MP attributes backends bit bit32 blobs boolean buffers builders caches callbacks catcodes characters chemistry commands containers context converters coroutine ctxrunner debug dir directives document documentdata environment epdf experiments figures **file** floats fontloader fonts functions global graphics gzip immg interactions interfaces io jit job languages layouts lfs libraries lmx logs lpdf lpeg ltn12 lua luatex lxml math mathematics mbox md5 metapost mime moduledata modules mp mplib newtoken noads nodes number os package pagebuilders parametersets pdfscanner physics profiler publications regimes resolvers sandbox scripts set socket sorters statistics status storage streams string structures table tex thirddata tokens tracers trackers typesetters unicode url userdata utilities vf visualizers xml zip zlib

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

# global (alias: \_G)

MP	table	file	table
LUAVERSION	number	floats	table
MAJORVERSION	number	font	table
MINORVERSION	number	fontloader	table
arg	table	fonts	table
assert	function	frozen	boolean
attributes	table	functions	table
backends	table	gcinfo	function
beginpage	function	getfenv	function
bit	table	getmetatable	function
bit32	table	getpos	function
blobs	table	getvpos	function
boolean	table	global	table
buffers	table	graphics	table
builders	table	gzip	table
caches	table	img	table
callback	table	inspect	function
callbacks	table	interactions	table
catcodes	table	interfaces	table
characters	table	io	table
chemistry	table	ipairs	function
collectgarbage	function	jit	table
commands	table	job	table
containers	table	l	number
context	function	lang	table
converters	table	languages	table
coroutine	table	layouts	table
ctxrunner	table	lfs	table
debug	table	libraries	table
dimen	function	lmx	table
dir	table	load	function
directives	table	loadfile	function
document	table	loadstring	function
documentdata	table	logs	table
dofile	function	lpdf	table
endpage	function	lpeg	table
environment	table	ltn12	table
epdf	table	lua	table
error	function	luatex	table
experiments	table	lxml	table
figures	table	math	table

mathematics table table mhox md5 table table metapost mime table module function moduledata table modules table mp table mplib table function newproxy newtoken tahle next function noads table table node nodes table number table optionalrequire function os table outputpagestree function table package pagebuilders table function pairs table parametersets pcall function pdf table pdfscanner table table physics function print profiler table publications table rawequal function rawget function rawlen function rawset function regimes table require function resolvers table resolvestoredfunction function sandbox table scripts table select function set table

setfenv

setinspector setmetatable socket sorters statistics status storage streams string structures swialib table tex texconfig texio thirddata toboolean tokens tonumber tostring tracers trackers type typesetters unicode unpack url userdata utf utilities νf visualizers xml xpcall zip zlib

function function table table table table table table table table function table table table table table function table function function table table function table table function table table table table table table table function table table

function

### attributes (context)

colorintents table	[ montions	
	F mpoptions	
N attribute	U none	
D data	F popset	
F enable	F processcoloro	omponents
F handler	F pushset	
F register	F register	
D registered	D registered	
colors table	F registerspoto	olor
N attribute	F rgb	
F cmyk	F rgbtocmyk	
F cmyktogray	F rgbtogray	
F cmyktorgb	F rgbtohsv	
F colorcomponents	N selector	
B couple	F setlist	
D data	F setmodel	
N default	F setpagecolorm	odel
F defineintermediatecolor	D sets	
F definemultitonecolor	F spec	
F defineprocesscolor	F spot	
F definesimplegray	F spotcolorname	
F definespotcolor	F spotcolorpare	
F definetransparency	F spotcolorvalu	e
F enable	B supported	
F filter	F transparencyc	omponents
F forcedmodel	B triggering	
F forcesupport	F usecolors	
F formatcolor	F value	
F formatgray	D values	
F getpagecolormodel	B weightgray	
F gray	define	function
F graytohsv	effects	table
F handler	N attribute	
F hsvtogray	D data	
F hsvtorgb	F enable	
F iccprofile	F handler	
F isblack	F register	
N main	D registered	
S model	D values	
D models	handlers	table
F mpcolor	list	data table
F mpnamedcolor	names	data table

negatives table N attribute D data F enable F handler F register D registered F set numbers data table ofnode function private function public function restore function save function function showcurrent states table F disabletriggering F enabletriggering F finalize F initialize F process F selective F stacked F stacker function system transparencies table N attribute D data F enable F forcesupport F handler U none F register D registered B supported B triggering F value D values unsetvalue number viewerlayers table N attribute F cleanup

> D data F define

F definedlayoutcomponent F enable F forcesupport F handler B hasorder D listwise F register D registered F resolve\_begin F resolve end F resolve reset F resolve step D scopes F setfeatures F start F stop B supported D values

#### backends (context)

F hasmatrix

codeinjections table F insertrenderingwindow current strina F mergebookmarks defaults table F mergereferences T codeiniections F mergeviewerlavers F aethpos F prerollreference F getmatrix F presetsymbol F getpos F presetsymbollist F getvpos F processrendering F hasmatrix F registerdocumentcloseaction T nodeinjections F registerdocumentopenaction T registrations F registeredsymbol D tables F registerpagecloseaction install function F registerpageopenaction nodeinjections table F registersymbol F restore F setfieldcalculationset F save F setfigurealternative F transform F setfigurecolorspace nothing function F setfiguremask pdf table F setformat T codeinjections F setformsmethod F addbookmarks F setpagetransition F attachmentid F setupcanvas F clonefield F setupidentity F definefield F setxmpfile F definefieldset F startlayer F defineviewerlayer F stoplayer F embedfile F supportedformats F enabletags F unicodetoactualtext F exportformdata F useviewerlaver F getbookmarks F validfield F validfieldcategory F getdefaultfieldvalue F validfieldset F getfieldcategory F getfieldset S comment F getformatoption T nodeinjections F gethpos F addtags F getmatrix F annotation F getoutputfilename F attachfile F changestackedlayer F getpos F cmykcolor F getpreviewfigure F getvpos F comment

F destination

- F effect
- F graycolor
- F injectbitmap
- F insertmovie
- F insertsound
- F insertswf
- F insertu3d
- F knockout
- F negative
- F overprint
- F positive
- F reference
- F rgbcolor
- F spotcolor
- F startlayer
- F startstackedlayer
- F stoplayer
- F stopstackedlayer
- F transparency
- F typesetfield
- T registrations
  - F cmykindexcolor
  - F cmykspotcolor
  - F getspotcolorreference
  - F grayindexcolor
  - F grayspotcolor
  - F rgbindexcolor
  - F rgbspotcolor
  - F spotcolorname
  - F transparency
- T tables
  - D vfspecials

# registrations table tables table

#### bit (context)

```
arshift function
band
         function
bnot
         function
bor
         function
         function
bswap
bxor
         function
lshift
         function
rol
         function
         function
ror
rshift
         function
        function
tobit
         function
tohex
```

#### bit32 (basic lua)

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

# blobs (context)

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

### boolean (context)

tocontext function
tonumber function

#### buffers (context)

append function assign function collectcontent function function erase function exists getcontent function getlines function loadcontent function parallel table

F define

F hassomecontent

F next
F place
F reset
F save

prepend function
raw function
undent function

#### builders (context)

#### kernel table profiling table F hyphenation F add F kerning F distance F ligaturing F fixedprofile F mlist\_to\_hlist F aet T originals F list F hyphenate F pagehandler F kerning F profilebox F ligaturing F set paragraphs table vspacing table T constructors F analyze N attribute D categories F define F collapsevbox F disable T data F enable D map F handler D skip T methods D snapmethods F basic F definesnapmethod F default B fixed F hpack F pagehandler F oneline F resetprevdepth D names F setmap D numbers F setskip F set F snapbox F start F tocategories F stop F tocategory T expansion F vboxhandler F trace F keeptogether F registertogether T solutions T splitters F define F optimize T registered F reset F set F split F start F stop F tag

#### caches (context)

ask	boolean
base	string
collapsecontent	function
configfiles	function
contentstate	function
defaults	table
define	function
direct	boolean
force	boolean
getfirstreadablefile	function
<pre>getfirstreadablefile_TEST_ME_FIRST</pre>	function
getreadablepaths	function
getwritablepath	function
hashed	function
is_writable	function
loadcontent	function
loaddata	function
more	string
relocate	boolean
savecontent	function
savedata	function
setfirstwritablefile	function
setluanames	function
tree	string
treehash	function
usedpaths	function

# callback (basic tex)

find function
list function

register overloaded function

#### callbacks (context)

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

#### catcodes (context)

names data table
numbers data table
register function

### characters (context)

activeoffset	number	lhash	data table
adobename	function	linebreaks	table
bidi	data table	S ai	
blockrange	function	S al	
blocks	data table	S b2	
casemap	table	S ba	
categories	data table	S bb	
category	function	S bk	
categorytags	data table	S cb	
collapsed	data table	S cj	
combined	data table	S cl	
contextname	function	S cm	
csletters	data table	S cp	
data	data table	S cr	
decomposed	data table	S ex	
description	function	S gl	
descriptions	data table	S h2	
detailtags	data table	S h3	
directions	table	S hl	
enccodes	data table	S hy	
entities	data table	S id	
fallbacks	data table	S in	
filters	data table	S is	
fractions	table	S jl	
fromnumber	function	S jt	
fschars	data table	S jv	
fscodes	data table	S lf	
getrange	function	S nl	
graphemes	data table	S ns	
hangul	data table	S nu	
initialize	function	S op	
is_character	data table	S po	
is_command	data table	S pr	
is_letter	data table	S qu	
is_mark	data table	S ri	
is_punctuation	data table	S sa	
is_spacing	data table	S sg	
lcchars	data table	S sp	
lccode	function	S sy	
lccodes	data table	S wj	
lettered	function	S xx	

S	Z٧

function lower math table mathpairs data table mirrors table otfscripts data table data table ranges function registerentities remap hangul syllabe function setactivecatcodes function setlettercatcodes function shape function function shaped shash data table shchars data table data table shcodes function showstring **specialchars** data table specials data table

T char

splits

subscripts
superscripts
synonyms
tex
table
table
table

table

D accentmapping

D commandmapping

 ${\sf F} \ {\sf defineaccents}$ 

F safechar F toutf

F toutfpattern

table textclasses tonumber function ucchars data table uccode function uccodes data table uhash data table unicodechar function function upper

#### chemistry (context)

component function define function definitions data table format string inlinechemical function instance string method string molecule function moleculeparser userdata function start stop function structures number undefine function

### containers (context)

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

#### converters (context)

A	function	maxchrs	function
AK	function	minute	function
Alphabetic	function	month	function
Character	function	nicenumber	function
Characters	function	nofdays	function
Characters:es	function	number	function
I	function	numbers	function
KA	function	octnumber	function
KR	function	octstringtonumber	function
R	function	ordinal	function
RK	function	r	function
Romannumerals	function	rawcharacter	function
Sloviannumerals	function	romannumerals	function
Spanishnumerals	function	second	function
Word	function	sequences	data table
Words	function	sloviannumerals	function
a	function	spanishnumerals	function
abjadnodotnumerals	function	textime	function
abjadnumerals	function	toabjad	function
alphabetic	function	tochinese	function
character	function	toroman	function
characters	function	uchexnumber	function
characters:es	function	uchexnumbers	function
chineseallnumerals	function	upper	function
chinesecapnumerals	function	verbose	table
chinesenumerals	function	D data	
chr	function	F translate	
chrs	function	weekday	function
cn	function	word	function
cn-a	function	words	function
cn-c	function	year	function
convert	function		
define	function		
hexstringtonumber	function		
hour	function		
i	function		
isleapyear	function		
lchexnumber	function		
lchexnumbers	function		
leapyear	function		
lower	function		

### coroutine (basic lua)

```
create function
resume function
running function
status function
wrap function
yield function
```

#### ctxrunner (context)

load function
preparedfile function
prepfiles data table
resolve function

# debug (basic lua)

debug	function
getfenv	function
gethook	function
getinfo	function
getlocal	function
getmetatable	function
getregistry	function
getupvalue	function
getuservalue	function
setfenv	function
sethook	function
setlocal	function
setmetatable	function
setupvalue	function
setuservalue	function
traceback	function
upvalueid	function
upvaluejoin	function

# dir (context)

collectpattern	function
current	function
expandname	function
found	function
glob	function
globfiles	function
globpattern	function
ls	function
makedirs	function
mkdirs	function
рор	function
push	function

#### directives (context)

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

#### document (context)

arguments data table
files table
getargument function
getfilename function
options table

T commandline

D environments

D modes

D modules

T ctxfile

D environments

D modes

D modules

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

#### environment (context)

function argument data table arguments data table basicengines currentrun number default texmfcnf strina definefilefallback function definefilesvnonvm function data table engineflags filename string files table filesvnonvms data table forcedruns number getargument function homedir strina initex boolean function *initializearguments* initializefilenames function inputfilebarename string inputfilename string inputfilesuffix string **jobfilename** string iobfilesuffix string kindofrun number 1 oadexamodes function loadluafile function luafile function luafilechunk function maxnofruns number data table originalarguments outputfilename string ownbin string ownmain string ownname string ownpath string boolean prerollrun data table rawarguments reconstructcommandline function relativepath function setargument function **splitarguments** function suffix string

texfile
texmfos
texos
texroot
truefilename
useluamodule
usemodules
validengines

function string string string function function function data table

#### epdf (extra tex)

Array function
Attribute function
AttributeOwner\_Type function
Attribute\_Type function
Dict function
Object function
PDFRectangle function
StructElement\_Type function

type function

#### experiments (context)

```
data
         data table
default
         function
disable
         function
enable
         function
list
         function
name
         string
register function
report
         function
reset
         function
         function
show
value
       function
```

#### figures (context)

applvratio badname bases bitmapimage boxnumber cachepaths check checkers converters current defaultdepth defaultheight defaultsearch defaultwidth done dummy existers exists formats found get getrealpage auess hash identifiers identify images F boxes

function function data table function number data table function data table data table function number number hool ean number function function data table function data table data table function function function function data table function table

F write function include includers data table initialize function data table loaded data table localpaths magics data table mergegoodies function nofprocessed number order data table data table paths data table patterns gog function preferguality boolean data table programs function push registerpattern function registerresource function registersuffix function data table resources scale function setlookups function setorder function setpaths function suffixes data table used data table

F totable

F types

F copy F immediatewrite F keys F new F node F ofindex F package F print F scan F serialize

F check F checksize F clone

# file (basic lua)

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

### floats (context)

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

#### font (basic tex)

current function define function each function table fonts frozen function getfont overloaded function id function function max nextid function read tfm function read\_vf function

setfont function

#### fontloader (extra tex)

apply\_afmfile function
apply\_featurefile function
close function
fields function
fullinfo function

to\_table function
totable function

# fonts (context)

analyzers	table	F	process	
T features			registermain	
N blwf			report	
N fina			reset	
N half		Т	vectors	
N init		cons	tructors	table
N isol			addcoreunicode	S
N medi		F	aftercopyingch	aracters
N pref		F	applymanipulat	ors
N pstf		F	assignmathpara	meters
N rphf		В	autocleanup	
D initializers		F	beforecopyingc	haracters
D methods		D	cache	
F setstate		В	cacheintex	
T states		F	calculatescale	
N blwf		F	checkedfeature	S
N fina		F	checkedfilenam	e
N half		F	checkvirtualid	s
N init		F	cleanuptable	
N isol		F	collectprocess	ors
N mark		F	currentfonthas	feature
N medi		D	designsizes	
N pref		D	dontembed	
N pstf		F	enhanceparamet	ers
N rest		N	factor	
N rphf		F	finalize	
B useunicodemark			getfeatureacti	on
checkers	table	F	hashfeatures	
F getmissing		F	hashinstance	
F missing		Т	hashmethods	
F placeholder			F normal	
cid	table		F virtual	
F getmap		F	initializefeat	ures
F loadfile			keys	
collections	table		T character	
F checkenabled			S depth	
F clonevector			S height	
F define			S italic	
T definitions			S width	
F found			T description	
F prepare			T boundingbox	(

