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

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

## global (alias: \_G)

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

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

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

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

## attributes (context)

1		+-h1-	_		
		table		mpoptions	
	attribute			none	
	data			popset	
	enable 			processcolorco	nponents
	nandler			pushset	
	register			register	
	registered			registered	
color	_	table		registerspotco	lor
	attribute			rgb	
	cmyk			rgbtocmyk	
	cmyktogray			rgbtogray	
	cmyktorgb			rgbtohsv	
	colorcomponents			selector	
	couple			setlist	
	data			setmodel	
	default			setpagecolormo	del
	defineintermedi			sets	
Fd	definemultitone	ecolor	F	spec	
Fd	defineprocessco	lor	F	spot	
Fd	definesimplegra	ıy	F	spotcolorname	
Fd	definespotcolor		F	spotcolorparen	t
Fd	definetranspare	ency	F	spotcolorvalue	
Fe	enable		В	supported	
F f	filter		F	transparencyco	mponents
F f	forcedmodel		В	triggering	
F f	forcesupport		F	usecolors	
F f	formatcolor		F	value	
Ff	formatgray		D	values	
Fg	getpagecolormod	lel		weightgray	
Fg	gray		def:		function
Fg	graytohsv		effe	ects	table
Fh	nandler		N	attribute	
Fh	nsvtogray		D	data	
Fh	nsvtorgb		F	enable	
Fi	iccprofile		F	handler	
Fi	isblack		F	register	
N m	nain		D	registered	
Sm	nodel			values	
D m	nodels			ilers	table
Fm	npcolor		list	t	data table
Fm	npnamedcolor		name	es	data table

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

> D data F define

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

#### backends (context)

F hasmatrix

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

F destination

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

## registrations table tables table

#### bit (context)

```
arshift function
band
        function
        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
getlines
                function
loadcontent
                function
parallel
                table
```

F define

F hassomecontent

F next
F place
F reset
F save

prepend function
raw function
undent function

#### builders (context)

#### kernel table profiling table F hyphenation F add F kernina F addtobox F ligaturing F distance F mlist to hlist F get T originals F handler F list F hyphenate F kerning F profilebox F ligaturing F set paragraphs table vspacing table T constructors F analyze N attribute D categories F define F collapsevbox F disable T data F enable D map F handler D skip T methods D snapmethods F basic F definesnapmethod F default B fixed F hpack F pagehandler F oneline F resetprevdepth D names F setmap D numbers F setskip F set F snapbox F start F tocategories F stop F tocategory F vboxhandler 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

#### caches (context)

ask	boolean
base	string
collapsecontent	function
configfiles	function
contentstate	function
defaults	table
define	function
direct	boolean
force	boolean
getfirstreadablefile	function
${\tt getfirstreadablefile\_TEST\_ME\_FIRST}$	function
getreadablepaths	function
getwritablepath	function
hashed	function
is_writable	function
loadcontent	function
loaddata	function
more	string
relocate	boolean
savecontent	function
savedata	function
setfirstwritablefile	function
setluanames	function
tree	string
treehash	function
usedpaths	function

#### callback (basic tex)

find function
list function

register overloaded function

#### callbacks (context)

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

#### catcodes (context)

names data table
numbers data table
register function

## characters (context)

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

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

subscripts table
superscripts table

synonyms data table

tex table

D accentmapping

D commandmapping

F defineaccents

F safechar

F toutf

F toutfpattern

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

#### chemistry (context)

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

## containers (context)

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

#### converters (context)

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

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

function function function function

## coroutine (basic lua)

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

#### ctxrunner (context)

load function
preparedfile function
prepfiles data table
resolve function

## debug (basic lua)

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

## dir (context)

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

#### directives (context)

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

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

#### environment (context)

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

texfile
texmfos
texos
texroot
truefilename
useluamodule
usemodules
validengines

function string string string function function function data table

#### epdf (extra tex)

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

type function

#### experiments (context)

data data table default function disable function enable function list function name string register function report function reset function 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 getrealpage quess hash identifiers identify images

realpage
ess
th
entifiers
entify
ages
F boxes
F check
F checksize
F clone
F copy
F immediatewrite
F keys

F new
F node
F ofindex
F package
F print
F scan
F serialize

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

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

## 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
is_rootbased_path	function
is_writable	function
isreadable	function
iswritable	function
join	function
joinpath	function
loadchecksum	function
nameonly	function
nametotable	function
needs_updating	function
needsupdating	function
pathpart	function
readdata	function
removesuffix	function
replacesuffix	function
reslash	function
robustname	function
savechecksum	function
savedata	function
size	function
splitbase	function
splitname	function
splitpath	function
strip	function
suffix	function
suffixes	function
suffixesonly	function
suffixonly	function
syncmtimes	function

## floats (context)

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

#### font (basic tex)

current function define function each function fonts table frozen function id function

getfont overloaded 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

to\_table function
totable function

# fonts (context)

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

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

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

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

N gimeldagesh N holam19 N gravecmb N holam26 N haaltonearabic N holam32 N hamzaarabic N holamhebrew N hamzadammaarabic N holamnarrowhebrew N hamzadammatanarabic N holamquarterhebrew N hamzafathaarabic N ilde N hamzafathatanarabic N integralbottom N hamzalowarahic N integraltop N hamzalowkasraarabic N kaf N hamzalowkasratanarabic N kafdagesh N hatafpatah N kashidaautoarabic N hatafpatah16 N kashidaautonosidebearingarabic N hatafpatah23 N kcedilla N hatafpatah2f N lamed N hatafpatahhebrew N lameddagesh N hatafpatahnarrowhebrew N lamedhebrew N lamedholam N hatafpatahquarterhebrew N hatafqamats N lamedholamdagesh N hatafgamats1b N lamedholamdageshhebrew N hatafgamats28 N laminitialarabic N hatafgamats34 N lammeemieeminitialarabic N lcedilla N hatafgamatshebrew N hatafgamatsnarrowhebrew N logicalnotreversed N hatafqamatsquarterhebrew N mahapakhhebrew N hatafsegol N mem N hatafsegol17 N memdagesh N hatafsegol24 N merkhahebrew N merkhakefulahebrew N hatafsegol30 N hatafsegolhebrew N middot N hatafsegolnarrowhebrew N munahhebrew N hatafsegolquarterhebrew N nbspace N he N ncedilla N hedagesh N newshegelsign N hehfinalalttwoarabic N ninearabic N het N noonhehinitialarabic N hiriq N nun N hirig14 N nundagesh N hiriq21 N odblacute N hiriq2d N onearabic N hiriqhebrew N overscore N hiriqnarrowhebrew N patah

N patah11

N patahld

N hiriqquarterhebrew

N holam

N patah2a N aubuts18 N patahhebrew N qubuts25 N patahnarrowhebrew N qubuts31 N patahquarterhebrew N qubutshebrew N pe N gubutsnarrowhebrew N pedagesh N gubutsquarterhebrew N gamats N quoteleftreversed N rafe N gamats10 N gamatsla N rcedilla N reharabic N gamats1c N gamats27 N resh N gamats29 N reshhatafpatah N gamats33 N reshhatafpatahhebrew N gamatsde N reshhatafsegol N gamatshebrew N reshhatafsegolhebrew N gamatsnarrowhebrew N reshhebrew N qamatsqatanhebrew N reshhiria N gamatsgatannarrowhebrew N reshhirighebrew N gamatsgatanguarterhebrew N reshholam N gamatsgatanwidehebrew N reshholamhebrew N gamatsquarterhebrew N reshpatah N aof N reshpatahhebrew N gofdagesh N reshgamats N gofhatafpatah N reshgamatshebrew N qofhatafpatahhebrew N reshaubuts N qofhatafsegol N reshqubutshebrew N qofhatafsegolhebrew N reshsegol N qofhebrew N reshsegolhebrew N reshsheva N qofhiriq N gofhirighebrew N reshshevahebrew N gofholam N reshtsere N qofholamhebrew N reviahebrew N qofpatah N samekh N gofpatahhebrew N samekhdagesh N gofgamats N segol N qofqamatshebrew N segol13 N gofgubuts N segol1f N qofqubutshebrew N segol2c N qofsegol N segolhebrew N qofsegolhebrew N segolnarrowhebrew N gofsheva N segolquarterhebrew N gofshevahebrew N sevenarabic N sfthyphen N goftsere N gubuts N shaddaarabic

