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 imm 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 noads mode nodes number oldtoken os package pagebuilders parametersets pdf pdfscanner physics profiler publications regimes resolvers sandbox scripts set socket sorters statistics **status** storage streams string structures table t 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	lang	table
context	function	languages	table
converters	table	layouts	table
coroutine	table	lfs	table
ctxrunner	table	libraries	table
debug	table	lmx	table
dimen	function	load	function
dir	table	loadfile	function
directives	table	loadstring	function
document	table	logs	table
documentdata	table	lpdf	table
dofile	function	lpeg	table
endpage	function	ltn12	table
environment	table	lua	table
epdf	table	luatex	table
error	function	lxml	table
experiments	table	math	table
figures	table	mathematics	table

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

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

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

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

openMemStream
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 fonts table frozen function

getfont overloaded function

id function function max nextid function read tfm function read\_vf function

setfont overloaded 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		F registermain
N blwf		F report
N fina		F reset
N half		T vectors
N init		constructors table
N isol		F addcoreunicodes
N medi		F aftercopyingcharacters
N pref		F applymanipulators
N pstf		F assignmathparameters
N rphf		B autocleanup
D initializers		F beforecopyingcharacters
D methods		D cache
F setstate		B cacheintex
T states		F calculatescale
N blwf		F checkedfeatures
N fina		F checkedfilename
N half		F checkvirtualids
N init		F cleanuptable
N isol		F collectprocessors
N mark		F currentfonthasfeature
N medi		D designsizes
N pref		D dontembed
N pstf		F enhanceparameters
N rest		N factor
N rphf		F finalize
B useunicodemarks		F getfeatureaction
checkers	table	F hashfeatures
F getmissing		F hashinstance
F missing		T hashmethods
F placeholder		F normal
cid	table	F virtual
F getmap		F initializefeatures
F loadfile		T 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 autoitalicamo	ount
T parameters	T cidinfo	
S ascender	S embedding	
S descender	S encodingbytes	5
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 mathitalics	
S hfactor	S mode	
S mathsize	S name	
T protrusion	S noglyphnames	
S auto	S nostackmath	
S quad	S psname	
S scaledpoints	S textitalics	
S scriptpercentage	S virtualized	
S scriptscriptpercentage	D loadedfonts	
S size	S namemode	
S slantfactor	F newfeatures	
S slantperpoint	F newhandler	
T spacing	N noffontsloaded	
S extra	N nofsharedfonts	
S shrink	N nofsharedhashes	
S stretch	N nofsharedvectors	
S width	N privateoffset	
T synonyms	F readanddefine	
S em	F registerfeature	
S ex	B resolvevirtualto	0
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 trytosharefont	
S spaceshrink	N version	
S spacestretch	current	function
S x_height	currentid	function
S units	definers	table
S vfactor	F addlookup	

F analysis	N Engunillia
F analyze	N Encyrillic
F applypostprocessors F checkedmode	N Ercyrillic
	N Ereversedcyrillic
F checkedscript	N Escyrillic
F current	N Fitacyrillic
S defaultlookup	N Gcedilla
F define	N Gdot
F getspecification	N Gecyrillic
F internal	N Gheupturncyrillic
Floadfont	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 Jecyrillic
F file	N Kacyrillic
F name	N Kcedilla
F spec	N Khacyrillic
F spec <b>definetypeface</b> function	N Khacyrillic N Kjecyrillic
definetypeface function	N Kjecyrillic
definetypeface function encodings table	N Kjecyrillic N Lcedilla
<pre>definetypeface function encodings table T agl</pre>	N Kjecyrillic N Lcedilla N Ljecyrillic
<pre>definetypeface function encodings table  T agl     D ctxcodes</pre>	N Kjecyrillic N Lcedilla N Ljecyrillic N Ncedilla
definetypeface function encodings table  T agl D ctxcodes D extras	N Kjecyrillic N Lcedilla N Ljecyrillic N Ncedilla N Njecyrillic
definetypeface function encodings table  T agl D ctxcodes D extras D names	N Kjecyrillic N Lcedilla N Ljecyrillic N Ncedilla N Njecyrillic N Ocyrillic
definetypeface function encodings table  T agl D ctxcodes D extras D names T synonyms	N Kjecyrillic N Lcedilla N Ljecyrillic N Ncedilla N Njecyrillic N Ocyrillic N Odblacute
definetypeface function table  T agl D ctxcodes D extras D names T synonyms N Acyrillic	N Kjecyrillic N Lcedilla N Ljecyrillic N Ncedilla N Njecyrillic N Ocyrillic N Odblacute N Ohm
definetypeface encodings table  T agl D ctxcodes D extras D names T synonyms N Acyrillic N Becyrillic	N Kjecyrillic N Lcedilla N Ljecyrillic N Ncedilla N Njecyrillic N Ocyrillic N Odblacute N Ohm N Pecyrillic
definetypeface encodings table  T agl D ctxcodes D extras D names T synonyms N Acyrillic N Becyrillic N Cdot	N Kjecyrillic N Lcedilla N Ljecyrillic N Ncedilla N Njecyrillic N Ocyrillic N Odblacute N Ohm N Pecyrillic
definetypeface function table  T agl D ctxcodes D extras D names T synonyms N Acyrillic N Becyrillic N Cdot N Checyrillic	N Kjecyrillic N Lcedilla N Ljecyrillic N Ncedilla N Njecyrillic N Ocyrillic N Odblacute N Ohm N Pecyrillic N Rcedilla N Shacyrillic
definetypeface encodings table  T agl D ctxcodes D extras D names T synonyms N Acyrillic N Becyrillic N Cdot N Checyrillic N Decyrillic	N Kjecyrillic N Lcedilla N Ljecyrillic N Ncedilla N Njecyrillic N Ocyrillic N Odblacute N Ohm N Pecyrillic N Rcedilla N Shacyrillic
definetypeface encodings table  T agl D ctxcodes D extras D names T synonyms N Acyrillic N Becyrillic N Cdot N Checyrillic N Decyrillic N Djecyrillic	N Kjecyrillic N Lcedilla N Ljecyrillic N Ncedilla N Njecyrillic N Ocyrillic N Odblacute N Ohm N Pecyrillic N Rcedilla N Shacyrillic N Softsigncyrillic
definetypeface encodings table  T agl D ctxcodes D extras D names T synonyms N Acyrillic N Becyrillic N Cdot N Checyrillic N Decyrillic N Decyrillic N Decyrillic N Decyrillic N Decyrillic	N Kjecyrillic N Lcedilla N Ljecyrillic N Ncedilla N Njecyrillic N Ocyrillic N Odblacute N Ohm N Pecyrillic N Rcedilla N Shacyrillic N Softsigncyrillic
definetypeface function encodings table  T agl D ctxcodes D extras D names T synonyms N Acyrillic N Becyrillic N Cdot N Checyrillic N Decyrillic	N Kjecyrillic N Lcedilla N Ljecyrillic N Ncedilla N Njecyrillic N Ocyrillic N Odblacute N Ohm N Pecyrillic N Rcedilla N Shacyrillic N Softsigncyrillic N Tcedilla N Tecyrillic
definetypeface encodings table  T agl D ctxcodes D extras D names T synonyms N Acyrillic N Becyrillic N Checyrillic N Decyrillic N Decyrillic N Decyrillic N Dzecyrillic N Dzecyrillic N Dzecyrillic N Dzecyrillic N Dzecyrillic N Dzecyrillic	N Kjecyrillic N Lcedilla N Ljecyrillic N Ncedilla N Njecyrillic N Ocyrillic N Odblacute N Ohm N Pecyrillic N Rcedilla N Shacyrillic N Shchacyrillic N Softsigncyrillic N Tcedilla N Tecyrillic
definetypeface encodings table  T agl D ctxcodes D extras D names T synonyms N Acyrillic N Becyrillic N Cdot N Checyrillic N Decyrillic N Djecyrillic N Dzecyrillic N Dzecyrillic N Dzhecyrillic N Ecyrillic N Ecyrillic	N Kjecyrillic N Lcedilla N Ljecyrillic N Ncedilla N Njecyrillic N Ocyrillic N Odblacute N Ohm N Pecyrillic N Rcedilla N Shacyrillic N Shchacyrillic N Toedilla N Tecyrillic N Tecyrillic N Tecyrillic
definetypeface encodings table  T agl D ctxcodes D extras D names T synonyms N Acyrillic N Becyrillic N Cdot N Checyrillic N Djecyrillic N Djecyrillic N Dzecyrillic N Dzhecyrillic N Edot N Efyrillic N Efcyrillic	N Kjecyrillic N Lcedilla N Ljecyrillic N Ncedilla N Njecyrillic N Ocyrillic N Odblacute N Ohm N Pecyrillic N Rcedilla N Shacyrillic N Shchacyrillic N Toedilla N Tecyrillic N Tecyrillic N Tsecyrillic N Tshecyrillic