S depth	S xheight	
S height	T properties	
S width	S autoitalic	amount
T parameters	T cidinfo	
S ascender	S embedding	
S descender	S encodingby	tes
S designsize	S filename	
T expansion	S finalized	
S auto	S fontname	
S shrink	S format	
S step	S fullname	
S stretch	S hasitalics	
S extendfactor	S hasmath	
S factor	S mathitalic	S
S hfactor	S mode	
S mathsize	S name	
T protrusion	S noglyphnam	es
S auto	S nostackmat	h
S quad	S psname	
S scaledpoints	S textitalic	S
S scriptpercentage	S virtualize	d
S scriptscriptpercentage	D loadedfonts	
S size	S namemode	
S slantfactor	F newfeatures	
S slantperpoint	F newhandler	
T spacing	N noffontsloaded	d
S extra	N nofsharedfonts	s
S shrink	N nofsharedhash	es
S stretch	N nofsharedvecto	ors
S width	N privateoffset	
T synonyms	F readanddefine	
S em	F registerfeatu	re
S ex	B resolvevirtua	ltoo
S extra_space	F scale	
S extraspace	F scaled	
S slant	F setfactor	
S space	F setname	
S space_shrink	B sharefonts	
S space_stretch	F trytosharefon	t
S spaceshrink	N version	_
S spacestretch	current	function
S x_height	currentid	function
S units	definers	table
S vfactor	F addlookup	

F analyze N Encyrillic F applypostprocessors N Ercyrillic F checkedmode N Ereversedcyrillic F checkedscript N Escyrillic F current N Fitacyrillic S defaultlookup N Gcedilla F define N Gdot F getspecification N Gecvrillic F internal N Gheupturncyrillic F loadfont N Gjecyrillic F makespecification N Hardsigncyrillic T methods N IAcyrillic F install N IUcyrillic D variants N Icyrillic F read N Idot F register N Iecyrillic F registered N Iicyrillic F registersplit N Iishortcyrillic F resetnullfont N Iocyrillic F resolve N Izhitsacyrillic T resolvers N Jecvrillic F file N Kacvrillic F name N Kcedilla F spec N Khacyrillic definetypeface function N Kjecyrillic encodings table N Lcedilla N Ljecyrillic T agl D ctxcodes N Ncedilla D extras N Njecyrillic D names N Ocyrillic T synonyms N Odblacute N Acyrillic N Ohm N Becyrillic N Pecyrillic N Cdot N Rcedilla N Checyrillic N Shacyrillic N Decyrillic N Shchacyrillic N Djecyrillic N Softsigncyrillic N Dzecyrillic N Tcedilla N Dzhecyrillic N Tecyrillic N Ecyrillic N Tsecyrillic N Edot N Tshecyrillic N Efcyrillic N Ucyrillic N Elcyrillic N Udblacute N Emcyrillic N Ushortcyrillic

N Vecyrillic	N daletholam
N Yatcyrillic	N daletholamhebrew
N Yericyrillic	N daletpatah
N Yicyrillic	N daletpatahhebrew
N Zdot	N daletqamats
N Zecyrillic	N daletqamatshebrew
N Zhecyrillic	N daletqubuts
N acutecmb	N daletqubutshebrew
N acyrillic	N daletsegol
N afii00208	N daletsegolhebrew
N afii08941	N daletsheva
N afii57694	N daletshevahebrew
N afii57695	N dalettsere
N afii57700	N dammaarabic
N afii57705	N dammatanaltonearabic
N afii57723	N dargahebrew
N alef	N dbllowline
N alefmaksurainitialarabic	N decimalseparatorarabic
N alefmaksuramedialarabic	N dialytikatonos
N approximatelyequal	N dotbelowcmb
N asteriskaltonearabic	N doubleyodpatah
N ayin	N doubleyodpatahhebrew
N bet	N edot
N betdagesh	N eightarabic
N blackdownpointingtriangle	
. 3 3	N eighthnotebeamed
N blackleftpointingpointer	N eightnhotebeamed N ethahtafoukhhebrew
	_
N blackleftpointingpointer	N etnahtafoukhhebrew
N blackleftpointingpointer N blackrectangle	N etnahtafoukhhebrew N etnahtafoukhlefthebrew
N blackleftpointingpointer N blackrectangle N blackrightpointingpointer	N etnahtafoukhhebrew N etnahtafoukhlefthebrew N etnahtahebrew
N blackleftpointingpointer N blackrectangle N blackrightpointingpointer N blacksmilingface	N etnahtafoukhhebrew N etnahtafoukhlefthebrew N etnahtahebrew N fathaarabic
N blackleftpointingpointer N blackrectangle N blackrightpointingpointer N blacksmilingface N blacksquare	N etnahtafoukhhebrew N etnahtafoukhlefthebrew N etnahtahebrew N fathaarabic N finalkaf
N blackleftpointingpointer N blackrectangle N blackrightpointingpointer N blacksmilingface N blacksquare N blackuppointingtriangle	N etnahtafoukhhebrew N etnahtafoukhlefthebrew N etnahtahebrew N fathaarabic N finalkaf N finalkafdagesh
N blackleftpointingpointer N blackrectangle N blackrightpointingpointer N blacksmilingface N blacksquare N blackuppointingtriangle N bulletinverse	N etnahtafoukhhebrew N etnahtafoukhlefthebrew N etnahtahebrew N fathaarabic N finalkaf N finalkafdagesh N finalkafhebrew
N blackleftpointingpointer N blackrectangle N blackrightpointingpointer N blacksmilingface N blacksquare N blackuppointingtriangle N bulletinverse N cdot	N etnahtafoukhhebrew N etnahtafoukhlefthebrew N etnahtahebrew N fathaarabic N finalkaf N finalkafdagesh N finalkafhebrew N finalkafqamats
N blackleftpointingpointer N blackrectangle N blackrightpointingpointer N blacksmilingface N blacksquare N blackuppointingtriangle N bulletinverse N cdot N compass	N etnahtafoukhhebrew N etnahtafoukhlefthebrew N etnahtahebrew N fathaarabic N finalkaf N finalkafdagesh N finalkafhebrew N finalkafqamats
N blackleftpointingpointer N blackrectangle N blackrightpointingpointer N blacksmilingface N blacksquare N blackuppointingtriangle N bulletinverse N cdot N compass N dagesh	N etnahtafoukhhebrew N etnahtafoukhlefthebrew N etnahtahebrew N fathaarabic N finalkaf N finalkafdagesh N finalkafhebrew N finalkafqamats N finalkafqamats
N blackleftpointingpointer N blackrectangle N blacksightpointingpointer N blacksmilingface N blacksquare N blackuppointingtriangle N bulletinverse N cdot N compass N dagesh N dalet	N etnahtafoukhhebrew N etnahtafoukhlefthebrew N etnahtahebrew N fathaarabic N finalkaf N finalkafdagesh N finalkafhebrew N finalkafqamats N finalkafqamats N finalkafqamatshebrew N finalkafsheva N finalkafsheva
N blackleftpointingpointer N blackrectangle N blackrightpointingpointer N blacksmilingface N blacksquare N blackuppointingtriangle N bulletinverse N cdot N compass N dagesh N dalet N daletdagesh	N etnahtafoukhhebrew N etnahtafoukhlefthebrew N etnahtahebrew N fathaarabic N finalkaf N finalkafdagesh N finalkafhebrew N finalkafqamats N finalkafqamats N finalkafqamatshebrew N finalkafsheva N finalmem N finalnun
N blackleftpointingpointer N blackrectangle N blackrightpointingpointer N blacksmilingface N blacksquare N blackuppointingtriangle N bulletinverse N cdot N compass N dagesh N dalet N daletdagesh N dalethatafpatah	N etnahtafoukhhebrew N etnahtafoukhlefthebrew N etnahtahebrew N fathaarabic N finalkaf N finalkafdagesh N finalkafhebrew N finalkafqamats N finalkafqamats N finalkafqamatshebrew N finalkafsheva N finalmem N finalnun
N blackleftpointingpointer N blackrectangle N blackrightpointingpointer N blacksmilingface N blacksquare N blackuppointingtriangle N bulletinverse N cdot N compass N dagesh N dalet N daletdagesh N dalethatafpatah	N etnahtafoukhhebrew N etnahtafoukhlefthebrew N etnahtahebrew N fathaarabic N finalkaf N finalkafdagesh N finalkafdebrew N finalkafqamats N finalkafqamats N finalkafqamatshebrew N finalkafsheva N finalmem N finalnun N finalpe N finaltsadi
N blackleftpointingpointer N blackrectangle N blackrightpointingpointer N blacksmilingface N blacksquare N blackuppointingtriangle N bulletinverse N cdot N compass N dagesh N dalet N dalethatafpatah N dalethatafpatahhebrew N dalethatafsegol	N etnahtafoukhhebrew N etnahtafoukhlefthebrew N etnahtahebrew N fathaarabic N finalkaf N finalkafdagesh N finalkafdebrew N finalkafqamats N finalkafqamats N finalkafqamatshebrew N finalkafsheva N finalmem N finalnun N finalpe N finaltsadi N fivearabic
N blackleftpointingpointer N blackrectangle N blacksightpointingpointer N blacksmilingface N blacksquare N blackuppointingtriangle N bulletinverse N cdot N compass N dagesh N dalet N daletdagesh N dalethatafpatah N dalethatafpatahhebrew N dalethatafsegol N dalethatafsegolhebrew	N etnahtafoukhhebrew N etnahtafoukhlefthebrew N etnahtahebrew N fathaarabic N finalkaf N finalkafdagesh N finalkafdebrew N finalkafqamats N finalkafqamatshebrew N finalkafsheva N finalmem N finalnun N finalpe N finaltsadi N fivearabic N forall

N gdot

N dalethiriqhebrew

N aimel N holam N holam19 N gimeldagesh N gravecmb N holam26 N haaltonearabic N holam32 N hamzaarabic N holamhebrew N hamzadammaarabic N holamnarrowhebrew N hamzadammatanarabic N holamquarterhebrew N hamzafathaarabic N ilde N hamzafathatanarahic N integralbottom N hamzalowarabic N integraltop N hamzalowkasraarabic N kaf N hamzalowkasratanarabic N kafdagesh N hatafpatah N kashidaautoarabic N hatafpatah16 N kashidaautonosidebearingarabic N hatafpatah23 N kcedilla N hatafpatah2f N lamed N hatafpatahhebrew N lameddagesh N hatafpatahnarrowhebrew N lamedhebrew N hatafpatahquarterhebrew N lamedholam N hatafgamats N lamedholamdagesh N hatafgamats1b N lamedholamdageshhebrew N hatafqamats28 N laminitialarabic N lammeemjeeminitialarabic N hatafgamats34 N hatafgamatshebrew N lcedilla N hatafqamatsnarrowhebrew N logicalnotreversed N hatafqamatsquarterhebrew N mahapakhhebrew N hatafsegol N mem N hatafsegol17 N memdagesh N hatafsegol24 N merkhahebrew N hatafsegol30 N merkhakefulahebrew N hatafsegolhebrew N middot N hatafsegolnarrowhebrew N munahhebrew N hatafsegolquarterhebrew N nbspace N he N ncedilla N hedagesh N newshegelsign N hehfinalalttwoarabic N ninearabic N het N noonhehinitialarabic N hiriq N nun N hiriq14 N nundagesh N hiria21 N odblacute N hiriq2d N onearabic N hiriqhebrew N overscore N hirignarrowhebrew N patah

N patah11

N hirigguarterhebrew

N patahld N aubuts N qubuts18 N patah2a N qubuts25 N patahhebrew N patahnarrowhebrew N qubuts31 N patahquarterhebrew N gubutshebrew N pe N gubutsnarrowhebrew N qubutsquarterhebrew N pedagesh N quoteleftreversed N gamats N gamats10 N rafe N rcedilla N gamatsla N gamats1c N reharabic N gamats27 N resh N gamats29 N reshhatafpatah N gamats33 N reshhatafpatahhebrew N gamatsde N reshhatafsegol N gamatshebrew N reshhatafsegolhebrew N gamatsnarrowhebrew N reshhebrew N gamatsgatanhebrew N reshhiriq N qamatsqatannarrowhebrew N reshhirighebrew N gamatsgatanguarterhebrew N reshholam N gamatsgatanwidehebrew N reshholamhebrew N gamatsquarterhebrew N reshpatah N reshpatahhebrew N qof N gofdagesh N reshgamats N qofhatafpatah N reshgamatshebrew N qofhatafpatahhebrew N reshaubuts N qofhatafsegol N reshqubutshebrew N qofhatafsegolhebrew N reshsegol N qofhebrew N reshsegolhebrew N gofhirig N reshsheva N gofhirighebrew N reshshevahebrew N qofholam N reshtsere N qofholamhebrew N reviahehrew N samekh N gofpatah N gofpatahhebrew N samekhdagesh N qofqamats N segol N gofgamatshebrew N segol13 N gofgubuts N segol1f N qofqubutshebrew N segol2c N qofsegol N segolhebrew N qofsegolhebrew N segolnarrowhebrew N gofsheva N segolquarterhebrew N qofshevahebrew N sevenarabic N goftsere N sfthyphen

N	shaddaarabic		N	vavholam		
N	shegel		N	yerahbenyomo	ohebrew	
N	sheva			yod		
N	sheva115		N	yoddagesh		
N	sheva15			zayin		
N	sheva22			zayindagesh		
N	sheva2e		N	zdot		
	shevahebrew			zeroarabic		
N	shevanarrowhebrew		Du	nicodes		
	shevaquarterhebrew	D	cac	he		
	shin	F	is	known		
	shindagesh		kno			
	shindageshshindot	F	loa	d		
	shindageshsindot			e_unicode_ve	ector	
	shinshindot		mat			
	shinsindot			sion		
	siluqhebrew	expa			data	table
	sixarabic	form				table
	tav	good	lies	1	table	
	tavdages	_		orschemes		
	tavdagesh		dat			
	tcedilla			ignsizes		
	tchehinitialarabic			enames		
	tet			compositions	;	
	tetdagesh		lis	·		
	tevirhebrew	•		ompositions		
	thousandsseparatorarabic			esignsizes		
	threearabic			xpansions		
	tildecmb			eatureset		
	tipehahebrew			ilenames		
	tsadi			iles		
	tsadidagesh			athematics		
	tsere			rotrusions		
	tsere12			olutions		
	tserele			reatments		
	tsere2b			ypefaces		
	tserehebrew	F	loa	, ,		
	tserenarrowhebrew			_ pare_feature	25	
	tserequarterhebrew			ister		
	twoarabic			isterpostpro	cessor	
	udblacute		rep			
	vav	hand			table	
	vavdagesh		afm		24000	
		'		ddkerns		
IV	vavdagesh65		ва	uukeriis		

B addligatures F gsub context B addtexligatures F gsub contextchain B autoprefixed F gsub\_ligature D cache F gsub multiple D features F gsub reversecontextchain T helpdata F qsub single D bothkerned F load D leftkerned F nackoutlines T readers D ligatures D rightkerned F addunicodetable D texligatures D cache F load F cff F setfeatures F checkhash B syncspace F cmap N version F compact T otf F expand F addfeature F qdef D cache F getinfo T chainhandlers F glyf F normal F gpos F verbose F asub F collectlookups F head F dataset F hhea S defaultbasealternate F hmtx S defaultnodealternate F kern D enhancers F loadfont D features F loadshapes F fileformat F loca F getalternate F math T glists F maxp T handlers F name F devanagari remove joiners F os/2 F devanagari reorder matras F pack F devanagari\_reorder\_pre\_base\_reordering\_consonants F post F rehash F devanagari\_reorder\_reph F gpos context T streamreader F close F gpos\_contextchain F gpos\_cursive F getposition F gpos\_mark2base F look F gpos\_mark2ligature F open F gpos\_mark2mark F read2dot14 F gpos\_pair F readbyte F gpos single F readbytes