N	sheqel	N yerahbeny	/omohebrew
	sheva	N yod	, omoriest ew
	sheval15	N yoddagesh	1
	sheva15	N zayin	•
	sheva22	N zayindage	ach
	sheva2e	N zdot	.311
	shevahebrew	N zeroarabi	ic
	shevanarrowhebrew	D unicodes	
	shevaquarterhebrew	D cache	
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	shin	F is_known	
	shindagesh	D known	
	shindageshshindot	F load	
	shindageshsindot	F make_unicode	_vector
	shinshindot	D math	
	shinsindot	N version	da4a 4abla
	siluqhebrew	expansions	data table
	sixarabic	formats	data table
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	tet	F getcompositi	ons
	tetdagesh	T list	
	tevirhebrew	F composition	
	thousandsseparatorarabic	F designsize	S
N	threearabic	F expansions	
N	tildecmb	F featureset	
N	tipehahebrew	F filenames	
N	tsadi	F files	
N	tsadidagesh	F mathematic	S
N	tsere	F protrusion	S
N	tsere12	F solutions	
N	tserele	F treatments	
N	tsere2b	F typefaces	
N	tserehebrew	F load	
N	tserenarrowhebrew	F prepare_feat	ures
N	tserequarterhebrew	F register	
N	twoarabic	F registerpost	processor
N	udblacute	F report	
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N	vavdagesh	T afm	
N	vavdagesh65	B addkerns	
N	vavholam	B addligatur	es

B addtexligatures	F gsub_context
B autoprefixed	F gsub_contextchain
D cache	F gsub_ligature
D features	F gsub_multiple
T helpdata	F gsub_reversecontextchair
D bothkerned	F gsub_single
D leftkerned	F load
D ligatures	F scriptandlanguage
D rightkerned	F setcontextchain
D texligatures	F setdynamics
F load	F setfeatures
F setfeatures	T statistics
B syncspace	D usedfeatures
N version	T tables
otf	D baselines
F addfeature	D features
D cache	D languages
T chainhandlers	D scripts
F normal	N version
F verbose	T pfb
F collectlookups	T tfm
F dataset	D features
S defaultbasealternate	F setfeatures
S defaultnodealternate	T vf
D enhancers	T combinations
D features	F combine
F fileformat	T combiner
F getalternate	D commands
T glists	F find
T handlers	D helpers
F contextchain	D math
F devanagari_remove_joiners	D predefined
F devanagari_reorder_matras	D whatever
F devanagari_reorder_pre_base_reordering_consonants	<b>hashes</b> table
F devanagari_reorder_reph	D characters
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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

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D marks		F loadfile	
D modes		F loadline	
D originals		F loadlumtable	
D parameters		F makenameparser	
T processes		D overloads	
D properties		F reset	
D quads		F tounicode	
D resources		F tounicode16	
T setdynamics		F tounicodel6seq	luence
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D spacings		D cache	
D unicodes		B inline	
D xheights		N version	
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F addprivate		nulldata	data table
F dimenfactor		protrusions	data table
F expandglyph		readers	table
F fontpatternha	ssize	F afm	
F getdigitwidth		F check_lua	
F getparameters		F check_tfm	
F getprivatenod	e	F dfont	
F hasprivate		F lua	
F indextoslot		F opentype	
F name		F otf	
F nametoslot		F pfb	
F setdigitwidth		D sequence	
F splitfontpatt	ern	F tfm	
F tochar		F ttc	
infofont	function	F ttf	
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F characters		T data	
F descriptions		F define	
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F register		F file	
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F addtounicode		F simplefonts	

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F searchfiles

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F presetcontext

F registercontext

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F point

# gzip (extra lua)

```
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```

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сору	function
immediatewrite	function
keys	function
new	function
node	function
ofindex	function
package	function
print	function
scan	function
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totable	function
types	function
write	function

### interactions (context)

```
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# interfaces (context)

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formats	data table	F abjadnumerals
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getmessage	function	F addfeature
hashedsetups	data table	F addgrapheme
implement	function	F addlinklistelement
interfacedcommand	function	F addprofiletobox
interfaces	table	F addreplacements
invalidkey	function	F addtojavascriptpreamble
is_command	function	F addtolist
namespaces	table	F addvalidinterfacekeys
F define		F allinputpaths
Flist		F alphabetic
registernamespace	function	F analysefloatmethod
scanners	table	F analyzeitemgroup
F Alphabetic		F analyzelist
F Character		F analyzeregister
F Characters		F applytobox
F MPc		F applytofirstcharacter
F MPd		F assignbuffer
F MPh		F autofinishstructurelevels
F MPll		F autonextspace
F MPlr		F autonextstructurelevel
F MPls		F autosetups
F MPn		F autostarttext
F MPp		F autostoptext
F MPpardata		F averagecharwidth
F MPplus		F bitmapimage
F MPpos		F boxtostring
F MPposset		F bposcolumn
F MPr		F bposcolumnregistered
F MPrest		F btxabbreviatedjournal

F btxaddentrv F btxsetspecification F btxaddjournal F btxsingularorplural F btxauthor F btxtoregister F btxauthorfield F btxusedataset F btxcollectlistentries F btxuservariable F btxcurrentfirstnames F buildtextaccent F btxcurrentinitials F character F htxcurrentiumiors F characters F btxcurrentsurnames F chardescription F htxcurrentyons F checkcountersetup F btxdetail F checkedconversion F btxdirect F checkedpagefloat F btxdoif F checkinjector F btxdoifelse F checknextiniector F btxdoifelsesameasprevious F checkpreviousinjector F btxdoifelseuservariable F checktwopassdata F btxdoifnot F chemical component F chinesenumerals F btxexpandedjournal F htxfetchlistentries F cleanfontname F btxfield F cleanupbox F btxfieldname F cleanuplayers F clonefield F btxfieldtvpe F btxfirstofrange F collectfloat F btxflush F collecthelp F btxflushlistentrv F colorcomponents F btxflushmarked F concatcommalist F consultfloat F btxflushpages F btxfoundname F convertbtxdatasettoxml F convertmpstopdf F btxfoundtype F btxhandlecite F copyposition F btxhandlenocite F cos F btxlastofrange F cosd F htxlistvariant E countervalue F btxloaddefinitionfile F counttwopassdata F btxloadjournallist F currentcomponent F btxloadreplacementfile F currentdate F btxoneorrange F currentdesignsize F btxpreparelistentries F currentenvironment F btxremapauthor F currentposthyphenchar F btxsavedataset F currentprehyphenchar F btxsavejournallist F currentproduct F btxsetdataset F currentproject F currentreferenceorder F btxsetentry

F currentsectiontolist

F btxsetregister

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

F doifelseinputfile

F definerule

F doifelseinset F dosavepositionwhd F doifelseintwopassdata F dosetposition F doifelseleapyear F dosetpositionbox F doifelselisthasentry F dosetpositionplus F doifelselisthasnumber F dosetpositionstrut F doifelselisthaspage F dosetpositionwhd F doifelselisthastitle F dostarttextfile F doifelselocfile E dostontextfile F doifelsemarking F elapsedtime F enableasciimode F doifelsemessage F doifelseobiectreferencefound F enableautofontscript F doifelseolderversion F enablebackgroundalign F doifelseoverlapping F enablebackgroundboxes F doifelseparallel F enablecolor F doifelseparentfile F enablecolorintents F doifelsepathexist F enablecrlf F doifelseposition F enabledirectives F enableexperiments F doifelsepositiononpage F enablefontcolorschemes F doifelsepositionsonsamepage F doifelsepositionsonthispage F enableinteraction F doifelsepositionsused F enableparbuilder F doifelserangeonpage F enableregime F doifelsereference F enablerules F doifelsesame F enableshifts F doifelsestackedfloats F enablespellchecking F doifelsesvnonvmshown F enablestatetriggering F enablestream F doifelsesynonymused F doifelseurldefined F enabletrackers F doifelseutfmathabove F enabletransparency F doifelseutfmathaccent F enableutf F doifelseutfmathbelow F enhancelinkedlist F doifelseutfmathfiller F enhancelist F doifelsevisualizer F enhancereference F doiffieldsetelse F enhanceregister F doifnotcounter F eposcolumn F doifnotecontent F eposcolumnregistered F doifnoteonsamepageasprevious F erasebuffer F doifnotsame F execute F doifposition F expandcurrentreference F doifsame F exportformdata F exportreferences F doprocesstypescriptfile F doreshapeframedbox F extendregister F dosaveposition F extensiblecode

