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

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

## global (alias: \_G)

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

logs	table	publications	table
lp_fastpos_n	userdata	rawequal	function
lp_fastpos_p	userdata	rawget	function
lpdf	table	rawlen	function
lpeg	table	rawset	function
ltn12	table	regimes	table
lua	table	report_characters	function
luatex	table	require	function
lxml	table	resolve fences	function
marknocite	function	resolvers	table
math	table	scripts	table
mathematics	table	select	function
mbox	table	set	table
md5	table	setcharacteralign	function
metapost	table	setfenv	function
mime	table	setinspector	function
module	function	setmetatable	function
moduledata	table	socket	table
modules	table	sorters	table
mp	table	statistics	table
mplib	table	status	table
newline	function	storage	table
newproxy	function	streams	table
next	function	string	table
noads	table	stripmath	function
node	table	structures	table
nodes	table	swiglib	function
number	table	table	table
optionalrequire	function	tex	table
os	table	texconfig	table
outputpagestree	function	texio	table
package	table	thirddata	table
pagebuilders	table	toboolean	function
pairs	function	token	table
parametersets	table	tokens	table
pattern	table	tonumber	function
pcall	function	tostring	function
pdf	table	trace_characters	boolean
pdfborder	function	tracers	table
pdfscanner	table	trackers	table
physics	table	type	function
print	function	typesetters	table
profiler	table	unicode	table
protect	function	unpack	function

table url table userdata utf table utilities table νf table visualizers table table xml xmlconvert function xpcall function zip table zlib table

## attributes (context)

colorintents	table	F mpoptions	
N attribute		U none	
D data		F popset	
F enable		F processcolorc	omponents
F handler		F pushset	
F register		F register	
D registered		D registered	
colors	table	F registerspotc	olor
N attribute		F rgb	
F cmyk		F rgbtocmyk	
F cmyktogray		F rgbtogray	
F cmyktorgb		F rgbtohsv	
F colorcomponer	nts	N selector	
B couple		F setlist	
D data		F setmodel	
N default		D sets	
F defineinterme	ediatecolor	F spec	
F definemixcolo	or	F spot	
F definemultito	onecolor	F spotcolorname	
F defineprocess	scolor	F spotcolorpare	nt
F definesimple	gray	F spotcolorvalu	е
F definespotcol	lor	B supported	
F definetranspa	arency	F transparencyc	omponents
F enable		B triggering	
F filter		F usecolors	
F forcedmodel		F value	
F forcesupport		D values	
F formatcolor		B weightgray	
F formatgray		define	function
F gray		effects	table
F graytohsv		N attribute	
F handler		D data	
F hsvtogray		F enable	
F hsvtorgb		F handler	
F iccprofile		F register	
F isblack		D registered	
N main		D values	
S model		handlers	table
D models		list	data table
F mpcolor		names	data table
F mpnamedcolor		negatives	table

N attribute D data F enable F handler F register D registered data table numbers function ofnode private function public function showcurrent function 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 D data F define

F enable
F forcesupport
F handler
B hasorder
D listwise

F register
D registered
F resolve\_begin
F resolve\_end
F resolve\_step
D scopes
F setfeatures
F start
F stop
B supported
D values

#### backends (context)

F hasmatrix

codeinjections table F insertrenderingwindow F synchronizecolormodel F mergereferences current strina F mergeviewerlavers defaults table F prerollreference T codeinjections F presetsymbol F aethpos F presetsymbollist F getmatrix F processrendering F getpos F registerdocumentcloseaction F registerdocumentopenaction F getypos F hasmatrix F registeredsymbol T nodeiniections F registerpagecloseaction T registrations F registerpageopenaction D tables F registersymbol install function F setfieldcalculationset nodeinjections table F setfigurealternative F restore F setfigurecolorspace F save F setfiguremask F transform F setformat nothina function F setformsmethod table pdf F setpagetransition T codeiniections F setupcanvas F addbookmarks F setupidentity F attachmentid F setxmpfile F clonefield F startlayer F definefield F stoplayer F definefieldset F supportedformats F defineviewerlayer F unicodetoactualtext F embedfile F useviewerlaver F enabletags F validfield F exportformdata F validfieldcategory F validfieldset F getdefaultfieldvalue F getfieldcategory S comment F getfieldset T nodeinjections F getformatoption F addtags F gethpos F annotation F attachfile F getmatrix F getoutputfilename F changestackedlayer F cmykcolor F getpos F comment F getpreviewfigure F destination F getypos