F gsub\_alternate

F readcardinal

F readcardinal1		D predefined	
F readcardinal2		D whatever	
F readcardinal3	hash		table
F readcardinal4		characters	tabte
F readchar			
F readfixed4		csnames	
		descriptions	
F readinteger		dynamics	
F readinteger1		emwidths	
F readinteger2		exheights	
F readinteger4		extensibles	
F readstring		features	
F readtag		identifiers	
F setposition		italics	
F size		lastmathids	
Fskip		marks	
F skiplong		modes	
F skipshort		originals	
N tableversion		parameters	
F unpack		processes	
N version	D	properties	
F scriptandlanguage		quads	
F setcontextchain	D	resources	
F setdynamics	Т	setdynamics	
F setfeatures	Т	shapes	
T statistics	D	spaces	
D usedfeatures	D	spacings	
T tables	D	unicodes	
D baselines	D	variants	
D features		xheights	
D languages	help	ers	table
D scripts	F	addprivate	
F unpackoutlines	F	dimenfactor	
N version	F	expandglyph	
T pfb	F	fontpatternhass	ize
T tfm	F	getdigitwidth	
D features	F	getparameters	
F setfeatures	F	getprivatenode	
T vf	F	hasprivate	
T combinations	F	indextoslot	
F combine	F	name	
T combiner	F	nametoslot	
D commands	F	setdigitwidth	
D helpers	F	splitfontpatter	'n
D math	F	tochar	

infofont	function	F	check_tfm	
iterators	table		dfont	
F characters			lua	
F descriptions			opentype	
F glyphs			otf	
loggers	table	-	pfb	
F add_placeholde			sequence	
D category_to_pl			tfm	
F format	accinocaci		ttc	
F onetimemessage		-	ttf	
F register		sele		table
F reportdefinedf	onts		data	cabcc
F reportusedfeat			define	
mappings	table		definetypeface	
F addtounicode	tabte		fallbacks	
F fromunicode16			filterinput	
F loadfile			methods	
F loadline		'	F default	
F makenameparser			F features	
D overloads			F file	
F reset			F goodies	
F tounicode			F name	
F tounicode16			F selectfont	
F tounicode16seq			F simplefonts	
metapost	table		F spec	
F boundingbox		_	F style	
F boxtomp			registerfallbac	:K
F draw			searchfiles	<b>4</b> -61-
F fill			ifiers	table
F maxbounds			contextmerged	
F output			contextnumber	
F paths			contextnumbers	
F widthline			contextsetups	
F zeroline	4-11-		contexttostring	I
тр	table		definecontext	
D cache			mergecontext	
B inline			presetcontext	
N version			registercontext	
names	data table		showcontext	
nulldata 	data table		splitcontext	
protrusions	data table		synonyms	
readers	table		variants	
F afm		symb		table
F check_lua		F	uselibrary	

tables table
tracers table
treatments table

F applyfixes

D data

S filename

F ignoredfile

F report F trace

typefaces

data table

# functions (context)

**dummy** function

#### graphics (context)

#### backgrounds table

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

#### gzip (extra lua)

```
close function
lines function
load function
open function
save function
suffix function
```

# img (basic tex)

boxes	function
check	function
checksize	function
clone	function
сору	function
immediatewrite	function
keys	function
new	function
node	function
ofindex	function
package	function
print	function
scan	function
serialize	function
totable	function
types	function
write	function

#### interactions (context)

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

# interfaces (context)

addvalidkeys	function	F MPr
cachedsetups	data table	F MPrest
cachesetup	function	F MPrs
checked specification	function	F MPul
complete	data table	F MPur
constants	data table	F MPw
corenamespaces	data table	F MPx
definecommand	function	F MPxy
doifelsemessage	function	F MPxywhd
elements	data table	F MPy
formats	data table	F Romannumerals
${\tt getcheckedparameters}$	function	F abjadnodotnumerals
getmessage	function	F abjadnumerals
hashedsetups	data table	F addcounter
implement	function	F addfeature
interfacedcommand	function	F addgrapheme
interfaces	table	F addlinklistelement
invalidkey	function	F addreplacements
is_command	function	F addtojavascriptpreamble
message	function	F addtolist
namespaces	table	F addvalidinterfacekeys
F define		F allinputpaths
F list		F alphabetic
registernamespace	function	F analysefloatmethod
scanners	table	F analyzeitemgroup
F Alphabetic		F analyzelist
F Character		F analyzeregister
F Characters		F applytobox
F MPLIBconvertoutlinetex	t	F applytofirstcharacter
F MPc		F assignbuffer
F MPd		F autofinishstructurelevels
F MPh		F autonextspace
F MPll		F autonextstructurelevel
F MPlr		F autosetups
F MPls		F autostarttext
F MPn		F autostoptext
F MPp		F averagecharwidth
F MPpardata		F bitmapimage
F MPplus		F boxtostring
F MPpos		F bposcolumn
F MPposset		F bposcolumnregistered

F btxabbreviatediournal F btxsaveiournallist F btxaddentry F btxsetdataset F btxaddjournal F btxsetentry F btxauthor F btxsetregister F btxauthorfield F btxsetspecification F btxauthortoregister F btxsingularorplural F btxcollectlistentries F btxtoregister F htxcurrentfirstnames F htxusedataset F btxcurrentinitials F htxuservariable F btxcurrentjuniors E huildtextaccent F btxcurrentsurnames F character F btxcurrentvons F characters F btxdetail F chardescription F btxdirect F checkcountersetup F btxdoif F checkedconversion F btxdoifelse F checkedpagefloat F btxdoifelsecombiinlist F checkinjector F checkinterfacechain F btxdoifelsesameasprevious F htxdoifelseuservariable F checknextinjector F btxdoifnot F checkpreviousinjector F btxexpandediournal F checktwopassdata F btxfetchlistentries F chemicalcomponent F btxfield F chinesenumerals F btxfieldname F cleanfontname F btxfieldtvpe F cleanupbox F btxfirstofrange F cleanuplayers F btxflush F clonefield F btxflushlistcombi F collectfloat F btxflushlistentry F collecthelp F btxflushmarked F colorcomponents F btxflushpages F concatcommalist F btxfoundname F consultfloat F btxfoundtype F converthtxdatasettoxml F converteddimen F btxhandlecite F btxhandlenocite F convertmpstopdf F btxlastofrange F copyposition F btxlistvariant F cos F btxloaddefinitionfile F cosd F btxloadjournallist F countervalue F btxloadreplacementfile F counttwopassdata F btxoneorrange F currentcomponent F currentdate F btxpreparelistentries F btxremapauthor F currentdesignsize

F currentenvironment

F btxsavedataset

F currentposthyphenchar F defineprocesscolorglobal F currentprehyphenchar F defineprocesscolorlocal F currentproduct F defineprogram F definereference F currentproject F currentreferenceorder F defineregister F currentsectiontolist F definerule F datasetvariable F definesectionlevels F defineselectfont F dayname F decrementcounter F defineshift F decrementedcounter F definesnapmethod F decrementsubcounter F definespotcolorglobal F defineaccents F definestructureblock F defineattribute F definestructureset F definebreakpoint F definetransparency F definebreakpoints F definetwopasslist F definecharacterspacing F definetypeface F definechemical F defineviewerlaver F defineconversion F depthnumber F definecounter F digits normal F definedlayoutcomponent F digits reverse F definefallbackfamily F disableautofontscript F definefield F disabledirectives F definefieldset F disableexperiments F definefilefallback F disablejobsave F definefilesvnonvm F disableparbuilder F definefont one F disableregime F disablespellchecking F definefont two F definefontfamily F disablestatetriggering F definefontfeature F disablestream F definefontsolution F disabletrackers F definehyphenationfeatures F discardfromlist F defineinsertion F doanalyzeframedbox E defineintermediatecolor F doifcounter F definelabels F doifelseblack F doifelsebuffer F definelanguage F definelinkedlist F doifelsecharinfont F definemarking F doifelsecommon F definemetafont F doifelsecontinuewithfile F doifelseconverter F definemultitonecolorglobal F definenamespace F doifelsecounter F definenote F doifelsecurrentfonthasfeature F defineparallel F doifelsedrawingblack F defineparbuilder F doifelsefieldcategory F defineprocesscolordummy F doifelsefiledefined

F doifelsefileexist F doifsame F doifelsefirstchar F doprocesstypescriptfile F doifelsefontpresent F doreshapeframedbox F doifelseinelement F dosaveposition F doifelseinputfile F dosavepositionplus F doifelseinset F dosavepositionwhd F doifelseintwopassdata F dosetposition F doifelseleapvear F dosetpositionbox F doifelselisthasentry F dosetpositionplus F doifelselisthasnumher F dosetpositionstrut F dosetpositionwhd F doifelselisthaspage F doifelselisthastitle F dostarttextfile F doifelselocfile F dostoptextfile F doifelsemarking F elapsedtime F doifelsemessage F enableasciimode F doifelseobjectreferencefound F enableautofontscript F doifelseolderversion F enablebackgroundalign F doifelseoverlapping F enablebackgroundboxes F enablecolor F doifelseparallel F doifelseparentfile F enablecolorintents F doifelsepathexist F enablecrlf F doifelseposition F enabledirectives F doifelsepositiononpage F enableexperiments F enablefontcolorschemes F doifelsepositionsonsamepage F doifelsepositionsonthispage F enableinteraction F doifelsepositionsused F enableparbuilder F doifelserangeonpage F enableregime F doifelsereference F enablerules F enableshifts F doifelsesame F doifelsestackedfloats F enablespellchecking F doifelsesynonymshown F enablestatetriggering F doifelsesynonymused F enablestream F doifelseurldefined F enabletrackers F doifelseutfmathabove F enabletransparency F enableutf F doifelseutfmathaccent F doifelseutfmathbelow F enhancelinkedlist F doifelseutfmathfiller F enhancelist F doifelsevisualizer F enhancereference F doiffieldsetelse F enhanceregister F doifnotcounter F eposcolumn F doifnotecontent F eposcolumnregistered F erasebuffer F doifnoteonsamepageasprevious F doifnotsame F execute

F expandcurrentreference

F doifposition

F exportformdata F flushstream F exportreferences F flushstreamcopy F extendregister F fontchar F extensiblecode F fontcharbvindex F featureattribute F fontcollectionclone F featurelist F fontcollectiondefine F feedback F fontcollectionprepare F fetchallmarks F fontcollectionregister F fetchmultipar F fontcollectionreport F fetchmultishape F fontcollectionreset F fetchonemark F fontlookupgetkev F fetchposboxes F fontlookupgetkeyofindex F fetchtwomarks F fontlookupinitialize F figure check F fontlookupnoffound F figure done F forceendiob F figure\_dummy F forcequitiob F figure\_identify F formatcolor F figure include F formatoray F figure mergegoodies F from F figure pop F getbidimode F figure push F getbodyfontsizes F figure reset F getbuffer F getbufferctxlua F figure\_scale F figurefilename F getbuffermkvi F figurefilepath F getcheckedinterfaceparameters F figurefiletype F getcurrentprefixspec F getcurrentreferencemetadata F figurerequest F figurestatus F getdefaultfieldvalue F figureused F getdocumentargument F filterdefaultreference F getdocumentfilename F filterreference F getelementtag F finalizebox F getfieldcategory F findtwopassdata F aetfile F finishexport F getfirstcharacter F firstcountervalue F getfirsttwopassdata F firstinset F getfloatvariable F firstsubcountervalue F getfullstructurenumber F flushfloat F getinternallistreference F flushlabeledfloat F getlasttwopassdata F flushnotes F getmarking F flushpageinjectionsafter F getmessage F flushpageinjectionsbefore F getmpextensions F flushpostponedblocks F getmprandomnumber F flushpostponednotes F getnotestate

F getprivatechar F insertfield F insertionnumber F getprogram F getrandomdimen F insertrenderingwindow F getrandomfloat F installedlanguages F getrandomnumber F installtexdirective F getrandomseed F installtextracker F getreadfilename F iobfilename F getsomefullstructurenumber F jobfilesuffix F getsomestructurenumber F languagenumber F lastcountervalue F getspecificstructuretitle F getstructurelevel F lastsubcountervalue F getstructurenumber F lchexnumber F getsubstring F lchexnumbers F gettexbuffer F leapyear F gettwopassdata F linenumbersstageone F gettwopassdatalist F linenumbersstagetwo F geturl F listgroupindex F listlabel F getvisual F hboxtovbox F listlocation F helpaction F listnamespaces F helpreference F listprefixednumber F hexstringtonumber F listprefixedpage F horizontalcode F listrealpage F listsize F hour F hyphenatedlist F listtitle F hyphenatedurl F listuserdata F loadexamodes F immediatemessage F incrementcounter F loadfontgoodies F loadluamodule F incrementedcounter F incrementsubcounter F loadmapfile F initializejob F loadmapline F initializestream F loadspellchecklist F initializetexdirectives F loadtypescriptfile F initializetextrackers F loadvisualizer F locatefilepath F injectcurrentreference F injectcurrentreferencehtdp F locfilename F injectreference F lower F inlinechemical F lpdf\_adddocumentcolorspace F inputfilebarename F lpdf adddocumentextgstate F inputfilename F lpdf adddocumentpattern F inputfilerealsuffix F lpdf\_adddocumentshade F inputfilesuffix F lpdf\_addpageattributes F insertattachment F lpdf addpageresources

F lpdf\_addpagesattributes

F insertcomment

F lpdf addtocatalog F mpsetoutercolor F lpdf addtoinfo F mpsetsxsy F lpdf addtonames F mpsettext F lpdf collectedresources F mptexget F lpdf color F mptexreset F luascript F mptexset F luathread F mptexsetfrombuffer F lxmlid F namedstructureuservariable F markcontent F namedstructurevariable F markingnumber F nhfs F markingtitle F nextcountervalue F markiniector F nextparallel F markregionbox F nextsubcountervalue F markregionboxcorrected F nofdays F markregionboxtagged F nofstackedfloats F markvisualfonts F notedeltapage F mathfraction F notelistindex F mathrenderset F notenumberpage F noteprefixednumber F message F metapostescaped F notesymbolpage F metapostformatted F notetitle F metapostgraphformat F ntimes F number F minute F mixcleanup F numbers F mixfinalize F objectnumber F mixflushlist F objectpage F mixflushrest F octnumber F mixgetsplit F octstringtonumber F mixsetsplit F operatingsystem F mixstate F ordinal F molecule F outputfilename F month F overloadbookmark F monthmnem F overloaderror F monthname F pagestaterealpage F mpcolor F parpos F mpflushliteral F pdfrotation F mpflushreset F pdfstartmatrix F mpgettext F pdfstartmirroring F pdfstartrotation F mpgraphic F mpoptions F pdfstartscaling F mprunset F pdfstopmatrix F mpruntab F pdfstopmirroring

F mprunvar
F mpsetclippath

F pdfstoprotation

F pdfstopscaling

F percentageof F pushreaime F pqfxcolorspec F pushsectionblock F pickupbuffer F pushstream F pickupmarkedcontent F rawcharacter F pickuppunctuation F rawcountervalue F placeparallel F rawdate F popfloat F rawsubcountervalue F pophyphenation F referencepagedetail F popitaliccorrection F referencepagestate F poplist F referencerealpage F poppath F registerattachment F poprandomseed F registerbackendsymbol F popreferenceprefix F registerbodyfontsize F popregime F registerbookmark F popsectionblock F registerbuttons F postponenotes F registercolorintent F prefixedconverted F registeredviewerlayer F presetsymbollist F registerfigurepattern F presettabulate F registerfiguresuffix F prevcountervalue F registerhelp F previoussubcountervalue F registerhyphenationexception F processbodyfontsizes F registerhyphenationpattern F processbuffer F registeritemgroup F processcolorcomponents F registerlanguagefeatures F processedfile F registerlinenumbering F processedfiles F registermaintextcolor F registermpyfile F processfile F processfilemany F registernamedlua F processfilenone F registernamespace F processfileonce F registerpostponedblock F processiob F registerrendering F processlist F registersection F processregister F registershownsynonym F processsplit F registerstructureprocessor F processsynonyms F registersynonym F profilebox F registerunit F purefontname F registerusedsynonym F pushfloat F registeruserdata F pushhyphenation F relatemarking F pushitaliccorrection F renderingvar F pushlist F replacefeature F pushpath F replacepospxywhd F pushrandomseed F reportstructure

F resavefloat

F pushreferenceprefix

F resetcharacteralign F savenote F resetcounter F saveobject F reseteffect F savepagedata F resetfeature F savepageinjections F resetfontfeature F saveparallel F resetfontsolution F savespecificfloat F resetiniector F savestructureblock F resetitaliccorrection F savetaggedtwopassdata F resetmanfiles F savetwopassdata F resetmarking F savevariable F resetmathattributes F second F resetmathitalics F selectstructureblock F resetnullfont F setactivecatcodes F resetparallel F setbreakpoints F resetpath F setcharacteralign F resetprevdepth F setcharactercasing F resetreference F setcharactercleaning F resetscript F setcharacterkerning F resetshownsynonyms F setcharacterspacing F resetstructureprocessor F setcharacterstripping F resetsubcounter F setclosedocumentaction F resettimer F setclosepageaction F resettrackers F setcolormodel F setcounter F resetusedsynonyms F restartcounter F setdataset F restartsubcounter F setdigitsmanipulation F restorecounter F setdirection F restorecurrentattributes F setdocumentargument F restorenote F setdocumentcommandline F reuserandomseed F setdocumentctxfile F revivefeature F setdocumentdefaultargument F romannumerals F setdocumentenvironments F rounded F setdocumentfilename F runbuffer F setdocumentfilenames F runcontextjob F setdocumentmodes F safechar F setdocumentmodules F savebuffer F seteffect F savecounter F setelementuserproperties F savecurrentattributes F setfigurelookuporder F savedlistnumber F setfigurepaths F savedlistprefixednumber F setfirstline F savedlisttitle F setfontfeature F savefloat F setfontofid