F featureattribute

F dosavepositionplus

F featurelist F fontcollectionprepare F feedback F fontcollectionregister F fetchallmarks F fontcollectionreport F fetchmultipar F fontcollectionreset F fetchmultishape F fontlookupgetkey F fetchonemark F fontlookupgetkeyofindex F fetchposboxes F fontlookupinitialize F fetchtwomarks F fontlookupnoffound F figure check F forceendjob F forcequitjob F figure done F figure dummy F formatcolor F figure identify F formatgray F figure include F freezerandomseed F figure mergegoodies F from F figure pop F aetbidimode F figure\_push F getbodyfontsizes F figure\_reset F getbuffer F getbufferctxlua F figure scale F figurefilename F getbuffermkvi F figurefilepath F getcheckedinterfaceparameters F figurefiletype F getcurrentprefixspec F figurerequest F getcurrentreferencemetadata F figurestatus F getdefaultfieldvalue F figureused F getdocumentargument F filterdefaultreference F getdocumentfilename F filterreference F getelementtag F finalizebox F getfieldcategory F findtwopassdata F getfile F firstcountervalue F getfirstcharacter F firstinset F getfirsttwopassdata F firstsubcountervalue F getfloatvariable F flushfloat F getfullstructurenumber F flushlabeledfloat F getinternallistreference F flushnotes F getlasttwopassdata F flushpageinjectionsafter F getmarking F flushpageinjectionsbefore F getmessage F flushpostponedblocks F getmpextensions F flushpostponednotes F getnotestate F flushstream F getprivatechar F flushstreamcopy F getprogram F fontchar F getrandomdimen F fontcharbyindex F getrandomfloat F fontcollectionclone F getrandomnumber F fontcollectiondefine F getrandomseed

F getreadfilename F iobfilename F getsomefullstructurenumber F jobfilesuffix F getsomestructurenumber F languagenumber F lastcountervalue F getspecificstructuretitle F getstructurelevel F lastsubcountervalue F getstructurenumber F lchexnumber F aetsubstrina F lchexnumbers F gettexbuffer F leapyear F gettwopassdata F linenumbersstageone F linenumbersstagetwo F gettwopassdatalist F aeturl F listaroupindex F getvisual F listlabel F hboxtovbox F listlocation F helpaction F listnamespaces F helpreference F listprefixednumber F hexstringtonumber F listprefixedpage F horizontalcode F listrealpage F listsize F hour F hyphenatedlist F listtitle F hyphenatedurl F listuserdata F immediatemessage F loadexamodes F incrementcounter F loadfontgoodies F incrementedcounter F loadluamodule F incrementsubcounter F loadmapfile F initializeiob F loadmapline F initializestream F loadspellchecklist F initializetexdirectives F loadtypescriptfile F initializetextrackers F loadvisualizer F locatefilepath F injectcurrentreference F injectcurrentreferencehtdp F locfilename F injectreference F lower F inlinechemical F lpdf adddocumentcolorspace F inputfilebarename F lpdf adddocumentextgstate F inputfilename F lpdf adddocumentpattern F inputfilerealsuffix F lpdf\_adddocumentshade F inputfilesuffix F lpdf addpageattributes F insertattachment F lpdf\_addpageresources F insertcomment F lpdf\_addpagesattributes F insertfield F lpdf addtocatalog F insertionnumber F lpdf\_addtoinfo F insertrenderingwindow F lpdf\_addtonames F installedlanguages F lpdf\_collectedresources F installtexdirective F lpdf color F installtextracker F luascript

F luathread F namedstructurevariable F lxmlid F nhfs F markingnumber F nextcountervalue F markingtitle F nextparallel F markinjector F nextsubcountervalue F markregionbox F nofdays F markregionboxcorrected F nofstackedfloats F markregionboxtagged E notedeltanage F markvisualfonts F notelistindex F mathfraction F notenumberpage F mathrenderset F noteprefixednumber F metapostescaped F notesymbolpage F metapostformatted F notetitle F metapostgraphformat F ntimes F minute F number F mixcleanup F numbers F mixfinalize F objectnumber F mixflushlist F objectpage F mixflushrest F octnumber F mixgetsplit F octstringtonumber F mixsetsplit F operatingsystem F mixstate F ordinal F molecule F outputfilename F month F overloadbookmark F monthmnem F overloaderror F monthname F pagestaterealpage F mpcolor F parpos F mpflushliteral F pdfrotation F mpflushreset F pdfstartmatrix F mpgettext F pdfstartmirroring F mpgraphic F pdfstartrotation F mpoptions F pdfstartscaling F mprunset F pdfstopmatrix F mpruntab F pdfstopmirroring F pdfstoprotation F mprunvar F mpsetclippath F pdfstopscaling F mpsetoutercolor F percentageof F mpsetsxsy F pgfxcolorspec F mpsettext F pickupbuffer F mptexget F pickuppunctuation F mptexreset F placeparallel F popfloat F mptexset F pophyphenation F mptexsetfrombuffer F namedstructureuservariable F popitaliccorrection

F poplist F registerbackendsymbol F registerbodyfontsize F poppath F popreferenceprefix F registerbookmark F popregime F registerbuttons F popsectionblock F registercolorintent F postponenotes F registeredviewerlayer F prefixedconverted F registerfigurepattern F presetsymbollist F registerfiguresuffix F presettabulate F registerhelp F prevcountervalue F registerhyphenationexception F previoussubcountervalue F registerhyphenationpattern F processbodyfontsizes F registeritemgroup F processbuffer F registerlanguagefeatures F processcolorcomponents F registerlinenumbering F processedfile F registermaintextcolor F processedfiles F registermpyfile F processfile F registernamedlua F processfilemany F registernamespace F processfilenone F registerpostponedblock F processfileonce F registerrendering F processiob F registersection F processlist F registershownsynonym F registerstructureprocessor F processregister F processsplit F registersynonym F processsynonyms F registerunit F profilebox F registerusedsynonym F purefontname F registeruserdata F pushfloat F relatemarking F renderingvar F pushhyphenation F pushitaliccorrection F replacefeature F pushlist F replacepospxywhd F pushpath F reportstructure F pushreferenceprefix F resavefloat F resetcharacteralign F pushregime F pushsectionblock F resetcounter F pushstream F reseteffect F rawcharacter F resetfeature F rawcountervalue F resetfontfeature F rawdate F resetfontsolution F rawsubcountervalue F resetiniector F referencepagedetail F resetitaliccorrection F resetmapfiles F referencepagestate F referencerealpage F resetmarking

