculatedelta	a	F finish_row	
F checkline		F flush	
F handler		F initialize_com	nstruct
F moveinline		F initialize_re	flow_height
F normalize		F initialize_re	flow_width
F set		F next_row	
periodkerns	table	F reflow_height	
D factors		F reflow_width	
F handler		F set_construct	
D mapping		F set_reflow_he:	ight
F set		F set_reflow_wio	ith
processors	table		

## updaters (context)

apply function
register function

# url (context)

function	hashed	function
function	hasscheme	function
function	query	function
function	split	function
function	toquery	function
function	unescape	function
function	unescapeget	function
	function function function function function	function hasscheme function query function split function toquery function unescape

# utf8 (basic lua)

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

# utilities (context)

debugger	table	F	readtag	
F disable			setposition	
F enable			size	
F savestats		F	skip	
F showstats		F	skiplong	
F showtraceback		F	skipposition	
files	table	F	skipshort	
F close		F	writebyte	
F getposition		F	writecardinal1	
F getsize		F	writecardinal1le	
F look		F	writecardinal2	
F open		F	writecardinal2le	
F read2dot14		F	writecardinal3	
F readbyte		F	writecardinal3le	
F readbytes		F	writecardinal4	
F readbytetable		F	writecardinal4le	
F readcardinal		F	writeinteger1	
F readcardinal1		F	writeinteger1le	
F readcardinal1le		F	writeinteger2	
F readcardinal2		F	writeinteger2le	
F readcardinal2le		F	writeinteger3	
F readcardinal3		F	writeinteger3le	
F readcardinal3le		F	writeinteger4	
F readcardinal4		F	writeinteger4le	
F readcardinal4le			writestring	
F readcardinaltable	9	form	atters	table
F readchar			formatcolumns	
F readfixed2		F	list	
F readfixed4			stripzeros	
F readinteger		_	agecollector	table
F readinteger1			check	
F readinteger1le			criterium	
F readinteger2			enabled	
F readinteger2le			stscript	table
F readinteger3			convert	
F readinteger3le			statistics	4-61-
F readinteger4		•	hicmagick	table
F readinteger4le			convert	
F readintegertable			statistics	+2612
F readsignedbyte			hicsmagick	table
F readstring		F	convert	

F statistics	B leftpage
<b>lua</b> table	B page
B alwaysstripcode	B paper
F checkmemory	B rightpage
F compile	B text
F loadedluacode	F iterator
F loadstring	F keq_to_hash
F loadstripped	F listitem
N nofstrippedbytes	F make_settings_to_hash_pattern
N nofstrippedchunks	F mergehashes
F registerfinalizer	F options_to_array
B stripcode	F options_to_hash
T strippedchunks	T patterns
F strippedloadstring	U settings_to_array
T suffixes	U settings_to_hash_a
S lua	U settings_to_hash_b
S luc	U settings_to_hash_c
S lui	U settings_to_hash_d
S luj	U unittotex
S luv	F process_stripped_settings
S tma	F rfc4180splitter
S tmc	F runtime
S tua	F settings_to_array
S tuc	F settings_to_array_obey_fences
<b>packers</b> table	F settings_to_array_with_repeat
F hashed	F settings_to_hash
F new	F settings_to_hash_colon_too
F pack	F settings_to_hash_strict
F simplehashed	F settings_to_hash_tolerant
F strip	F settings_to_numbers
F unpack	F settings_to_set
N version	F simple_hash_to_string
<b>parsers</b> 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	<b>randomizer</b> table
T hashes	F get
T settings_to_set	F getnumber
T text,hidden,paper,page,leftpage,rightpage	F getseed
B hidden	F popseed