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	N of abthrotohoomed
3 3 3 3	N eighthnotebeamed
N blackleftpointingpointer	N etnahtafoukhhebrew
	_
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 reviahebrew 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	
			ah nau
	sheya	N yerahbenyomoh	ebrew
	sheva115	N yod	
		N yoddagesh	
	sheva15	N zayin	
	sheva22	N zayindagesh	
	sheva2e	N zdot	
	shevahebrew	N zeroarabic	
	shevanarrowhebrew	D unicodes	
	shevaquarterhebrew 	D cache	
	shin	F is_known	
	shindagesh	D known	
	shindageshshindot	F load	
	shindageshsindot	F make_unicode_vect	tor
	shinshindot	D math	
	shinsindot	N version	
	siluqhebrew	enhanceid	function
	sixarabic	expansions	data table
	tav	formats	data table
	tavdages	getalternate	function
	tavdagesh	getdiscexpansion	
	tcedilla	getkern	function
N	tchehinitialarabic	getmultiple	function
N	tet	getsubstitution	function
N	tetdagesh	getters	table
N	tevirhebrew	T alternate	
N	thousandsseparatorarabic	F opentype	
N	threearabic	T kern	
N	tildecmb	F opentype	
N	tipehahebrew	F type1	
N	tsadi	T multiple	
N	tsadidagesh	F opentype	
N	tsere	T substitution	
N	tsere12	F opentype	
N	tserele	goodies	table
N	tsere2b	D colorschemes	
N	tserehebrew	D data	
N	tserenarrowhebrew	D designsizes	
N	tserequarterhebrew	D filenames	
N	twoarabic	F getcompositions	
N	udblacute	T list	
N	vav	F compositions	
N	vavdagesh	F designsizes	
N	vavdagesh65	F expansions	

F featureset		F register
F filenames		S stepkey
F files		F dataset
F mathematics		S defaultbasealternate
F protrusions		S defaultnodealternate
F solutions		D enhancers
F treatments		D features
F typefaces		F getalternate
F load		F getgsub
F prepare_featur	`es	F getkern
F register		F getmultiple
F registerpostpr	ocessor	F getsubstitution
F report		T handlers
handlers	table	F devanagari_remove_joiners
T afm		F devanagari_reorder_matras
B addkerns		F devanagari_reorder_pre_base_reordering_consonants
B addligatures		F devanagari_reorder_reph
B addtexligatu	res	F gpos_context
B autoprefixed		F gpos_contextchain
D cache		F gpos_cursive
D features		F gpos_mark2base
F getkern		F gpos_mark2ligature
T helpdata		F gpos_mark2mark
D bothkerned		F gpos_pair
D leftkerned		F gpos_single
D ligatures		F gsub_alternate
D rightkerned		F gsub_context
D texligature	es	F gsub_contextchain
F load		F gsub_ligature
F setfeatures		F gsub_multiple
B syncspace		F gsub_reversecontextchain
N version T otf		F gsub_single
		Fload
F addfeature D cache		F packoutlines T readers
F collectlooku	nc	F addunicodetable
,	μs	D cache
T coverup T actions		F cff
F alternate		F checkhash
F kern	,	F cmap
F ligature		F compact
F multiple		F expand
F pair		F gdef
F substitut	ion	F getinfo
. 50551100	· <del></del> ··	. 90.20

F glyf	F unpack
F gpos	N version
F gsub	F scriptandlanguage
F head	F setdynamics
F hhea	F setfeatures
F hmtx	T statistics
F kern	D usedfeatures
F loadfont	T tables
F loadshapes	D baselines
F loca	D features
F math	D languages
F maxp	D scripts
F name	F unpackoutlines
F os/2	N version
F pack	T pfb
F post	T tfm
F rehash	D features
T streamreader	N maxnestingdepth
F close	N maxnestingsize
F getposition	F setfeatures
F look	N version
F open	T vf
F read2dot14	T combinations
F readbyte	F combine
F readbytes	T combiner
F readcardinal	D commands
F readcardinal1	D helpers
F readcardinal2	D math
F readcardinal3	D predefined
F readcardinal4	N version
F readchar	D whatever
F readfixed4	<b>hashes</b> table
F readinteger	D characters
F readinteger1	D csnames
F readinteger2	D descriptions
F readinteger4	D dynamics
F readstring	D emwidths
F readtag	D exheights
F setposition	D extensibles
F size	D features
F skip	D identifiers
F skiplong	D italics
F skipshort	D lastmathids
N tableversion	D marks