F resetmathattributes

F registerattachment

F resetmathitalics F setactivecatcodes F resetnullfont F setbreakpoints F resetparallel F setcharacteralign F resetpath F setcharactercasing F resetprevdepth F setcharactercleaning F resetreference F setcharacterkerning F resetscript F setcharacterspacing F resetshownsvnonvms F setcharacterstripping F resetstructureprocessor F setclosedocumentaction F resetsubcounter F setclosepageaction F resettimer F setcolormodel F resettrackers F setcounter F resetusedsynonyms F setdataset F restartcounter F setdigitsmanipulation F restartsubcounter F setdirection F restorecounter F setdocumentargument F restorecurrentattributes F setdocumentcommandline F setdocumentctxfile F restorenote F revivefeature F setdocumentdefaultargument F romannumerals F setdocumentenvironments F rounded F setdocumentfilename F runbuffer F setdocumentfilenames F runcontextjob F setdocumentmodes F safechar F setdocumentmodules F savebuffer F seteffect F savecounter F setelementuserproperties F savecurrentattributes F setfigurelookuporder F savedlistnumber F setfigurepaths F savedlistprefixednumber F setfirstline F savedlisttitle F setfontfeature F savefloat F setfontofid F savemargindata F setfontsolution F savenote F setformat F saveobject F setformsmethod F savepagedata F sethyphenatedurlcharacters F savepageinjections F sethyphenationfeatures F saveparallel F sethyphenationmethod F savespecificfloat F setinitial F savestructureblock F setiniector F savetaggedtwopassdata F setinnerreferencemethod F savetwopassdata F setinsertionlocation F savevariable F setinterfaceconstant

F second

F selectstructureblock

F setinterfaceelement

F setinterfacemessage

F setinterfacemessages F setsectionblock F setinterfacevariable F setsectionentry F setinternalreference F setstructureblockstate F setitaliccorrection F setstructurelevel F setjavascriptpreamble F setstructurenumber F setjobcomment F setsubcounter F setlanguageexceptions F settagaspect F setlanguagesynonym F settagcombination F setlettercatcodes F settagdescription F settagdescriptionsymbol F setmarking F setmathalphabet F settagfigure F setmathalternate F settaggedmetadata F setmathattribute F settaghighlight F setmathdirection F settagitem F setmathitalics F settagitemgroup F setmathstyle F settaglist F setmpextensions F settagproperty F setnegative F settagproperty b F settagproperty\_n F setnextinternalreference F setnextreferenceorder F settagregister F setnotestate F settagsorting F setnotesymbolpage F settagsynonym F settagtablecell F setobject F settagtabulatecell F setopendocumentaction F setopenpageaction F setupbookmarks F setowncounter F setupcanvas F setownsubcounter F setupcharacterspacing F setpagecolormodel F setupexport F setpagestate F setupfontexpansion F setpagestaterealpageno F setupfontprotrusion F setpagetransition F setupidentity F setparbuilder F setupinsertion F setprofile F setupitaliccorrection F setrandomseed F setuplinenumbering F setuserinterface F setrealign F setrealspaces F setvalidinterfacekeys F setreferencearguments F setvisual F setreferenceattribute F setvisualfont F setreferenceoperation F setvisuallayer F setregionbox F setxmpfile F showassignerror F setregionboxtagged F setregistermethod F showattributes F setreplacements F showcounter

F showdebuginfo

F setscript

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F s	showdiscretionaries	F	stopstream
F s	showexperiments	F	stoptag
F	showhyphenatedinlist	F	stoptext
F s	showhyphenationtrace	F	stopviewerlayer
F s	showinjector	F	storejavascriptcode
F	showjustification	F	storejavascriptpreamble
F	showlogcategories	F	storenote
F	showmessage	F	storeregister
F	showtrackers	F	strdp
F s	sin	F	strhd
F	sind	F	strht
F	splitfilename	F	strip
F s	spotcolorname	F	structureautocatcodedget
F	spotcolorparent	F	structurecatcodedget
F s	spotcolorvalue	F	structuregivencatcodedget
F s	startactualtext	F	structurenumber
F	startchemical	F	structuretitle
F s	startcolorset	F	structureuservariable
F	startcomponent	F	structurevariable
F	startenvironment	F	strwd
F	startfontsolution	F	subcountervalue
F	startparbuilder	F	subcountervalues
F	startproduct	F	subsubcountervalues
F	startproject	F	subtractfeature
F	startregime	F	synchronizemarking
F	startsectionlevel	F	synchronizestream
F s	startstream	F	synonymmeaning
F s	starttag	F	synonymname
F s	starttag_c	F	systemlog
F s	starttag_d	F	taggedmathfunction
F s	starttag_u	F	tan
F s	starttext	F	tand
F s	startviewerlayer	F	texdefinition_one
F s	stopactualtext	F	texdefinition_two
F s	stopchemical	F	textime
F s	stopcolorset	F	thefirstcharacter
F s	stopcomponent	F	theremainingcharacters
F	stopenvironment	F	tochar
F s	stopfontsolution	F	transparencycomponents
F s	stopparbuilder	F	truefilename
F s	stopproduct	F	type
F	stopproject	F	typebuffer
F	stopregime	F	typefile

F uchar F utfmathstretch F uchexnumber F vboxlisttohbox F uchexnumbers F verbose F undefinechemical F vspacing F unicodechar F vspacingcollapse F unihex F vspacingcollapseonly F unit normal F vspacingdefine F vspacingsetamount F unit reverse F unloadlanguage F vspacingsnap F upper F way F useMPlibrary F weekday F useanvfile F weekdavname F useanyfileonce F writestatus F usecldfile F x table c F usecldfileonce F x table cleanup F usecolors F x\_table\_construct F usecomponent F x\_table\_create F useenvironment F x table finish row F usefigurebase F x table flush F usefile F x table init construct F useiavascriptpreamble F x table init reflow height F usejavascriptscripts F x\_table\_init\_reflow\_height\_option F useluafile F x\_table\_init\_reflow\_width F useluafileonce F x\_table\_init\_reflow\_width\_option E useluamodule F x table next row F usemodules F x table next row option F usepath F x\_table\_r F useproduct F x table reflow height F useproject F x table reflow width F usesubpath F x\_table\_set\_construct F usesymbols F x\_table\_set\_reflow\_height Fusetexfile F x table set reflow width F usetexfileonce F xmlafterdocumentsetup F xmlaftersetup F useurl F usexmlfile F xmlall F usexmlfileonce F xmlappenddocumentsetup F usezipfile F xmlappendsetup F utfchar F xmlapplyselectors F utfmathclass F xmlatt F utfmathcommand F xmlattdef F utfmathcommandabove F xmlattribute F utfmathcommandbelow F xmlattributedef F utfmathcommandfiller F xmlbeforedocumentsetup F utfmathfiller F xmlbeforesetup

F xmlchainatt F xmlinstalldirective F xmlchainattdef F xmllast F xmlchecknamespace F xmlload F xmlloadbuffer F xmlcommand F xmlconcat F xmlloaddata F xmlconcatrange F xmlloaddirectives F xmlcontext F xmlloadregistered F xmlcount F xmlmain F xmldelete F xmlmatch F xmldirect F xmlname F xmldirectives F xmlnamespace F xmldirectivesafter F xmlnonspace F xmldirectivesbefore F xmlpos F xmldisplayverbatim F xmlprependdocumentsetup F xmldoif F xmlprependsetup F xmldoifelse F xmlraw F xmldoifelseempty F xmlregisterns F xmldoifelseselfempty F xmlremapname F xmldoifelsetext F xmlremapnamespace F xmldoifempty F xmlremovedocumentsetup F xmldoifnot F xmlremovesetup F xmldoifnotemptv F xmlresetdocumentsetups F xmldoifnotselfempty F xmlresetinjectors F xmldoifnottext F xmlsave F xmldoifselfempty F xmlsetcommandtonone F xmldoiftext F xmlsetcommandtotext F xmlelement F xmlsetentity F xmlfilter F xmlsetfunction F xmlfilterlist F xmlsetinjectors F xmlfirst F xmlsetsetup F xmlflush F xmlsnippet F xmlflushcontext F xmlstartraw F xmlflushdocumentsetups F xmlstarttiming F xmlflushlinewise F xmlstopraw F xmlflushspacewise F xmlstoptiming F xmlfunction F xmlstrip F xmlgetindex F xmlstripanywhere F xmlinclude F xmlstripnolines F xmlincludeoptions F xmlstripped F xmlinclusion F xmlstrippednolines F xmlinclusions F xmltag F xmlindex F xmltexentity F xmlinfo F xmltext