F pushseed		streams	table
F reuseseed		F close	
F setseed		F getposition	
F setseedi		F getsize	
randomizers	table	F getstring	
F poisson		Flook	
report	function	F open	
sequencers	table	F openstring	
F appendaction		F read2dot14	
F appendgroup		F read2dot4	
F compile		F readbyte	
F disableaction		F readbytes	
F disablegroup		F readbytetable	
F enableaction		F readcardinal	
F enablegroup		F readcardinal1	
D functions		F readcardinal2	
F localize		F readcardinal2le	
F new		F readcardinal3	
F nodeprocessor		F readcardinal3le	
F prependaction		F readcardinal4	
F prependgroup		F readcardinal4le	
F removeaction		F readcardinaltabl	e
F replaceaction		F readchar	
F setkind		F readfixed2	
F tostring		F readfixed4	
setters	table	F readinteger	
F disable		F readinteger1	
F enable		F readinteger2	
F initialize		F readinteger2le	
F list		F readinteger3	
F new		F readinteger3le	
F register		F readinteger4	
F report		F readinteger4le	
F reset		F readintegertable	
F show		F readsignedbyte	
stacker	table	F readstring	
F new		F setposition	
storage	table	F size	
F allocate		F skip	
F checked		F skipbytes	
F mark		F skiplong	
F marked		F skipshort	
F setinitializer		strings	table
F sparse		F collapse	

F col	lapsecrlf	F definetable	
T for	matters	F encapsulate	
Fa	dd	F insertaftervalu	e
Fn	ew	F insertbeforeval	ue
F new	collector	F migratetable	
F new	repeater	F removevalue	
Fnic	e	F replacevalue	
T str	iplinepatterns	templates	table
Uc	ollapse	F load	
Uр	rune	F replace	
Uр	rune and collapse	F replacer	
Uр	rune and no empty	F resolve	
Uр	rune and to space	zipfiles	table
Ur	etain	F close	
Ur	etain and collapse	F found	
Ur	etain and no empty	F gunzipfile	
Fstr	iplines	F hash	
Fstr	iplong	F list	
F tab	tospace	F open	
T tra	cers	F unzip	
tables	table	F unzipdir	