D modes		F fromunicode16	
D originals		F loadfile	
D parameters		F loadline	
T processes		F makenameparser	
D properties		D overloads	
D quads		F reset	
D resources		F tounicode	
T setdynamics		F tounicode16	
T shapes		F tounicode16seque	ence
D spaces		metapost	table
D spacings		F boundingbox	
D unicodes		F boxtomp	
D variants		F draw	
D xheights		F fill	
helpers	table	F maxbounds	
F addprivate		F output	
F dimenfactor		F paths	
F expandglyph		F widthline	
F fontpatternhassi	ize	F zeroline	
F getdigitwidth		mp	table
F getparameters		D cache	
F getprivatenode		B inline	
F hasprivate		N version	
F indextoslot		names	data table
F name		nulldata	data table
F nametoslot		protrusions	data table
F setdigitwidth		readers	table
F splitfontpatter	1	F afm	
F tochar		F check_lua	
infofont	function	F check_tfm	
iterators	table	F lua	
F characters		F opentype	
F descriptions		F otf	
F glyphs		F pfb	
loggers	table	D sequence	
F add_placeholders	3	F tfm	
D category_to_plac	ceholder	F ttc	
F format		F ttf	
F onetimemessage		reserveid	function
F register		select	table
F reportdefinedfor	nts	T data	
F reportusedfeatur	res	F define	
mappings	table	F definetypeface	
F addtounicode		T fallbacks	

```
F filterinput
   T methods
     F default
     F features
     F file
     F goodies
     F name
     F selectfont
     F simplefonts
     F spec
     F style
   F registerfallback
   F searchfiles
setdiscexpansion function
specifiers
                      table
   D contextmerged
    F contextnumber
   D contextnumbers
   D contextsetups
    F contexttostring
    F definecontext
   F mergecontext
    F presetcontext
    F registercontext
    F showcontext
    F splitcontext
    D synonyms
   D variants
                      table
symbols
    F uselibrary
tables
                      table
tracers
                      table
                      table
treatments
    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 MPrest
cachedsetups	data table	F MPrs
cachesetup	function	F MPul
checkedspecification	function	F MPur
complete	data table	F MPw
constants	data table	F MPx
corenamespaces	data table	F MPxy
definecommand	function	F MPxywhd
doifelsemessage	function	F MPy
elements	data table	F Romannumerals
formats	data table	F abjadnodotnumerals
getcheckedparameters	function	F abjadnumerals
getmessage	function	F addcounter
hashedsetups	data table	F addfeature
implement	function	F addgrapheme
interfacedcommand	function	F addlinklistelement
interfaces	table	F addreplacements
invalidkey	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	ct	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 MPr		F btxabbreviatedjournal

F btxaddentrv F htxsetdataset F btxaddjournal F btxsetentry F btxauthor F btxsetregister F btxauthorfield F btxsetspecification F btxauthortoregister F btxsingularorplural F btxcollectlistentries F btxtoregister F btxcurrentfirstnames F btxusedataset F btxcurrentinitials F btxuservariable F btxcurrentjuniors F 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 checkiniector F btxdoifelsesameasprevious F checkinterfacechain F htxdoifelseuservariable F checknextiniector F btxdoifnot F checkpreviousinjector F btxexpandedjournal F checktwopassdata F btxfetchlistentries F chemicalcomponent F btxfield F chinesenumerals F btxfieldname F cleanfontname F btxfieldtype F cleanupbox F btxfirstofrange F cleanuplayers F htxflush 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 E htxhandlecite F converteddimen 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 btxpreparelistentries F currentdate F btxremapauthor F currentdesignsize F currentenvironment F btxsavedataset

F currentposthyphenchar

F btxsavejournallist

F currentprehyphenchar F defineprocesscolorglobal F currentproduct F defineprocesscolorlocal F currentproject F defineprogram F currentreferenceorder F definereference F currentsectiontolist F defineregister F datasetvariable F definerule F davname F definesectionlevels F decimals F defineselectfont F decrement counter 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 definefont two F disablespellchecking 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 doifelseleapyear 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 enableautofences F doifelseolderversion F enableautofontscript F doifelseoverlapping F enablebackgroundalign F doifelseparallel F enablebackgroundboxes F doifelseparentfile F enablecolor F doifelsepathexist F enablecolorintents F doifelseposition F enablecrlf F enabledirectives F doifelsepositiononpage F enableexperiments F doifelsepositionsonsamepage F doifelsepositionsonthispage F enablefontcolorschemes F doifelsepositionsused F enableinteraction F enableparbuilder F doifelserangeonpage F doifelsereference F enableregime F enablerules F doifelsesame F doifelsestackedfloats F enableshifts F doifelsesynonymshown F enablespellchecking F doifelsesynonymused F enablestatetriggering F doifelseurldefined F enablestream F doifelseutfmathabove F enabletrackers F enabletransparency F doifelseutfmathaccent F doifelseutfmathbelow F enableutf F doifelseutfmathfiller F enhancelinkedlist F doifelsevisualizer F enhancelist F doiffieldsetelse F enhancereference F doifnotcounter F enhanceregister F doifnotecontent F eposcolumn F doifnoteonsamepageasprevious F eposcolumnregistered F erasebuffer F doifnotsame

F execute

F doifposition

F expandcurrentreference F flushpostponednotes F exportformdata F flushstream F exportreferences F flushstreamcopy F extendregister F fontchar F extensiblecode F fontcharbyindex 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 fontlookupaetkev F fetchposboxes F fontlookupgetkeyofindex F fetchtwomarks F fontlookupinitialize F figure check F fontlookupnoffound F figure done F forceendjob F figure\_dummy F forcequitjob F formatcolor F figure identify F figure include F formatgray F figure mergegoodies F from F figure pop F aetbidimode F figure push F getbodyfontsizes F getbuffer F figure\_reset F getbufferctxlua F figure scale F figurefilename F getbuffermkvi F figurefilepath F getcheckedinterfaceparameters F figurefiletype F getcurrentprefixspec F figurerequest F getcurrentreferencemetadata F getdefaultfieldvalue F figurestatus F figureused F getdocumentargument F filterdefaultreference F getdocumentfilename F filterreference F getelementtag F finalizebox F getfieldcategory F findtwopassdata F getfile 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 getmathdomain F flushpageinjectionsbefore F getmathitalics F flushpostponedblocks F getmessage

F getmpextensions F inputfilebarename F getmprandomnumber F inputfilename F getnaturaldimensions F inputfilerealsuffix F getnotestate F inputfilesuffix F getprivatechar F insertattachment F getprogram F insertcomment F getrandomdimen F insertfield F insertionnumber F getrandomfloat F getrandomnumber F insertrenderingwindow F installedlanguages F getrandomseed F getreadfilename F installtexdirective F getsomefullstructurenumber F installtextracker F getsomestructurenumber F iobfilename F getspecificstructuretitle F jobfilesuffix F getstructurelevel F languagenumber F getstructurenumber F lastcountervalue F getsubstring F lastsubcountervalue F lchexnumber F gettexbuffer F 1chexnumbers F gettwopassdata F gettwopassdatalist F leapyear F aeturl F linenumbersstageone F getvisual F linenumbersstagetwo F hboxtovbox F listgroupindex F helpaction F listlabel F helpreference F listlocation F hexstringtonumber F listnamespaces F horizontalcode F listprefixednumber F hour F listprefixedpage F hyphenatedlist F listrealpage F hyphenatedurl F listsize F immediatemessage F listtitle F increment counter F listuserdata F incrementedcounter F loadexamodes F loadfontgoodies F incrementsubcounter F loadluamodule F initializejob F initializemathdomain F loadmapfile F initializemathitalics F loadmapline F initializestream F loadspellchecklist F initializetexdirectives F loadtypescriptfile F initializetextrackers F loadvisualizer F injectcurrentreference F locatefilepath F injectcurrentreferencehtdp F locfilename F injectreference F lower