F xmltobuffer

F xmlinlineverbatim

F xmltobufferverbose

F xmltofile

F xmltoparameters

F xmlverbatim

F xmlwithindex

F year

translations

variables

writestatus

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

data table

data table

function

### io (basic lua)

ask function bytes function characters function exists function fileseparator flush function

loadchunk function
loaddata function
loadlines function
noflines 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)

commont	function	-		_
comment datasets	table		F getcollected	
	table		getdata	
D collected			getfield	
F extend			gettobesave	a
F getdata			inlist	
F setdata			last	
D tobesaved	£		list	
disablesave	function		save	
files	table		savetagged	
D collected			tobesaved	4-11-
F context		-		table
B forcerun			b_col	
F run			b_region	
D tobesaved			С	
initialize -	function		collected	
load	function		column	
loadother	function		сору	
objects	table		depth	
D collected			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	markregionb	0X
D tobesaved		F	n	
passes	table	F	onsamepage	
F check		F	overlapping	
D collected		F	p	
F count		F	page	
F define		F	paragraph	
F find		F	parindent	
F first		F	position	
F get		F	r	

- F region
- F replace
- F rightskip
- F set
- F setall
- F setdim
- F setregionbox
- D tobesaved
- F upperleft
- F upperright
- S used
- F width
- Fx
- F xy
- Fу

# register function save function structure table

- D collected
- T components
- T tobesaved
- T branches
- S name
- S type

#### variables table

- D checksums
- D collected
- F getchecksum
- F makechecksum
- F restore
- F save
- F setchecksum
- D tobesaved

### 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)

F registerpattern

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

# layouts (context)

#### **status** table

F isleftpage

F leftorrightpagection

#### lfs (extra lua)

attributes overloaded function chdir overloaded function

currentdir function

lock function

mkdirs function

unlock function

#### libraries (context)

```
basiclua data table
basictex data table
builtin data table
extralua data table
extratex data table
functions data table
globals data table
```

#### lmx (context)

color function convert function convertfile function convertstring function einject function eprint function escape function finalized function finject function fprint function get function getvariables function htmfile function html table

F a F td

F th

include function
inherited table

S color-background-four

S color-background-one

S color-background-three

S color-background-two

S title

initialize function inject function **lmxfile** function loadedfile function make function new function overloaderror function popupfile function print function pν function report function function reset function result set function show function showdebuginfo function showerror function stripcss function
tv function
type function
urlescape function
variable function
variables table

S color-background-blue

S color-background-body

S color-background-green

S color-background-main

S color-background-purple

S color-background-yellow

S title-default

#### logs (context)

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

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

B none

transparencyvalue function
unicode function
verbose function

# lpeg (basic lua)

В	function
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 function getluaname 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	flushlinewise	function
all	function	flushsetups	function
applyfunction	function	flushspacewise	function
applyselectors	function	get id	function
att	function	get_id	function
attribute	function	getindex	function
chainattribute	function	id	function
checkindex	function	idsplitter	userdata
collected	function	include	function
command	function	inclusion	function
concat	function	inclusions	function
concatrange	function	index	function
content	function	info	function
context	function	inlineverbatim	function
convert	function	installsetup	function
count	function	last	function
delete	function	load	function
direct	function	loadbuffer	function
directives	table	loaddata	function
F after		loaded	table
F before		loadregistered	function
F handle		main	function
F load		match	function
F setup		name	function
displayverbatim	function	namespace	function
doif	function	nonspace	function
doifelse	function	pos	function
doifelseempty	function	position	function
doifelsetext	function	raw	function
doifempty	function	rawroot	function
doifnot	function	register	function
doifnotempty	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

setcommandtonone
setcommandtotext
setsetup function
snippet function
sorters table

F add F compare

F flush
F reset
F show

F sort

toparameters

toverbatim

splitid function startraw function stopraw function function store strip function stripped function tag function function text tobuffer function tofile function