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

#### bit32 (basic lua)

```
arshift function
band
       function
       function
bnot
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 erase function function exists function getcontent function getlines loadcontent function parallel table

F define

F hassomecontent

F next
F place
F reset
F save

prepend function
raw function

#### builders (context)

#### kernel table F hyphenation F kernina F ligaturing F mlist\_to\_hlist paragraphs table T constructors N attribute F define F disable F enable F handler T methods F basic F default F oneline D names D numbers F set F start F stop T expansion 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 vspacing table F analyze D categories F collapsevbox

T data

D map D skip D snapmethods F definesnapmethod B fixed F pagehandler F resetprevdepth F setmap F setskip F snapbox F tocategories F tocategory F vboxhandler

#### caches (context)

ask boolean base string collapsecontent function configfiles function function contentstate defaults table define function direct boolean force boolean **getfirstreadablefile** function getfirstreadablefile\_TEST\_ME\_FIRST function getreadablepaths function getwritablepath function hashed function is writable function loadcontent function loaddata function strina more relocate boolean savecontent function function savedata setfirstwritablefile function setluanames function tree string treehash function function usedpaths

#### callback (basic tex)

find function
list function

register overloaded function

#### callbacks (context)

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

#### catcodes (context)

## characters (context)

activeoffset	number	C D
activeoriset	function	S B
bidi	data table	S C
	function	S D
blockrange blocks	data table	SE
	table	S F
casemap	10.010	5 G
categories	data table	SH
category	function data table	SI
categorytags	data table	S J
collapsed combined	data table	S K
combined	function	S L
data	data table	S M
***	data table	SN
decomposed define	function	S 0
description	function	S P
•	data table	5 Q
descriptions directions	table	S R S S
enccodes	data table	5 5 S T
entities	data table	SU
fallbacks	data table	S V
filters	data table	S W
fromnumber	function	s w
fschars	data table	5 Y
fscodes	data table	SZ
getrange	function	S À
graphemes	data table	SÁ
hangul	data table	SÂ
initialize	function	SÃ
is character	data table	SÄ
is_command	data table	s Å
is letter	data table	S Æ
is mark	data table	S C
is punctuation	data table	SÈ
is_spacing	data table	SÉ
lcchars	data table	SÊ
lccode	function	SË
lccodes	data table	SÌ
lettered	function	SÍ
lhash	table	SÎ
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S U	SΪ
S ℧	SÎ
Sυ	SÕ
SY	S Ô
S Z	S Ř
S 3	S Â
S Σ	SÜ
S 5	S Û
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S B	SÈ
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S E	SΓ
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S K	SJ
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linebreaks	table	mirrors	table
S ai		otfscripts	data table
S al		ranges	data table
S b2		registerentities	function
S ba		remap_hangul_syllabe	function
S bb		setcodes	function
S bk		shape	function
S cb		shaped	function
S cj		shash	table
S cl		S À	
S cm		S Á	
S cp		S Â	
S cr		S Ã	
S ex		S Ä	
S gl		S Å	
S h2		S Æ	
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math	table	Sä	
mathpairs	data table	S å	
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S	superscripts	table
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## chemistry (context)

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

## commands (context)

Alphabetic	function	assignbuffer	function
Character	function	attachproperty	function
Characters	function	autofinishstructurelevels	function
MPc	function	autonextspace	function
MPd	function	autonextstructurelevel	function
MPh	function	autosetups	function
MPll	function	autostarttext	function
MPlr	function	autostoptext	function
MPls	function	averagecharwidth	function
MPn	function	bcolumn	function
MPp	function	boolcase	function
MPpardata	function	boxtostring	function
MPplus	function	btx_a_f	function
MPpos	function	btx_a_i	function
MPposset	function	btx_a_j	function
MPr	function	btx_a_s	function
MPrest	function	btx_a_v	function
MPrs	function	btxabbreviatedjournal	function
MPul	function	btxaddfield	function
MPur	function	btxaddjournal	function
MPw	function	btxauthor	function
MPx	function	btxauthorfield	function
MPxy	function	btxcollectlistentries	function
MPxywhd	function	btxdetail	function
MPy	function	btxdoif	function
Romannumerals	function	btxdoifelse	function
abjadnodotnumerals	function	btxdoifelseuservariable	function
abjadnumerals	function	btxdoifnot	function
addbtxentry	function	btxexpandedjournal	function
addcounter	function	btxfetchlistentries	function
addlinklistelement	function	btxfield	function
addreplacements	function	btxflush	function
addtojavascriptpreamble	function	btxflushlistentries	function
addtolist	function	btxhandlecite	function
allinputpaths	function	btxhandlenocite	function
alphabetic	function	btxlistvariant	function
analysefloatmethod	function	btxloadjournallist	function
analyzelist	function	btxpreparelistentries	function
applytochars	function	btxsavejournallist	function
applytofirstcharacter	function	btxsingularorplural	function
applytowords	function	btxuservariable	function

buildtextaccent	function	definebreakpoints	function
character	function	definecatcodetable	function
characters	function	definecharacterspacing	function
chardescription	function	definechemical	function
checkcharactersinfont	function	defineconversion	function
checkcountersetup	function	definecounter	function
checkedconversion	function	definedviewerlayer	function
checkedpagefloat	function	definefallbackfamily	function
checktwopassdata	function	definefield	function
chemicalcomponent	function	definefieldset	function
chineseallnumerals	function	definefilefallback	function
chinesecapnumerals	function	definefilesynonym	function
chinesenumerals	function	definefont_one	function
cleanfontname	function	definefont_two	function
cleanupbox	function	definefontfamily	function
cleanuplayers	function	definefontfeature	function
clonefield	function	definefontsolution	function
collectfloat	function	defineinsertion	function
collecthelp	function	defineintermediatecolor	function
colorcomponents	function	definelabels	function
concatcommalist	function	definelanguage	function
consultfloat	function	definelinkedlist	function
convertbtxdatasettoxml	function	definemarking	function
converteddimen	function	definemetafont	function
copyposition	function	definemultitonecolor	function
COS	function	definenote	function
cosd	function	defineparallel	function
countervalue	function	defineparbuilder	function
counttwopassdata	function	defineprocesscolor	function
ctxfunction	function	defineprogram	function
currentcomponent	function	definereference	function
currentdate	function	defineregister	function
currentenvironment	function	definesectionlevels	function
currentproduct	function	defineselectfont	function
currentproject	function	definesnapmethod	function
currentreferencedefault	function	definespotcolor	function
currentreferenceorder	function	definestructureblock	function
currentregime	function	definestructureset	function
currentsectiontolist	function	definetransparency	function
datasetvariable	function	definetwopasslist	function
dayname	function	defineviewerlayer	function
deferredproperty	function	defrostrandomseed	function
defineattribute	function	depthnumber	function
definebreakpoint	function	digits	function

disableautofontscript	function	doiflocfileelse	function
disableparbuilder	function	doifnot	function
disableregime	function	doifnotcounter	function
disablespellchecking	function	doifnotecontent	function
discardfromlist	function	doifnoteonsamepageasprevious	function
doanalyzeframedbox	function	doifobjectreferencefoundelse	function
doif	function	doifolderversionelse	function
doifblackelse	function	doifoverlappingelse	function
doifcommonelse	function	doifparentfileelse	function
doifcounter	function	doifpathexistelse	function
doifdimenstringelse	function	doifposition	function
doifdrawingblackelse	function	doifpositionelse	function
doifelse	function	doifpositiononpage	function
doifelsebuffer	function	doifpositionsonsamepageelse	function
doifelsecontinuewithfile	function	doifpositionsonthispageelse	function
doifelsecounter	function	doifurldefinedelse	function
doifelsecurrentfonthasfeature	function	doprocesstypescriptfile	function
doifelseintwopassdata	function	doreshapeframedbox	function
doifelsemarking	function	dostarttextfile	function
doifelsemessage	function	dostoptextfile	function
doifelsemultipar	function	ecolumn	function
doifelseparallel	function	elapsedtime	function
doifelsepositionsused	function	enableautofontscript	function
doifelserangeonpage	function	enablecolor	function
doifelsereference	function	enablecolorintents	function
doifelsesavedfloat	function	enablefontcolorschemes	function
doifelsespaces	function	enableparbuilder	function
doifelseutfmathabove	function	enableregime	function
doifelseutfmathaccent	function	enablespellchecking	function
doifelseutfmathbelow	function	enabletransparency	function
doifelsevisualizer	function	enhancelinkedlist	function
doiffieldcategoryelse	function	enhancelist	function
doiffieldelse	function	enhancereference	function
doiffieldsetelse	function	enhanceregister	function
doiffiledefinedelse	function	erasebuffer	function
doiffileexistelse	function	expandcurrentreference	function
doiffirstcharelse	function	exportformdata	function
doifinputfileelse	function	exportreferences	function
doifinsetelse	function	extendregister	function
doifleapyearelse	function	extensiblecode	function
doiflisthasentry	function	feature	function
doiflisthasnumberelse	function	featureattribute	function
doiflisthaspageelse	function	featurelist	function
doiflisthastitleelse	function	feedback	function

fetchallmarks	function	getbidimode	function
fetchmultipar	function	getbuffer	function
fetchmultishape	function	getbufferctxlua	function
fetchonemark	function	getbuffermkvi	function
fetchposboxes	function	getcommandline	function
fetchtwomarks	function	getctxfile	function
figurefilename	function	getcurrentprefixspec	function
figurefilepath	function	getcurrentreferencemetadata	function
figurefiletype	function	getcurrentsectionlevel	function
figurerequest	function	getdefaultfieldvalue	function
figurestatus	function	getelementtag	function
figureused	function	getfieldcategory	function
figurevariable	function	getfirstcharacter	function
filterdefaultreference	function	getfirsttwopassdata	function
filterreference	function	getfloatvariable	function
finalizebox	function	getfullsectionnumber	function
findtwopassdata	function	getinternallistreference	function
firstcountervalue	function	getinternalreference	function
firstinrange	function	getlasttwopassdata	function
firstinset	function	getmarking	function
flushfloat	function	getmessage	function
flushmarked	function	getmpextensions	function
flushnotes	function	getnotestate	function
flushpostponedblocks	function	getplaceholderchar	function
flushpostponednotes	function	getprivatechar	function
fontchar	function	getprogram	function
fontcharbyindex	function	getrandomcounta	function
fontcollectionclone	function	getrandomcountb	function
fontcollectiondefine	function	getrandomseed	function
fontcollectionprepare	function	getreadfilename	function
fontcollectionregister	function	getsectionnumber	function
fontcollectionreport	function	getstructuredata	function
fontcollectionreset	function	getsubstring	function
fontlookupgetkey	function	gettexbuffer	function
fontlookupgetkeyofindex	function	gettwopassdata	function
fontlookupinitialize	function	gettwopassdatalist	function
fontlookupnoffound	function	geturl	function
forceendjob	function	grabbuffer	function
forcequitjob	function	hboxtovbox	function
format	function	helpaction	function
formatcolor	function	helpreference	function
formatgray	function	hexstringtonumber	function
freezerandomseed	function	horizontalcode	function
from	function	hour	function

hyphenatedlist	function	loadvisualizer	function
hyphenatedurl	function	locatefilepath	function
D characters		locfilename	function
N lefthyphenmin		lower	function
D mapping		makeactive	function
N righthyphenmin		manipulated	function
F setcharacters		markfonts	function
immediateproperty	function	markingnumber	function
incrementedcounter	function	markingtitle	function
initializetexdirectives	function	markregionbox	function
initializetextrackers	function	math_frac	function
injectcurrentreference	function	mathrenderset	function
injectreference	function	maxitemwidth	function
inlinechemical	function	minute	function
insertattachment	function	mixcleanup	function
insertcomment	function	mixfinalize	function
insertfield	function	mixflushlist	function
insertionnumber	function	mixflushrest	function
insertrenderingwindow	function	mixgetsplit	function
insertsoundclip	function	mixsetsplit	function
installedlanguages	function	mixstate	function
installtexdirective	function	molecule	function
installtextracker	function	month	function
languagenumber	function	monthmnem	function
lastcountervalue	function	monthname	function
lchexnumber	function	mpcolor	function
lchexnumbers	function	mpoptions	function
leapyear	function	mprunvar	function
linenumbersstageone	function	namedstructureuservariable	function
linenumbersstagetwo	function	namedstructurevariable	function
listgroupindex	function	nbfs	function
listlabel	function	nextcountervalue	function
listlocation	function	nextparallel	function
listprefixednumber	function	nofdays	function
listprefixedpage	function	nofitems	function
listrealpage	function	nofstackedfloats	function
listsize	function	notedeltapage	function
listtitle	function	notelistindex	function
listuserdata	function	notenumberpage	function
loadbtxdefinitionfile	function	noteprefixednumber	function
loadexamodes	function	notesymbolpage	function
loadfontgoodies	function	notetitle	function
loadspellchecklist	function	ntimes	function
loadtypescriptfile	function	number	function

F C	F TexSnippetSpecial
F FL	F XmlSnippet
F HL	F XmlSnippetBoundary
F L	F XmlSnippetCdata
F LL	F XmlSnippetComment
F LuaSnippet	F XmlSnippetEntity
F LuaSnippetBoundary	F XmlSnippetEqual
F LuaSnippetComment	F XmlSnippetKey
F LuaSnippetName	F XmlSnippetName
F LuaSnippetNameBase	F XmlSnippetString
F LuaSnippetNameCore	Fflush
F LuaSnippetNameLibraries	Fflushdirect
F LuaSnippetQuote	Fflushlines
F LuaSnippetSpecial	F a
F LuaSnippetString	F addaskedblankskip
F ML	F addpredefinedblankskip
F MPLIBsetCtext	F applyprocessor
F MPLIBsetNtext	F b
F MPcolor	F beginhbox
F MetapostSnippet	F beginvbox
F MetapostSnippetBoundary	F bf
F MetapostSnippetComment	F bgroup
F MetapostSnippetConstructor	F blank
F MetapostSnippetName	F bold
F MetapostSnippetNameMetafun	F btxchecklistcombi
F MetapostSnippetNamePlain	F btxchecklistentry
F MetapostSnippetNamePrimitive	F btxciteauthorsetup
F MetapostSnippetQuote	F btxcitesetup
F MetapostSnippetSpecial	F btxcitevariantparameter
F MetapostSnippetString	F btxdirectlink
F NC	F btxhandlelistentry
F NR	F btxlistauthorsetup
F ParsedXmlSnippetCdata	F btxlistparameter
F ParsedXmlSnippetComment	F btxlistsetup
F ParsedXmlSnippetDoctype	F btxlistvariantparameter
F ParsedXmlSnippetElement	F btxmissing
F ParsedXmlSnippetInstruction	F btxsetauthorindex
F ParsedXmlSnippetKey	F btxsetauthorvariant
F ParsedXmlSnippetValue	F btxsetbacklink
F TexSnippet	F btxsetbacktrace
F TexSnippetBoundary	F btxsetcategory
F TexSnippetComment	F btxsetcitereference
F TexSnippetGroup	F btxsetcombis
F TexSnippetName	F btxsetconcat

F htxsetcount F constructcs F btxsetdataset F constructcsonly F btxsetfirst F convertnumber F btxsetfirstnames F ctxreport F btxsetinitials F d F btxsetinternal F darkblue F btxsetiuniors F darkgreen F btxsetlanguage F darkred F htysetleftteyt F definefontsynonym F htysetlistreference T delayed F btxsetnumber F digitsdigit F btxsetoverflow F digitsfinalcomma F btxsetrighttext F digitsfinalperiod F btxsetsecond F digitshighspace F btxsetsurnames F digitsintermediatecomma F btxsettag F digitsintermediateperiod F btxsetthird F digitsminus F htxsetvons F digitsnegative F btxstartauthor F digitsplus F btxstartcite F digitspositive F btxstartciteauthor F digitspower F btxstartsubcite F digitspowerminus F digitspowerplus F btxstopauthor F digitsseparatorspace F btxstopcite F btxstopciteauthor F digitssignspace F btxstopsubcite F digitsspace F c F digitszeropadding F callfunctiononce F direct F dodisplayverbatimbeginline F char F chardef F dodisplayverbatimemptyline F color F dodisplayverbatiminitialize F colordefage F dodisplayverbatimnewline F colordefagt F dodisplayverbatimstart F colordefalc F dodisplayverbatimstop F colordefalt F dofastdefinetypeface F colordeffgc F dofinishsomereference F dofromfiledescription F colordeffqt F dofromfileliteral F colordefflc F colordefflt F dofromurldescription F colordefrac F dofromurlliteral F colordefrat F doinlineverbatimbeginline F colordefrlc F doinlineverbatimemptyline F colordefrlt F doinlineverbatimnewline

F doinlineverbatimstart

F concat

F doinlineverbatimstop F loadfile F donestedtypingstart F loadfoundtypescriptfile F donestedtypingstop F luasetup F m F dostarttext F doverbatimspace F makelinenumber F egroup T metafun F emptyreference F color F enablemode T delayed F endhhox F start F endybox F stop F environment T nested F expandreferencearguments F markingcommand F expandreferenceoperation F markingseparator F finalizeautostructurelevel F newbox F finishjob F newcount F firstofoneargument F newdimen F firstoftwoarguments F newindexer F newmuskip F fixedblankskip F flexibleblankskip F newskip F newtexthandler F flushblankhandling F flushboxregister F newtoks F flushnode F newverbosehandler F fntsetdefname F nointerlineskip F fntsetnopsize F normalatop F fntsetsomename F normalover F fntsetsomesize F overstrike T formatted F par F fprint F pdfliteral F popcatcodes T generics S starttabulate F poplogger S stoptabulate F printlines F getlogger F processfilemany F getreferencestructureprefix F processfilenone F processfileonce F getvalue F glyph F protect F gobbleoneargument T puretext F goto F pushcatcodes F hrule F pushlogger F registerentry F input T knownfunctions F registerfunction Fι F registeronepage F lateluafunction F registerpagerange F letvaluerelax F registerseeword F llap F reservefunction

F rlap F startyboxregister F startxtitle F rotate F runfile F stopLuaSnippet F secondoftwoarguments F stopMetapostSnippet F setblankcategory F stopParsedXmlSnippet F setblankorder F stopTexSnippet F setblankpenalty F stopXmlSnippet F setconditional F stopblankhandling F setfalsevalue F stopcolumns F sethboxregister F stopcomponentindeed F setsomevalue F stopenvironmentindeed F settabulateentry F stopfontclass F settabulatelastentry F stophboxregister F settracing F stopproductindeed F setupsystem F stopprojectindeed F setupwithargument F stopreadingfile F setvalue F stopregisterentries F setvboxregister F stopregisterentry F stopregisteroutput F setxvalue F space F stopregisterpages F sprint F stopregistersection F startLuaSnippet F stopregisterseewords F stoptabulate F startMetapostSnippet F startParsedXmlSnippet F stoptext F startTexSnippet F stoptitle F startXmlSnippet F stopvboxregister F startblankhandling F stopxtitle F startcolumns F storenode F startcomponentindeed F synonymentry F startenvironmentindeed F tabulaterow F startfontclass F tabulaterowbold F starthboxregister F tabulaterowtyp F startproductindeed F tabulaterowtype F startprojectindeed F template F startreadingfile T templates F startregisterentries F texsetup F startregisterentry F tobuffer F startregisteroutput F tocontext F tolines F startregisterpages F startregistersection F unitsC F startregisterseewords F unitsN F starttabulate F unitsNspace F starttext F unitsNstart F starttitle F unitsNstop

Fu	nitsO		F XmlSnippetCdata	
Fu	nitsP		F XmlSnippetComment	
Fu	nitsPS		F XmlSnippetEntity	
F u	nitsPU		F XmlSnippetEqual	
F u	nitsPUS		F XmlSnippetKey	
F u	nitsQ		F XmlSnippetName	
Fu	nitsS		F XmlSnippetString	
F u	nitsU		F ctxreport	
Fu	nitsUS	F	F viafile	
F u	nprotect	F	F vrule	
Fu	nregisterfunction	F	F xmlcdataafter	
Fu	semodule	F	F xmlcdatabefore	
Fu	tfchar	F	F xmlcdataobeyedline	
Τv	erbatim	F	F xmlcdataobeyedspace	
F	LuaSnippetBoundary	F	F xmlprocessbuffer	
F	LuaSnippetComment	F	F xmlsetup	
F	LuaSnippetName	numl	nbers functi	ion
F	LuaSnippetNameBase	F	F C	
F	LuaSnippetNameCore	F	F FL	
F	LuaSnippetNameLibraries	F	F HL	
F	LuaSnippetQuote	F	F L	
F	LuaSnippetSpecial	F	F LL	
F	LuaSnippetString	F	F LuaSnippet	
F	MetapostSnippetBoundary	F	F LuaSnippetBoundary	
F	MetapostSnippetComment	F	F LuaSnippetComment	
F	MetapostSnippetConstructor	F	F LuaSnippetName	
F	MetapostSnippetName	F	F LuaSnippetNameBase	
F	MetapostSnippetNameMetafun	F	F LuaSnippetNameCore	
F	MetapostSnippetNamePlain	F	F LuaSnippetNameLibraries	
F	MetapostSnippetNamePrimitive	F	F LuaSnippetQuote	
F	MetapostSnippetQuote	F	F LuaSnippetSpecial	
F	MetapostSnippetSpecial	F	F LuaSnippetString	
F	MetapostSnippetString	F	F ML	
F	ParsedXmlSnippetCdata	F	F MPLIBsetCtext	
F	ParsedXmlSnippetComment	F	F MPLIBsetNtext	
F	ParsedXmlSnippetDoctype	F	F MPcolor	
F	ParsedXmlSnippetElement	F	F MetapostSnippet	
F	ParsedXmlSnippetInstruction	F	F MetapostSnippetBoundary	
F	TexSnippetBoundary	F	F MetapostSnippetComment	
F	TexSnippetComment	F	F MetapostSnippetConstructor	
F	TexSnippetGroup	F	F MetapostSnippetName	
F	TexSnippetName	F	F MetapostSnippetNameMetafun	
F	TexSnippetSpecial	F	F MetapostSnippetNamePlain	
F	XmlSnippetBoundary	F	F MetapostSnippetNamePrimitive	

F MetapostSnippetQuote F btxcitesetup F MetapostSnippetSpecial F btxcitevariantparameter F MetapostSnippetString F btxdirectlink F btxhandlelistentrv F NC F NR F btxlistauthorsetup F ParsedXmlSnippetCdata F btxlistparameter F ParsedXmlSnippetComment F btxlistsetup F ParsedXmlSnippetDoctvpe F btxlistvariantparameter F ParsedXmlSnippetElement F btxmissing F ParsedXmlSnippetInstruction F btxsetauthorindex F ParsedXmlSnippetKev F btxsetauthorvariant F ParsedXmlSnippetValue F btxsetbacklink F TexSnippet F btxsetbacktrace F TexSnippetBoundary F btxsetcategory F TexSnippetComment F btxsetcitereference F TexSnippetGroup F btxsetcombis F TexSnippetName F btxsetconcat F TexSnippetSpecial F htxsetcount F htxsetdataset F XmlSnippet F btxsetfirst F XmlSnippetBoundary F XmlSnippetCdata F btxsetfirstnames F XmlSnippetComment F btxsetinitials F btxsetinternal F XmlSnippetEntity F btxsetjuniors F XmlSnippetEqual F XmlSnippetKey F btxsetlanguage F XmlSnippetName F btxsetlefttext F btxsetlistreference F XmlSnippetString F \_\_flush F btxsetnumber F flushdirect F btxsetoverflow F \_\_flushlines F btxsetrighttext Fa F btxsetsecond F addaskedblankskip F htxsetsurnames F addpredefinedblankskip F btxsettag F btxsetthird F applyprocessor F b F btxsetvons F beginhbox F btxstartauthor F beginvbox F btxstartcite F bf F btxstartciteauthor F btxstartsubcite F bgroup F blank F btxstopauthor F btxstopcite F bold F btxchecklistcombi F btxstopciteauthor F btxstopsubcite F btxchecklistentry F btxciteauthorsetup Fc

F callfunctiononce F direct F dodisplayverbatimbeginline F char F chardef F dodisplayverbatimemptyline F dodisplayverbatiminitialize F color F colordefage F dodisplayverbatimnewline F colordefagt F dodisplayverbatimstart F colordefalc F dodisplayverbatimstop F colordefalt F dofastdefinetypeface F colordeffqc F dofinishsomereference F colordeffqt F dofromfiledescription F colordefflc F dofromfileliteral F colordefflt F dofromurldescription F colordefrac F dofromurlliteral F colordefrgt F doinlineverbatimbeginline F colordefrlc F doinlineverbatimemptyline F colordefrlt F doinlineverbatimnewline F concat F doinlineverbatimstart F doinlineverbatimstop F constructcs F donestedtypingstart F constructcsonly F convertnumber F donestedtypingstop F ctxreport F dostarttext F d F doverbatimspace F darkblue F egroup F emptyreference F darkgreen F darkred F enablemode F definefontsynonym F endhbox F endybox T delayed F digitsdigit F environment F digitsfinalcomma F expandreferencearguments F digitsfinalperiod F expandreferenceoperation F digitshighspace F finalizeautostructurelevel F digitsintermediatecomma F finishjob F digitsintermediateperiod F firstofoneargument F firstoftwoarguments F digitsminus F digitsnegative F fixedblankskip F digitsplus F flexibleblankskip F digitspositive F flushblankhandling F digitspower F flushboxregister F flushnode F digitspowerminus F digitspowerplus F fntsetdefname F digitsseparatorspace F fntsetnopsize F digitssignspace F fntsetsomename F fntsetsomesize F digitsspace F digitszeropadding T formatted