F lpdf\_adddocumentcolorspace

F inlinechemical

F lpdf adddocumentextgstate F mpgraphic F lpdf adddocumentpattern F mpoptions F lpdf adddocumentshade F mprunset F lpdf addpageattributes F mpruntab F lpdf addpageresources F mprunvar F lpdf addpagesattributes F mpsetclippath F lpdf addtocatalog F mpsetoutercolor F lpdf addtoinfo F mpsetsxsv 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 naturalwd F markingtitle F nbfs F nextcountervalue F markinjector F markregionbox F nextparallel F markregionboxcorrected F nextsubcountervalue F markregionboxtagged F nofdays F markvisualfonts F nofstackedfloats F mathfraction F notedeltapage F mathrenderset F notelistindex F message F notenumberpage F metapostescaped F noteprefixednumber F metapostformatted F notesymbolpage F metapostgraphformat F notetitle F minute F ntimes F mixcleanup F number F mixfinalize F numbers F mixflushlist F objectnumber F mixflushrest F objectpage F mixgetsplit F octnumber F octstringtonumber F mixsetsplit F mixstate F operatingsystem F molecule F ordinal F month F outputfilename F monthmnem F overloadbookmark F monthname F overloaderror F mpcolor F pagestaterealpage F mpflushliteral F parpos F mpflushreset F pdfrotation

F pdfstartmatrix

F mpgettext

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

F registeruserdata F savecounter F relatemarking F savecurrentattributes F renderingvar F savedlistnumber F replacefeature F savedlistprefixednumber F replacepospxywhd F savedlisttitle F reportstructure F savefloat F resavefloat F savemargindata F resetcharacteralign F savenote F resetrounter F saveobject F reseteffect F savepagedata F resetfeature F savepageiniections 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 setcharactercasing F resetprevdepth 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 resetusedsynonyms F setcounter 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 seteffect

F savebuffer

F setelementuserproperties F setopendocumentaction F setfigurelookuporder F setopenpageaction F setfigurepaths F setowncounter F setfirstline F setownsubcounter F setfontfeature F setpagecolormodel F setfontofid F setpagestate F setfontsolution F setpagestaterealpageno F setformat F setpagetransition F setformsmethod F setparbuilder F sethyphenatedurlcharacters F setprofile F sethyphenationfeatures F setrandomseed F sethyphenationmethod F setrealign F setinitial F setrealspaces F setinitialsectionblock F setreferencearguments F setiniector F setreferenceattribute F setinnerreferencemethod F setreferenceoperation F setinsertionlocation F setregionbox F setinterfaceconstant F setregionboxtagged F setinterfaceelement F setregistermethod F setinterfacemessage F setreplacements F setinterfacemessages F setscript F setinterfacevariable F setsectionblock F setinternalreference F setsectionentry F setitaliccorrection F setstructureblockstate F setjavascriptpreamble F setstructurelevel F setjobcomment F setstructurenumber F setlanguageexceptions F setsubcounter F setlanguagesynonym F settagaspect F setlettercatcodes F settagcombination F setmarking F settagdelimitedsymbol F setmathalphabet F settagfigure E setmathalternate F settaggedmetadata F setmathattribute F settaghighlight F setmathdirection F settagitem F setmathdomain F settagitemgroup F setmathitalics F settaglist F setmathstyle F settagnotation F setmpextensions F settagnotationsymbol F setnegative F settagproperty F setnextinternalreference F settagproperty b F setnextreferenceorder F settagproperty\_n F setnotestate F settagregister F setnotesymbolpage F settagsorting

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F settagsubsentencesymbol

F setobject

F settagsynonym F startfontsolution F settagtablecell F startparbuilder F settagtabulatecell F startproduct F setupbookmarks F startproject F setupcanvas F startregime F setupcharacterspacing F startsectionlevel F setupexport F startstream F setupfontexpansion F starttag F setupfontprotrusion F starttag c F setupidentity F starttag\_d F setupinsertion F starttag u F setupitaliccorrection F starttext F setuplinenumbering F startviewerlayer F setuserinterface F stopactualtext F setvalidinterfacekeys F stopchemical F setvisual F stopcolorset F setvisualfont F stopcomponent F setvisuallayer 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 sin F strhd F sind F strht 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 structurevariable F startcomponent

F strwd

F startenvironment

E subcountervalue F usejavascriptpreamble F subcountervalues F usejavascriptscripts F subsubcountervalues F useluafile F subtractfeature F useluafileonce F synchronizemarking F useluamodule F synchronizestream F usemodules F synonymmeaning F usepath F useproduct F synonymname F systemlog F useproject F tagmfunctionlab F usesubpath F tagmfunctiontxt F usesymbols F tan F usetexfile F tand F usetexfileonce F texdefinition one F useurl F texdefinition two F usexmlfile F textime F usexmlfileonce F thefirstcharacter F usezipfile F utfchar F theremainingcharacters F utfmathclass F tochar F utfmathcommand F transparencycomponents F truefilename F utfmathcommandabove F utfmathcommandbelow F type F typebuffer F utfmathcommandfiller F typefile F utfmathfiller F uchar F utfmathstretch Fuchexnumber 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 useanyfile F weekdayname F useanyfileonce 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

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F x\_table\_init\_construct

F usefile

F x table init reflow height F xmldoifelsetext F x table init reflow height option F xmldoifemptv F x\_table\_init\_reflow\_width F xmldoifnot F x table init reflow width option F xmldoifnotemptv F x table next row F xmldoifnotselfempty F x table next row option F xmldoifnottext F x table r F xmldoifselfemptv F xmldoiftext F x table reflow height F x table reflow width F xmlelement F x table set construct F xmlfilter F xmlfilterlist F x table set reflow height F xmlfirst F x table set reflow width F xmladdindex F xmlflush F xmlafterdocumentsetup F xmlflushcontext F xmlaftersetup F xmlflushdocumentsetups F xmlall F xmlflushlinewise F xmlappenddocumentsetup F xmlflushspacewise F xmlfunction F xmlappendsetup F xmlapplyselectors F xmlgetindex F xmlatt F xmlinclude F xmlattdef F xmlincludeoptions F xmlattribute F xmlinclusion F xmlattributedef F xmlinclusions F xmlbadinclusions F xmlindex F xmlbeforedocumentsetup F xmlinfo F xmlbeforesetup F xmlinlineverbatim F xmlchainatt F xmlinstalldirective F xmlchainattdef F xmllast F xmlchecknamespace F xmlload F xmlcommand F xmlloadbuffer F xmlconcat F xmlloaddata F xmlconcatrange F xmlloaddirectives F xmlcontext F xmlloadregistered F xmlmain F xmlcount F xmlmatch F xmldelete 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 xmlregisterns

F xmldoifelseselfempty

F xmlremapname

F xmlremapnamespace

F xmlremovedocumentsetup

F xmlremovesetup

F xmlresetdocumentsetups

F xmlresetinjectors

F xmlsave

F xmlsetcommandtonone

F xmlsetcommandtotext

F xmlsetentity

F xmlsetinjectors

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

setcount function setdimen function setelement function setformat function function setmacro setmessage function setmessages function settranslation function setuserinterface function setvalidkeys function setvariable function

function

showmessage storedscanners strings syntax tolist translations variables writestatus function
data table
table
data table
function
data table
data table

#### 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)