F setfontsolution

F savemargindata

F setformat F setprofile F setformsmethod F setrandomseed F sethyphenatedurlcharacters F setrealign F sethyphenationfeatures F setrealspaces F sethyphenationmethod F setreferencearguments F setinitial F setreferenceattribute F setiniector F setreferenceoperation F setinnerreferencemethod F setregionbox F setinsertionlocation F setregionboxtagged F setinterfaceconstant F setregistermethod F setinterfaceelement F setreplacements F setinterfacemessage F setscript F setinterfacemessages F setsectionblock F setinterfacevariable F setsectionentry F setinternalreference F setstructureblockstate F setitaliccorrection F setstructurelevel F setjavascriptpreamble F setstructurenumber F setjobcomment F setsubcounter F setlanguageexceptions F settagaspect F setlanguagesynonym F settagcombination F setlettercatcodes F settagdescription F setmarking F settagdescriptionsymbol F setmathalphabet F settagfigure F setmathalternate F settaggedmetadata F setmathattribute F settaghighlight F setmathdirection F settagitem F setmathitalics F settagitemgroup F setmathstyle F settaglist F setmpextensions F settagproperty F setnegative F settagproperty b F setnextinternalreference F settagproperty n F setnextreferenceorder F settagregister E setnotestate F settagsorting F setnotesymbolpage F settagsynonym F setobject F settagtablecell F setopendocumentaction F settagtabulatecell F setopenpageaction F setupbookmarks F setowncounter F setupcanvas F setownsubcounter F setupcharacterspacing F setpagecolormodel F setupexport F setpagestate F setupfontexpansion

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F setpagestaterealpageno
F setpagetransition

F setparbuilder

F setupfontprotrusion

F setupidentity

F setupinsertion

F setupitaliccorrection F starttext F setuplinenumbering F startviewerlayer F setuserinterface F stopactualtext F stopchemical F setvalidinterfacekevs F setvisual F stopcolorset F setvisualfont F stopcomponent F setvisuallaver F stopenvironment F setxmpfile F stopfontsolution F showassignerror F stopparbuilder F showattributes F stopproduct F showcounter F stopproject F showdebuginfo F stopregime F showdirectives F stopsectionlevel F showdiscretionaries F stopstream F showexperiments F stoptag F showhyphenatedinlist F stoptext F showhyphenationtrace F stopviewerlayer F showinjector F storejavascriptcode F showjustification F storejavascriptpreamble F showlogcategories F storenote F showmessage F storeregister F showtrackers F strdp F strhd F sin F strht F sind F splitfilename F strip F spotcolorname F structureautocatcodedget F spotcolorparent F structurecatcodedget F spotcolorvalue F structuregivencatcodedget F startactualtext F structurenumber F startchemical F structuretitle F startcolorset F structureuservariable F startcomponent E structurevariable F startenvironment F strwd F startfontsolution F subcountervalue F subcountervalues F startparbuilder F startproduct F subsubcountervalues F startproject F subtractfeature F startregime F synchronizemarking F startsectionlevel F synchronizestream F startstream F synonymmeaning F synonymname F starttag F systemlog F starttag\_c F tagmfunctionlab F starttag d F starttag u F tagmfunctiontxt

F tan Fusetexfile F usetexfileonce F tand F texdefinition one F useurl F texdefinition two F usexmlfile F textime F usexmlfileonce F thefirstcharacter F usezipfile F theremainingcharacters F utfchar F utfmathclass F tochar F transparencycomponents F utfmathcommand F truefilename F utfmathcommandahove F type F utfmathcommandbelow F utfmathcommandfiller F typebuffer F typefile F utfmathfiller F uchar F utfmathstretch F uchexnumber F vboxlisttohbox F uchexnumbers F verbose F undefinechemical F vspacing F unicodechar F vspacingcollapse F unihex F vspacingcollapseonly F unit normal F vspacingdefine F unit reverse F vspacingsetamount F unloadlanguage F vspacingsnap F upper F way F useMPlibrary F weekday F useanvfile F weekdavname F useanvfileonce F writestatus F usecldfile F x\_table\_c F usecldfileonce F x\_table\_cleanup F usecolors F x table construct F usecomponent F x\_table\_create F useenvironment F x\_table\_finish\_row F usefigurebase F x table flush F usefile F x table init construct F usejavascriptpreamble F x\_table\_init\_reflow\_height F usejavascriptscripts F x\_table\_init\_reflow\_height\_option F useluafile F x\_table\_init\_reflow\_width F useluafileonce F x\_table\_init\_reflow\_width\_option F useluamodule F x\_table\_next\_row F usemodules F x\_table\_next\_row\_option F usepath F x table r F useproduct F x\_table\_reflow\_height F useproject F x\_table\_reflow\_width F usesubpath F x table set construct F usesymbols F x\_table\_set\_reflow\_height

F x\_table\_set\_reflow\_width F xmlfirst F xmladdindex F xmlflush F xmlafterdocumentsetup F xmlflushcontext F xmlaftersetup F xmlflushdocumentsetups F xmlall F xmlflushlinewise F xmlappenddocumentsetup F xmlflushspacewise F xmlappendsetup F xmlfunction F xmlapplyselectors F xmlgetindex F xmlatt F xmlinclude F xmlattdef F xmlincludeoptions F xmlattribute F xmlinclusion F xmlinclusions F xmlattributedef F xmlbadinclusions F xmlindex F xmlbeforedocumentsetup F xmlinfo F xmlbeforesetup F xmlinlineverbatim F xmlchainatt F xmlinstalldirective F xmlchainattdef F xmllast F xmlload F xmlchecknamespace F xmlloadbuffer F xmlcommand F xmlconcat F xmlloaddata F xmlconcatrange F xmlloaddirectives F xmlcontext F xmlloadregistered F xmlcount F xmlmain F xmldelete F xmlmatch F xmldirect F xmlname F xmldirectives F xmlnamespace F xmldirectivesafter F xmlnonspace F xmldirectivesbefore F xmlpos F xmldisplayverbatim F xmlprependdocumentsetup F xmldoif F xmlprependsetup F xmldoifelse F xmlraw F xmldoifelseempty F xmlrefatt F xmldoifelseselfempty F xmlregisterns F xmldoifelsetext F xmlremapname F xmldoifempty F xmlremapnamespace F xmldoifnot F xmlremovedocumentsetup F xmldoifnotempty F xmlremovesetup F xmldoifnotselfempty F xmlresetdocumentsetups F xmldoifnottext F xmlresetinjectors F xmldoifselfemptv F xmlsave F xmldoiftext F xmlsetcommandtonone F xmlelement F xmlsetcommandtotext

F xmlsetentity

F xmlsetinjectors

F xmlfilter

F xmlfilterlist

- F xmlsetsetup
- F xmlsnippet
- F xmlstartraw
- F xmlstarttiming
- F xmlstopraw
- F xmlstoptiming
- F xmlstrip
- F xmlstripanywhere
- F xmlstripnolines
- F xmlstripped
- F xmlstrippednolines
- F xmltag
- F xmltexentity
- F xmltext
- F xmltobuffer
- F xmltobufferverbose
- F xmltofile
- F xmltoparameters
- F xmlverbatim
- F xmlwithindex
- F year

setconstant function function setcount setdimen function setelement function setformat function function setmacro function setmessage function setmessages settranslation function setuserinterface function setvalidkeys function setvariable function showmessage function storedscanners data table strings table syntax data table tolist function translations data table variables data table writestatus function

#### io (basic lua)

ask function
bytes function
characters function
close function
exists function
fileseparator string
flush function

loadchunk function
loaddata function
loadlines function
noflines function

open overloaded function
output overloaded function

pathseparator string

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

#### jit (context)

```
arch string
attach function
flush function
off function
on function
opt table
```

F start

os string
status function
util table

F funcbc

F funcinfo

F funck

F funcuvname

F ircalladdr

F traceexitstub

F traceinfo

F traceir

F tracek

F tracemc

F tracesnap

version string
version\_num number

# job (context)

comment	function	F find	
datasets	table	F first	
D collected	cabic	F get	
F extend		F getcollected	
F getdata		F getdata	
F setdata		F getfield	
D tobesaved		F gettobesaved	
disablesave	function	Finlist	
fileobjreferences		F last	
D collected		Flist	
D tobesaved		F save	
files	table	F savetagged	
D collected		D tobesaved	
F context		<b>positions</b> tab	ole
B forcerun		• F b_col	
F run		_ F b_region	
D tobesaved		_ 5 F c	
initialize	function	D collected	
load	function	F column	
loadother	function	F copy	
objects	table	F depth	
D collected		F e_col	
F get		F e_region	
F number		F enhance	
F page		F extra	
F save		F get	
F set		F getreserved	
D tobesaved		F hangafter	
pack	boolean	F hangindent	
packversion	number	F height	
pagestates	table	F hsize	
D collected		F leftskip	
F extend		F lowerleft	
F realpage		F lowerright	
F setstate		F markregionbox	
D tobesaved		Fn	
passes	table	F onsamepage	
F check		F overlapping	
D collected		F p	
F count		F page	
F define		F paragraph	

```
F parindent
    F position
    Fr
   F region
   F replace
   F rightskip
   F set
   F setall
   F setdim
   F setregionbox
   D tobesaved
    F upperleft
    F upperright
    S used
    F width
   Fχ
   F xy
   Fу
register
                        function
                        function
save
                        table
structure
   D collected
   T components
   T tobesaved
     T branches
     S name
     S type
variables
                        table
   D checksums
    D collected
    F getchecksum
    F makechecksum
    F restore
    F save
    F setchecksum
   D tobesaved
```

number

version

# lang (basic tex)

clean	function
clear_hyphenation	function
clear_patterns	function
exceptions	function
hyphenate	function
hyphenation	function
id	function
new	function
patterns	function
postexhyphenchar	function
posthyphenchar	function
preexhyphenchar	function
prehyphenchar	function

# languages (context)

F registerpattern

associate	function	F setfeatures	
associated	data table	installed	function
association	function	labels	table
counters	data table	F define	
current	function	F split	
data	data table	lefthyphenmin	function
define	function	loadable	function
expand	function	loadwords	function
expanders	table	logger	table
frequencies	table	F report	
F averagecharwidth		numbers	data table
F getdata		postexhyphenchar	function
getdata	function	posthyphenchar	function
getnumber	function	preexhyphenchar	function
hyphenate	function	prehyphenchar	function
hyphenators	table	registered	data table
T dictionaries		replacements	table
D featuresets		F add	
F handler		F handler	
T methods		F set	
F expanded		righthyphenmin	function
B none		serializediscretionary	function
F original		setexceptions	function
F tex		setsynonym	function
F traditional		showdiscretionaries	function
B optimize		unload	function
F popmethod		version	number
F pushmethod		visualizediscretionaries	function
F setmethod		words	table
F setup		F check	
F showhyphenationtrace		T data	
T traditional		F disable	
F definefeatures		F enable	
F gettrace		T enablers	
F hyphenate		B enables	
F injecthyphens		F found	
F installmethod		F load	
F lasttrace		T methods	
F loadpatterns		N threshold	
F registerexception			

## layouts (context)

#### **status** table

F isleftpage

F leftorrightpagection

#### lfs (extra lua)

attributes overloaded function chdir overloaded function

currentdir function

lock function

**mkdirs** function

unlock 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 function convert convertfile function convertstring function einject function eprint function escape function finalized function finject function **fprint** function aet function getvariables function htmfile function html table

F a F td F th

include function
inherited table

S color-background-four

S color-background-one

S color-background-three

S color-background-two

S title

initialize function inject function **lmxfile** function loadedfile function make function function new overloaderror function popupfile function print function function pν function report function reset result function set function function show 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)

application function function categories direct function disable function enable function exporters table extendbanner function flush function help function messenger function function new newline function poptarget function pushtarget function report function function reportbanner function reporter table reporters

F banner

F export

F help

F info

F lines

F version

reportline function reportlines function setformats function setformatters function setloafile function function setmessenger setprocessor function setprogram function settarget function settimedlog function settranslations function function show show close function show load function show open function simple function simpleline function

simplelines function start page number function status function function stop page number subdirect function function subreport system function function texerrormessage function writer

# lpdf (context)

action	function	finalizepage	function
adddocumentcolorspace	function	finishtransparencycode	function
adddocumentextgstate	function	flushobject	function
adddocumentpattern	function	flushstreamfileobject	function
adddocumentshade	function	flushstreamobject	function
addtocatalog	function	formats	data table
addtoinfo	function	frompdfdoc	function
addtonames	function	fromsixteen	function
addtopageattributes	function	gethpos	function
addtopageresources	function	getmatrix	function
addtopagesattributes	function	getpos	function
addxmpinfo	function	getypos	function
annotationspecification	function	graycode	function
array	function	hasmatrix	function
boolean	function	id	function
border	function	injectxmpinfo	function
checkedkey	function	insertxmpinfo	function
checkedvalue	function	layerreference	function
circularshade	function	limited	function
cmykcode	function	linearshade	function
collectedresources	function	nametree	function
color	function	null	function
colorspace	function	number	function
colorspaceconstants	data table	pagedestinations	data table
colorspec	function	pagereference	function
colorvalue	function	pagereferences	data table
colorvalues	function	pdfcolor	function
constant	function	pdftimestamp	function
delayedobject	function	protectresources	boolean
destinationspecification	function	rectangle	function
dictionary	function	reference	function
docstring	function	registerannotation	function
epdf	table	registerdestination	function
F contenttotext		registerdocumentfinalizer	function
F expand		registerpagefinalizer	function
F expanded		reserveobject	function
F getpagecontent		rgbcode	function
F getstructure		rotationcm	function
Fload		shareobject	function
F unload		shareobjectreference	function
finalizedocument	function	spotcode	function

function stream string function function timestamp function toeight topdfdoc function tosixteen function transform function transparency function transparencycode function transparencygroups table

B none

transparencyvalue function
unicode function
verbose function

### lpeg (basic lua)

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

setmaxstack function
split function
splitat function
splitter function
stripper function
times function
tsplitat function
tsplitter function
type function
utfchartabletopattern function
version function

### ltn12 (extra lua)

```
BLOCKSIZE number
filter
             table
   F chain
   F cycle
             table
pump
   F all
   F step
             table
sink
   F chain
   F error
   F file
   F null
   F simplify
   F table
source
             table
   F cat
   F chain
   F empty
   F error
   F file
   F rewind
   F simplify
   F string
```

#### lua (basic tex)

bytecode table bytedata data table table bytedone collectgarbage function delay function finalize function firstbytecode number flush function function flushdelayed get functions table function getbytecode function getluaname function lastbytecode number mask string messages data table table name data table numbers registercode function registeredcodes function registerfinalizer function registername function setbytecode function setluaname function startupfile string version string

### luatex (context)

cleanuptempfiles function
registerstartactions function
registerstopactions
registertempfile function
starttime number

## lxml (context)

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	info	function
context	function	inlineverbatim	function
convert	function	installsetup	function
count	function	last	function
delete	function	load	function
direct	function	loadbuffer	function
directives	table	loaddata	function
F after		loaded	table
F before		loadregistered	function
F handle		main	function
F load		match	function
F setup		name	function
displayverbatim	function	namespace	function
doif	function	nonspace	function
doifelse	function	pos	function
doifelseempty	function	position	function
doifelsetext	function	raw	function
doifempty	function	rawroot	function
doifnot	function	refatt	function
doifnotempty	function	register	function
doifnottext	function	registerentity	function
doiftext	function	removesetup	function
element	function	resetcdata	function
elements	function	resetsetups	function
entities	data table	resolvedentity	function
filter	function	root	function
filterlist	function	save	function
first	function	serialize	function

setaction function
setcdata function
setcommandtonone function
setcommandtotext function
setsetup function
snippet function
sorters table

F add F compare

F flush
F reset
F show

xmltexhandler

F sort splitid function function startraw stopraw function function store strip function stripped function tag function text function tobuffer function tofile function toparameters function toverbatim function verbatim function withindex function

data table

## math (basic lua)

abs	function
acos	function
asin	function
atan	function
atan2	function
ceil	function
ceiling	function
cos	function
cosd	function
cosh	function
deg	function
div	function
even	function
exp	function
floor	function
fmod	function
frexp	function
huge	number
initialseed	number
ldexp	function
log	function
log10	function
max	function
min	function
mod	function
modf	function
odd	function
pi	number
pow	function
rad	function
random	function
randomseed	function
round	function
setrandomseedi	function
sin	function
sind	function
sinh	function
sqrt	function
tan	function
tand	function
tanh	function