F fprint F pdfliteral T generics F popcatcodes S starttabulate F poplogger S stoptabulate F printlines F getlogger F processfilemany F getreferencestructureprefix F processfilenone F getvalue F processfileonce F protect F alvph F gobbleoneargument T puretext F pushcatcodes F goto F hrule F pushlogger F input F registerentry T knownfunctions F registerfunction F 1 F registeronepage F lateluafunction F registerpagerange F letvaluerelax F registerseeword F llap F reservefunction F loadfile F rlap F loadfoundtypescriptfile F rotate F luasetup F runfile F m F secondoftwoarguments F makelinenumber F setblankcategory T metafun F setblankorder F color F setblankpenalty T delayed F setconditional F start F setfalsevalue F stop F sethboxregister T nested F setsomevalue F markingcommand F settabulateentry F markingseparator F settabulatelastentry F newbox F settracing F newcount F setupsystem F newdimen F setupwithargument F newindexer F setvalue F newmuskip F setvboxregister F newskip F setxvalue F newtexthandler F space F newtoks F sprint F newverbosehandler F startLuaSnippet F nointerlineskip F startMetapostSnippet F normalatop F startParsedXmlSnippet F normalover F startTexSnippet F overstrike F startXmlSnippet

F startblankhandling

F par

F startcolumns F storenode F startcomponentindeed F synonymentry F startenvironmentindeed F tabulaterow F startfontclass F tabulaterowbold F starthboxregister F tabulaterowtyp F startproductindeed F tabulaterowtype F startprojectindeed F template F startreadingfile T templates F startregisterentries F texsetup F startregisterentry F tobuffer F startregisteroutput F tocontext F startregisterpages F tolines F startregistersection F unitsC F startregisterseewords F unitsN F unitsNspace F starttabulate F starttext F unitsNstart F starttitle F unitsNstop F startvboxregister F units0 F startxtitle F unitsP F stopLuaSnippet F unitsPS F stopMetapostSnippet F unitsPU F stopParsedXmlSnippet F unitsPUS F stopTexSnippet F units0 F stopXmlSnippet F unitsS F stopblankhandling F unitsU F stopcolumns F unitsUS F stopcomponentindeed F unprotect F stopenvironmentindeed F unregisterfunction F usemodule F stopfontclass F stophboxregister F utfchar F stopproductindeed T verbatim F stopprojectindeed F LuaSnippetBoundary F stopreadingfile F LuaSnippetComment F stopregisterentries F LuaSnippetName F stopregisterentry F LuaSnippetNameBase F stopregisteroutput F LuaSnippetNameCore F stopregisterpages F LuaSnippetNameLibraries F stopregistersection F LuaSnippetQuote F LuaSnippetSpecial F stopregisterseewords F stoptabulate F LuaSnippetString F stoptext F MetapostSnippetBoundary F stoptitle F MetapostSnippetComment F stopvboxregister F MetapostSnippetConstructor F stopxtitle F MetapostSnippetName

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F MetapostSnippetNameMetafun		parpos	function
F MetapostSnippetNamePlain		pdfrotation	function
F MetapostSnippetNamePrimitive		pdfstartmatrix	function
F MetapostSnippetQuote		pdfstartmirroring	function
F MetapostSnippetSpecial		pdfstartrotation	function
F MetapostSnippetString		pdfstartscaling	function
F ParsedXmlSnippetCdata		pdfstopmatrix	function
F ParsedXmlSnippetComment		pdfstopmirroring	function
F ParsedXmlSnippetDoctype		pdfstoprotation	function
F ParsedXmlSnippetElement		pdfstopscaling	function
${\sf F} \ {\sf ParsedXmlSnippetInstruction}$		percentageof	function
F TexSnippetBoundary		pgfxcolorspec	function
F TexSnippetComment		placeparallel	function
F TexSnippetGroup		popfloat	function
F TexSnippetName		popitaliccorrection	function
F TexSnippetSpecial		poplist	function
F XmlSnippetBoundary		popreferenceprefix	function
F XmlSnippetCdata		popregime	function
F XmlSnippetComment		popsectionblock	function
F XmlSnippetEntity		pos	function
F XmlSnippetEqual		posplus	function
F XmlSnippetKey		posstrut	function
F XmlSnippetName		postponenotes	function
F XmlSnippetString		poswhd	function
F ctxreport		posxy	function
F viafile		prefixedconverted	function
F vrule		prepareMPvariable	function
F xmlcdataafter		preparedfile	function
F xmlcdatabefore		presetsymbollist	function
F xmlcdataobeyedline		presettabulate	function
F xmlcdataobeyedspace		prevcountervalue	function
F xmlprocessbuffer		processbuffer	function
F xmlsetup		processcolorcomponents	function
objectnumber	function	processedfile	function
objectpage	function	processedfiles	function
octnumber	function	processfile	function
octstringtonumber	function	processfilemany	function
oneorrange	function	processfilenone	function
ordinal	function	processfileonce	function
overloadbookmark	function	processlist	function
page_injections_flush_after	function	processregister	function
page_injections_flush_before	function	processsplit	function
page_injections_save	function	processsynonyms	function
pagestaterealpage	function	purefontname	function
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pushfloat	function	resetfontfeature	function
pushitaliccorrection	function	resetfontsolution	function
pushlist	function	resetmarking	function
pushreferenceprefix	function	resetmathattributes	function
pushregime	function	resetmathitalics	function
pushsectionblock	function	resetnullfont	function
rawcharacter	function	resetparallel	function
rawcountervalue	function	resetprevdepth	function
rawdate	function	resetreference	function
referencepagestate	function	resetstructureprocessor	function
referencerealpage	function	resettimer	function
registerattachment	function	restartcounter	function
registerbookmark	function	restorecounter	function
registerbuttons	function	restorecurrentattributes	function
registercatcodetable	function	restorenote	function
registercolor	function	romannumerals	function
registercolorintent	function	runbuffer	function
registeredviewerlayer	function	safechar	function
registerhelp	function	savebuffer	function
registeritemgroup	function	savecounter	function
registerlanguagefeatures	function	savecurrentattributes	function
registerlinenumbering	function	savedlistnumber	function
registermaintextcolor	function	savedlistprefixednumber	function
registernamespace	function	savedlisttitle	function
registerpostponedblock	function	savefloat	function
registerrendering	function	savemargindata	function
registersection	function	savenote	function
registersoundclip	function	saveobject	function
registerstructureprocessor	function	savepagedata	function
registersynonym	function	saveparallel	function
registertransparency	function	savestructureblock	function
registerunit	function	savetaggedtwopassdata	function
registerusedsynonym	function	savetwopassdata	function
registeruserdata	function	savevariable	function
relatemarking	function	second	function
remapentity	function	selectstructureblock	function
removemissingcharacters	function	setbreakpoints	function
renderingvar	function	setbtxdataset	function
replacemissingcharacters	function	setbtxentry	function
replacepospxywhd	function	setcharacteralign	function
reportstructure	function	setcharactercasing	function
resavefloat	function	setcharactercleaning	function
resetcharacteralign	function	setcharactercodes	function
resetcounter	function	setcharacterkerning	function

setcharacterspacing	function	setobject	function
setcharacterstripping	function	setopendocumentaction	function
setclosedocumentaction	function	setopenpageaction	function
setclosepageaction	function	setowncounter	function
setcolormodel	function	setpagestate	function
setcounter	function	setpagestaterealpageno	function
setdataset	function	setpagetransition	function
setdigitsmanipulation	function	setparbuilder	function
setdirection	function	setpos	function
setdocumentenvironments	function	setrandomseed	function
setdocumentfilenames	function	setrealign	function
setdocumentmodes	function	setrealspaces	function
setdocumentmodules	function	setreferencearguments	function
setelementuserproperties	function	setreferenceattribute	function
setfigurelookuporder	function	setreferenceoperation	function
setfirstline	function	setregistermethod	function
setfontfeature	function	setreplacements	function
setfontofid	function	setsectionblock	function
setfontsolution	function	setsectionentry	function
setformat	function	setsectionlevel	function
setformsmethod	function	setsectionnumber	function
setinitial	function	setstructureblockstate	function
setinsertionlocation	function	settagcombination	function
setinterfaceconstant	function	settagdescription	function
setinterfaceelement	function	settagdescriptionsymbol	function
setinterfacemessage	function	settagfigure	function
setinterfacemessages	function	settaghighlight	function
setinterfacevariable	function	settagitemgroup	function
setinternalreference	function	settaglist	function
setjobcomment	function	settagproperty	function
setlanguageexceptions	function	settagregister	function
setlanguagesynonym	function	settagsorting	function
setlayer	function	settagsynonym	function
setmarking	function	settagtablecell	function
setmathalphabet	function	settagtabulatecell	function
setmathalternate	function	setupbookmarks	function
setmathattribute	function	setupcanvas	function
setmathdirection	function	setupcharacterspacing	function
setmathitalics	function	setupexport	function
setmathstyle	function	setupfontexpansion	function
setnextinternalreference	function	setupfontprotrusion	function
setnextreferenceorder	function	setupidentity	function
setnotestate	function	setupinsertion	function
setnotesymbolpage	function	setupitaliccorrection	function

setuplinenumbering	function	stopregime	function
setvisual	function	stopsectionlevel	function
setxmpfile	function	stoptag	function
showassignerror	function	stoptext	function
showattributes	function	stopviewerlayer	function
showbtxdatasetcompleteness	function	storejavascriptcode	function
showbtxdatasetfields	function	storejavascriptpreamble	function
showbtxfields	function	storenote	function
showcallbacks	function	storeregister	function
showchardata	function	strdp	function
showcounter	function	strhd	function
showfontparameters	function	strht	function
showhyphenatedinlist	function	strip	function
showjustification	function	structureautocatcodedget	function
showmessage	function	structurecatcodedget	function
sin	function	structuregivencatcodedget	function
sind	function	structurenumber	function
splitfilename	function	structuretitle	function
spotcolorname	function	structureuservariable	function
spotcolorparent	function	structurevariable	function
spotcolorvalue	function	strwd	function
startactualtext	function	subcountervalues	function
startchemical	function	synchronizecolormodel	function
startcolorset	function	synchronizemarking	function
startcomponent	function	synonymmeaning	function
startenvironment	function	synonymname	function
startfontsolution	function	taggedmathfunction	function
startparbuilder	function	tan	function
startproduct	function	tand	function
startproject	function	testcase	function
startregime	function	textime	function
startsectionlevel	function	thefirstcharacter	function
starttag	function	theremainingcharacters	function
starttext	function	thetexdefinition	function
startviewerlayer	function	transparencycomponents	function
stopactualtext	function	triggereffect	function
stopchemical	function	triggernegative	function
stopcolorset	function	truefilename	function
stopcomponent	function	typebuffer	function
stopenvironment	function	typefile	function
stopfontsolution	function	typestring	function
stopparbuilder	function	uchexnumber	function
stopproduct	function	uchexnumbers	function
stopproject	function	undefinechemical	function

unicodechar	function
unit	function
unloadlanguage	function
upper	function
useMPlibrary	function
useanyfile	function
usebtxdataset	function
usecldfile	function
usecolors	function
usecomponent	function
useenvironment	function
usefile	function
usejavascriptpreamble	function
usejavascriptscripts	function
uselibrary	function
useluafile	function
useluamodule	function
usemodules	function
usepath	function
useproduct	function
useproject	function
usesubpath	function
usesymbols	function
usetexfile	function
useurl	function
usexmlfile	function
usezipfile	function
utfchar	function
utfmathclass	function
utfmathcommand	function
utfmathcommandabove	function
utfmathcommandbelow	function
utfmathfiller	function
utfmathstretch	function
vboxlisttohbox	function
verbose	function
visual	function
vspacing	function
vspacingcollapse	function
vspacingdefine	function
vspacingsetamount	function
vspacingsnap	function
way	function
weekday	function

weekdayname	function
writestatus	function
x_table_c	function
x_table_cleanup	function
x_table_construct	function
x_table_create	function
x_table_flush	function
x_table_init_construct	function
x_table_init_reflow_height	function
x_table_init_reflow_width	function
x_table_next_row	function
x_table_r	function
x_table_reflow_height	function
x_table_reflow_width	function
x_table_set_construct	function
x_table_set_reflow_height	function
x_table_set_reflow_width	function
year	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
AK	function
Alphabetic	function
Character	function
Characters	function
I	function
KA	function
KR	function
R	function
RK	function
Romannumerals	function
Word	function
Words	function
a	function
abjadnodotnumerals	function
abjadnumerals	function
alphabetic	function
character	function
characters	function
chineseallnumerals	function
chinesecapnumerals	function
chinesenumerals	function
chr	function
chrs	function
cn	function
cn-a	function
cn-c	function
convert	function
define	function
hexstringtonumber	function
hour	function
i	function
isleapyear	function
leapyear	function
lower	function
maxchrs	function
minute	function
month	function
nofdays	function
number	function
numbers	function

octstringtonumber	function	
ordinal	function	
r	function	
rawcharacter	function	
romannumerals	function	
second	function	
sequences	data table	
textime	function	
toabjad	function	
tochinese	function	
toroman	function	
upper	function	
verbose	table	
D data		
F translate		
weekday	function	
word	function	
words	function	

year

function

# coroutine (basic lua)

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

#### ctxrunner (context)

load function
prepfiles data table
resolve function

# debug (basic lua)

function
function
function
function
function
function
function
function
function
function
function
function
function
function
function
function
function
function

# dir (context)

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

#### directives (context)

data data table default function disable function enable function list function name string register function report 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
setdefaultargument function
setfilename function
variables data table

#### environment (context)

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

texos

texroot truefilename validengines string function data table

string

#### epdf (extra tex)

Array function
Dict function
Object function
PDFRectangle function
open function
type function

#### experiments (context)

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

#### figures (context)

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

function function data table function number data table function data table data table function number number bool ean number function function data table function data table data table function function function data table function table

F write include includers initialize loaded localpaths magics mergegoodies nofprocessed order paths patterns pop preferguality programs push registerpattern registerresource registersuffix resources scale setlookups setorder setpaths suffixes used

F types

function data table function data table data table data table function number data table data table data table function boolean data table function function function function data table function function function function data table data table

F immediatewrite
F keys
F new
F node
F ofindex
F package
F print

F check
F checksize
F clone
F copy

F scan
F serialize
F totable

# file (basic lua)

addsuffix	function
basename	function
checksum	function
collapsepath	function
сору	function
dirname	function
expandname	function
extname	function
is_qualified_path	function
is_readable	function
<pre>is_rootbased_path</pre>	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
nofstacked	function
рор	function
push	function
resave	function
save	function
stacked	function

#### font (basic tex)

current
define function
each function
fonts table
frozen function
getfont overloaded function
id function
max function

id function
max function
nextid function
read\_tfm function
read\_vf function
setfont function

### fontloader (extra tex)

apply_afmfile	function
apply_featurefile	function
close	function
fields	function
fullinfo	function
info	function
open	function
to_table	function
totable	function

### fonts (context)

analyzers	table	F report	
T features		F reset	
N blwf		T vectors	
N fina		<pre>constructors table</pre>	
N half		F aftercopyingcharacters	
N init		F applymanipulators	
N isol		F assignmathparameters	
N medi		B autocleanup	
N pref		F beforecopyingcharacters	
N pstf		D cache	
N rphf		F calculatescale	
D initializers		F checkedfeatures	
D methods		F checkedfilename	
F setstate		F checkvirtualids	
T states		F cleanuptable	
N blwf		F collectprocessors	
N fina		D designsizes	
N half		D dontembed	
N init		F enhanceparameters	
N isol		N factor	
N mark		F finalize	
N medi		F getfeatureaction	
N pref		F hashfeatures	
N pstf		F hashinstance	
N rest		T hashmethods	
N rphf		F normal	
B useunicodemar		F virtual	
checkers	table	F initializefeatures	
F getmissing		T keys	
F missing	±=61 =	T character	
cid	table	S depth	
F getmap		S height	
F loadfile collections	table	S italic	
	table	S width	
F checkenabled F clonevector		T description	
F define		T boundingbox S depth	
T definitions		S height	
F prepare		S width	
F process		T parameters	
F process F registermain		S ascender	
i registeriiidili		3 ascender	

9	5 descender		S encodingbyt	es
9	5 designsize		S filename	
٦	Γ expansion		S finalized	
	S auto		S fontname	
	S shrink		S format	
	S step		S fullname	
	S stretch		S hasitalics	
9	5 extendfactor		S hasmath	
9	5 factor		S mathitalics	;
9	5 hfactor		S mode	
9	5 mathsize		S name	
7	Γ protrusion		S noglyphname	es
	S auto		S nostackmath	1
9	5 quad		S psname	
9	5 scaledpoints		S textitalics	;
9	5 scriptpercentage		S virtualized	I
9	5 scriptscriptpercentage	D	loadedfonts	
9	5 size	S	namemode	
9	5 slantfactor	F	newfeatures	
9	5 slantperpoint	F	newhandler	
٦	Γ spacing	N	noffontsloaded	
	S extra	N	nofsharedfonts	
	S shrink	N	nofsharedhashe	S
	S stretch	N	nofsharedvecto	rs
	S width	N	${\tt privateoffset}$	
7	Γ synonyms	F	readanddefine	
	S em	F	registerfeatur	е
	S ex	В	resolvevirtual	too
	S extra_space	F	scale	
	S extraspace	F	scaled	
	S slant	F	setfactor	
	S space	F	setname	
	S space_shrink	В	sharefonts	
	S space_stretch	F	trytosharefont	
	S spaceshrink	N	version	
	S spacestretch	curr		function
	S x_height		entid	function
9	5 units	defi	ners	table
9	S vfactor	F	addlookup	
9	5 xheight		analyze	
T	properties	F	applypostproce	ssors
9	5 autoitalicamount	F	checkedmode	
٦	Γ cidinfo	F	checkedscript	
9	5 embedding	F	current	

C defeul+leekun	F mathematics
S defaultlookup F define	F protrusions
F getspecification	F solutions
F internal	F treatments
Floadfont	
	F typefaces F load
F makespecification	
T methods	F prepare_features
Finstall	F register
D variants	F registerpostprocessor
F read	F report
F register	handlers table
F registered	T afm
F registersplit	B addkerns
F resetnullfont	B addligatures
F resolve	B addtexligatures
T resolvers	B autoprefixed
F file	D cache
F name	D features
F spec	T helpdata
definetypeface function	D bothkerned
<b>encodings</b> table	D leftkerned
T agl	D ligatures
D cache	D rightkerned
F is_known	D texligatures
D known	F load
F load	F setfeatures
F make_unicode_vector	B syncspace
D math	N version
N version	T otf
<b>expansions</b> data table	F addfeature
<b>formats</b> data table	D cache
<b>goodies</b> table	T chainhandlers
D colorschemes	F normal
D data	F verbose
D designsizes	F collectlookups
D filenames	F dataset
F getcompositions	S defaultbasealternate
T list	S defaultnodealternate
F compositions	D enhancers
F designsizes	D features
F expansions	F fileformat
F featureset	F getalternate
F filenames	T glists
F files	T handlers

F contextchain	D math	
F devanagari_remove_joiners	D predefined	
F devanagari_reorder_matras	D whatever	
F devanagari_reorder_pre_base_reordering_consonants	hashes	table
F devanagari_reorder_reph	D characters	
F gpos_context	D csnames	
F gpos_contextchain	D descriptions	
F gpos_cursive	D dynamics	
F gpos_mark2base	D emwidths	
F gpos_mark2ligature	D exheights	
F gpos_mark2mark	D extensibles	
F gpos_pair	D features	
F gpos_single	D identifiers	
F gsub_alternate	D italics	
F gsub_context	D lastmathids	
F gsub_contextchain	D marks	
F gsub_ligature	D parameters	
F gsub_multiple	T processes	
F gsub_reversecontextchain	D properties	
F gsub_single	D quads	
F load	D resources	
F scriptandlanguage	T setdynamics	
F setcontextchain	D spaces	
F setdynamics	D spacings	
F setfeatures	D unicodes	
T statistics	D xheights	
D usedfeatures	helpers	table
T tables	F addprivate	
D baselines	F dimenfactor	
D features	F expandglyph	
D languages	F fontpatternhas	size
D scripts	F getdigitwidth	
N version	F getparameters	
T pfb	F getprivatenode	<u> </u>
T tfm	F hasprivate	
D features	F indextoslot	
F setfeatures	F name	
T vf	F nametoslot	
T combinations	F setdigitwidth	
F combine	F splitfontpatte	rn
T combiner	iterators	table
T combiner D commands	iterators F characters	table
T combiner	iterators	table

loggers F add_placehold		names nulldata	data table data table
T category_to_p	laceholder	protrusions	
S ll		readers	table
S lm		Fafm	
S lo		F check_lua	
S lt		F check_tfm	1
S lu		F dfont	
S mc		F lua	
S me		F opentype	
S mn		F otf	
S nd		F pfb	
S nl		D sequence	
S no		F tfm	
S pc		F ttc	
S pd		F ttf	
S pe		select	table
S pf		T data	
S pi		F definetyp	peface
S po		T fallbacks	i
S ps		F filtering	out
S sc		T methods	
S sk		F default	
S sm		F feature	S
S so		F file	
F format		F goodies	
F onetimemessage	e	F name	
F register		F selectf	ont
F reportdefined	fonts	F simplef	onts
F reportusedfea	tures	F spec	
mappings	table	F style	
F addtounicode		F registerf	allback
F fromunicode16		F searchfil	.es
F loadfile		specifiers	table
F loadline		D contextme	erged
F loadlumtable		F contextnu	ımber
F makenameparse	r	D contextnu	ımbers
F reset		D contexts	etups
F tounicode16		F contextto	string
F tounicodel6se	quence	F definecor	itext
mp	table	F mergecont	ext
D cache		F presetcor	ntext
B inline		F register	context
N version		F showconte	ext

F splitcontext D synonyms

D variants

symbols table

F uselibrary

tables table
tracers table
treatments table

F applyfixes

D data

S filename

F ignoredfile

F report F trace

typefaces data table

### functions (context)

**dummy** function

#### graphics (context)

#### backgrounds table

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

#### gzip (extra lua)

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

# img (basic tex)

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

#### interactions (context)