```
string
arch
attach
             function
flush
             function
off
             function
             function
on
             table
opt
   F start
             string
os
             function
status
```

version\_num number

version

string

# job (context)

comment	function	F find	
datasets	table	F first	
D collected		F get	
F extend		F getcollected	
F getdata		F getdata	
F setdata		F getfield	
D tobesaved		F gettobesaved	
disablesave	function	F inlist	
fileobjreferences	table	F last	
D collected		F list	
D tobesaved		F save	
files	table	F savetagged	
D collected		D tobesaved	
F context		positions	table
B forcerun		F b_col	
F run		F b_region	
D tobesaved		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
hyphenationmin	function
id	function
new	function
patterns	function
postexhyphenchar	function
posthyphenchar	function
preexhyphenchar	function
prehyphenchar	function

## languages (context)

 ${\sf F}$  registerexception

associate	function	F registerpattern	
associated	data table	F setfeatures	
association	function	installed	function
counters	data table	labels	table
current	function	F define	
data	data table	F split	
decimals	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	

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

spotcode function function stream string function timestamp function toeight function 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 setescapedentities function setsetup function snippet function table sorters F add

F compare F flush F reset

F show F sort

xmltexhandler

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

#### 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

function
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

### noads (context)

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

processouter

function

## node (basic tex)

conv	function	E is made	
copy list	function	F is_node	
copy_list count	function	F last_node	
	function	F length	
current_attr dimensions	function	F new	
direct	table	F protect_glyphs	
F copy	table	F protrusion_skippable F remove	
F copy_list		F set attribute	
F count		_	
F current_attr		<pre>F set_properties_mode F setboth</pre>	
F dimensions		F setbox	
F do_ligature_n		F setchar	
F effective_glue		F setdisc	
F end_of_math		F setfield	
F first_glyph		F setlink	
F flush_list		F setnext	
F flush_node		F setprev	
- F flush_properties_table		F setproperty	
F free		F slide	
F get_properties_table		F tail	
F getboth		F todirect	
F getbox		F tonode	
F getchar		F tostring	
F getdisc		F traverse	
F getfield		F traverse_id	
F getfont		F unprotect_glyphs	
F getid		F unset_attribute	
F getleader		F usedlist	
F getlist		F vpack	
F getnext		F write	
F getprev		do_ligature_n	function
F getproperty		effective_glue	function
F getsubtype		end_of_math	function
F has_attribute		family_font	function
F has_field		fields	function
F has_glyph		first_character	function
F hpack		first_glyph	function
F insert_after		flush_list	function
F insert_before		flush_node	function
F is_char		flush_properties_table	function
F is_direct		free	function

<pre>get_properties_table</pre>	function	usedlist	function
getchar	function	vpack	function
getfield	function	whatsits	function
getfont	function	write	function
getid	function		
getleader	function		
getlist	function		
getnext	function		
getprev	function		
getproperty	function		
getsubtype	function		
has_attribute	function		
has_field	function		
has_glyph	function		
hpack	function		
id	function		
insert_after	function		
insert_before	function		
is_node	function		
kerning	function		
last_node	function		
length	function		
ligaturing	function		
mlist_to_hlist	function		
new	function		
next	function		
prev	function		
protect_glyphs	function		
protrusion_skippable	function		
remove	function		
set_attribute	function		
set_properties_mode	function		
setfield	function		
setproperty	function		
slide	function		
subtype	function		
tail	function		
tostring	function		
traverse	function		
traverse_id	function		
type	function		
types	function		
unprotect_glyphs	function		
unset_attribute	function		

## nodes (context)

accentcodes	data table	free	function
aligned	function	free spec	function
append	function	getattr	function
astable	function	getattribute	function
basepoints	function	getbox	function
builders	table	getchar	function
F buildpage_filter		getfield	function
F vpack_filter		getfont	function
codes	data table	getid	function
concat	function	getleader	function
сору	function	getlist	function
copy_list	function	getnext	function
copy_spec	function	getprev	function
count	function	getskip	function
current_attr	function	getsubtype	function
delete	function	gluecodes	data table
destinations	table	glyphcodes	data table
N attribute		glyphdir_is_equal	data table
T done		glyphdir_is_opposite	data table
F handler		glyphdir_is_orthogonal	data table
T stack		handlers	table
43	J-4- 4-61-		
dimensionfields	data table	F accessibility	
dimensions	function	F accessibility F alignbackgrounds	
dimensions dir_is_pop	function data table	•	
<pre>dimensions dir_is_pop dir_negation</pre>	function data table data table	F alignbackgrounds	
dimensions dir_is_pop dir_negation disccodes	function data table data table data table	F alignbackgrounds F backgrounds	
dimensions dir_is_pop dir_negation disccodes discretionarycodes	function data table data table data table data table	F alignbackgrounds F backgrounds F characters	
dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n	function data table data table data table data table function	F alignbackgrounds F backgrounds F characters F checkforleaks	
dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n effective_glue	function data table data table data table data table function function	F alignbackgrounds F backgrounds F characters F checkforleaks F checkglyphs	
dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n effective_glue end_of_math	function data table data table data table data table function function function	F alignbackgrounds F backgrounds F characters F checkforleaks F checkglyphs F cleanupbox F cleanuppage F export	
dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n effective_glue end_of_math fasthpack	function data table data table data table data table function function function function	F alignbackgrounds F backgrounds F characters F checkforleaks F checkglyphs F cleanupbox F cleanuppage F export F finalize	
dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n effective_glue end_of_math fasthpack fencecodes	function data table data table data table data table function function function function data table	F alignbackgrounds F backgrounds F characters F checkforleaks F checkglyphs F cleanupbox F cleanuppage F export F finalize F migrate	
dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n effective_glue end_of_math fasthpack fencecodes fields	function data table data table data table data table function function function function function function data table function	F alignbackgrounds F backgrounds F characters F checkforleaks F checkglyphs F cleanupbox F cleanuppage F export F finalize F migrate F protectglyphs	
dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n effective_glue end_of_math fasthpack fencecodes fields fillcodes	function data table data table data table data table function function function function data table function data table	F alignbackgrounds F backgrounds F characters F checkforleaks F checkglyphs F cleanupbox F cleanuppage F export F finalize F migrate F protectglyphs F stripping	
dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n effective_glue end_of_math fasthpack fencecodes fields fillcodes first_character	function data table data table data table data table function function function function data table function data table 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	
dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n effective_glue end_of_math fasthpack fencecodes fields fillcodes first_character first_glyph	function data table data table data table data table function function function data table function data table function data table function data table 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 effective_glue 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 table function data table 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
dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n effective_glue end_of_math fasthpack fencecodes fields fillcodes first_character first_glyph firstcharacter firstcharinbox	function data table data table data table data table data table function function function data table function data table function data tole 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 has_glyph	function function
dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n effective_glue end_of_math fasthpack fencecodes fields fillcodes first_character first_glyph firstcharinbox firstglyph	function data table data table data table data table data table function function function data table function data table function function data tole function 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 has_glyph hpack	function function function
dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n effective_glue end_of_math fasthpack fencecodes fields fillcodes first_character first_glyph firstcharacter firstcharinbox	function data table data table data table data table data table function function function data table function data table function data tole 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 has_glyph	function function

injections	table	listcodes
F copy		listtoutf
F getligaindex		load
F handler		locate
F installnewkern		margincodes
F keepcounts		markers
F reset		F get
F resetcounts		mathcodes
F setcursive		maxboxwidth
F setkern		mlist_to_hlist
F setligaindex		new
F setmark		noadcodes
F setpair		nodecodes
insert_after	function	nopts
insert_before	function	nuts
insert_list_after	function	F append
installattributehandler	function	F concat
is_direct	function	F copy
is_display_math	function	F copy_list
is_mirrored	data table	F copy_properties
is_node	function	F count
is_nut	function	F current_attr
is_rotated	data table	F delete
kerncodes	data table	F dimensions
kerning	function	F do_ligature_n
keys	table	F effective_glue
T whatsit		F end_of_math
last_node	function	F fasthpack
leftmarginwidth	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
D data		F getattribute
F finalize		F getboth
F number		F getbox
N scratchbox		F getchar
link	function	F getdisc
linked	function	F getfield
list	function	F getfont
listablefields	data table	F getid

data table function function data table data table data table function function data table data table function table

F getleader F negatedglue F getlist F noad F getnext F pdfannotation F getprev F pdfdestination F getprop F pdfdirect F pdfliteral F getskip F getsubtype F pdfrestore F has attribute F pdfsave F has field F pdfsetmatrix F has\_glyph F penalty F hpack F register F insert after F rightmarginkern F insert\_before F rightskip F rule F insert list after F is char F shrink F is\_direct F special F stretch F is\_display\_math F temp F is node F textdir F is nut F kerning F usage F last node T userids F leftmarginwidth N margins.inline F ligaturing N property F link N splitters.one F linked N splitters.two F locate F userlist F mlist\_to\_hlist F usernumber F nestedtracedslide F userstring F new F usertokens T pool F vlist F baselineskip F zeroglue F cleanup F prepend F disc F protect glyphs F fontkern F protrusion\_skippable F glue F rawprop F gluespec F reference F glyph F remove F hlist F repackhlist F kern F replace F latelua F rightmarginwidth F lateluafunction F set\_attribute F leftmarginkern F setattr F setattribute F leftskip

F setattributes

F lineskip

F setboth	F write	
F setbox	packlist	function
F setchar	pardir is equal	data table
F setdisc	pardir_is_opposite	data table
F setfield	pardir_is_parallel	data table
F setlink	partextdir is equal	data table
		data table
F setnext	penaltycodes	table
F setprev	plugindata	table
F setprop	F finalizer F initializer	
F setunsetattributes		
F setvisual	S name	
F slide	T namespace	
F somepenalty	N attribute	
F somespace	D data	
Ftail	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 post_linebreak_filter		F define	
F pre_linebreak_filter		F enable	
F tracer		F handler	
processwords	function	show	function
properties	table	showboxes	function
T actions		showcodes	function
F delayed		showlist	function
F fdelayed		showsimplelist	function
F immediate		skipcodes	data table
F attach		slide	function
T data		snapshots	table
F delayed		F getparameters	
protect_glyphs	function	F getsamples	
protrusion_skippable	function	F resetsamples	
pts	function	F takesample	
reference	function	somepenalty	function
references	table	somespace	function
N attribute		stripdiscretionaries	function
T done		stripping	table
F handler		T glyphs	
T stack		F set	
remove	function	striprange	function
repackhlist	function	tail	function
replace	function	takebox	function
report	function	tasks	table
rightmarginwidth	function	F actions	
rulecodes	data table	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

textdir_is_parallel	data table	F start	
tobasepoints	function	T steppers	
tocentimeters	function	F check	
tociceros	function	F codes	
todidots	function	F features	
todimen	function	F font	
toinches	function	F glyphs	
tomillimeters	function	F message	
tonewciceros	function	F messages	
tonewdidots	function	F nofsteps	
tonode	function	F register	
tonodes	function	F reset	
tonut	function	F start	
topicas	function	F stop	
topoints	function	F stop	
toscaledpoints	function	T transparencies	
tosequence	function	F reset	
tostring	function	F set	
totable	function	F setlist	
totree	function	traverse	function
toutf	function	traverse_id	function
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 resetproperties F rule F setlist			

F setvisual

F setproperties

vpack function
whatcodes data table
whatsitcodes data table
whatsitters table

T getters

T dimensions

T width

T setters

T dimensions

T width

writable\_spec function
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	

# oldtoken (context)

command_id	function
command_name	function
create	function
csname_id	function
csname_name	function
expand	function
get_next	function
is_activechar	function
is_expandable	function
is_protected	function
lookup	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 overloaded function setenv overloaded function setlocale sleep function overloaded function spawn

function

function

function

function function

function

time

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)

function
function
overloaded
function

setcatalog

setinfo

setcompresslevel

setmajorversion function
setminorversion function
setnames overloads
setobjcompresslevel function
setpageattributes overloads
setpageresources overloads
setpagesattributes overloads
settrailer overloads
setxformattributes function
setxformresources function
xformname function

function
function
overloaded function
overloaded function
overloaded function
overloaded function
overloaded function
function
function
function
function

function

overloaded function

overloaded function

function

# 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
currentspecification	table	T virtual

T demo-a	T virtualfields	
S category	B authornum	
T extra	B authoryear	
T fields	B authoryears	
S author	B num	
S institution	B suffix	
S organization	datasets	table
S subtitle	detailed	table
S title	endnotes_to_btx	function
S year	enhancer	table
T optional	S arguments	
T required	T askip	
T sets	B dirty	
T author	T gskip	
T virtual	T kind	
T demo-b	T list	
S category	T system	
T extra	T order	
T fields	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
F default		splitoneauthor	function
F index		statistics	table
F num		N nofbytes	
F page		N nofdatasets	
F short		N nofdefinitions	
F tag		N nofshortcuts	
load	function	tables	table
loadbibdata	function	D implicits	
loaddefinitionfile	function	D origins	
loaders	table	D privates	
F bbl		D sets	
F bib		D specials	
F buffer		D types	
F endnote		D virtuals	
F lua		tags	function
F refman		tracers	table
F registercleaner		F showdatasetauthors	
F xml		F showdatasetcompletene	SS
loadreplacementfile new	function function	F showdatasetfields F showentry	

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 function
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	formatofyariable	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
confighanner	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	<del>function</del>	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 F command S final-recipient 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 arrival-date S original-envelope-id 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
packch
                function
                function
packuc
setlanguage
                function
sort
                function
splitters
                table
   F utf
                function
strip
tracers
                data table
update
                function
```