function

function

## math (basic lua)

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

#### mathematics (context)

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

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

D sets

#### mbox (context)

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

## md5 (extra lua)

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

## metapost (context)

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

setoutercolor
settext function
showlog boolean
svformat function
tex table

F get F reset F set

F setfrombuffer

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

#### mime (extra lua)

```
b64
           function
           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)

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

#### F string

graphformat	function
n	function
numeric	function
pair	function
path	function
print	function
quadruple	function
quoted	function
size	function
triplet	function
tt_dimensions	function
tt initialize	function

### mplib (extra tex)

fields function
finder function
finders table

F file

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

new overloaded function

pen\_info function
preprocessed function
version function

## newtoken (basic tex)

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

### noads (context)

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

T unscript

# node (basic tex)

сору	function	F protect_glyphs	
copy_list	function	F protrusion_skippable	
count	function	F remove	
current attr	function	F set_attribute	
dimensions	function	F set_properties_mode	
direct	table	F setbox	
F copy	cabic	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

function
function

### nodes (context)

accentcodes	data table	free	function
addprofiletolist	function	free spec	function
aligned	function	getattr	function
append	function	getattribute	function
astable	function	getbox	function
basepoints	function	getchar	function
builders	table	getfield	function
F buildpage_filter	tabte	getfont	function
F vpack filter		getid	function
codes	data table	getleader	function
concat	function	getlist	function
сору	function	getnext	function
copy list	function	getprev	function
copy_cist	function	getskip	function
count	function	getsubtype	function
current attr	function	gluecodes	data table
delete	function	glyphcodes	data table
destinations	table	glyphdir_is_equal	data table
N attribute		glyphdir_is_opposite	data table
T done		glyphdir_is_orthogonal	data table
			boolean
F handler		gonuts	bootean
F handler T stack		gonuts handlers	table
	data table	•	
T stack	data table function	handlers	
T stack  dimensionfields		handlers F accessibility	
T stack  dimensionfields  dimensions	function	handlers  F accessibility  F alignbackgrounds	
T stack dimensionfields dimensions dir_is_pop	function data table	handlers F accessibility F alignbackgrounds F backgrounds	
T stack  dimensionfields  dimensions  dir_is_pop  dir_negation	function data table data table	handlers F accessibility F alignbackgrounds F backgrounds F characters	
T stack  dimensionfields  dimensions  dir_is_pop  dir_negation  disccodes	function data table data table data table	handlers F accessibility F alignbackgrounds F backgrounds F characters F checkforleaks	
T stack  dimensionfields  dimensions  dir_is_pop  dir_negation  disccodes  discretionarycodes	function data table data table data table data table	handlers F accessibility F alignbackgrounds F backgrounds F characters F checkforleaks F checkglyphs	
T stack dimensionfields dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n	function data table data table data table data table function	handlers  F accessibility F alignbackgrounds F backgrounds F characters F checkforleaks F checkglyphs F cleanupbox	
T stack dimensionfields dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n end_of_math	function data table data table data table data table function function	handlers  F accessibility  F alignbackgrounds  F backgrounds  F characters  F checkforleaks  F checkglyphs  F cleanupbox  F cleanuppage	
dimensionfields dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n end_of_math fasthpack	function data table data table data table data table function function function	handlers  F accessibility  F alignbackgrounds  F backgrounds  F characters  F checkforleaks  F checkglyphs  F cleanupbox  F cleanuppage  F export	
T stack dimensionfields dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n end_of_math fasthpack fencecodes	function data table data table data table data table function function function data table	handlers  F accessibility F alignbackgrounds F backgrounds F characters F checkforleaks F checkglyphs F cleanupbox F cleanuppage F export F finalize	
dimensionfields dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n end_of_math fasthpack fencecodes fields	function data table data table data table data table function function function data table function	handlers  F accessibility F alignbackgrounds F backgrounds F characters F checkforleaks F checkglyphs F cleanupbox F cleanuppage F export F finalize F migrate	
dimensionfields dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n end_of_math fasthpack fencecodes fields fillcodes	function data table data table data table data table function function function data table function	handlers  F accessibility F alignbackgrounds F backgrounds F characters F checkforleaks F checkglyphs F cleanupbox F cleanuppage F export F finalize F migrate F protectglyphs	
dimensionfields dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n end_of_math fasthpack fencecodes fields fillcodes first_character	function data table data table data table data table function function function data table function	handlers  F accessibility F alignbackgrounds F backgrounds F characters F checkforleaks F checkglyphs F cleanupbox F cleanuppage F export F finalize F migrate F protectglyphs F stripping	
dimensionfields dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n end_of_math fasthpack fencecodes fields fillcodes first_character first_glyph	function data table data table data table data table function function function data table function data table function data toto function function function function function function function	handlers  F accessibility F alignbackgrounds F backgrounds F characters F checkforleaks F checkglyphs F cleanupbox F cleanuppage F export F finalize F migrate F protectglyphs F stripping F unprotectglyphs has_attribute has_field	table  function function
dimensionfields dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n end_of_math fasthpack fencecodes fields fillcodes first_character first_glyph firstcharinbox firstglyph	function data table data table data table data table data table function function data table function data table function data tole function function function function function function function function	handlers  F accessibility F alignbackgrounds F backgrounds F characters F checkforleaks F checkglyphs F cleanupbox F cleanuppage F export F finalize F migrate F protectglyphs F stripping F unprotectglyphs has_attribute has_field has_glyph	table  function function function
dimensionfields dimensions dir_is_pop dir_negation disccodes discretionarycodes do_ligature_n end_of_math fasthpack fencecodes fields fillcodes first_character first_glyph firstcharacter firstcharinbox	function data table data table data table data table function function function data table function data table function data toto function function function function function function function	handlers  F accessibility F alignbackgrounds F backgrounds F characters F checkforleaks F checkglyphs F cleanupbox F cleanuppage F export F finalize F migrate F protectglyphs F stripping F unprotectglyphs has_attribute has_field	table  function function

<pre>ignorablefields injections  F copy F getligaindex F handler F installnewkern F keepcounts F reset F resetcounts F setcursive F setkern F setligaindex F setmark</pre>	data table table	list listablefields listcodes listtoutf load locate margincodes markers     F get mathcodes maxboxwidth mlist_to_hlist new
F setpair	function	noadcodes nodecodes
insert_after	function	
insert_before insert_list_after	function	nopts 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 copy_properties
is_nut	function	F count
is rotated	data table	F current_attr
kerncodes	data table	F delete
kerning	function	F dimensions
keys	table	F do_ligature_n
T whatsit	tabte	F end_of_math
last node	function	F fasthpack
leftmarginwidth	function	F first_glyph
ligaturing	function	F firstcharacter
lines	table	F firstcharinbox
T boxed		F firstglyph
F register		F flush_list
F setup		- F flush_node
F stage one		F free
F stage_two		F getattr
F stage_zero		F getattribute
D data		F getbox
F finalize		F getchar
F number		F getfield
N scratchbox		F getfont
link	function	F getid
linked	function	F getleader

function
data table
data table
function
function
function
data table
table

data table function function function data table data table function table

F pdfannotation F aetlist F getnext F pdfdestination F getprev F pdfdirect F pdfliteral F getprop F getskip F pdfrestore F pdfsave F getsubtype F has\_attribute F pdfsetmatrix F has field F penalty F has glyph F register F rightmarginkern F hpack 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 temp F is\_node F is\_nut F textdir F usage F kerning T userids F last node F leftmarginwidth N margins.inline F ligaturing N property F link N splitters.one F linked N splitters.two F locate F userlist F mlist to hlist F usernumber F nestedtracedslide F userstring F new F usertokens F vlist T pool F baselineskip F zeroglue F cleanup F prepend F disc F protect\_glyphs F fontkern F protrusion skippable F glue F reference F remove F gluespec 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 setprop

F noad

F setunsetattributes		T namespace	
F slide		N attribute	
F somepenalty		D data	
F somespace		F enable	
F tail		F handler	
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		F usernumber	
F usedlist		prepend 	function
F vianodes		print	function
F vianuts		processors	table
F vpack		B enabled	
F writable_spec		F hpack_filter	
F write	function	F post_linebreak_filter	
packlist	data table	F pre_linebreak_filter	
pardir_is_equal		F tracer	function
<pre>pardir_is_opposite pardir_is_parallel</pre>	data table	processwords	function table
partextdir is equal	data table data table	properties	table