```
attachments data table
fields
               table
   F clone
   F define
   F defineset
   Finsert
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
              data table
renderings
soundclips data table
```

#### interfaces (context)

addvalidkeys function cachedsetups data table cachesetup function checkedspecification function complete data table constants data table corenamespaces data table definecommand function doifelsemessage function data table elements formats data table getcheckedparameters function function getmessage data table hashedsetups interfacedcommand function interfaces table invalidkev function function is command table namespaces

F define F list

registernamespace function setconstant function setelement function setformat function setmessage function function setmessages settranslation function setuserinterface function setvalidkeys function setvariable function function showmessage data table syntax tolist function translations data table variables data table

#### io (basic lua)

ask function bytes function characters function close function exists function fileseparator string flush function i limiter function i limiters table

T paranoid

input function limiter function lines function loadchunk function loaddata function loadlines function noflines function function o limiter o limiters table

T paranoid

open overloaded function

output function
pathseparator string

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

### jit (context)

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

F start

os string
status function
util table

F funcbc

F funcinfo

F funck

F funcuvname

F ircalladdr

F traceexitstub

F traceinfo

F traceir

F tracek

F tracemc

F tracesnap

version string
version\_num number

# job (context)

comment	function	F	getcollected
datasets	table	F	getdata
D collected		F	getfield
F extend		F	gettobesaved
F getdata		F	inlist
F setdata		F	last
D tobesaved		F	list
disablesave	function	F	save
files	table	F	savetagged
D collected		D	tobesaved
F context		posi	. <b>tions</b> table
B forcerun		F	b_col
F run		F	b_region
D tobesaved		F	С
initialize	function	D	collected
load	function	F	column
loadother	function	F	сору
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		F	n
passes	table	F	onsamepage
F check		F	overlapping
D collected			р
F count			page
F define			paragraph
F find			parindent
F first			position
F get			r
<b>J</b> -		-	