## statistics (context)

function
function
function
function
function
boolean
function
number
function
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 register		F preset	
F setup		F reset	
counters	table	floats	table
F add		formulas	table
F analyze		helpers	table
F check		F analyze	
D collected		F formulanumber	
F compact		F merged	
F converted		F page	
F currentvalue		F prefix	
D data		F prefixlastpage	
F define		F prefixpage	
F first		F simplify	
F get		F title	
Flast		F touserdata	+-61-
F next		inserts	table
F prev		D data	

F define		F savedlistpr	refixednumher
F getdata		F savedlistti	
F getlocation		D sectionbloo	
F getname		F sectionnumb	
F getnumber		F size	,
F setlocation		F title	
F setup		D tobesaved	
D stored		F userdata	
itemgroups	table	F uservalue	
lists	table	marks	table
F addto	tubte	D data	tabte
F analyze		F define	
B autoreorder		F exists	
D cached		F fetch	
D collected		F fetchallmar	-ks
F discard		F fetched	KS
F enhance		F fetchonemar	-k
T enhancers		F fetchtwoman	
F filter		F get	KS
F formulanumber		F number	
F getresult		F relate	
F groupindex		F reset	
F hasnumberdata		F set	
F haspagedata		F show	
F hastitledata		F synchronize	<u> </u>
F iscached		F title	
D kinds		T tracers	
F label		F showtable	
F location		notes	table
D names		F checkpagech	nange
F number		F define	
D ordered		F doifonsamer	pageasprevious
F page		F get	
F popnesting		F getdeltapag	je
F prefix		F getn	
F prefixednumber		F getnumberpa	nge
F prefixedpage		F getstate	
F process		F getsymbolpa	nge
D pushed		F hascontent	
F pushnesting		F internal	
F realpage		F internalid	
F reordered		F listindex	
T result		F ordered	
		1 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	${\tt getinternallistreference}$
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	<b>sections</b> tabl	e
F inner	F autodepth	
F special	F cct	
F special operation	D collected	
F special operation with argume	nts 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	D levels	
F found	F load	
F get	F matchingtilldepth	
D usedinternals	F numberatdepth	
D usedviews	F numbers	
F valid	F popblock	
<b>registers</b> table	F prefixedconverted	
F analyze	F pushblock	
D collected	F register	
F compare	D registered	
F define	F reportstructure	
F enhance	F save	
F extend	T sectionblockdata	
F filter	T bodypart	
F filtercollected	S bookmark	
F finalize	F set	
F flush	F setblock	
F get	F setchecker	
F prepare	F setentry	
F process	F setinitialblock	

F setlevel D labels F setnumber F last F structuredata F lastinchain F title F locatedtag D tobesaved T patterns U splitter F typesetnumber F userdata D properties B verbose F registermetadata sets table F restart F define F setaspect F get F setattributehash F setcombination F getall D setlist F setfigure specials table F sethighlight D collected F setitem F setitemgroup F retrieve F store F setlist D tobesaved F setnotation synonyms table F setnotationsymbol 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 settagdelimitedsymbol F isshown F settagsubsentencesymbol F isused F setupexport F meaning F setuserproperties F prepare D specifications F process F start F register F stop F registershown F strip F registerused D taglist F resetshown T usewithcare F resetused T images F sort F synonym D tobesaved table tags F elementtag F finishexport F getid F handler