F accesstable

F definedtable

F zipdir

## 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)

Marction					
eq function F topair  index table F tostring   F I Fmul   Fadd Sname   Fdiv Fpow   Feq Fsub   Tindex Ftostring   F I Funm   Fadd F abs   Fdiv F acos   Feq F acosh   Fmul F acosh   Fmul F asin   Sname F asin   Fsub F asinh   Fsub F atan   Funm F conj   F abs F cos   F acosh F cos   F acosh F cos   F acosh F exp   F asinh F imag   F atan F new   F atanh F pow   F conj F proj   F cos F real   F imag F tan   F pow F tostring   F pow F tostring   F projmul   F proj	I	function		F sqrt	
eq function table F topairindex table F tostring  F I Fadd Sname Fdiv Fpow Feq Fsub Tindex Funm Fadd Fads Fdiv Fsub Fdiv Fsub Fdiv Fsub Fdiv Fsub Facos Feq Facos Fmul Farg Sname Fsin Fpow Fasin Fpow Fasin Ftostring Fatan Ftostring Fsin Facos Facos Fcos Facos Fac				F tan	
index table	div	function		F tanh	
F I Fmul Fadd Sname Fdiv Fpow Feq Fsub Tindex Ftostring F I Funm Fadd Fabs Fdiv Facos Feq Facosh Fmul Facos Feq Facosh Fmul Farg Sname Fasin Fpow Fasin Fpow Fasin Ftostring Fatan Ftostring Fatan Ftostring Fatan Ftostring Fatan Ftosh Facos Fcos Facos F	eq	function		F topair	
F _ add	index	table		F tostrin	g
Fdiv         Fpow           Feq         Fsub           Tindex         Ftostring           F I         Funm           Fadd         F abs           Fdiv         F acos           Fmul         F arg           Sname         F asin           Fpow         F asinh           Funm         F conj           Funm         F conj           F acos         F cos           F acos         F real           F acos         F real           F acos         F real           F acos         F real           F cos         F real           F c	FΙ			Fmul	
Feq       Ftostring         F I       Funm         Fadd       F abs         Fdiv       F acos         Feq       F acos         Facos       F asin         Fsub       F atan         Fsub       F atan         Fsub       F atan         Fsub       F atan         Funm       F conj         F atan       F conj         F abs       F cos         F acos       F real         F acos       F real         F cos       F real         F cos       F real         F cos       F real         F cos       F sin <td< th=""><th>Fa</th><th>dd</th><th></th><th>Sname</th><th></th></td<>	Fa	dd		Sname	
F I       Ftostring         F I       Funm         Fddv       F abs         Fdiv       F acos         Fdiv       F acos         Fdiv       F acos         Fdosh       F acosh         Fmul       F arg         Sname       F asin         Fpow       F asinh         Fsub       F atanh         Funm       F conj         Fatanh       F conj         F acos       F cosh         F acos       F cosh         F acosh       F i         F asinh       F log         F atanh       F log         F atanh       F pow         F conj       F proj         F cosh       F sin	Fd	iv		Fpow	
F   I	Fe	q		F _sub	
F add F abs F div F acos F dos F dos F dos F mul F arg S name F asin F pow F asinh F sub F atan F tostring F atanh F unm F conj F abs F cos F acos F cosh F acosh F arg F i F asin F imag F atanh F log F atan F pow F atanh F log F atan F tostring F atanh F log F atan F imag F tanh F log F atan F pow F conj F proj F cos F real F cosh F cosh F atanh F pow F tonj F proj F tos F real F cosh F i F sin F imag F tan F imag F tostring F pow F topair F pow F tostring F proj F real F pow F tostring F proj F tostring	Ti	ndex		Ftostrin	ng
F_div	FΙ			Funm	
Feq       F acosh         Fmul       F arg         Sname       F asin         Fpow       F asinh         Fsub       F atan         Fsub       F atanh         Fsub       F atanh         Ftostring       F atanh         Funm       F conj         F abs       F cos         F acosh       F cosh         F acosh       F exp         F arg       F i         F asin       F imag         F asinh       F log         F atan       F pow         F conj       F proj         F cosh       F sin         F proj       F tanh         F pow       F tostring         F proj      mul         <	F _	_add		F abs	
F _mul F arg S _name F asin F _pow F asinh F _sub F atan F _tostring F atanh F _unm F conj F abs F cos F acos F cosh F arg F i F asin F imag F asinh F log F atanh F pow F conj F proj F cos F real F cosh F exp F arg F i F atanh F pow F tonj F proj F tos F real F cosh F sin F exp F sinh F i F sqrt F imag F tan F log F tan F pow F topair F pow F topair F pow F proj F proj F proj F tostring F proj F proj F proj F tostring F proj F real F new F tostring F proj F real F new F tostring F proj F proj F mul function F real F name string F sin	F _	_div		F acos	
Sname	F _	_eq		F acosh	
Fpow	F _	_mul		F arg	
F _ sub F _ tostring F _ tostring F _ unm F _ conj F abs F cos F acos F acos F acosh F acosh F arg F if F asin F imag F atanh F pow F conj F cos F cosh F exp F atan F new F atanh F pow F tosh F conj F proj F cos F real F cosh F i i f sin F exp F sin F inag F inag F tan F inag F tan F inag F tan F topair F pow F tostring F proj F proj F tostring F proj F proj F tostring F proj	S _	_name		F asin	
Ftostring Funm Funm Fconj F abs F cos F acos F acos F acosh F acosh F exp F arg F i F asin F imag F asinh F log F atan F new F atanh F pow F conj F cos F real F cosh F sin F exp F sin F imag F tan F imag F tan F proj F cos F real F cosh F sin F exp F sinh F i F sqrt F imag F tan F log F tan F log F tan F topair F pow F tostring F proj F proj F proj F tostring F proj F tostring F proj F proj F tostring F proj F proj F tostring F proj	F _	_pow		F asinh	
F _ unm       F conj         F abs       F cos         F acos       F cosh         F acosh       F exp         F arg       F i         F asin       F imag         F asinh       F log         F atan       F new         F atanh       F pow         F conj       F proj         F cosh       F sin         F cosh       F sin         F exp       F sinh         F i mag       F tan         F log       F tanh         F new       F topair         F pow       F tostring         F proj      mul       function         F real      name       string         F sin      pow       function	F _	_sub		F atan	