penaltycodes	data table	T actions F delayed	
plugindata	table		
F finalizer	cance	F fdelayed F immediate	
F initializer		F attach	
S name		T data	
3 Hallic		i uata	

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

F getparameters

tonodes

function

tonut	function	F start	
topicas	function	F stop	
topoints	function	F stop	
toscaledpoints	function	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		whatsitters	table
F features		T getters	
F font		T dimensions	
F glyphs		T width	
F message		T setters	
F messages		T dimensions	
F nofsteps		T width	
F register		writable_spec	function
F reset		write	function

#### number (context)

function basepoints function bit function bits function clearbit function dimenfactors data 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 function clock converttime function date function difftime function data table env overloaded function exec execute overloaded function exit function fulltime function overloaded function aetenv gettimeofday function isleapyear function launch function libsuffix strina localtime function name string nofdays function function now strina platform overloaded function remove overloaded function rename resolvers table F bits resultof function runtime function selfdir string seteny overloaded function setlocale overloaded function function sleep spawn overloaded function time function times function timezone function tmpdir function function tmpname today function

string

type

uname
uuid function
validdate function
weekday function
where function
which function

# package (basic lua)

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

### pagebuilders (context)

#### injections table

- F flushafter
- F flushbefore
- F save

#### mixedcolumns table

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

#### pdf (basic tex)

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

overloaded function

settrailer

# pdfscanner (context)

scan function

# physics (context)

units table

F registerunit

D tables

#### profiler (extra lua)

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

#### publications (context)

S editor

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

S subtitle

S title		endnotes_to_btx	function
S year		enhancer	table
T optional		S arguments	
T required		T askip	
T sets		B dirty	
T author		T gskip	
T virtual		T kind	
T demo-b		T list	
S category		T system	
T extra		T order	
T fields		enhancers	table
S author		F details	
S institutio	on	F order	
S organizati	ion	F suffixes	
S subtitle		finder	function
S title		firstofrange	function
S year		found	function
T optional		get	function
T required		getcasted	function
T sets		getdetail	function
T authors		getdirect	function
T virtual		getfaster	function
S comment		getfield	function
S copyright		getfuzzy	function
T fields		getindex	function
S name		inspectors	data table
T types		journals	table
S author		F abbreviated	
S editor		F add	
S keywords		F expanded	
S number		F load	
S page		F save	
S pages		lastofrange	function
S volume		lists	table
S version		F collectentries	
D virtual		F fetchentries	
T virtualfields		F filterall	
B authornum		F flushentry	
B authoryear		T methods	
B authoryears		F dataset	
B num		F force	
B suffix		F global	
datasets	table	F local	
detailed	table	F nofregistered	

F prepareentries		T sequence	
F register		specifications	table
F sameasprevious		T default	
T sorters		S author	
F dataset		S comment	
F default		S copyright	
F reference		S name	
F short		S version	
F uservariable		D virtual	
listvariants	table	splitauthor	function
F bib		splitoneauthor	function
F default		statistics	table
F num		N nofbytes	
F page		N nofdatasets	
F short		N nofdefinitions	
F yes		N nofshortcuts	
load	function	tables	table
loadbibdata	function	D implicits	
loaddefinitionfile	function	D origins	
loaders	table	D privates	
F bbl		D sets	
F bib		D specials	
F buffer		D types	
F endnote		D virtuals	
F lua		tags	function
F refman		tracers	table
F registercleaner		F showdatasetauthors	
F xml		F showdatasetcompletene	SS
loadreplacementfile	function	F showdatasetfields	
new	function	F showentry	
okay	function	F showfields	
oneorrange	function	F showtables	
parenttag	function	F showvariants	
permitted	function	typesetters	table
refman_to_btx	function	F author	
resolvedname	function	F string	
save	function	usedataset	function
search	function	usedentries	function
setcategory	function	writers	table
setspecification	function	F author	
singularorplural	function	F keyword	
sortedentries	function	F pagenumber	
sortmethods	table	F range	

T authoryear

#### regimes (context)

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

### resolvers (context)

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

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

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

### sandbox (context)

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

#### scripts (context)

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 allow S message-id S alternate-recipient S mime-version S original-envelope-id S arrival-date S authorization S original-recipient S bcc S pragma S cache-control S proxy-authenticate 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 storedfunctions data table strip boolean tofmodules number toftables number

### streams (context)

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

# string (basic lua)

autodouble	function
autosingle	function
booleanstring	function
byte	function
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
toHEX	function
toboolean	function
tobytes	function
tocontext	function
todec	function
todimen	function
tohex	function
tonodes	function
topattern	function
totable	function
toutf	function
tracedchar	function
tracedchars	table
unquote	function
unquoted	function
upper	function
utfcharacters	function
utfvalues	function
valid	function

### structures (context)

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

F define		F savedlistprefixednumber	
F getdata		F savedlisttitle	
F getlocation		D sectionblocks	
F getname		F sectionnumber	
F getnumber		F size	
F setlocation		F title	
F setup		D tobesaved	
D stored		F userdata	
itemgroups	table	F uservalue	
lists	table	marks tabl	۵
F addto	table	D data	
F analyze		F define	
B autoreorder		F exists	
D cached		F fetch	
D cached D collected		F fetchallmarks	
F discard		F fetched F fetchonemark	
F enhance		F fetchtwomarks	
T enhancers			
F filter		F get	
F formulanumber		F number	
F getresult		F relate	
F groupindex		F reset	
F hasnumberdata		F set	
F haspagedata		F show	
F hastitledata		F synchronize	
F iscached		F title	
D kinds		T tracers	
F label		F showtable	
			_
F location		notes tabl	е
D names		notes tabl	е
D names F number		<pre>notes tabl   F checkpagechange   F define</pre>	е
D names F number D ordered		notes tabl  F checkpagechange F define F doifonsamepageasprevious	е
D names F number D ordered F page		notes tabl  F checkpagechange F define F doifonsamepageasprevious F get	е
D names F number D ordered F page F popnesting		<pre>notes tabl   F checkpagechange   F define   F doifonsamepageasprevious   F get   F getdeltapage</pre>	е
D names F number D ordered F page F popnesting F prefix		<pre>notes tabl    F checkpagechange    F define    F doifonsamepageasprevious    F get    F getdeltapage    F getn</pre>	е
D names F number D ordered F page F popnesting F prefix F prefixednumber		<pre>notes tabl   F checkpagechange   F define   F doifonsamepageasprevious   F get   F getdeltapage</pre>	е
D names F number D ordered F page F popnesting F prefix F prefixednumber F prefixedpage		<pre>notes tabl  F checkpagechange F define F doifonsamepageasprevious F get F getdeltapage F getn F getnumberpage F getstate</pre>	e
D names F number D ordered F page F popnesting F prefix F prefixednumber F prefixedpage F process		<pre>notes tabl  F checkpagechange F define F doifonsamepageasprevious F get F getdeltapage F getn F getnumberpage F getstate F getsymbolpage</pre>	е
D names F number D ordered F page F popnesting F prefix F prefixednumber F prefixedpage F process D pushed		<pre>notes tabl    F checkpagechange    F define    F doifonsamepageasprevious    F get    F getdeltapage    F getn    F getnumberpage    F getsymbolpage    F hascontent</pre>	е
D names F number D ordered F page F popnesting F prefix F prefixednumber F prefixedpage F process D pushed F pushnesting		notes tabl  F checkpagechange F define F doifonsamepageasprevious F get F getdeltapage F getn F getnumberpage F getstate F getsymbolpage F hascontent F internal	e
D names F number D ordered F page F popnesting F prefix F prefixednumber F prefixedpage F process D pushed F pushnesting F realpage		r checkpagechange F define F doifonsamepageasprevious F get F getdeltapage F getn F getnumberpage F getstate F getsymbolpage F hascontent F internal F internalid	e
D names F number D ordered F page F popnesting F prefix F prefixednumber F prefixedpage F process D pushed F pushnesting		r checkpagechange F define F doifonsamepageasprevious F get F getdeltapage F getnumberpage F getstate F getsymbolpage F hascontent F internal F internalid F listindex	e
D names F number D ordered F page F popnesting F prefix F prefixednumber F prefixedpage F process D pushed F pushnesting F realpage		r checkpagechange F define F doifonsamepageasprevious F get F getdeltapage F getn F getnumberpage F getstate F getsymbolpage F hascontent F internal F internalid	e

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

F setreferencerealpage			setmethod	
D specials			sort	
F splitcomponent			store	
F splitprefix		D	tobesaved	
F splitreference		F	unique	
F synchronizepage			userdata	
T testrunners		sect	ions	table
F inner		F	autodepth	
F special		F	cct	
F special operation		D	collected	
F special operation with	arguments	F	current	
T testspecials		F	currentblock	
F deltapage		F	currentid	
Fi		F	currentlevel	
F internal		F	currentsectionindex	
F page		F	depthnumber	
F realpage		F	finddata	
F section		F	findnumber	
F userpage		F	fullnumber	
D tobereferred		F	getcurrentlevel	
D tobesaved		F	getlevel	
D tracedpages		F	getnumber	
T urls		F	internalreference	
T data		D	levelmap	
F define		D	levels	
F found		F	load	
F get		F	matchingtilldepth	
D usedinternals		F	numberatdepth	
D usedviews		F	numbers	
F valid		F	popblock	
registers t	able	F	prefixedconverted	
F analyze		F	pushblock	
D collected		F	register	
F compare		D	registered	
F define		F	reportstructure	
F enhance		F	save	