#### mathematics (context)

addfallbacks	function
alphabets	data table
alternatives	data table
big	function
boldmap	data table
categories	table
D functions	
charactersets	data table
checkaccentbaseheight	function
checkprivateparameters	function
classes	data table
codes	data table
define	function
dimensions	function
extensiblecode	function
extensibles	data table
extrabase	number
extras	table
F add	
F copy	
fallbacks	table
F apply	
F install	
fallbackstyleattr	function
families	data table
gaps	data table
getboth	function
getstyle	function
horizontalcode	function
initializeparameters	function
injectfallbacks	function
makefont	function
mapremap	data table
overloaddimensions	function
overloadparameters	function
privatebase	number
remapalphabets	function
renderings	table
D mappings	

function renderset resetattributes function resetitalics function scaleparameters function setalternate function setitalics function data table sets data table styles syncboth function syncname function syncstyle function toname function function tostyle function tweakaftercopyingfont tweakbeforecopyingfont function tweaks table utfmathaccent function utfmathclass function utfmathcommand function utfmathfiller function utfmathstretch function

D numbers

D sets

### mbox (context)

```
parse function
parse_from function
parse_header function
parse_message function
split_headers function
split_mbox function
split_message function
```

### md5 (extra lua)

HEX function
crypt function
dec function
exor function
hex function
sum function
sumhexa function

# metapost (context)

analyzonlugine	function	gottovt	function
analyzeplugins checkformat	function	gettext graphic	function
checktexts	function	graphic_base_pass	function
collapse	boolean	initializescriptrunner	function
colorinitializer	function	instance	function
convert	function	intermediate	table
defaultformat		T actions	table
defaultinstance	string		
defaultmethod	string	F makempy	c+rina
directrun	string function	lastlog load	string function
	function		table
escaped exectime	table	makempy	table
		N nofconverted	
extensiondata	data table function	F processgraphics	
filterclippath	function	F registerfile	£
flush		maketext	function
flushers	table	metafun	table
T pdf		F interpolate	
F comment		F topath	
F flushfigure		method	number
F startfigure		mptopdf	table
F stopfigure		F convertmpstopdf	
F textfigure	£	N nofconverted	
flushliteral	function	n	number
flushnormalpath	function	nvformat	function
flushreset	function	optimize	boolean
fonts	table	parse	function
F define		pdfliterals	function
T flusher		pluginactions	function
F flushfigure		process	function
F startfigure		processplugins	function
F stopfigure		processspecial	function
N instances		properties	table
F process		quickanddirty	function
format	function	reducetogray	boolean
format_number	function	reporterror	function
format_string	function	reset	function
formatnumber	function	resetlastlog	function
getclippath	function	resetplugins	function
getextensions	function	runscript	function
getjobdata	function	scripterror	function
getstatistics	function	setextensions	function

setoutercolor
settext function
showlog boolean
svformat function
tex table

F get F reset F set

F setfrombuffer

texerrors boolean
textextsdata function
theclippath function
totable function
unload function
untagvariable function
variables table

#### mime (extra lua)

```
b64
           function
decode
           function
decodet
           table
   F base64
   F quoted-printable
           function
dot
encode
           function
encodet
           table
   F base64
   F quoted-printable
eol
           function
normalize function
           function
qр
           function
qpwrp
stuff
           function
unb64
           function
           function
unqp
           function
wrap
wrapt
           table
   F base64
   F default
   F quoted-printable
   F text
           function
wrp
```

# mp (context)

BackSpace	function	OverlayDepth	function
BaseLineSkip	function	OverlayHeight	function
BodyFontSize	function	<b>OverlayLineWidth</b>	function
BottomDistance	function	<b>OverlayOffset</b>	function
BottomHeight	function	OverlayWidth	function
BottomSpace	function	PageDepth	function
CurrentColumn	function	PageFraction	function
CurrentHeight	function	PageNumber	function
CurrentWidth	function	PageOffset	function
CutSpace	function	PaperBleed	function
EmWidth	function	PaperHeight	function
ExHeight	function	PaperWidth	function
FooterDistance	function	PrintPaperHeight	function
FooterHeight	function	PrintPaperWidth	function
HSize	function	RealPageNumber	function
HeaderDistance	function	RightEdgeDistance	function
HeaderHeight	function	RightEdgeWidth	function
InPageBody	function	RightMarginDistance	function
InnerEdgeDistance	function	RightMarginWidth	function
InnerEdgeWidth	function	SpineWidth	function
InnerMarginDistance	function	StrutDepth	function
InnerMarginWidth	function	StrutHeight	function
LastPageNumber	function	TextHeight	function
LayoutColumnDistance	function	TextWidth	function
LayoutColumnWidth	function	TopDistance	function
LayoutColumns	function	TopHeight	function
LeftEdgeDistance	function	TopSkip	function
LeftEdgeWidth	function	TopSpace	function
LeftMarginDistance	function	VSize	function
LeftMarginWidth	function	_f_	function
LineHeight	function	boolean	function
MakeupHeight	function	dataset	function
MakeupWidth	function	datasets	table
NOfColumns	function	F load	
NOfPages	function	defaultcolormodel	function
OnOddPage	function	format	function
OnRightPage	function	formatted	function
OuterEdgeDistance	function	get	table
OuterEdgeWidth	function	F boolean	
OuterMarginDistance	function	F number	
OuterMarginWidth	function	F numeric	

#### F string

get_outline_text	function
graphformat	function
n	function
numeric	function
pair	function
path	function
print	function
quadruple	function
quoted	function
report	function
size	function
triplet	function
tt_dimensions	function
tt_initialize	function

### mplib (extra tex)

fields function
finder function
finders table

F file

get\_boolean function
get\_number function
get\_string function

new overloaded function

pen\_info function
preprocessed function
version function

## newtoken (basic tex)

create	function
get_next	function
is_token	function
scan_code	function
scan_dimen	function
scan_glue	function
scan_int	function
scan_keyword	function
scan_string	function
scan_token	function
scan_toks	function
scan_word	function
set_macro	function
type	function

# noads (context)

#### handlers table F check F classes F collapse F families F italics F relocate F render F resize F showtree F tags F unscript F variants function process processors table T collapse F mlist\_to\_hlist T relocate T render T resize

T unscript

## node (basic tex)

сору	function	F protect_glyphs	
copy_list	function	F protrusion_skippable	
count	function	F remove	
current_attr	function	F set_attribute	
dimensions	function	F set_properties_mode	
direct	table	F setbox	
F copy		F setfield	
F copy_list		F setproperty	
F count		F slide	
F current_attr		F tail	
F dimensions		F todirect	
F do_ligature_n		F tonode	
F end_of_math		F tostring	
F first_glyph		F traverse	
F flush_list		F traverse_id	
F flush_node		F unprotect_glyphs	
F flush_properties_table		F unset_attribute	
F free		F usedlist	
F get_properties_table		F vpack	
F getbox		F write	
F getchar		do_ligature_n	function
F getfield		end_of_math	function
F getfont		family_font	function
F getid		fields	function
F getleader		first_character	function
F getlist		first_glyph	function
F getnext		flush_list	function
F getprev		flush_node	function
F getproperty		flush_properties_table	function
F getsubtype		free	function
F has_attribute		<pre>get_properties_table</pre>	function
F has_field		getchar	function
F has_glyph		getfield	function
F hpack		getfont	function
F insert_after		getid	function
F insert_before		getleader	function
F is_direct		getlist	function
F is_node		3	function
F last_node		3. 1	function
F length		getproperty	function
F new		getsubtype	function

function
function

# nodes (context)

accentcodes	data table	free spec	function
aligned	function	getattr	function
append	function	getattribute	function
astable	function	getbox	function
basepoints	function	getchar	function
builders	table	getfield	function
F buildpage_filter		getfont	function
F vpack_filter		getid	function
codes	data table	getleader	function
concat	function	getlist	function
сору	function	getnext	function
copy_list	function	getprev	function
copy_spec	function	getskip	function
count	function	getsubtype	function
current_attr	function	gluecodes	data table
delete	function	glyphcodes	data table
destinations	table	glyphdir_is_equal	data table
N attribute		glyphdir_is_opposite	data table
T done		glyphdir_is_orthogonal	data table
F handler		gonuts	boolean
T stack		handlers	table
dimensionfields	data table	F accessibility	
dimensions	data table function	F accessibility F alignbackgrounds	
		•	
<pre>dimensions dir_is_pop dir_negation</pre>	function	F alignbackgrounds	
dimensions dir_is_pop	function data table	F alignbackgrounds F backgrounds	
<pre>dimensions dir_is_pop dir_negation</pre>	function data table data table data table data table	F alignbackgrounds F backgrounds F characters	
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dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n end_of_math fasthpack fencecodes fields fillcodes first_character first_glyph firstcharacter	function data table data table data table data table function function function data table function data table function data totale function function function	F alignbackgrounds F backgrounds F characters F checkforleaks F checkglyphs F cleanupbox F cleanuppage F export F finalize F migrate F protectglyphs F stripping F unprotectglyphs has_attribute	function
dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n end_of_math fasthpack fencecodes fields fillcodes first_character first_glyph firstcharacter firstcharinbox	function data table data table data table data table function function function data table function data table function data totale function function function function function function	F alignbackgrounds F backgrounds F characters F checkforleaks F checkglyphs F cleanupbox F cleanuppage F export F finalize F migrate F protectglyphs F stripping F unprotectglyphs has_attribute has_field	function
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F copy	injections	table	listablefields
F handler F installnewkern F keepcounts F reset F reset F resetcounts F setcursive F settkern F settigaindex F setpair Insert_list_after insert_list_after is_display_math f function is_mirrored is_node f function f copy_list is_node f function f copy_list is_node f function f copy_list is_noted kerning f function f copy T whatsit last_node leftmarginwidth ligaturing f function f first_glyph F register F setup F stage_one F stage_tro link f unction F squend F getfiont	F copy		listcodes
F installnewkern  F keepcounts  F reset  F reset  F resetcounts  F resetcounts  F setursive  F setkern  F setligaindex  F setmark  F setpair  insert_after  insert_list_after  is_direct  is_display_math  is_mirrored  is_node  is_node  is_node  f unction  is_notated  kerncodes  kerning  f unction  T whatsit  Last_node  leftmarginwidth  ligaturing  T boxed  F register  F setup  F stage_one  F stage_zero  D data  F innalize  F number  N scratchbox  link  I function  F setior  F setior  F getid  F getid  F getiont  Inction  F first_glyph  F first_glyph  F fire  F getiend	F getligaindex		listtoutf
F keepcounts  F reset  F reset  F resetcounts  F setcursive  F setkern  F setligaindex  F setmark  F setpair  Insert_after  Insert_list_after  Installattributehandler  Is_direct  Is_mirrored  Is_mirrored  Is_node  Is_node  Is_not	F handler		load
F reset F resetcounts F resetcounts F setcursive F setkern F setligaindex F sethark F setpair  insert_after insert_list_after installattributehandler is_direct function is_display_math is_node function	F installnewkern		locate
F resetcursive F setkern F setligaindex F setligaindex F setmark F setpair insert_after insert_list_after installattributehandler is_direct is_display_math is_node function is_mirrored is_node function is_rotated kerncodes kerning function functi	F keepcounts		margincodes
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F setligaindex F setligaindex F setmark F setpair  insert_after insert_list_after installattributehandler is_display_math is_node  f unction is_node  f unction is_node  f unction is_node  f unction is_display_math is_node f unction f copy_list is_node f unction f copy_properties is_nut f unction f count is_rotated kerncodes data table kerning f unction f dimensions keys table F do_ligature_n F end_of_math last_node leftmarginwidth f unction leftmarginwidth f unction f f first_glyph f first_glyph f firstsharacter lines  T boxed F register F stage_noe F stage_noe F stage_two F stage_two F stage_two F stage_two F firsel F stage_two F finalize F number N scratchbox link f unction F gettox F getchar F getfield N scratchbox link f function F getid linked function F getid linked function F getid linked function F getid	F resetcounts		F get
F settigaindex F setmark F setpair  Innoadcodes  Insert_after Insert_before Insert_list_after Installattributehandler Is_display_math Is_node Is_node Is_node Is_node Is_node Is_node Is_node Is_node Is_notion Is_notated Is_notated Is_notated Is_node Is_notated Is_node It_notion It_node It_notion It_node It_notion It_node It	F setcursive		mathcodes
F setmark F setpair  Insert_after Insert_before Insert_list_after Installattributehandler Is_display_math Is_node Is_not Is_not Is_not Is_not Is_not Is_not Is_not Is_not Is_node Is_notion Is_first_glyph Isgaturing Is_notion Is_first_glyph Isgaturing Is_notion Is_first_glyph Isgaturing Is_notion Is_first_lode Is_first_lod	F setkern		maxboxwidth
insert_after function nodecodes insert_before function nopts insert_list_after function nuts installattributehandler function Fappend is_direct function Fcopy is_mirrored function Fcopy is_mirrored data table Fcopy_list is_node function Fcopy is_nut function Fcopy_roperties is_nut function Fcount is_rotated data table Fcurrent_attr kerncodes data table Fdelete kerning function Fdomesions keys table Fdo_ligature_n T whatsit Fend_of_math last_node function Ffirst_glyph ligaturing function Ffirst_glyph Ffregister table Ffirstcharacter lines table Ffirstcharacter T boxed Ffirstlyph F register Fsetup F stage_one F stage_one F stage_two F stage_zero D data F gettox F finalize F number N scratchbox Link function Fgetid Linked function Fgetid Linked Fgetid Linked Fgetid Linked Fgetid Fgetid Ffirstlyph F getid F getid F getid	F setligaindex		mlist_to_hlist
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<pre>insert_before insert_list_after installattributehandler is_direct is_display_math is_mirrored is_node is_nut is_node is_nut is_rotated kerncodes kerning It whatsit last_node leftmarginwidth ligaturing I boxed F register F setup F stage_one F stage_two F stage_zero D data F finalize F number N scratchbox I installattributehandler if unction f function F copy F append F concat F append F concat F copy F concat F copy F copy</pre>	F setpair		noadcodes
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is_node   function   F copy_properties   is_nut   function   F count   is_rotated   data table   F current_attr   kerncodes   data table   F delete   kerning   function   F dimensions   keys   table   F do_ligature_n    T whatsit   F end_of_math   F end_of_math   last_node   function   F first_glyph   ligaturing   function   F first_glyph   ligaturing   function   F firstcharacter   lines   table   F firstcharinbox    T boxed   F firstglyph   F register   F flush_list   F setup   F flush_node   F stage_one   F free   F stage_two   F getattr   F stage_two   F getattr   F stage_tero   F getbox   F finalize   F getbox   F finalize   F getfield   N scratchbox   F getfont   link   function   F getid   linked   function   F getid	is_display_math	function	F copy
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F setup F flush_node F stage_one F free F stage_two F getattr F stage_zero F getattribute D data F getbox F finalize F getchar F number F getfield N scratchbox F getfont  link function F getid linked function F getleader	T boxed		F firstglyph
F stage_one F stage_two F getattr F stage_zero F getattribute D data F getbox F finalize F number N scratchbox F function F getfont Link F stage_zero F getfont F getfont F getid Linked F getid	F register		F flush_list
F stage_two F getattr F stage_zero F getattribute D data F getbox F finalize F getchar F number F getfield N scratchbox F getfont link function F getid linked function F getleader	F setup		F flush_node
F stage_zero  D data F getbox  F finalize F number N scratchbox  F function F getfort  F unction F getid  F getfort  F getfort  F getfort  F getfort  F getid	F stage_one		F free
D data F getbox F finalize F getchar F number F getfield N scratchbox F getfont  link function F getid linked function F getleader	F stage_two		F getattr
F finalize F getchar F number F getfield N scratchbox F getfont link function F getid linked function F getleader	F stage_zero		F getattribute
F number F getfield N scratchbox F getfont  link function F getid  linked function F getleader	D data		F getbox
N scratchbox F getfont link function F getid linked function F getleader	F finalize		F getchar
linkfunctionF getidlinkedfunctionF getleader	F number		F getfield
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<b>3</b>	link	function	F getid
<b>list</b> function F getlist	linked	function	F getleader
	list	function	F getlist