F abs F cos F acos F cosh F acosh F exp F arg F i F asin F imag F asinh F log F atan F new F atanh F pow F conj F proj F cos F real F cosh F sin F exp F sinh F i F sqrt F imag F tan F log F tan F pow F topir F pow F tostring F proj F tostring F proj F pr	F _	_tostring		F atanh	
F acosh       F cosh         F acosh       F exp         F arg       F i         F asin       F imag         F asinh       F log         F atan       F new         F atanh       F pow         F conj       F proj         F cos       F real         F cosh       F sin         F exp       F sinh         F imag       F tan         F log       F tanh         F new       F topair         F pow       F tostring         F proj      mul       function         F real      name       string         F sin      pow       function	F _	_unm		F conj	
F acosh       F exp         F arg       F i         F asin       F imag         F asinh       F log         F atan       F new         F atanh       F pow         F conj       F proj         F cos       F real         F cosh       F sin         F exp       F sinh         F imag       F tan         F log       F tanh         F new       F topair         F proj      mul       function         F real      name       string         F sin      pow       function	F al	bs		F cos	
F arg       F i         F asin       F imag         F asinh       F log         F atan       F new         F atanh       F pow         F conj       F proj         F cos       F real         F cosh       F sin         F exp       F sinh         F i mag       F tan         F log       F tanh         F new       F topair         F pow       F tostring         F proj      mul       function         F real      name       string         F sin      pow       function	Fac	cos		F cosh	
F asin	Fac	cosh		F exp	
F asinh       F log         F atan       F new         F atanh       F pow         F conj       F proj         F cos       F real         F cosh       F sin         F exp       F sinh         F i       F sqrt         F imag       F tan         F log       F tanh         F new       F topair         F pow       F tostring         F proj      mul       function         F real      name       string         F sin      pow       function	Fa	rg		Fi	
F atan       F new         F atanh       F pow         F conj       F proj         F cos       F real         F cosh       F sin         F exp       F sinh         F i       F sqrt         F imag       F tan         F log       F tanh         F new       F topair         F pow       F tostring         F proj      mul       function         F real      name       string         F sin      pow       function	Fas	sin		F imag	
F atanh         F pow           F conj         F proj           F cos         F real           F cosh         F sin           F exp         F sinh           F i         F sqrt           F imag         F tan           F log         F tanh           F new         F topair           F pow         F tostring           F proj        mul         function           F real        name         string           F sin        pow         function	Fas	sinh		F log	
F conj         F proj           F cos         F real           F cosh         F sin           F exp         F sinh           F i         F sqrt           F imag         F tan           F log         F tanh           F new         F topair           F pow         F tostring           F proj        mul         function           F real        name         string           F sin        pow         function	F at	tan		F new	
F cosh         F real           F cosh         F sin           F exp         F sinh           F i         F sqrt           F imag         F tan           F log         F tanh           F new         F topair           F pow         F tostring           F proj        mul         function           F real        name         string           F sin        pow         function	F a	tanh		F pow	
F cosh         F sin           F exp         F sinh           F i         F sqrt           F imag         F tan           F log         F tanh           F new         F topair           F pow         F tostring           F proj        mul         function           F real        name         string           F sin        pow         function	F co	onj		F proj	
F exp         F sinh           F i         F sqrt           F imag         F tan           F log         F tanh           F new         F topair           F pow         F tostring           F proj        mul         function           F real        name         string           F sin        pow         function	F co	os		F real	
F i         F sqrt           F imag         F tan           F log         F tanh           F new         F topair           F pow         F tostring           F proj        mul         function           F real        name         string           F sin        pow         function	F co	osh		F sin	
F imag         F tan           F log         F tanh           F new         F topair           F pow         F tostring           F proj        mul         function           F real        name         string           F sin        pow         function	F ex	хр		F sinh	
F log         F tanh           F new         F topair           F pow         F tostring           F proj        mul         function           F real        name         string           F sin        pow         function	Fi			F sqrt	
F new         F topair           F pow         F tostring           F proj        mul         function           F real        name         string           F sin        pow         function	Fir	nag		F tan	
F pow F tostring F projmul function F realname string F sinpow function	Flo	og		F tanh	
F proj        mul         function           F real        name         string           F sin        pow         function	Fne	ew		F topair	
F realname string F sinpow function	F po	OW		F tostring	
F sinpow function	F p	roj	m	ul	function
<b>_</b>	Fre	eal	n	ame	string
F sinhsub function	Fs	in	p	OW	function
	F s:	inh	s	ub	function