```
F region
   F replace
   F rightskip
   F set
   F setall
   F setdim
   D tobesaved
   F upperleft
   F upperright
   S used
   F width
   Fx
   F xy
   Fу
register
                function
                function
save
                table
structure
   D collected
   T components
   T tobesaved
     T branches
     S name
     S type
                table
   D checksums
```

#### variables

D collected

F getchecksum

F makechecksum

F restore

F save

F setchecksum

D tobesaved

version number

# lang (basic tex)

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

#### languages (context)

associate function associated data table association function counters data table function current data data table define function table frequencies

F averagecharwidth

F getdata

getdata function
getnumber function
hyphenate function
installed function
labels table

F define F split

lefthyphenmin function
loadable function
loadwords function
logger table

F report

F add F handler F set

righthyphenmin function setexceptions function setsynonym function unload function version number words table

F check
T data
F disable
F enable
T enablers

B enables
F found
F load
T methods
N threshold

## layouts (context)

#### **status** table

F isleftpage

F leftorrightpagection

### lfs (extra lua)

attributes function
chdir function
currentdir function
dir function

lock function lock dir function mkdir function mkdirs function readlink function rmdir function function setmode function shortname symlinkattributes function touch 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 convert function convertfile function function convertstring einject function eprint function escape function finalized function finject function fprint function get function getvariables function htmfile function html table Fa

Ftd

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 function new overloaderror function popupfile function print function pν function report function reset function function result function set show function showdebuginfo function showerror function stripcss function tv function
type function
urlescape function
variable function
variables table

S color-background-blue

S color-background-body

S color-background-green

S color-background-main

S color-background-purple

S color-background-yellow

S title-default

### logs (context)

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

> F banner F export

F help

F info

Flines

F version

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

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

# lpdf (context)

action	function	gethpos	function
adddocumentcolorspace	function	getmatrix	function
adddocumentextgstate	function	getpos	function
adddocumentpattern	function	getvpos	function
adddocumentshade	function	graycode	function
addtocatalog	function	hasmatrix	function
addtoinfo	function	id	function
addtonames	function	injectxmpinfo	function
addtopageattributes	function	insertxmpinfo	function
addtopageresources	function	layerreference	function
addtopagesattributes	function	limited	function
addxmpinfo	function	linearshade	function
annotationspecification	function	nametree	function
array	function	null	function
boolean	function	number	function
border	function	pagedestinations	data table
checkedkey	function	pagereference	function
checkedvalue	function	pagereferences	data table
circularshade	function	pdfcolor	function
cmykcode	function	pdftimestamp	function
collectedresources	function	protectresources	boolean
color	function	rectangle	function
colorspace	function	reference	function
colorspaceconstants	data table	registerannotation	function
colorspec	function	registerdestination	function
colorvalue	function	registerdocumentfinalizer	function
colorvalues	function	registerpagefinalizer	function
constant	function	reserveobject	function
delayedobject	function	rgbcode	function
destinationspecification	function	rotationcm	function
dictionary	function	shareobject	function
epdf	table	shareobjectreference	function
F expand		spotcode	function
F load		stream	function
finalizedocument	function	string	function
finalizepage	function	timestamp	function
finishtransparencycode	function	toeight	function
flushobject	function	tosixteen	function
flushstreamfileobject	function	transform	function
flushstreamobject	function	transparency	function
formats	data table	transparencycode	function

transparencygroups table

B none

transparencyvalue function
unicode function
verbose function

## lpeg (basic lua)

В	function
C	function
Carg	function
Cb	function
Сс	function
Cf	function
Cg	function
Cmt	function
Ср	function
Cs	function
Ct	function
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
pump
             table
   F all
   F step
sink
             table
   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 bytedone table collectgarbage function function delay finalize function firstbytecode number flush function flushdelayed function get\_functions\_table function getbytecode function getluaname function lastbytecode number string mask messages data table name table numbers data table registercode function registeredcodes function registerfinalizer function function registername setbytecode function setluaname function startupfile string version string

### luatex (context)

cleanuptempfiles function
registerstartactions function
registerstopactions
registertempfile function
starttime number

## lxml (context)

addindex	function	getid	function
all	function	getindex	function
applyfunction	function	id	function
att	function	idsplitter	userdata
attribute	function	include	function
chainattribute	function	inclusion	function
checkindex	function	inclusions	function
collected	function	index	function
command	function	info	function
concat	function	inlineverbatim	function
concatrange	function	installsetup	function
content	function	last	function
context	function	load	function
convert	function	loadbuffer	function
count	function	loaddata	function
delete	function	loaded	table
direct	function	loadregistered	function
directives	table	main	function
F after		match	function
F before		name	function
F handle		namespace	function
F load		nonspace	function
F setup		pos	function
displayverbatim	function	position	function
doif	function	raw	function
doifelse	function	rawroot	function
doifelsetext	function	register	function
doifnot	function	registerentity	function
doifnottext	function	removesetup	function
doiftext	function	resetcdata	function
element	function	resetsetups	function
elements	function	resolvedentity	function
entities	data table	root	function
filter	function	save	function
filterlist	function	serialize	function
first	function	setaction	function
flush	function	setcdata	function
flushlinewise	function	setcommandtonone	function
flushsetups	function	setcommandtotext	function
flushspacewise	function	setsetup	function
<del>get_id</del>	<del>function</del>	snippet	function

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

sorters F add table

## math (basic lua)

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

#### mathematics (context)

addfallbacks function alphabets data table alternatives data table bia function data table boldmap categories table D functions charactersets data table checkaccentbaseheight function checkprivateparameters function classes data table codes data table define function dimensions function extensiblecode function extensibles data table extrabase number table extras F add F copy fallbacks table F apply F install fallbackstyleattr function data table

resetitalics scaleparameters setalternate setitalics sets stvles svncboth synchame syncstyle toname tostyle tweakaftercopyingfont tweakbeforecopyingfont tweaks utfmathaccent utfmathclass utfmathcommand utfmathfiller utfmathstretch

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

**families** gaps data table function getboth function getstyle function initializeparameters injectfallbacks function function makefont data table mapremap **overloaddimensions** function **overloadparameters** function privatebase number function remapalphabets table renderings

D mappings
D numbers
D sets
renderset

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)

11	function		£
analyzeplugins checkformat	function	getstatistics gettext	function function
checktexts	function	_	function
	boolean	graphic graphic_base_pass	function
collapse colorinitializer	function		function
convert		initializescriptrunner	function
	function	instance	table
defaultformat	string	intermediate	table
defaultinstance defaultmethod	string	T actions	
deraultmethod directrun	string function	F makempy	
	function	lastlog	string function
edefsxsy		load	
escaped	function	makempy	table
exectime	table	N nofconverted	
extensiondata	data table	F processgraphics	
filterclippath	function	F registerfile	4-61-
finder	function	metafun	table
flush	function	F interpolate	
flushers	table	F topath	
T pdf		method	number
F comment		mptopdf	table
F flushfigure		F convertmpstopdf	
F startfigure		N nofconverted	
F stopfigure		n	number
F textfigure		nvformat	function
flushliteral	function	optimize	boolean
flushnormalpath	function	parse	function
flushreset	function	pdfliterals	function
fonts	table	pluginactions	function
F define		process	function
T flusher		processplugins	function
F flushfigure		processspecial	function
F startfigure		properties	table
F stopfigure		quickanddirty	function
N instances		reducetogray	boolean
F process		reporterror	function
format	function	reset	function
format_number	function	resetlastlog	function
format_string	function	resetplugins	function
formatnumber	function	runscript	function
getclippath	function	scripterror	function
getextensions	function	setextensions	function

setoutercolorfunctionsettextfunctionshowlogbooleansvformatfunctiontextable

F get F reset F set

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

### mime (extra lua)

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

# mp (context)

_f_	function
boolean	function
format	function
number	function
numeric	function
pair	function
print	function
quadruple	function
quoted	function
string	function
triplet	function

### mplib (extra tex)