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F setunsetattributes

F pdfannotation

F slide		T namespace	
F somepenalty		N attribute	
F somespace		D data	
F tail		F enable	
F takebox		F handler	
F theprop		F register	
F tonode		D registered	
F tonodes		D values	
F tonut		F processor	
F tosequence		points	function
F tostring		pool	table
F tracedslide		• F baselineskip	
F traverse		F cleanup	
F traverse_id		F glyph	
T typesetters		F kern	
F fast_hpack		F latelua	
F hpack		F lateluafunction	
F tohpack		F lineskip	
F tohpackfast		F pdfdirect	
F tonodes		F pdfliteral	
F tovpack		F pdfrestore	
F tovpackfast		F pdfsave	
F vpack		F pdfsetmatrix	
F unprotect_glyphs		F register	
F unset_attribute		F rule	
F unsetattribute		F special	
F unsetattributes		F usage	
F untracedslide		F usernumber	
F usedlist		prepend	function
F vianodes		print	function
F vianuts		processors	table
F vpack		B enabled	
F writable_spec		F hpack_filter	
F write	function	F post_linebreak_filter	
packlist	function data table	F pre_linebreak_filter	
pardir_is_equal	data table data table	F tracer	function
<pre>pardir_is_opposite pardir_is_parallel</pre>	data table	processwords	function table
partextdir_is_equal	data table	<pre>properties     T actions</pre>	table
penaltycodes	data table	F delayed	
plugindata	table	F fdelayed	
F finalizer	cabic	F immediate	
F initializer		F attach	
S name		T data	
		·	

F delayed		F getsamples	
protect_glyphs	function	F resetsamples	
protrusion_skippable	function	F takesample	
pts	function	somepenalty	function
reference	function	somespace	function
references	table	stripdiscretionaries	function
N attribute		stripping	table
T done		T glyphs	
F handler		F set	
T stack		striprange	function
remove	function	tail	function
repackhlist	function	takebox	function
replace	function	tasks	table
report	function	F actions	
rightmarginwidth	function	F appendaction	
rules	table	F disableaction	
D data		F disablegroup	
F define		F enableaction	
F enable		F enablegroup	
F handler		F freeze	
save	function	F freezegroup	
serialize	function	F new	
serializebox	function	F prependaction	
set_attribute	function	F removeaction	
setattr	function	F replaceaction	
setattribute	function	F restart	
setattributes	function	F setaction	
setbox	function	F showactions	
setfield	function	F table	
setunsetattributes	function	textdir_is_equal	data table
shifts	table	textdir_is_is	data table
D data		textdir_is_opposite	data table
F define		textdir_is_parallel	data table
F enable		tobasepoints	function
F handler		tocentimeters	function
show	function	tociceros	function
showboxes	function	todidots	function
showcodes	function	todimen	function
showlist	function	toinches	function
showsimplelist	function	tomillimeters	function
skipcodes	data table	tonewciceros	function
slide	function	tonewdidots	function
snapshots	table	tonode	function

F getparameters

tonodes

function

tonut	function	F start	
topicas	function	F stop	
topoints	function	F stop	
toscaledpoints	function	•	
tosequence	function	T transparencies F reset	
tostring	function	F reset	
totable	function		
	function	F setlist	function
totree		traverse	function
toutf	function table	traverse_id	table
tracers	table	typesetters	table
T characters		F hpack	
F collect		F tohpack	
F equal		F tohpackfast	
F start		F tonodes	
F string		F tovpack	
F unicodes		F tovpackfast	
T colors		F vpack	
F reset		unprotect_glyphs	function
F set		unset_attribute	function
F setlist		unsetattribute	function
F fontchar		unsetattributes	function
T frequencies		usedlist	function
F register		vianodes	function
T pool		vianuts	function
T nodes		visualizebox	function
F rule		visualizers	table
T nuts		F box	
F rule		F handler	
F resetproperties		F markfonts	
F rule		F setfont	
F setlist		F setlayer	
F setproperties		F setvisual	
F start		vpack	function
T steppers		whatcodes	data table
F check		whatsitcodes	data table
F codes		whatsitters	table
F features		T getters	
F font		T dimensions	
F glyphs		T width	
F message		T setters	
F messages		T dimensions	
F nofsteps		T width	
F register		writable_spec	function
F reset		write	function

# number (context)

	function
basepoints	function
bit	function
bits	function
clearbit	function
dimenfactors	data tabl
formatted	function
hasbit	function
maxdimen	number
nopts	function
percent	function
points	function
pts	function
setbit	function
signed	function
sparseexponent	function
splitdimen	function
tobasepoints	function
tobitstring	function
tocentimeters	function
tociceros	function
todidots	function
todimen	function
toevenhex	function
toinches	function
tomillimeters	function
tonewciceros	function
tonewdidots	function
tonumberf	function
tonumberg	function
topicas	function
topoints	function
toscaled	function
toscaledpoints	function
toset	function
valid	function

#### os (basic lua)

function \_\_getenv\_\_ function setenv binsuffix string binsuffixes table clock function converttime function function date difftime function env data table exec overloaded function execute overloaded function exit function function fulltime overloaded function getenv gettimeofday function function isleapyear launch function libsuffix string localtime function name string newline string nofdays function now function platform strina overloaded function remove overloaded function rename resolvers table F bits resultof function runtime function selfdir string setenv overloaded function overloaded function setlocale sleep function overloaded function spawn time function

function

function

function function

function

times

tmpdir

tmpname today

timezone

type string
uname function
uuid function
validdate function
weekday function
where function
which function

# package (basic lua)

config	string
cpath	string
extralibpath	function
extralibpaths	function
extraluapath	function
extraluapaths	function
helpers	table
libpaths	function
loaded	table
loaders	table
loadlib	function
luapaths	function
path	string
preload	table
searchpath	function
seeall	function

#### pagebuilders (context)

#### injections table

- F flushafter
- F flushbefore
- F save

#### mixedcolumns table

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

#### pdf (basic tex)

getcatalog function function gethpos getinfo function function getmatrix aetnames function function getpageattributes getpageresources function getpagesattributes function getpos function gettrailer function aetvpos function hasmatrix function immediateobj function mapfile function mapline function maxobjnum function obj function objtype function pageref function print function function refobj overloaded function registerannot reserveobj function setcatalog overloaded function setinfo overloaded function setnames overloaded function setpageattributes overloaded function overloaded function

setpagesattributes overloaded function

overloaded function

setpageresources

settrailer

# pdfscanner (context)

scan function

# physics (context)

#### units table

F registerunit

D tables

#### profiler (extra lua)

```
pause function
resume function
start function
stop function
```

## publications (context)

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

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	enhancers	table
S author	F details	
S institution	F order	
S organization	F suffixes	
S subtitle	finder	function
S title	firstofrange	function
S year	found	function
T optional	get	function
T required	getcasted	function
T sets	getdetail	function
T authors	getdirect	function
T virtual	getfaster	function
S comment	getfield	function
S copyright	getfuzzy	function
T fields	getindex	function
S name	inspectors	data table
T types	journals	table
S author	F abbreviated	
S editor	F add	
S keywords	F expanded	
S number	F load	
S page	F save	
S pages	lastofrange	function
S volume	lists	table
S version	F collectentries	
D virtual	F combiinlist	

F fetchentries		okay	function
F filterall		oneorrange	function
F flushcombi		parenttag	function
F flushentry		permitted	function
T methods		refman_to_btx	function
F dataset		resolvedname	function
F force		save	function
F global		search	function
F local		setcategory	function
F nofregistered		setspecification	function
F prepareentries		singularorplural	function
F register		sortedentries	function
F sameasprevious		sortmethods	table
T sorters		T authoryear	
F cite		T sequence	
F dataset		specifications	table
F default		T default	
F index		S author	
F list		S comment	
F reference		S copyright	
F short		S name	
F used		S version	
F uservariable		D virtual	
listvariants	table	splitauthor	function
<b>listvariants</b> F default	table	splitoneauthor	function function
	table		
F default	table	splitoneauthor	function
F default F index	table	splitoneauthor statistics	function
F default F index F num	table	splitoneauthor statistics N nofbytes	function
F default F index F num F page F short F tag		splitoneauthor statistics N nofbytes N nofdatasets N nofdefinitions N nofshortcuts	function table
F default F index F num F page F short F tag load	function	splitoneauthor statistics N nofbytes N nofdatasets N nofdefinitions	function
F default F index F num F page F short F tag load	function function	splitoneauthor statistics N nofbytes N nofdatasets N nofdefinitions N nofshortcuts	function table
F default F index F num F page F short F tag load loadbibdata loaddefinitionfile	function function function	splitoneauthor statistics  N nofbytes N nofdatasets N nofdefinitions N nofshortcuts tables	function table
F default F index F num F page F short F tag load	function function	splitoneauthor statistics  N nofbytes N nofdatasets N nofdefinitions N nofshortcuts tables D implicits	function table
F default F index F num F page F short F tag load loadbibdata loaddefinitionfile	function function function	splitoneauthor statistics  N nofbytes N nofdatasets N nofdefinitions N nofshortcuts tables D implicits D origins	function table
F default F index F num F page F short F tag load loadbibdata loaddefinitionfile loaders	function function function	splitoneauthor statistics  N nofbytes  N nofdatasets  N nofdefinitions  N nofshortcuts tables  D implicits D origins D privates	function table
F default F index F num F page F short F tag load loadbibdata loaddefinitionfile loaders F bbl	function function function	splitoneauthor statistics  N nofbytes  N nofdatasets  N nofdefinitions  N nofshortcuts  tables  D implicits  D origins  D privates  D sets	function table
F default F index F num F page F short F tag load loadbibdata loaddefinitionfile loaders F bbl F bib	function function function	splitoneauthor statistics  N nofbytes  N nofdatasets  N nofdefinitions  N nofshortcuts  tables  D implicits  D origins  D privates  D sets  D specials	function table
F default F index F num F page F short F tag load loadbibdata loaddefinitionfile loaders F bbl F bib F buffer	function function function	splitoneauthor statistics  N nofbytes N nofdatasets N nofdefinitions N nofshortcuts tables D implicits D origins D privates D sets D specials D types D virtuals tags	function table table
F default F index F num F page F short F tag load loadbibdata loaddefinitionfile loaders F bbl F bib F buffer F endnote F lua F refman	function function function	splitoneauthor statistics  N nofbytes N nofdatasets N nofdefinitions N nofshortcuts tables D implicits D origins D privates D sets D specials D types D virtuals	function table
F default F index F num F page F short F tag load loadbibdata loaddefinitionfile loaders F bbl F bib F buffer F endnote F lua	function function function	splitoneauthor statistics  N nofbytes N nofdatasets N nofdefinitions N nofshortcuts tables D implicits D origins D privates D sets D specials D types D virtuals tags tracers F showdatasetauthors	function table table function table
F default F index F num F page F short F tag load loadbibdata loaddefinitionfile loaders F bbl F bib F buffer F endnote F lua F refman F registercleaner F xml	function function function table	splitoneauthor statistics  N nofbytes N nofdatasets N nofdefinitions N nofshortcuts tables  D implicits D origins D privates D sets D specials D types D virtuals tags tracers	function table table function table
F default F index F num F page F short F tag load loadbibdata loaddefinitionfile loaders F bbl F bib F buffer F endnote F lua F refman F registercleaner	function function function	splitoneauthor statistics  N nofbytes N nofdatasets N nofdefinitions N nofshortcuts tables D implicits D origins D privates D sets D specials D types D virtuals tags tracers F showdatasetauthors	function table table function table

F showfields

F showhashedauthors

F showtables

F showvariants

#### typesetters

table

F author

F string

usedataset usedentries

writers

function function

table

F author

F keyword

F pagenumber

F range

#### regimes (context)

```
cleanup
disable function
enable function
fromregime function
pop function
process function
push function
toregime function
translate function
```

## resolvers (context)

allprefixes	function	findtexfile	function
appendhash	function	findwildcardfile	function
automount	function	findwildcardfiles	function
automounted	table	formatofsuffix	function
booleanvariable	function	formatofvariable	function
cacheversion	string	formats	data table
checkedvariable	function	generators	data table
cleanedpathlist	function	get_from_content	function
cleanpath	function	getenv	function
cleanpathlist	function	getownpath	function
concatinators	data table	getreadfilename	function
configbanner	string	hashers	data table
criticalvars	data table	homedir	string
dangerous	data table	inputstack	table
datastate	function	installinputfilehandler	function
defaultsuffixes	table	installinputlinehandler	function
dowithfilesandreport	function	instance	table
dowithfilesintree	function	D data	
dowithpath	function	B diskcache	
dowithvariable	function	D environment	
env	function	D expansions	
executers	table	D fakepaths	
expandbraces	function	D files	
expandedpathfromlist	function	B force_suffixes	
expandedpathlist	function	D found	
expandedpathlistfromvariable	function	D foundintrees	
expandpath	function	D hashed	
expandpathfromvariable	function	D hashes	
expansion	function	D lists	
extendtexmfvariable	function	B loaderror	
filtered_from_content	function	D order	
find_file	function	D pathlists	
find_files	<del>function</del>	T pathstack	
findbinfile	function	B remember	
findctxfile	function	B renewcache	
finders	data table	B renewtree	
findfile	function	B savelists	
findfiles	function	D setups	
findgivenfile	function	D specification	
findgivenfiles	function	D variables	
findpath	function	jobpath	function

jobs	table	registerextrapath	function
F currentcomponent		registerfile	function
F currentenvironment		registerfilehash	function
F currentproduct		registerintrees	function
F currentproject		registermethod	function
F justacomponent		registerzipfile	function
D processors		relations	data table
F productcomponent		renew	function
F usefile		repath	function
joinpath	function	reset	function
load	function	resetextrapath	function
loadbinfile	function	resetresolve	function
loaders	data table	resolve	function
loadlualib	function	savers	data table
loadtexfile	function	scandata	function
loadtime	function	scanfiles	function
locateformat	function	schemes	table
locators	data table	T cleaners	
luacnfname	string	F md5	
luacnfspec	string	F none	
luacnfstate	string	F strip	
macros	table	F cleanname	
F convertfile		F fetchstring	
F decodecomment		F fetchtable	
F enablecomment		F install	
F encodecomment		setdynamic	function
F preprocessed		setenv	function
F processmk		setinstance	function
F processmkvi		showpath	function
F version		simplescanfiles	function
maxreadlevel	number	splitconfigurationpath	function
methodhandler	function	splitexpansions	function
newinstance	function	splitmethod	function
openbinfile	function	splitpath	function
openers	data table	stackpath	function
openfile	function	suffixes	data table
opentexfile	function	suffixmap	data table
ownpath	string	suffixofformat	function
popextrapath	function	texdatablob	function
poppath	function	toppath	function
prefixes	data table	unexpandedpath	function
prependhash	function	unexpandedpathlist	function
pushextrapath	function	unresolve	function
pushpath	function	updaterelations	function

updatescript	function
uselibrary	function
usertypes	data table
usezipfile	function
validatedpath	function
variable	function
variableofformat	function
variableofformatorsuffix	function
wildcardpattern	function

## sandbox (context)

binaryhandler	function
disablerunners	function
enable	function
filehandlerone	function
filehandlertwo	function
finalizer	function
initializer	function
iohandler	function
logcalls	function
logfiles	function
original	function
overload	function
possiblepath	function
redefine	function
register	function
registerbinary	function
registerroot	function
registerrunner	function
report	function
run	function
runhandler	function
setfilenamelogger	function
setlogger	function
setreporter	function
settrace	function
validfilename	function

#### scripts (context)

#### autofontfeature table F disable F enable F handler categorytonumber data table colors data table decomposehangul function defaults table N inter\_char\_half\_shrink\_factor N inter\_char\_half\_stretch\_factor N inter\_char\_hangul\_penalty N inter\_char\_quarter\_shrink\_factor N inter\_char\_quarter\_stretch\_factor N inter\_char\_shrink\_factor N inter\_char\_stretch\_factor N inter\_word\_stretch\_factor handlers data table table hash injectors data table installdataset function installmethod function numbertocategory data table numbertodataset data table numbertohandler data table function reset function set **splitters** data table

#### set (context)

contains function
create function
tolist function
tonumber function
totable function