#### 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	inicatcodes	number
badness	function	init_rand	function
box	table	isattribute	function
catcode	table	isbox	function
conditionals	data table	iscount	overloaded function
constants	data table	isdefined	function
count	table	isdimen	overloaded function
ctdcatcodes	number	ismuskip	function
ctxcatcodes	number	isskip	overloaded function
definefont	function	istoken	function
delcode	table	istoks	function
dimen	table	lccode	table
directives	data table	linebreak	function
enableprimitives	function	lists	table
error	function	lua_math_random	function
extraprimitives	function	lua_math_randomseed	
finish	function	luacatcodes	number
fontidentifier	function	mathcode	table
fontname	function	modes	data table
fprint	function	muskip	table
get	function	nest	table
getattribute	function	nilcatcodes	number
getbox	function	normal_rand	function
getcatcode	function	notcatcodes	number
getcount	function	number	function
getdelcode	function	primitives	function
getdelcodes	function	print	function
getdimen	function	prtcatcodes	number
getlccode	function	romannumeral	function
getlist	function	round	function
getmath	function	run	function
getmathcode	function	saveboxresource	function
getmathcodes	function	scale	function
getmuskip	function	scantoks	function
getnest	function	set	function
getsfcode	function	setattribute	function
getskip	function	setbox	function
gettoks	function	setcatcode	function
getuccode	function	setcount	function
hashtokens	function	setdelcode	function
ifs	data table	setdimen	function

setlccode function setlist function setmath function setmathcode function setmuskip function setnest function setsfcode function setskip function settoks function setuccode function sfcode table shipout function function show context skip table function sp function sprint data table systemmodes takebox function texcatcodes number table toks tpacatcodes number tpbcatcodes number function tprint data table trackers txtcatcodes number type function uccode table uniform rand function uniformdeviate function uprint function useboxresource 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	on
N space		F glue	
N subscrip	t	F integer	
N superscr	ipt	F keyword	
N whitespa		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

#### 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 tabl	.e
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	table	T handlers	
F handler		F installhandler	
F set		F processmath	
breakpoints	table	F set	
F define		F setcolor	
F handler		F setmath	
D mapping		F tomode	
T methods		firstlines	table
T numbers		T actions	
F set		F default	
F setreplacement		Fline	
cases	table	F word	
T actions		F handler	
F handler		F set	
F register		initials	table
F set		T actions	
characteralign	table	F default	
F handler		F addanchortolin	e
F resetcharacter	align	F addtoline	
F setcharacteral	ign	F calculatedelta	
characters	table	F checkline	
F handler		F handler	
T methods		F moveinline	
F replacenbsp		F normalize	
F replacenbspace	s	F set	
checkers	table	injectors	table
F handler		F check	
F reset		T list	
F set		F mark	
cleaners	table	F reset	
F handler		F set	
F set		F show	
digits	table	italics	table
T actions		F forcevariant	
F handler		F handler	
F set		F reset	
directions	table	F set	
F getfences		kerns	table
F getglobal		D factors	
F getmethod		F handler	
F handler		F keepligature	

B keeptogether D mapping F set manipulators table F apply F applyspecification 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 function marksuspects paragraphs table F addanchortoline F addtoline F calculatedelta F checkline F handler F moveinline F normalize F set table processors F apply F register F reset F split F startapply F stopapply F stripped F tostring showsuspects function

spacings table F define F handler D mapping T numbers T frenchpunctuation T characters S name N number F reset F set F setup table wrappers F handler xtables table 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
FI	byte	F	lower
F	char	F	match
	dump		rep
	find		reverse
	format		sub
F	gfind		upper
F	gmatch	utf8	
	gsub		byte
	len		char
	lower		characters
Fı	match		chrlen
	rep		count
F	reverse	F	dump
F s	sub	F	filetype
	upper		find
graph	<b>ieme</b> table	F	format
FI	oyte	F	gfind
F	char	F	gmatch
F	dump	F	gsub
F	find	F	is_valid
F	format	F	len
F	gfind	F	length
F	gmatch	F	lower
F	gsub	F	magic
F	len	F	match
F	lower	F	remapper
Fı	match	F	rep
F	rep	F	replacer
F	reverse	F	reverse
F s	sub	F	split
F	upper	F	splitlines
latir	<b>1</b> table	F	sub
F	byte	F	subtituter
F	char	F	tocodes
F	dump	F	toeight
F	find	F	toentities
F	format	F	tostring
F	gfind	F	totable
F	gmatch	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)

dahuaaan	+ahla	D 1	
debugger	table	B alwaysstripcode	
F disable		F compile	
F enable		F loadedluacode	
F savestats		F loadstripped	
F showstats		N nofstrippedbyte	
F showtraceback	4-61-	N nofstrippedchun	KS
files	table	B stripcode	
F close		T strippedchunks	
F getposition		F strippedloadstr	ing
F look		T 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		packers	table
F readfixed4		F hashed	
F readinteger		F new	
F readinteger1		F pack	
F readinteger2		F simplehashed	
F readinteger4		F strip	
F readstring		F unpack	
F readtag		N version	
F setposition		parsers	table
F size		F add_settings_to	_array
F skip		F arguments_to_tal	ble
F skiplong		F array_to_string	
F skipshort		F csvsplitter	
formatters	table	F getparameters	
F formatcolumns		F groupedsplitat	
F list		F hash_to_string	
F stripzeros		F iterator	
garbagecollector	table	F keq_to_hash	
F check		F listitem	
N criterium		F make_settings_to	o_hash_pattern
B enabled		F mergehashes	
lua	table	F options_to_arra	y

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 accesstable F definedtable F definetable F encapsulate F insertaftervalue F insertbeforevalue F migratetable

table

F removevalue F replacevalue

templates

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

## xml (context)

addentitiesdoctype	function	D string	
after	function	D tex	
all	function	D tex D texline	
applylpath	function	D textine D texspace	
assign	function	D texspace D verbose	
attribute	function	defaultprotocol	string
badinclusions	function	delete	function
before	function	delete_element	function
body	function	each	function
builtinentities	table	each_element	function function
B amp	cance	elements	function
в amp В apos		elementtocdata	function
B gt		empty	function
Вlt		entities	data table
B quot		erase	function
cdata	function	errorhandler	function
cdatatotext	function	escaped	function
checkbom	function	expressions	table
checkerror	function	F boolean	cabte
checknamespace	function	F child	
checkns	function	F contains	
cleansed	function	F count	
collect	function	F error	
collect elements	function	F find	
collect tags	function	F idstring	
collect texts	function	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	sethandler
name	function	setinjecto
newhandlers	function	setpropert
nodesettostring	function	settings
originalload	function	specialhar
package	function	sprint
parent	function	string
parsedentitylpeg	userdata	strip
pihandlers	table	strip_whit
F injector		stripeleme
placeholders	table	stripleadi
F unknown_any_entity		table
F unknown_dec_entity		text
F unknown_hex_entity		textonly
position	function	texttocdat
privatecodes	table	tocdata
privatetoken	function	toelement
process	function	tostring
<pre>process_attributes</pre>	<del>function</del>	totable
process_elements	<del>function</del>	toxml
processattributes	function	tprint
profiled	table	traverse
raw	function	unescaped
registerentity	function	unprivatiz
registerns	function	withelemer
reindex	function	withelemer
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 t rsfunction function ors function function ty function ndler table function function function **function** tespace ent function lingspaces function function function function function ta function function function function function function function function function zed nt function function ents function table

### zip (extra lua)

archivestableclosefunctionclosearchivefunction

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