F extend		Т	sectionblockdata	
F filter			T bodypart	
F filtercollected			S bookmark	
F finalize		F	set	
F flush		F	setblock	
F get		F	setchecker	
F prepare		F	setentry	
F process		F	setlevel	

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

F last

#### table (basic lua)

allkeys	function	sequenced
append	function	serialize
are_equal	function	setmetata
autokey	function	setmetata
compact	function	setmetata
concat	function	setmetata
contains	function	sort
сору	function	sorted
count	function	sortedhas
derive	function	sortedhas
deserialize	function	sortedhas
drop	function	sortedind
fastcopy	function	sortedkey
fastserialize	function	sortedpai
filtered	function	sparse
flattened	function	strip
foreach	function	sub
foreachi	function	swapped
fromhash	function	tocontext
getmetatablekey	function	tocsv
getn	function	tofile
has_one_entry	function	tohandle
identical	function	tohash
imerge	function	toxml
imerged	function	twowaymap
insert	function	unique
is_empty	function	unnest
keys	function	unpack
load	function	values
loweredkeys	function	
maxn	function	
merge	function	
merged	function	
mirrored	function	
pack	function	
prepend	function	
print	function	
remove	function	
reverse	function	
reversed	function	
save	function	

function d function ablecall function ableindex function ablekey function ablenewindex function function function sh function function shkeys shonly function dexonly function function ys function irs function function function function t function function function function function function function pper function function function function

# tex (basic tex)

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

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

#### texconfig (basic tex)

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

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

### tokens (context)

astable	function		-	ters	table
bgroup	userdata			box	
bits	table			count	
N active				dimen	
N alignmen				token	
N begingro			hbo		userdata
N characte	er			oken	function
N close			let <sup>.</sup>		function
N comment				ters	function
N endgroup			oth		function
N endoflin	ie		pic!	· .	function
N escape			•	ntlist	function
N ignore				nners	table
N invalid				boolean	
N letter				code	
N mathshif	t			conditio	nal
N open				count	
N other				dimen	
N paramete	er		F dimension		
N space				F glue	
N subscrip	ot	F integer			
N superscr	ript			keyword	
N whitespa			F	list	
collectors	table		F	lxmlid	
T data			F	number	
F defaultw	vords		F	scanclos	e
F dowithwo	ords		F	scanopen	
F flush			F	skip	
F install			F	string	
F register	-		F	token	
T register	red		F	tokens	
F show			F	toks	
F test				word	
compile	function		sca	ntable	function
converters	table		set <sup>-</sup>	ters	table
S toboolea	n		F	box	
S todimen			F	count	
S toglue			F	dimen	
S tonumber	-		F	macro	
S tostring			sho	rtcuts	table
egroup	userdata		٦	Γ bits	

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

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

F tonumber
F tostring
U vbox
U vtop
F tonumber
F tostring

vbox

vtop

#### tracers (context)

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

T context
T internals
T scratch

name function
primitive function
printerror function
showlines function
strings table

S undefined

toks function
type function

# trackers (context)

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

# typesetters (context)

alianments	+ablo	F :11h11	_	
alignments	table		F installhandler	
F handler		·	F processmath	
F set	+-61-	F set		
breakpoints	table	F setcolor		
F define		F setmath		
F handler		F tomode		
D mapping		firstlines	table	
T methods		T actions		
T numbers		F default		
F set		F line		
F setreplacemen		F word		
cases	table	F handler		
T actions		F set		
F handler		initials	table	
F register		T actions		
F set		F default		
characteralign	table	F handler		
F handler		F set		
F resetcharacte	eralign	injectors	table	
F setcharactera	align	F check		
characters	table	T list		
F handler		F mark		
F replacenbsp		F reset		
F replacenbspac	ces	F set		
checkers	table	F show		
F handler		italics	table	
F reset		F forcevariant		
F set		F handler		
cleaners	table	F reset		
F handler		F set		
F set		kerns	table	
digits	table	D factors		
T actions		F handler		
F handler		F keepligature		
F set		B keeptogether		
directions	table	D mapping		
F getfences		F set		
F getglobal		manipulators	table	
F getmethod		F apply		
F handler		F applyspecific	ation	
T handlers		T methods	-	

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

F set
F setup
wrappers

F handler **xtables** 

F cleanup

table

table

F construct
F create
F finish\_row
F flush
F initialize\_construct
F initialize\_reflow\_height
F initialize\_reflow\_width
F next\_row
F reflow\_height
F reflow\_width
F set\_construct
F set reflow height

F set\_reflow\_width

### unicode (extra lua)

ascii	table	F	len
F byte			lower
F char			match
F dump			rep
F find			reverse
F forma	t	F	sub
F gfind		F	upper
F gmato	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 gmatc	h		lower
F gsub			magic
F len			match
F lower			remapper
F match			rep
F rep			replacer
F rever	se		reverse
F sub			split
F upper <b>latin1</b>	table		splitlines sub
F byte	table		subtituter
F char			tocodes
F dump			toeight
F find			toentities
F forma	+		tostring
F gfind			totable
F gmato			upper
F gsub			ustring
3,		·	3

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

# url (context)

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

# utilities (context)

debugger	table	N	version	
F disable		pars	ers	table
F enable		F	add_settings_to_a	rray
F savestats		F	arguments_to_table	e
F showstats		F	array_to_string	
F showtraceback		F	csvsplitter	
formatters	table	F	getparameters	
F formatcolumns		F	groupedsplitat	
F list		F	hash_to_string	
F stripzeros		F	iterator	
garbagecollector	table	F	keq_to_hash	
F check		F	listitem	
N criterium		F	make_settings_to_	hash_pattern
B enabled		F	mergehashes	
lua	table	F	options_to_array	
B alwaysstripcode		F	options_to_hash	
F compile		Т	patterns	
F loadedluacode			U settings_to_arra	ay
F loadstripped			U settings_to_hash	n_a
N nofstrippedbytes			U settings_to_hash	n_b
N nofstrippedchunks			U settings_to_hash	n_c
B stripcode			U unittotex	
T strippedchunks		F	process_stripped_	settings
F strippedloadstrin	g	F	rfc4180splitter	
T suffixes		F	runtime	
S lua		F	settings_to_array	
S luc		F	settings_to_array	_with_repeat
S lui		F	settings_to_hash	
S luj		F	settings_to_hash_	strict
S luv		F	settings_to_hash_	tolerant
S tma		F	settings_to_set	
S tmc		F	simple_hash_to_st	ring
S tua		F	splitmethod	
S tuc		F	splitthousands	
packers	table	F	stepper	
F hashed		F	stripped_settings	_to_array
F new		F	unittotex	
F pack		F	unittoxml	
F simplehashed		repo	rt	function
F strip		sequ	encers	table
F unpack		F	appendaction	

F appendgroup 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 tostrina table setters F disable F enable F initialize F list F new F register F report F reset F show table stacker F new storage table F allocate F checked F mark F marked F setinitializer F sparse table strings 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
getspecification	function	
getvisualizer	func	tion
load	func	tion
makenested	func	tion
makepattern	func	tion
newgrammar	func	tion
newhandler	func	tion
parsedxml	func	tion
pattern	func	tion
register	function	
registerescapecommand	func	tion
registerescapeline	function	
registerescapepattern	function	
signal	string	
signalpattern	user	data
specifications	data	table
visualize	func	tion
visualizebuffer	func	tion
visualizefile	func	tion
visualizestring	func	tion
write	func	tion
writeargument	func	tion
writedefault	func	tion
writeemptyline	func	tion
writenewline	func	tion
writespace	func	tion

### xml (context)

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

F	chainattribute	F reverse	
F	command	F table	
F	concat	F tag	
F	concatrange	F tags	
F	context	F text	
F	count	F texts	
F	ctxtext	F upperall	
F	default	first	function
F	first	found	function
F	function	functions	table
F	index	getbuffer	function
F	last	gethandlers	function
F	lettered	gethandlersfunction	function
F	lower	helpers	table
F	lowerall	F recursetext	
F	match	include	function
F	name	inclusion	function
F	position	inclusions	function
F	reverse	index	function
F	stripped	inheritedconvert	function
F	tag	inject	function
F	tags	<pre>inject_element</pre>	<del>function</del>
F	text	<pre>inject_element_after</pre>	<del>function</del>
F	upper	<pre>inject_element_before</pre>	function
F	upperall	injectafter	function
T x	ml	injectbefore	function
F	all	insert	function
F	att	insert_element	function
F	attribute	<pre>insert_element_after</pre>	<b>function</b>
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

Т

match	function	S
name	function	S
newhandlers	function	S
nodesettostring	function	S
originalload	function	S
package	function	S
parent	function	S
parsedentitylpeg	userdata	S
pihandlers	table	<del>S'</del>
F injector		S
placeholders	table	S
F unknown_any_entity		t
F unknown_dec_entity		t
F unknown_hex_entity		t
position	function	t
privatecodes	table	t
privatetoken	function	t
process	function	t
<pre>process_attributes</pre>	function	t
process_elements	<del>function</del>	t
processattributes	function	t
profiled	table	t
raw	function	u
registerentity	function	u
registerns	function	W
reindex	function	W
remap_name	function	W
remap_namespace	<del>function</del>	X
remap_tag	function	
remapname	function	
remapnamespace	function	
remaptag	function	
renamespace	function	
replace	function	
replace_element	function	
resetinjectors	function	
resolvens	function	
root	function function	
save		
selection	function	
separate	function	
serialize	function	
setcdata	function	
setcomment	function	

sethandlersfunction function setinjectors function setproperty function settings function specialhandler table print function string function function strip strip whitespace **function** stripelement function stripleadingspaces function table function text function textonly function texttocdata function tocdata function toelement function tostring function totable function toxml function torint function traverse function function unescaped function unprivatized vithelement function withelements function function wrap **xmlns** table

### zip (extra lua)

archivestableclosefunctionclosearchivefunction

openarchive function
openfile function
registeredfiles table
type function

#### zlib (extra lua)

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