#### socket (extra lua)

**BLOCKSIZE** number S connection boolean DEBUG S content-description SETSIZE number S content-disposition bind function S content-encoding function choose S content-id function connect S content-language connect4 function S content-length function connect6 S content-location dns table S content-md5 F getaddrinfo S content-range F gethostname S content-transfer-encoding F getnameinfo S content-type F tohostname S date F toip S diagnostic-code ftp table S dsn-gateway S PASSWORD S etag N PORT S expect N TIMEOUT S expires S USER S final-log-id S final-recipient F command F get S from F open S host F put S if-match gettime function S if-modified-since headers table S if-none-match T canonic S if-range S accept S if-unmodified-since S accept-charset S in-reply-to S accept-encoding S keywords S accept-language S last-attempt-date S accept-ranges S last-modified S action S location S max-forwards S age S allow S message-id S alternate-recipient S mime-version S original-envelope-id S arrival-date S authorization S original-recipient S bcc S pragma S cache-control S proxy-authenticate Scc S proxy-authorization S comments S range

S recei	ved	sinkt	table
S recei	.ved-from-mta	F close-v	vhen-done
S refer	rences	F default	:
S refer	rer	F http-ch	nunked
S remot	re-mta	F keep-op	oen
S reply	v-to	skip	function
S repor	ting-mta	sleep	function
S reser	rt-bcc	smtp	table
S reser	rt-cc	S DOMAIN	
S reser	t-date	N PORT	
S reser	t-from	S SERVER	
S reser	t-message-id	N TIMEOUT	Г
S reser	t-reply-to	S ZONE	
S reser	t-sender	F message	2
S reser	t-to	F open	
S retry	r-after	F send	
S retur	n-path	source	function
S sende		sourcet	table
S serve		F by-leng	
	remote-recipient	F default	
S statu		F http-ch	
S subje	ect	F until-d	
S te		tcp	function
S to		tcp6	function
S trail		tp	table
	fer-encoding	N TIMEOUT	
S upgra		F connect	
S user-	agent	try udp	function function
S vary S via		udp6	function
S warni	ng	url	table
	retry-until	F absolut	
	nuthenticate	F build	.e
S x-mai		F build_p	nath
http	table	F escape	
N PORT		F parse	
N TIMEOU	Г	F parse_p	oath
S USERAGI	ENT	F unescap	
F open		·	
F request	t		
newtry	function		
protect	function		
select	function		
sink	function		

#### sorters (context)

```
basicsorter
                function
                table
comparers
   F basic
                table
constants
   S defaultdigits
   S defaultlanguage
   S defaultmethod
   N digitsmaximum
   N digitsoffset
   N ignoredoffset
   N replacementoffset
   T validmethods
    B ch
    B mc
    B mm
    Врс
    B pm
    B uc
    B zc
    B zm
definitions
                data table
firstofsplit function
setlanguage
                function
                function
sort
splitters
                table
   F utf
strip
                function
                data table
tracers
                function
update
```

## statistics (context)

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

## status (basic tex)

list 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
disable
             function
enable
             function
flush
             function
initialize function
push
             function
start
            function
stop
            function
synchronize function
```

# string (basic lua)

autodouble	function
autosingle	function
booleanstring	function
byte	function
<b>bytepairs</b>	function
bytes	$ \hbox{function} $
char	$ \hbox{function} $
characterpairs	$ \hbox{function} $
characters	$ \hbox{function} $
checkedsplit	$ \hbox{function} $
collapsespaces	$ \hbox{function} $
count	function
dump	$ \hbox{function} $
escapedpattern	function
explode	function
find	$ \hbox{function} $
format	function
formatter	function
formatters	function
fullstrip	function
gmatch	function
gsub	function
is_boolean	function
is_empty	function
itself	function
len	function
limit	function
longtostring	function
lower	function
match	function
nspaces	table
optionalquoted	function
quote	function
quoted	function
rep	function
replacenewlines	function
reverse	function
split	function
splitlines	function
splitup	function
strip	function

sub	function
tformat	function
toHEX	function
toboolean	function
tobytes	function
tocontext	function
todec	function
todimen	function
tohex	function
tonodes	function
topattern	function
totable	function
toutf	function
tracedchar	function
tracedchars	table
unquote	function
unquoted	function
upper	function
utfcharacters	function
utfvalues	function
valid	function

## structures (context)

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

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

F resetpostponed		D filters	
F restore		D flaginternals	
F save		F from	
F setstate		D functions	
F setsymbolpage		F get	
D states		F getcurrentmetadata	
F store		F getcurrentprefixspec	
pages	table	F getinnermethod	
F analyze		F getinternallistreference	j
D collected		F getinternalreference	
F in_body		D handlers	
F is_odd		F identify	
N nofpages		F import	
F number		F inject	
F on_right		F injectcurrentset	
F save		S innermethod	
D tobesaved		D internals	
references	table	F load	
F analyze		F loadpresets	
F checkedfile		F mark	
F checkedfileorurl		D pages	
F checkedprogram		U prefixsplitter	
F checkedrealpage		D productdata	
F checkedurl		T programs	
D collected		T data	
U componentsplitter		F define	
F currentmetadata		F get	
F currentorder		F realpageofpage	
D currentset		U referencesplitter	
F define		D referred	
D defined		F referredpage	
D derived		F registerfinalizer	
F enableinteraction		F registerinitializer	
F enhance		F registerpage	
D executers		F reportproblems	
F expandcurrent		F reset	
F export		D runners	
T files		F set	
T data		F setandgetattribute	
F define		F setcomponent	
F found		F setinnermethod	
F get		F setinternalreference	
F filter		F setnextinternal	
F filterdefault		F setnextorder	

F setreferencerealpage		F	setmethod	
D specials		F	sort	
F splitcomponent		F	store	
F splitprefix		D	tobesaved	
F splitreference		F	unique	
F synchronizepage		F	userdata	
T testrunners		sect	ions	table
F inner		F	autodepth	
F special		F	cct	
F special operation		D	collected	
F special operation wi	ith arguments	F	current	
T testspecials		F	currentblock	
F deltapage		F	currentid	
Fi		F	currentlevel	
F internal		F	currentsectionindex	
F page		F	depthnumber	
F realpage		F	finddata	
F section		F	findnumber	
F userpage		F	fullnumber	
D tobereferred		F	getcurrentlevel	
D tobesaved		F	getlevel	
D tracedpages		F	getnumber	
T urls		F	internalreference	
T data		D	levelmap	
F define			levels	
F found			load	
F get			matchingtilldepth	
D usedinternals			numberatdepth	
D usedviews			numbers	
F valid	4-61-		popblock	
registers	table		prefixedconverted	
F analyze			pushblock 	
D collected			register	
F compare			registered	
F define			reportstructure	
F enhance			save	
F extend F filter		'	sectionblockdata	
F filtercollected			T bodypart S bookmark	
F finalize		_	set	
F flush			setblock	
F get			setchecker	
F prepare			setentry	
F process			setlevel	
r process		г	serievel	

F setnumber F last F structuredata F lastinchain F title F locatedtag D tobesaved T patterns F typesetnumber U splitter F userdata D properties B verbose F registermetadata table sets F restart F define F setaspect F get F setattributehash F setcombination F getall D setlist F setdescription specials table F setdescriptionsymbol D collected F setfigure F retrieve F sethighlight F store F setitem D tobesaved F setitemgroup synonyms table F setlist F analyzed F setproperty D collected F setregister F compare F setsorting F define F setsynonym F filter F settablecell F finalize F settabulatecell F flush F setupexport F isshown F setuserproperties F isused D specifications F meaning F start F prepare F stop F process F strip F register D taglist F registershown T usewithcare F registerused T images F resetshown F resetused F sort F synonym D tobesaved table tags F elementtag F finishexport F getid F handler D labels

#### table (basic lua)

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

# tex (basic tex)

attribute	table	isdefined	function
badness	function	isdimen	function
box	table	isskip	function
catcode	table	istoken	function
conditionals	data table	lccode	table
constants	data table	linebreak	function
count	table	lists	table
ctdcatcodes	number	lua math random	function
ctxcatcodes	number	lua math randomseed	function
definefont	function	luacatcodes	number
delcode	table	mathcode	table
dimen	table	modes	data table
directives	data table	nest	table
enableprimitives	function	nilcatcodes	number
error	function	normal_rand	function
extraprimitives	function	notcatcodes	number
finish	function	number	function
fontidentifier	function	pdffontname	function
fontname	function	pdffontobjnum	function
fprint	function	pdffontsize	function
get	function	pdfpageref	function
getattribute	function	pdfxformname	function
getbox	function	primitives	function
getcatcode	function	print	function
getcount	function	prtcatcodes	number
getdelcode	function	romannumeral	function
getdimen	function	round	function
getlccode	function	run	function
getlist	function	scale	function
getmath	function	set	function
getmathcode	function	set_experimental_code	function
getnest	function	setattribute	function
getsfcode	function	setbox	function
getskip	function	setcatcode	function
gettoks	function	setcount	function
getuccode	function	setdelcode	function
hashtokens	function	setdimen	function
ifs	data table	setlccode	function
inicatcodes	number	setlist	function
init_rand	function	setmath	function
iscount	function	setmathcode	function

setnest function setsfcode function setskip function settoks function setuccode function sfcode table shipout function function show context skip table sp function sprint function systemmodes data table takebox function texcatcodes number toks table tpacatcodes number tpbcatcodes number tprint function trackers data table txtcatcodes number function type uccode table uniform rand function uniformdeviate function uprint function vrbcatcodes number write function

#### texconfig (basic tex)

error\_line number expand depth number formatname string half\_error\_line number hash\_extra number init

overloaded function

kpse init boolean max\_in\_open number max\_print\_line number max\_strings number nest\_size number param\_size number save size number shell escape string

stack\_size overloaded number

## texio (basic tex)

write function
write\_nl function

## tokens (context)

astable	function	getters	table
bgroup	userdata	F box	
bits	table	F count	
N active		F dimen	
N alignmen	t	F token	
N begingro	up	hbox	userdata
N characte	r	istoken	function
N close		letter	function
N comment		letters	function
N endgroup		other	function
N endoflin	e	pickup	function
N escape		printlist	function
N ignore		scanners	table
N invalid		F boolean	
N letter		F code	
N mathshif	t	F condition	onal
N open		F count	
N other		F dimen	
N paramete	r	F dimensio	n
N space		F glue	
N subscrip	t	F integer	
N superscr	ipt	F keyword	
N whitespa	ce	F list	
collectors	table	F lxmlid	
T data		F number	
F defaultw	ords	F scanclos	e
F dowithwo	rds	F scanoper	ı
F flush		F skip	
F install		F string	
F register		F token	
T register	ed	F tokens	
F show		F toks	
F test		F word	
compile	function	scantable	function
converters	table	setters	table
S toboolea	n	F box	
S todimen		F count	
S toglue		F dimen	
S tonumber		F macro	
S tostring		shortcuts	table
egroup	userdata	T bits	

N active	F lxmlid
N alignment	F number
N begingroup	F scanclose
N character	F scanopen
N close	F skip
N comment	F string
N endgroup	F token
N endofline	F tokens
N escape	F toks
N ignore	F word
N invalid	F scannumber
N letter	F scanopen
N mathshift	F scanstring
N open	F scanword
N other	F toboolean
N parameter	F todimen
N space	T tokens
N subscript	F astable
N superscript	U bgroup
N whitespace	T collectors
N close	F defaultwords
F inspect	F dowithwords
N open	F flush
F report	F install
F scanboolean	F register
F scanclose	F show
F scancode	F test
F scanconditional	F compile
F scandimen	T converters
F scandimension	S toboolean
F scaninteger	S todimen
F scankeyword	S toglue
F scanlist	S tonumber
T scanners	S tostring
F boolean	U egroup
F code	T getters
F conditional	F box
F count	F count
F dimen	F dimen
F dimension	F token
F glue	U hbox
F integer	F istoken
F keyword	F letter
F list	F letters

F other F pickup F printlist F scantable T setters F box F count F dimen F macro T shortcuts N close F inspect N open F report F scanboolean F scanclose F scancode F scanconditional F scandimen F scandimension F scaninteger F scankeyword F scanlist F scannumber F scanopen F scanstring F scanword F toboolean F todimen F tonumber

F tostring
U vbox
U vtop
F tonumber
F tostring

vbox

vtop

### tracers (context)

count function
cs function
dimen function
knownlist function
lists table

T context
T internals
T scratch

name function
primitive function
printerror function
showlines function
strings table

S undefined

toks function
type function

## trackers (context)

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

# typesetters (context)

alignments F handler F handler F set F define F define F handler F methods T methods T methods F set F default F set F default F setreplacement F set F set F default F setreplacement F set F register F handler F handler F handler F set F register F handler F resetcharacteralign Characters F handler F methods F replacenbspaces F replacenbspaces F replacenbspaces F handler F handler F handler F handler F handler F handler F reset F handler F handler F reset F reset F set F handler F reset F handler F handler F reset F set F forcevariant F set F s				
F set		table		
F define				
F define F setcolor F handler F setmath D mapping F tomode T methods firstlines table T numbers T actions F set F set F default F setreplacement  Cases table F word  T actions F handler F handler F handler F register I initials table F handler F set F handler F set F handler F set F handler F handler F handler F handler F handler F resetcharacteralign F set F setcharacteralign F set F setcharacteralign F set F setcharacteralign F set F handler F reset F set T set F handler F handler F f set F			·	
F handler F setmath D mapping F tomode T methods firstlines table T numbers T actions F set F default F setreplacement F line  case table F word  T actions F handler F handler F set F register I actions F set F register F set F set Characteralign table F default F setcharacteralign F set F set T actions F handler F resetcharacteralign F set F set T list T methods F mark F replacenbspaces F set F replacenbspaces F set F set Checkers table F show F handler F set F set F handler F set F set Checkers table F show F handler F reset F set F set F set F set F set F set F handler F set F s	•	table		
D mapping T methods T methods T numbers T numbers F set F set F set F setreplacement Cases T actions T actions F set F setreplacement T actions F handler F handler F register F handler F handler F set F resetcharacteralign F setcharacteralign F setcharacteralign F setcharacteralign F setcharacteralign F setcharacters T actions Characters T actions F handler F resetcharacteralign F setcharacters F handler F handler F handler F feset F handler F feset F forevariant F set Checkers F handler F replacenbspaces F replacenbspaces F replacenbspaces F f set Checkers F handler F set F handler F reset F set F handler F reset F set F handler F set F handler F set F handler F reset F set B kerns T actions F handler F set Cleaners F handler F set B keeptogether Clications F handler F set B keeptogether Clications F handler F set Clications F papply F getfences F set Clications F s				
T methods T numbers T numbers T actions F set F set F setreplacement Cases				
T numbers F set F set F default F setreplacement  Cases table F word  T actions F handler F handler F register F register F register F handler F set F default F handler F handler F handler F handler F handler F set Set F set F resetcharacteralign F set F setcharacteralign F set F setcharacteralign F set F handler F handler F replacenbsp F replacenbsp F reset F replacenbsp F reset F show F handler F handler F handler F handler F set F set F handler F set F set F handler F set F se				
F set F default F setreplacement  Cases table F handler F handler F register F register F register F handler F handler F handler F set F set F default F set F register F register F set F default F handler F set F default F handler F set F default F handler F handler F handler F handler F resetcharacteralign F set F setcharacteralign F set F check F handler F replacenbsp F reset F replacenbsp F reset F replacenbspaces F set  Checkers table F handler F set F set B kerns table  Gigits T actions F handler F set B keeptogether  directions table F getfences F getglobal F getmethod F apply				table
F setreplacement  cases table F word  T actions F handler F handler F handler F register F register F register F set  T actions  Characteralign T able F handler F handler F handler F handler F resetcharacteralign F set T actions  Characters T actions  Characters T actions  Characteralign T handler F handler F handler F resetcharacteralign F set T actions T befault F handler F handler F handler T list T methods F mark F replacenbsp F reset F replacenbsp F reset F set Checkers T actions F handler F set F set F handler F set F set F handler F set F set F set F set F handler F set F set F handler F set F set F set F handler F set F set F set F handler F set F set F handler F set F				
cases table F word   T actions F handler   F handler F set   F register initials   F set T actions   Characteralign table   F handler F handler   F resetcharacteralign F set   F setcharacteralign injectors   table F check   F handler T list   T methods F mark   F replacenbsp F reset   F replacenbspaces F set   Checkers table   F handler F show   F handler F handler   F set F handler   F set F handler   F set kerns   digits table   T actions F handler   F handler F keepligature   F set B keeptogether   directions table   F getfences F set				
Tactions F handler F register F register F set F register F set  T actions Characteralign F handler F handler F resetcharacteralign F set F setcharacteralign F set F setcharacteralign F set F setcharacteralign F set F se	·			
F handler F register F register F set  Characteralign table F handler F handler F handler F handler F resetcharacteralign F set  Characters T actions F handler F handler F resetcharacteralign F set F setcharacteralign F set F setcharacters T able  Characters T able F check F handler T list T methods F mark F replacenbsp F reset F replacenbspaces F set  Checkers T able F handler F set F handler F set F handler F set F forcevariant F set F handler F set F handler F set F handler F set F handler F set F set  Cleaners T actions F handler F set  Characters T actions F handler F set F handler F keepligature F set	cases	table		
F register F set  Characteralign table F handler F resetcharacteralign F set  Characters F setcharacteralign F setcharacteralign F setcharacteralign F setcharacters F setcharacters  Characters T able F check F handler T list T methods F replacenbsp F replacenbsp F replacenbsp F replacenbsp F reset F set  Checkers  Checkers  Checkers  Checkers  Characters  Checkers  Checkers	T actions			
F set  Characteralign table F handler F resetcharacteralign F setcharacteralign F setcharacteralign F setcharacteralign F setcharacters T able F handler F resetcharacteralign F setcharacters T able F handler T list T methods F mark F replacenbsp F reset F replacenbspaces F set  Checkers T able F handler F reset F handler F reset F forcevariant F set F handler F set F set  Cleaners F set F handler F set F set F set F handler F set F set F handler F set F se	F handler			
characteralignF defaultF handlerF handlerF handlerF resetcharacteralignF setF setcharacterstableF checkF handlerT listT methodsF markF markF replacenbspacesF setF replacenbspacesF setCheckerstableF showF handlerF showF resetF forcevariantF forcevariantF setF handlerF setF setKernstableT actionsF setF handlerF keepligatureF handlerF setB keeptogetherdirectionstableD mappingF getfencesF setF getfencesF setF getglobalmanipulatorstable	F register		initials	table
F handler F resetcharacteralign F set F setcharacteralign F setcharacters  table  Characters  T actions F handler F set  T actions F handler F set  Characters  T handler F reset F handler F reset F handler F set  Checkers F handler F set F set Checkers F set F handler F set F handler F set F handler F set F set F set F set F set F handler F set F set F handler F set F handler F set			T actions	
F resetcharacteralign F set F setcharacteralign  Characters  table  F handler T methods F replacenbsp F replacenbspaces  Checkers T handler F set F handler F set F handler F set F handler F set F set F handler F set F set  Checkers F set F handler F set F handler F set F handler F set F handler F set F se	characteralign	table	F default	
F setcharacteralign table  characters table  F handler  T methods  F replacenbsp  F replacenbspaces  Checkers table  F handler  F handler  F handler  F handler  F set  F set  F set  F set  F set  F handler  F set  F set  F set  Cleaners  T actions  F handler  F set  F handler  F set  Gigits  T actions  F handler  F set  B keeptogether  directions  table  F getfences  F getglobal  F getglobal  F getgemethod  F apply  table	F handler		F handler	
characters table F check   F handler T list   T methods F mark   F replacenbsp F reset   F replacenbspaces F set   Checkers table F show   F handler italics table   F reset F forcevariant F handler   F set F handler F reset   F handler F set kerns table   digits table D factors table   T actions F handler F keepligature F keepligature   F set B keeptogether directions table D mapping F set   Girections table D mapping F set manipulators table   F getfences F getglobal F apply table	F resetcharacter	align	F set	
F handler T methods F replacenbsp F replacenbspaces F replacenbspaces F handler F handler F handler F reset F forcevariant F set F handler F handler F handler F set F handler F set F handler F set F handler F set F handler F set F set F handler F set F set F handler F set F handler F set F handler F handler F handler F handler F handler F set F s	F setcharacteral	ign	injectors	table
F methods F replacenbsp F replacenbspaces  Checkers table F handler F reset F reset F reset F set F handler F set  Cleaners table F handler F set F handler F set F handler F set F handler F set F set F set F set F handler F set F set F handler F set F set F handler F handler F handler F handler F set F se	characters	table	F check	
F replacenbspaces F set  Checkers table F show  F handler italics table  F reset F forcevariant  F set F handler  F handler  F handler  F set F handler  F set Kerns table  Gligits table  T actions  F handler  F handler  F set  B keepligature  F set  directions table  F getfences  F getglobal  F getmethod  F apply	F handler		T list	
F replacenbspaces table F show  F handler italics table  F reset F forcevariant F set F handler  Cleaners table F reset F handler F set Kerns table  Gigits table D factors T actions F handler F set B keepligature F set  Girections table D mapping F getfences F getglobal F getmethod F apply	T methods		F mark	
checkers table F show   F handler italics table   F reset F forcevariant   F set F handler   Cleaners table F reset   F handler F set   F set kerns table   digits table D factors   T actions F handler   F handler F keepligature   F set B keeptogether   directions table D mapping   F getfences F set   F getglobal manipulators table   F getmethod F apply	F replacenbsp		F reset	
F handler F reset F set F handler  Cleaners F handler F set F handler F set F handler F set F handler F handler F handler F set F se	F replacenbspace	s	F set	
F reset F set Cleaners table F handler F set F handler F set F set Kerns table  digits T actions F handler F set B keepligature F set B keeptogether  directions table F getfences F getglobal F getmethod F apply	checkers	table	F show	
F set  cleaners table F handler F set F set  kerns table  digits table D factors F handler F handler F handler F set B keepligature F set B keeptogether  directions table D mapping F getfences F getglobal F getmethod F apply	F handler		italics	table
cleaners table F reset   F handler F set kerns table   digits table D factors   T actions F handler F keepligature   F handler F keepligature B keeptogether   directions table D mapping   F getfences F set   F getglobal manipulators table   F getmethod F apply	F reset		F forcevariant	
F handler F set  Kerns table  digits table  T actions F handler F handler F set  B keepligature F set  B keeptogether  directions table  F getfences F getglobal F getmethod  F apply	F set		F handler	
F set kerns table  digits table D factors  T actions F handler F handler F set B keeptogether  directions table D mapping  F getfences F getglobal F getmethod F apply	cleaners	table	F reset	
digits table D factors   T actions F handler   F handler F keepligature   F set B keeptogether   directions table D mapping   F getfences F set   F getglobal manipulators table   F getmethod F apply	F handler		F set	
T actions F handler F handler F set  directions F getfences F getglobal F getmethod  F handler F keepligature F keepligature D mapping F set F set F getglobal F apply	F set		kerns	table
F handler F set  directions F getfences F getglobal F getmethod  F handler F keepligature B keeptogether D mapping F set F set manipulators T able F apply	digits	table	D factors	
F set  directions  F getfences  F getglobal  F getmethod  B keeptogether  D mapping  F set  manipulators  table  F apply	T actions		F handler	
directions     table     D mapping       F getfences     F set       F getglobal     manipulators     table       F getmethod     F apply	F handler		F keepligature	
F getfences F set F getglobal manipulators table F getmethod F apply	F set		B keeptogether	
F getmethod F apply table	directions	table	D mapping	
F getmethod F apply	F getfences		F set	
•	F getglobal		manipulators	table
F handler F applyspecification	F getmethod		F apply	
	F handler		F applyspecifica	tion
	F handler		F applyspecifica	tion

T methods F Word F Words F abbreviatedjournal F expandedjournal F lowercase F stripperiod F uppercase T patterns U list U pair F splitspecification margins table F finalhandler F globalhandler F ha F localhandler F save marksuspects function processors table F apply F register F reset F split F startapply F stopapply F stripped F tostring function showsuspects spacings table F define F handler D mapping T numbers T frenchpunctuation T characters S name N number F reset F set F setup wrappers table F handler

table

xtables

F cleanup F construct F create F finish row F flush F initialize\_construct F initialize\_reflow\_height F initialize reflow width F next row F reflow\_height F reflow width F set construct F set\_reflow\_height F set reflow width

## unicode (extra lua)

ascii	table	F	len
F byte		F	lower
F char		F	match
F dump		F	rep
F find		F	reverse
F forma	t	F	sub
F gfind			upper
F gmatc	n	utf8	table
F gsub		F	byte
F len		F	char
F lower			characters
F match		F	chrlen
F rep		F	count
F rever	se	F	dump
F sub		F	filetype
F upper		F	find
grapheme	table	F	format
F byte		F	gfind
F char			gmatch
F dump		F	gsub
F find		F	is_valid
F forma	t	F	len
F gfind		F	length
F gmatc	า	F	lower
F gsub		F	magic
F len		F	match
F lower		F	remapper
F match		F	rep
F rep		F	replacer
F rever	se	F	reverse
F sub		F	split
F upper		F	splitlines
latin1	table	F	sub
F byte		F	subtituter
F char		F	tocodes
F dump		F	toeight
F find		F	toentities
F forma	t		tostring
F gfind		F	totable
F gmatc	n	F	upper
F gsub		F	ustring

- F utf16\_to\_utf8\_be
- F utf16\_to\_utf8\_be\_t
- F utf16\_to\_utf8\_le
- F utf16\_to\_utf8\_le\_t
- F utf16\_to\_utf8\_t
- F utf32\_to\_utf8\_be
- F utf32\_to\_utf8\_be\_t
- F utf32\_to\_utf8\_le
- F utf32\_to\_utf8\_le\_t
- F utf32\_to\_utf8\_t
- F utf8\_to\_utf16
- F utf8\_to\_utf16\_be
- F utf8\_to\_utf16\_le
- F utf8\_to\_utf8\_t
- F values
- F xstring

# url (context)

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

## utilities (context)

debugger	table		alwaysstripcode	
F disable			compile	
F enable			loadedluacode	
F savestats			loadstripped	
F showstats			nofstrippedbytes	
F showtraceback	4-61-		nofstrippedchunks	i
files	table		stripcode	
F close			strippedchunks	
F getposition			strippedloadstrin	g
F look		Т	suffixes	
F open			S lua	
F read2dot14			S luc	
F readbyte			S lui	
F readbytes			S luj	
F readcardinal			S luv	
F readcardinal1			S tma	
F readcardinal2			S tmc	
F readcardinal3			S tua	
F readcardinal4			S tuc	
F readchar		pack		table
F readfixed4		-	hashed	
F readinteger			new	
F readinteger1			pack	
F readinteger2		F	simplehashed	
F readinteger4			strip	
F readstring		F	unpack	
F readtag			version	
F setposition		pars		table
F size		F	add_settings_to_a	rray
F skip			arguments_to_tabl	e
F skiplong			array_to_string	
F skipshort			csvsplitter	
formatters	table		getparameters	
F formatcolumns			groupedsplitat	
F list			hash_to_string	
F stripzeros			iterator	
garbagecollector	table		keq_to_hash	
F check			listitem	
N criterium			make_settings_to_	hash_pattern
B enabled			mergehashes	
lua	table	F	options_to_array	

F options_to_hash		F enable	
T patterns		F initialize	
U settings_to_ar	rav	Flist	
U settings_to_has		F new	
U settings to has	_	F register	
U settings to has	_	F report	
U unittotex		F reset	
F process_stripped	settinas	F show	
F rfc4180splitter	3-	stacker	table
F runtime		F new	
F settings_to_arra	у	storage	table
F settings_to_arra	y_with_repeat	F allocate	
F settings_to_hash		F checked	
F settings_to_hash	_strict	F mark	
F settings_to_hash	_tolerant	F marked	
F settings_to_set		F setinitializer	
F simple_hash_to_s	tring	F sparse	
F splitmethod		streams	table
F splitthousands		F close	
F stepper		F getposition	
F stripped_setting	s_to_array	F look	
F unittotex		F open	
F unittoxml		F read2dot14	
report	function	F readbyte	
sequencers	table	F readbytes	
F appendaction		F readcardinal	
F appendgroup		F readcardinal1	
F compile		F readcardinal2	
F disableaction		F readcardinal3	
F disablegroup		F readcardinal4	
F enableaction		F readchar	
F enablegroup		F readfixed4	
D functions		F readinteger	
F localize		F readinteger1	
F new		F readinteger2	
F nodeprocessor		F readinteger4	
F prependaction		F readstring	
F prependgroup		F setposition	
F removeaction		F size	
F replaceaction		F skip	
F setkind		F skipbytes	
F tostring		F skiplong	
setters	table	F skipshort	
F disable		strings	table

F collapsecrlf T formatters F add F new F newrepeater F nice T striplinepatterns U collapse U prune U prune and collapse U prune and no empty U retain U retain and collapse U retain and no empty F striplines F striplong F tabtospace T tracers tables table F definedtable F definetable F encapsulate F insertaftervalue F insertbeforevalue

### F accesstable

F migratetable

F removevalue

F replacevalue

#### templates

table

F load

F replace

F replacer

F resolve

### vf (context)