```
fields
             function
finders
             table
  F file
get_boolean function
get number
            function
get_numeric function
get_string function
new
            function
pen info
            function
preprocessed function
version
             function
```

### noads (context)

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

T unscript

## node (basic tex)

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

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function

### nodes (context)

accentcodes	data table	free spec	function
aligned	function	getattr	function
append	function	getattribute	function
astable	function	getbox	function
basepoints	function	getchar	function
builders	table	getfield	function
	table	getfont	function
F buildpage_filter		getid	function
F vpack_filter  codes	data table	getleader	function
concat	function	getlist	function
	function	getnext	function
copy	function	getprev	function
copy_list	function	- ·	function
copy_spec count	function	getskip	function
	function	getsubtype gluecodes	data table
current_attr delete	function	glyphcodes	data table
destinations	table	glyphdir is equal	data table
N attribute	cable	glyphdir_is_opposite	data table
T done		glyphdir_is_orthogonal	data table
F handler		gonuts	boolean
T stack		handlers	table
dimensionfields	data table		table
dimensions	function	F accessibility F alignbackgrounds	
dir_is_pop	data table	F backgrounds	
dir negation	data table	F characters	
discodes	data table	F checkforleaks	
discretionarycodes	data table	F checkglyphs	
do ligature n	function	F cleanupbox	
end of math	function	F cleanuppage	
fasthpack	function	F export	
fencecodes	data table	F finalize	
fields	function	F migrate	
fillcodes	data table	F protectglyphs	
first character	function	F stripping	
first glyph	function	F unprotectglyphs	
firstcharacter	function	has attribute	function
firstcharinbox	function	has field	function
	. 3110 02011		
tirstalvoh	function	has glyph	function
firstglyph flush list	function function	has_glyph hpack	function function
flush_list	function	hpack	function

injections	table	load
F getligaindex		locate
F handler		margincodes
F installnewkern		markers
F reset		F get
F setcursive		mathcodes
F setkern		maxboxwidth
F setligaindex		mlist_to_hlist
F setmark		new
F setpair		noadcodes
insert_after	function	nodecodes
insert_before	function	nopts
insert_list_after	function	nuts
installattributehandler	function	F append
is_direct	function	F concat
is_display_math	function	F copy
is_mirrored	data table	F copy_list
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 end_of_math
T whatsit		F fasthpack
last_node	function	F first_glyph
leftmarginwidth	function	F firstcharacter
ligaturing	function	F firstcharinbox
lines	table	F firstglyph
T boxed		F flush_list
F register		F flush_node
F setup		F free
F stage_one		F getattr
F stage_two		F getattribute
F stage_zero		F getbox
D data		F getchar
F finalize		F getfield
F number		F getfont
N scratchbox		F getid
link	function	F getleader
linked	function	F getlist
list	function	F getnext
listablefields	data table	F getprev
listcodes	data table	F getprop
listtoutf	function	F getskip

function
function
data table
table

data table function function function data table data table function table F getsubtype F pdfsave F has attribute F pdfsetmatrix F has field F penalty F has glyph F register F hpack F rightmarginkern F insert after F rightskip F insert\_before F rule F insert list after F shrink F is direct F special F is display math F stretch F is node F temp 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 userlist F locate F usernumber F mlist to hlist 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 reference F gluespec F remove F glyph F repackhlist F hlist F replace F kern F rightmarginwidth F latelua F set attribute F lateluafunction F setattr F leftmarginkern F setattribute F leftskip F setattributes F lineskip F setbox F negatedglue F setfield F noad F setprop F pdfannotation F setunsetattributes F pdfdestination F slide F pdfdirect F somepenalty F pdfliteral F somespace F pdfrestore F tail

F takebox		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		T userids	
F usedlist		N margins.inline	
F vianodes		N property	
F vianuts		N splitters.one	
F vpack		N splitters.two	
F writable_spec		F usernumber	
F write		prepend	function
packlist	function	print	function
pardir_is_equal	data table	processors	table
pardir_is_opposite	data table	B enabled	
pardir_is_parallel	data table	F hpack_filter	
partextdir_is_equal	data table	F post_linebreak_filter	
penaltycodes	data table	F pre_linebreak_filter	
plugindata	table	F tracer	
F finalizer		processwords	function
F initializer		properties	table
S name		T actions	
T namespace		F delayed	
N attribute		F fdelayed	
D data		F immediate	
F enable		F attach	
F handler		T data	

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

F getparameters

tonut

function

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 rule		F setfont	
F setlist		F setlayer	
F setproperties		F setvisual	
F start		vpack	function
T steppers		whatcodes	data table
F check		whatsitcodes	data table
F codes		writable_spec	function
F features		write	function
F font			
F glyphs			
F message			
F messages			
F nofsteps			
F register			
F reset			
F start			

#### number (context)

function basepoints function bit function bits function clearbit function dimenfactors data table formatted function hasbit function maxdimen number function nopts percent function points function pts function function setbit 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 function toset valid function

### os (basic lua)

getenv	function	
setenv	function	
binsuffix	string	
binsuffixes	table	
clock	function	
converttime	function	
date	function	
difftime	function	
env	data table	
exec	overloaded	function
execute	overloaded	function
exit	function	
fulltime	function	
getenv	${\tt overloaded}$	function
gettimeofday	function	
isleapyear	function	
launch	function	
libsuffix	string	
localtime	function	
name	string	
nofdays	function	
now	function	
platform	string	
remove	function	
rename	function	
resolvers	table	
F bits		
resultof	function	
runtime	function	
selfdir	string	
setenv	overloaded	
setlocale	overloaded	function
sleep	function	
spawn	overloaded	function
time	function	
times	function	
timezone	function	
tmpdir	function	
tmpname	function	

function

string

today

type

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

### pattern (context)

- 1 userdata
- 2 userdata
- 3 userdata

# pdf (basic tex)

getcatalog	function	
gethpos	function	
getinfo	function	
getmatrix	function	
getnames	function	
getpageattributes	function	
getpageresources	function	
getpagesattributes	function	
getpos	function	
gettrailer	function	
getvpos	function	
hasmatrix	function	
immediateobj	function	
mapfile	function	
mapline	function	
maxobjnum	function	
obj	function	
objtype	function	
pageref	function	
print	function	
refobj	function	
registerannot	overloaded	function
reserveobj	function	
setcatalog	overloaded	
setinfo	overloaded	function
setnames	overloaded	
setpageattributes	overloaded	
setpageresources	overloaded	
setpagesattributes	overloaded	
settrailer	overloaded	function

# pdfscanner (context)

scan function

# physics (context)

units table
 D tables

## profiler (extra lua)

pause function
resume function
start function
stop function

# publications (context)

addtexentry	function	F filterall	
analyze	function	F flushentries	
authors	table	T methods	
F sorted		F dataset	
T sorters		F force	
F author		F global	
F writer		F local	
F splitstring		F nofregistered	
citevariants	table	F prepareentries	
F author		F register	
F authornum		T sorters	
F authoryear		F author	
F authoryears		F dataset	
F category		F default	
F default		F reference	
F index		F short	
F key		F uservariable	
F num		listvariants	table
F page		F bib	
F serial		F default	
F short		F num	
F tag		F page	
F type		F short	
F year		F yes	
collected	data table	load	function
concatstate	function	loadbibdata	function
converttoxml	function	loaders	table
datasets	table	F bib	
endnotes_to_btx	function	F buffer	
enhance	function	F endnote	
finder	function	F lua	
getindex	function	F refman	
journals	table	F xml	
F abbreviated		markasupdated	function
F add		new	function
F expanded		parenttag	function
F load		refman_to_btx	function
F save		resolvedname	function
lists	table	search	function
F collectentries		singularorplural	function
F fetchentries		statistics	table

N nofbytes N nofdatasets N nofdefinitions N nofshortcuts tracers table F addfield T categories T article T optional T required T book T optional T required T booklet T optional T required T inbook T optional T required T incollection T optional T required T inproceedings T optional T required T manual T optional T required T mastersthesis T optional T required T misc T optional T required T patent T optional T required T phdthesis

> T optional T required T proceedings T optional T required T techreport

T optional T required T unpublished T optional T required T citevariants T fields T listvariants F showdatasetcompleteness F showdatasetfields F showfields table F author

writers

## regimes (context)

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

#### resolvers (context)

allprefixes 	function	finders
appendhash	function	findfile
automount	function	findfiles
automounted	table	findgivenfile
booleanvariable	function	findgivenfiles
cacheversion	string	findpath
checkedvariable	function	findtexfile
cleanpath	function	findwildcardfile
cleanpathlist	function	findwildcardfiles
concatinators	data table	formatofsuffix
configbanner	string	formatofvariable
criticalvars	data table	formats
dangerous	data table	generators
datastate	function	get_from_content
defaultsuffixes	table	getenv
dowithfilesandreport	function	getownpath
dowithfilesintree	function	getreadfilename
dowithpath	function	hashers
dowithvariable	function	homedir
env	function	inputstack
executers	table	installinputfilehandler
executers F check	table	installinputfilehandler installinputlinehandler
	table	
F check	table	installinputlinehandler
F check F exec	table	installinputlinehandler instance
F check F exec F execute	table	<pre>installinputlinehandler instance     D data</pre>
F check F exec F execute F finalize	table	<pre>installinputlinehandler instance     D data     B diskcache</pre>
F check F exec F execute F finalize F popen	table	<pre>installinputlinehandler instance     D data     B diskcache     D environment</pre>
F check F exec F execute F finalize F popen F register	table function	<pre>installinputlinehandler instance     D data     B diskcache     D environment     D expansions</pre>
F check F exec F execute F finalize F popen F register F spawn		<pre>installinputlinehandler instance     D data     B diskcache     D environment     D expansions     D fakepaths</pre>
F check F exec F execute F finalize F popen F register F spawn expandbraces	function	<pre>installinputlinehandler instance    D data    B diskcache    D environment    D expansions    D fakepaths    D files</pre>
F check F exec F execute F finalize F popen F register F spawn expandbraces expandedpathfromlist	function function function	<pre>installinputlinehandler instance    D data    B diskcache    D environment    D expansions    D fakepaths    D files    B force_suffixes</pre>
F check F exec F execute F finalize F popen F register F spawn expandbraces expandedpathfromlist expandedpathlist expandedpathlistfromvariable expandpath	function function function	<pre>installinputlinehandler instance     D data     B diskcache    D environment    D expansions    D fakepaths    D files    B force_suffixes    D found</pre>
F check F exec F execute F finalize F popen F register F spawn expandbraces expandedpathfromlist expandedpathlist	function function function function	<pre>installinputlinehandler instance  D data B diskcache D environment D expansions D fakepaths D files B force_suffixes D found D foundintrees</pre>
F check F exec F execute F finalize F popen F register F spawn expandbraces expandedpathfromlist expandedpathlist expandedpathlistfromvariable expandpath	function function function function function	<pre>installinputlinehandler instance  D data B diskcache D environment D expansions D fakepaths D files B force_suffixes D found D foundintrees D hashed</pre>
F check F exec F execute F finalize F popen F register F spawn expandbraces expandedpathfromlist expandedpathlist expandedpath expandpath expandpath	function function function function function function	<pre>installinputlinehandler instance  D data B diskcache D environment D expansions D fakepaths D files B force_suffixes D found D foundintrees D hashed D hashes</pre>
F check F exec F execute F finalize F popen F register F spawn expandbraces expandedpathfromlist expandedpathlist expandedpathlist expandpath expandpath expandpathfromvariable expandpathfromvariable expansion	function function function function function function function	<pre>installinputlinehandler instance  D data B diskcache D environment D expansions D fakepaths D files B force_suffixes D found D foundintrees D hashed D hashes D lists</pre>
F check F exec F execute F finalize F popen F register F spawn expandbraces expandedpathfromlist expandedpathlist expandedpathlist expandedpathlistfromvariable expandpath expandpath expandpathfromvariable expansion extendtexmfvariable	function function function function function function function function	<pre>installinputlinehandler instance  D data B diskcache D environment D expansions D fakepaths D files B force_suffixes D found D foundintrees D hashed D hashes D lists B loaderror</pre>
F check F exec F execute F finalize F popen F register F spawn expandbraces expandedpathfromlist expandedpathlist expandedpathlistfromvariable expandpath expandpath expandpathfromvariable expansion extendtexmfvariable filtered_from_content	function function function function function function function function function	<pre>installinputlinehandler instance  D data B diskcache D environment D expansions D fakepaths D files B force_suffixes D found D foundintrees D hashed D hashes D lists B loaderror D order</pre>
F check F exec F execute F finalize F popen F register F spawn expandbraces expandedpathfromlist expandedpathlist expandedpathlistfromvariable expandpath expandpath expandpathfromvariable expansion extendtexmfvariable filtered_from_content find_file	function function function function function function function function function function	<pre>installinputlinehandler instance  D data B diskcache D environment D expansions D fakepaths D files B force_suffixes D found D foundintrees D hashed D hashes D lists B loaderror D order T pathstack</pre>

		e 1	
B savelists		prefixes 	data table
D setups		prependhash	function
D specification		pushpath	function
D variables		registerextrapath	function
jobpath	function	registerfile	function
jobs	table	registerfilehash	function
F currentcomponent		registerintrees	function
F currentenvironment		registermethod	function
F currentproduct		registerzipfile	function
F currentproject		relations	data table
F justacomponent		renew	function
D processors		repath	function
F productcomponent		reset	function
F usefile		resetextrapath	function
joinpath	function	resetresolve	function
load	function	resolve	function
loadbinfile	function	savers	data table
loaders	data table	scandata	function
loadlualib	function	scanfiles	function
loadtexfile	function	schemes	table
loadtime	function	T cleaners	
locateformat	function	F md5	
locators	data table	F none	
luacnfname	string	F strip	
luacnfspec	string	F cleanname	
luacnfstate	string	F fetchstring	
macros	table	F fetchtable	
F convertfile		F install	
F decodecomment		setdynamic	function
F enablecomment		setenv	function
F encodecomment		setinstance	function
F preprocessed		showpath	function
F processmk		simplescanfiles	function
F processmkvi		splitconfigurationpath	function
F version		splitexpansions	function
maxreadlevel	number	splitmethod	function
methodhandler	function	splitpath	function
newinstance	function	stackpath	function
openbinfile	function	suffixes	data table
openers	data table	suffixmap	data table
openfile	function	suffixofformat	function
opentexfile	function	texdatablob	function
ownpath	string	toppath	function
poppath	function	unexpandedpath	function
		• •	

unexpandedpathlist	function
unresolve	function
updaterelations	function
updatescript	function
usertypes	data table
usezipfile	function
validatedpath	function
variable	function
variableofformat	function
variableofformatorsuffix	function
wildcardpattern	function

#### scripts (context)

table

autofontfeature

#### 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 hash table injectors data table installdataset function installmethod function numbertocategory data table numbertodataset data table numbertohandler data table reset function set function splitters data table

## set (context)

contains function
create function
tolist function
tonumber function
totable function

#### socket (extra lua)

**BLOCKSIZE** number S connection DEBUG boolean S content-description SETSIZE number S content-disposition bind function S content-encoding choose function S content-id function connect S content-language connect4 function S content-length connect6 function 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 S host F open S if-match F put gettime function S if-modified-since headers table S if-none-match S if-range T canonic 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 last-modified S accept-ranges S action S location S age S max-forwards S message-id S allow S alternate-recipient S mime-version S original-envelope-id S arrival-date S authorization S original-recipient S bcc S pragma S cache-control S proxy-authenticate S cc 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
constants
                table
   S defaultdigits
   S defaultlanguage
   S defaultmethod
   N digitsmaximum
   N digitsoffset
   N ignoredoffset
   N replacementoffset
   T validmethods
    B ch
    B mc
    B mm
    Врс
    B pm
    B uc
    B zc
    B zm
definitions
                data table
firstofsplit function
setlanguage
                function
                function
sort
splitters
                table
   F utf
strip
                function
tracers
                data table
update
                function
```