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

# xdecimal (context)

add	function	F min
band	function	F minus
bor	function	F new
bxor	function	F plus
div	function	F pow
eq	function	F rotate
index	table	F setprecision
Fadd		F shift
Fband		F sqrt
Fbor		F tonumber
Fbxor		F tostring
Fdiv		F trim
Feq		Fle
Tindex		Flt
Fadd		Fmul
Fband		Sname
Fbor		Fpow
Fbxor		Fshl
Fdiv		Fshr
Feq		Fsub
Fle		Ftostring
Flt		Funm
Fmul		F abs
Sname		F band
Fpow		F bor
Fshl		F bxor
Fshr		F conj
Fsub		F copy
Ftostrin	g	F exp
Funm		F getprecision
F abs		F ln
F band		F log
F bor		F max
F bxor		F min
F conj		F minus
F copy		F new
F exp		F plus
F getprecis	ion	F pow
F ln		F rotate
F log		F setprecision
F max		F shift

F sqrt		C	ору	function
F tonumber		e	хр	function
F tostring		g	etprecision	function
F trim		l	n	function
le	function	l	og	function
lt	function	m	ax	function
mul	function	m.	in	function
name	string	m.	inus	function
pow	function	n	ew	function
shl	function	p	lus	function
shr	function	p	OW	function
sub	function	r	otate	function
tostring	function	S	etprecision	function
unm	function	S	hift	function
abs	function	S	qrt	function
band	function	t	onumber	function
bor	function	t	ostring	function
bxor	function	t	rim	function
conj	function			

## xmath (extra lua)

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

## xml (context)

	£		
addentitiesdoctype	function	F fontspecification	
addspecialcode	function	F mappedstylevalue	
after	function	F padding	
all	function	F size	
applylpath	function	F style	
applyselector	function	F stylevalue	
assign	function	F todimension	
attribute	function	F variant	
badinclusions	function	F weight	
before 	function	defaulthandlers	table
body	function	D file	
builtinentities	table	D parsedxml	
B amp		D string	
B apos		D tex	
B gt		D texline	
B lt		D texspace	
B quot		D verbose	
cdata	function	defaultprotocol	string
cdatatotext	function	delete	function
checkbom	function	delete_element	function
checkerror	function	despecialized	function
checknamespace	function	each	function
checkns	function	each_element	function
cleansed	function	elements	function
collect	function	elementtocdata	function
collect_elements	<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	expressions	table
content	function	F attribute	
convert	function	F boolean	
сору	function	F child	
count	function	F contains	
cprint	function	F count	
CSS	table	F error	
F applyselector		F find	
F colorspecification		F hasclass	
F dimension		F idstring	
F family		F lower	

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

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

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

## xzip (extra lua)

adler32 function
compress function
crc32 function

decompress function
expandsize function

#### zip (extra lua)

archives table
closearchive function

openarchive function
registeredfiles table

#### zlib (extra lua)

adler32 function compress function crc32 function

decompress function
expandsize function