```
function
char
down
        function
fontid
        function
image
        function
node
        function
nop
        function
        function
pop
push
        function
right
        function
        function
rule
special function
```

## visualizers (context)

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

## xml (context)

addentitiesdoctype	function	D. ataina	
after	function	D string	
all	function	D tex	
		D texline	
applylpath	function	D texspace	
assign attribute	function function	D verbose	
badinclusions	function	defaultprotocol delete	string function
before			function function
	function	delete_element	
body	function	each	function
builtinentities	table	each_element	<del>function</del>
B amp		elements	function
B apos		elementtocdata	function
B gt		empty	function
B lt		entities	data table
B quot		erase	function
cdata	function	errorhandler	function
cdatatotext	function	escaped	function
checkbom	function	expressions	table
checkerror	function	F boolean	
checknamespace	function	F child	
checkns	function	F contains	
cleansed	function	F count	
collect	function	F error	
collect_elements	<del>function</del>	F find	
collect_tags	function	F idstring	
<del>collect_texts</del>	<del>function</del>	F lower	
collected	function	F name	
collecttexts	function	F number	
content	function	F oneof	
convert	function	F print	
сору	function	F quit	
count	function	F tag	
cprint	function	F text	
CSS	table	F undefined	
F colorspecification		F upper	
F dimension		fillin	function
F fontspecification		filter	function
F padding		finalizers	table
defaulthandlers	table	F paragraphs	
D file		T tex	
D parsedxml		F all	

F attribute	F position	
F chainattribute	F reverse	
F command	F table	
F concat	F tag	
F concatrange	F tags	
F context	F text	
F count	F texts	
F ctxtext	F upperall	
F default	first	function
F first	found	function
F function	functions	table
F index	getbuffer	function
F last	gethandlers	function
F lettered	gethandlersfunction	function
F lower	helpers	table
F lowerall	F recursetext	
F match	include	function
F name	inclusion	function
F position	inclusions	function
F reverse	index	function
F stripped	inheritedconvert	function
F tag	inject	function
F tags	inject_element	function
F text	<pre>inject_element_after</pre>	function
F upper	<pre>inject_element_before</pre>	function
F upperall	injectafter	function
T xml	injectbefore	function
F all	insert	function
F att	insert_element	function
F attribute	<pre>insert_element_after</pre>	function
F attributes	<pre>insert_element_before</pre>	<b>function</b>
F cdata	insertafter	function
F chainattribute	insertbefore	function
F count	insertcdata	function
F default	insertcomment	function
F elements	inspect	function
F empty	is_valid	function
F first	kind	function
F function	last	function
F index	load	function
F last	lpath	function
F lowerall	lpathcached	function
F match	lpathcalls	function
F name	lshow	function

Т

makestandalone	function	setcomment
match	function	sethandlersfunction
name	function	setinjectors
newhandlers	function	_
	function	setproperty
nodesettostring	function	settings
originalload		specialhandler
package	function function	sprint
parent	userdata	string
parsedentitylpeg	450.4414	strip
pihandlers	table	strip_whitespace
F injector	4-61-	stripelement
placeholders	table	stripleadingspaces
F unknown_any_entity		table
F unknown_dec_entity		text
F unknown_hex_entity		textonly
position	function	texttocdata
privatecodes	table	tocdata
privatetoken	function	toelement
process	function	tostring
<pre>process_attributes</pre>	<del>function</del>	totable
process_elements	function	toxml
processattributes	function	tprint
profiled	table	traverse
raw	function	unescaped
registerentity	function	unprivatized
registerns	function	withelement
reindex	function	withelements
remap_name	<del>function</del>	wrap
remap_namespace	<del>function</del>	xmlns
remap_tag	<del>function</del>	
remapname	function	
remapnamespace	function	
remaptag	function	
renamespace	function	
replace	function	
replace_element	function	
resetinjectors	function	
resolvens	function	
root	function	
save	function	
selection	function	
separate	function	
serialize	function	
setcdata	function	

function function function function function table function function function **function** function table

### zip (extra lua)

archives table close function closearchive function

openarchive function
openfile function
registeredfiles table
type function

# zlib (extra lua)

adler32	function
compress	function
compressobj	function
crc32	function
decompress	function
decompressobj	function
version	function