# statistics (context)

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

# status (basic tex)

list function

## storage (context)

allocate function data table mark function marked function number max min number **nofmodules** number noftables number register function shared data table boolean strip tofmodules number toftables number

### streams (context)

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

## string (basic lua)

autodouble	function
autosingle	function
booleanstring	function
byte	function
bytepairs	function
bytes	function
char	function
characterpairs	function
characters	function
checkedsplit	function
collapsespaces	function
count	function
dump	function
escapedpattern	function
explode	function
find	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
reverse	function
split	function
splitlines	function
splitup	function
strip	function
sub	function

tformat function toboolean function tocontext function todimen function function tonodes function topattern totable function toutf function tracedchar function tracedchars table unquote function unquoted function upper function function utfcharacters utfvalues function valid function

# structures (context)

	_		
atlocation	function	F setlevel	
blocks	table	F setoffset	
D collected		F setown	
F define		F setstate	
F print		F setvalue	
F save		T specials	
F select		F userpage	
F setstate		F subs	
D states		D tobesaved	
D tobesaved		F value	
bookmarks	table	currentsectionnumber	
F finalize		descriptions	table
F flatten		documents	table
S method		D data	
F overload		F initialize	
F place		F preset	
F register		F reset	
F setup		floats	table
counters	table	formulas	table
F add		F current	
F analyze		F simplify	
F check		F store	
D collected		helpers	table
F compact		F analyze	
F converted		F formulanumber	
F currentvalue		F merged	
D data		F page	
F define		F prefix	
F first		F prefixlastpage	
F get		F prefixpage	
F last		F simplify	
F next		F title	
F prev		F touserdata	
F previous		inserts	table
F raw		D data	
F record		F define	
F reset		F getdata	
F restart		F getlocation	
F restore		F getname	
F save		F getnumber	
F set		F setlocation	

F setup F userdata D stored F uservalue itemaroups table marks table F maxwidth D data F nofitems F define F exists F register lists table F fetch F addto F fetchallmarks F fetched F analyze B autoreorder F fetchonemark F fetchtwomarks D cached D collected F aet F discard F number F enhance F relate T enhancers F reset F filter F set F filtercollected F show F formulanumber F synchronize F getresult F title F groupindex T tracers F hasnumberdata F showtable table F haspagedata notes F hastitledata F checkpagechange F iscached F define F label F doifonsamepageasprevious F location F get Fnumber F getdeltapage D ordered F getn F page F getnumberpage F popnesting F getstate F prefix F getsymbolpage F prefixednumber F hascontent F prefixedpage F internal F internalid F process F listindex D pushed F pushnesting F ordered F realpage F postpone F reordered F resetpostponed T result F restore D sectionblocks F save F sectionnumber F setstate F size F setsymbolpage F title D states D tobesaved F store

pages	table	F identify
F analyze		F import
D collected		F inject
F is_odd		F injectcurrentset
N nofpages		S innermethod
F number		D internals
F save		F load
D tobesaved		F loadpresets
references	table	F mark
F analyze		D pages
F checkedfile		U prefixsplitter
F checkedfileorurl		D productdata
F checkedprogram		T programs
F checkedrealpage		T data
F checkedurl		F define
D collected		F get
U componentsplitter		F realpageofpage
F currentmetadata		U referencesplitter
F currentorder		D referred
D currentset		F referredpage
F define		F registerfinalizer
D defined		F registerinitializer
D derived		F registerpage
F enableinteraction		F reportproblems
F enhance		F reset
D executers		D runners
F expandcurrent		F set
F export		F setandgetattribute
T files		F setcomponent
T data		F setinnermethod
F define		F setinternalreference
F get		F setnextinternal
F filter		F setnextorder
F filterdefault		D specials
D filters		F splitcomponent
D flaginternals		F splitprefix
F from		F splitreference
F get		F synchronizepage
F getcurrentmetadata		T testrunners
F getcurrentprefixspec		Finner
F getinnermethod		F special
F getinternallistrefere	nce	F special operation
F getinternalreference D handlers		F special operation with arguments
v HanuterS		T testspecials

F deltapage		F currentlevel
Fi		F depthnumber
F internal		F finddata
F page		F findnumber
F realpage		F fullnumber
F section		F getcurrentlevel
F userpage		F getlevel
D tobereferred		F getnumber
D tobesaved		F internalreference
T urls		D levelmap
T data		D levels
F define		F load
F get		F matchingtilldepth
D usedinternals		F numberatdepth
D usedviews		F numbers
F valid		F popblock
F whatfrom		F prefixedconverted
registers	table	F pushblock
F analyze		F register
D collected		D registered
F compare		F reportstructure
F define		F save
F enhance		T sectionblockdata
F extend		T bodypart
F filter		S bookmark
F filtercollected		F set
F finalize		F setblock
F flush		F setchecker
F get		F setentry
F prepare		F setlevel
F process		F setnumber
F setmethod		F structuredata
F sort		F title
F store		D tobesaved
D tobesaved		F typesetnumber
F unique		F userdata
F userdata		B verbose
sections	table	<b>sets</b> table
F autodepth		F define
F cct		F get
D collected		F getall
F current		D setlist
F currentblock		<b>specials</b> table
F currentid		D collected

F retrieve F store D tobesaved table synonyms F analyzed D collected F compare F define F filter F finalize F flush F meaning F prepare F process F register F registerused F sort F synonym D tobesaved tags table T data F detailedtag F getid F handler D labels F last F lastinchain T metadata D properties F registerdata F registermetadata F restart F setattributehash F setcombination F setdescription F setdescriptionsymbol F setfigure F sethighlight F setitemgroup F setlist F setproperty F setregister

F setsorting F setsynonym

F settablecell
F settabulatecell
F setuserproperties
F start
F stop
D taglist
T userdata
D userproperties

### table (basic lua)

111	<b>.</b>		
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
copy	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 foreachi	function	sub	function
	function	swapped	function
fromhash	function function	tocontext tocsv	function function
getmetatablekey	function	tofile	function
getn	function	tonice	function
has_one_entry identical	function	tohash	function
imerge	function	tomasn	function
imerged	function		function
insert	function	twowaymapper unique	function
is empty	function	unnest	function
keys	function	unpack	function
load	function	values	function
loweredkeys	function	vacaes	runction
maxn	function		
merge	function		
merged	function		
mirrored	function		
pack	function		
prepend	function		
print	function		
remove	function		
reverse	function		
reversed	function		
save	function		

# tex (basic tex)

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

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

## texconfig (basic tex)

error\_line number
expand\_depth number
formatname string
half\_error\_line number
hash\_extra number

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

# texio (basic tex)

write function
write\_nl function

# token (basic tex)

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

## tokens (context)

```
bgroup
              table
collectors table
   T data
   F defaultwords
   F dowithwords
   F flush
   F handle
   F install
   F register
   T registered
   T remapper
     F convert
    T data
     F store
   F show
   T show_methods
    Fa
    F b
    F c
   F showtoken
   F test
   F trace
egroup
              table
              table
hbox
letter
              function
              function
letters
other
              function
vbox
              table
```

table

vtop

#### tracers (context)

```
count function
cs function
dimen function
knownlist function
lists table
```

T context
T internals
T scratch

name function
primitive function
printerror function
showlines function
strings table

S undefined

toks function
type function

# trackers (context)

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

# typesetters (context)

alignments	table	F installhandle	r
F handler	table		:I
F set		F processmath	
breakpoints	table	F set	
F define	table	F setcolor F setmath	
F handler		F tomode <b>firstlines</b>	table
D mapping			table
T methods		T actions	
T numbers		F default	
F set		Fline	
F setreplacemen		F word	
cases	table	F handler	
T actions		F set	4-61-
F handler		initials	table
F register		T actions	
F set		F default	
characteralign	table	F handler	
F handler		F set	
F resetcharacte		<b>italics</b> table	
F setcharactera	•	F forcevariant	
characters	table	F handler	
F handler		F reset	
F replacenbsp		F set	
F replacenbspac		kerns	table
checkers	table	D factors	
F handler		F handler	
F reset		F keepligature	
F set		B keeptogether	
cleaners	table	D mapping	
F handler		F set	
F set		manipulators	table
digits	table	F apply	
T actions		F applyspecification	
F handler		T methods	
F set		F Word	
directions	table	F Words	
F getfences		F abbreviatedjournal	
F getglobal		F expandedjournal	
F getmethod		F lowercase	
E 6		F stripperiod	
F handler		F stripperiod	

```
T patterns
                                                                F set_reflow_height
     U list
                                                                F set_reflow_width
     U pair
   F splitspecification
margins
                     table
    F finalhandler
   F globalhandler
    F localhandler
    F save
                     table
processors
    F apply
   F register
    F reset
    F split
    F startapply
    F stopapply
    F stripped
    F tostring
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
xtables
    F cleanup
    F construct
    F create
    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

## unicode (extra lua)

ascii	table	F	len
F byte			lower
F char			match
F dump			rep
F find			reverse
F forma	t		sub
F gfind		F	upper
F gmatcl	h	utf8	table
F gsub		F	byte
F len		F	char
F lower		F	characters
F match		F	chrlen
F rep		F	count
F rever	se	F	dump
F sub		F	filetype
F upper		F	find
grapheme	table	F	format
F byte		F	gfind
F char		F	gmatch
F dump		F	gsub
F find		F	is_valid
F forma	t	F	len
F gfind		F	length
F gmatcl	n	F	lower
F gsub		F	magic
F len			match
F lower		F	remapper
F match			rep
F rep			replacer
F rever	se		reverse
F sub			split
F upper			splitlines
latin1	table		sub
F byte			subtituter
F char			tocodes
F dump			toeight
F find	_		toentities
F forma	τ		tostring
F gfind			totable
F gmatcl	1		upper
F gsub		r	ustring

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

# url (context)

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

## utilities (context)

debugger	table	N version	
F disable		parsers	table
F enable		F add_settings_t	o_array
F savestats		F arguments_to_t	
F showstats		F array_to_strin	g
F showtraceback		F csvsplitter	
formatters	table	F getparameters	
F formatcolumns		F hash_to_string	
F list		F iterator	
F stripzeros		F keq_to_hash	
garbagecollector	table	F listitem	
F check		F make_settings_	to_hash_pattern
N criterium		F mergehashes	
B enabled		F options_to_has	h
lua	table	T patterns	
B alwaysstripcode		U settings_to_a	array
F compile		U settings_to_	hash_a
F loadedluacode		U settings_to_l	hash_b
F loadstripped		U settings_to_l	hash_c
N nofstrippedbytes		U unittotex	
N nofstrippedchunk	S	F process_stripp	ed_settings
B stripcode		F rfc4180splitte	r
T strippedchunks		F runtime	
F strippedloadstri	ng	F settings_to_ar	ray
T suffixes		F settings_to_ar	ray_with_repeat
S lua		F settings_to_ha	sh
S luc		F settings_to_ha	sh_strict
S lui		F settings_to_ha	sh_tolerant
S luj		F settings_to_se	t
S luv		F simple_hash_to	_string
S tma		F splitmethod	
S tmc		F splitthousands	
S tua		F stepper	
S tuc		F stripped_setti	ngs_to_array
packers	table	F unittotex	
F hashed		F unittoxml	
F new		report	function
F pack		sequencers	table
F simplehashed		F appendaction	
F strip		F appendgroup	
F unpack		F compile	

F disableaction F disablegroup F enableaction F enablegroup D functions F localize F new F nodeprocessor F prependaction F prependgroup F removeaction F replaceaction F setkind F tostring setters table F disable F enable F initialize F list F new F register F report F reset F show table stacker F new table storage F allocate F checked F mark F marked F setinitializer F sparse 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 F removevalue

F replacevalue

templates table

F load

F replace

F replacer

F resolve

#### vf (context)

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

## visualizers (context)

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

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	<pre>inject_element</pre>	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	insert_element_after	function
F	attributes	<pre>insert_element_before</pre>	<del>function</del>
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
F	position	makestandalone	function
F	reverse	match	function

Т

function name newhandlers function nodesettostring function originalload function package function function parent userdata parsedentitylpeg pihandlers table placeholders table F unknown\_any\_entity F unknown dec entity F unknown hex entity position function privatecodes table privatetoken function function process **function** process attributes process elements function. processattributes function profiled table raw function registerentity function registerns function **function** remap name function remap namespace function remap tag function remapname remapnamespace function remaptag function function renamespace replace function replace element function resolvens function root function function save selection function

separate

setcdata

setcomment

setproperty settings

specialhandler

sethandlersfunction

serialize

function sprint string function strip function strip whitespace function stripelement function stripleadingspaces function function table function text textonly function texttocdata function tocdata function toelement function tostrina function toxml function tprint function function traverse function unescaped unprivatized function withelement function withelements function function wrap xmlns table

function

function

function

function

function function

function

table

#### zip (extra lua)

archives table
close function
closearchive function
open function
openarchive function
openfile function
registeredfiles table
type function

#### zlib (extra lua)

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