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	<b>ipai</b> rs	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

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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

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## attributes (context)

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F enable		F pgfxcol	torspec
F handler		F popset	a calla recomponents
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F register		F pushset	
D registered colors	table	F registe	
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F cmyktogray		F rgbtoc	
F cmyktorgb		F rgbtogi	-
F colorcomponent	ts	F rgbtohs	
B couple		N selecto	
D data		F setlist	
N default		F setmode	
F defineintermed		. 3	ecolormodel
F definemultitor		D sets	
F defineprocesso		F spec	
F definesimpleg		F spot	
F definespotcolo		F spotcol	
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F enable		F spotco	
F filter		B support	
F forcedmodel			arencycomponents
F forcesupport		B trigge	-
F formatcolor		F usecolo	ors
F formatgray		F value	
F getpagecolormo	odel	D values	
F gray		B weight	
F graytohsv		define	function
F handler		effects	table
F hsvtogray		N attribu	ıte
F hsvtorgb		D data	
F iccprofile		F enable	
F isblack		F handle	r
N main		F registe	er
S model		D registe	ered
D models		D values	
F mpcolor		handlers	table
F mpnamedcolor		list	data table

data table names table negatives 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 function save showcurrent function table states F disabletriggering F enabletriggering F finalize F initialize F process F selective F stacked F stacker system function 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 F hyphenation F kernina F ligaturing F mlist\_to\_hlist T originals F hyphenate F kerning F ligaturing paragraphs table T constructors N attribute F define F disable F enable F handler T methods F basic F default F oneline D names D numbers F set F start F stop T expansion F trace F keeptogether F registertogether T solutions T splitters F define F optimize T registered F reset F set F split F start F stop F tag

vspacing

table

F analyze D categories F collapsevbox T data D map D skip D snapmethods F definesnapmethod B fixed F pagehandler F resetprevdepth F setmap F setskip F snapbox F tocategories F tocategory F vboxhandler

#### caches (context)

ask	boolean
base	string
collapsecontent	function
configfiles	function
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)

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blockrange	function	N e N f
blocks	data table	
	table	Ng
casemap categories	data table	N h N i
	function	
category categorytags	data table	N j N k
collapsed	data table	
combined	data table	N l N m
contextname	function	
csletters	table	
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N O		ΝÀ
N P		ΝÁ
N Q		ΝÂ
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N S		ΝÄ
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N U		N Æ
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NY		ΝÊ
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N	fromnumber	function
N	fschars	data table
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N	getrange	function
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N	initialize	function
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N	lcchars	data table
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S cr		showstring	function
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S op		tonumber	function
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S sa		unicodechar	function
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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		

function

function

function

data table

setlettercatcodes

shape shaped

shash

## 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	
Alphabeti	ic	function	month	
Character	٢	function	nicenumber	
Character	rs	function	nofdays	
Character	rs:es	function	number	
I		function	numbers	
KA		function	octnumber	
KR		function	octstringtonumber	
R		function	ordinal	
RK		function	r	
Romannume	erals	function	rawcharacter	
Sloviannu	umerals	function	romannumerals	
Spanishnu	umerals	function	second	
Word		function	sequences	
Words		function	sloviannumerals	
a		function	spanishnumerals	
abjadnodo	otnumerals	function	textime	
abjadnume	erals	function	toabjad	
alphabeti	ic	function	tochinese	
characte	٢	function	toroman	
characte	^s	function	uchexnumber	
characte	rs:es	function	uchexnumbers	
chineseal	llnumerals	function	upper	
chineseca	apnumerals	function	verbose	
chinesenu	umerals	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		
hexstring	gtonumber	function		
hour		function		
i		function		
isleapyea	ar	function		
lchexnumb	per	function		
lchexnumb	pers	function		
leapyear		function		
lower		function		

function function function function function function function function function function function function 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)

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

# dir (context)

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

## directives (context)

data data table default function disable function done table enable function function list 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 string ownname 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

F boxes
F check
F checksize
F clone
F copy
F immediatewrite
F keys
F new

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

table

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

used

F totable

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

## file (basic lua)

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

## floats (context)

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

#### font (basic tex)

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

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

#### fontloader (extra tex)

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

to\_table function
totable function

## fonts (context)

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

S width S autoitalicamount T parameters T cidinfo S ascender S embedding S descender S encodingbytes S designsize S filename S finalized T expansion S auto S fontname S shrink S format S fullname S step S stretch S hasitalics S extendfactor S hasmath S factor S mathitalics S hfactor S mode S mathsize S name T protrusion S noglyphnames S auto S nostackmath S guad S psname S scaledpoints S textitalics S virtualized S scriptpercentage D loadedfonts S scriptscriptpercentage S size S namemode S slantfactor F newfeatures S slantperpoint F newhandler T spacing N noffontsloaded S extra N nofsharedfonts S shrink N nofsharedhashes S stretch N nofsharedvectors S width N privateoffset T synonyms F readanddefine S em F registerfeature S ex B resolvevirtualtoo S extra space F scale S extraspace F scaled S slant F setfactor F setname S space S space\_shrink B sharefonts S space\_stretch F trytosharefont N version S spaceshrink current function S spacestretch currentid function S x height S units definers table S vfactor F addlookup S xheight F analyze T properties F applypostprocessors

F checkedmode N Escvrillic F checkedscript N Fitacyrillic F current N Gcedilla S defaultlookup N Gdot F define N Gecyrillic F getspecification N Gheupturncyrillic F internal N Gjecyrillic F loadfont N Hardsigncyrillic F makespecification N IAcyrillic T methods N IUcyrillic F install N Icvrillic 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 Kacyrillic F file N Kcedilla F name N Khacvrillic F spec N Kjecyrillic definetypeface function N Lcedilla encodings table N Ljecyrillic T agl N Ncedilla 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 Ercyrillic N Yatcyrillic N Ereversedcyrillic N Yericyrillic

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	dalethiriq	N	gcedilla
N	dalethiriqhebrew	N	gdot
N	daletholam	N	gimel
N	daletholamhebrew	N	gimeldagesh
N	daletpatah	N	gravecmb

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 hamzalowarabic N integraltop N hamzalowkasraarabic N kaf N hamzalowkasratanarabic N kafdagesh N hatafpatah N kashidaautoarabic N hatafpatah16 N kashidaautonosidebearingarabic N hatafpatah23 N kcedilla N hatafpatah2f N lamed N hatafpatahhebrew N lameddagesh N hatafpatahnarrowhebrew N lamedhebrew N hatafpatahquarterhebrew N lamedholam N hatafgamats N lamedholamdagesh N hatafqamats1b N lamedholamdageshhebrew N hatafqamats28 N laminitialarabic N hatafgamats34 N lammeemjeeminitialarabic N hatafgamatshebrew N lcedilla N hatafqamatsnarrowhebrew N logicalnotreversed N hatafqamatsquarterhebrew N mahapakhhebrew N hatafsegol N mem N hatafsegol17 N memdagesh N hatafsegol24 N merkhahebrew N merkhakefulahebrew N hatafsegol30 N hatafsegolhebrew N middot N hatafsegolnarrowhebrew N munahhebrew N hatafsegolguarterhebrew N nbspace N he N ncedilla N hedagesh N newshegelsign N hehfinalalttwoarabic N ninearabic N noonhehinitialarabic N het N hiriq N nun N hiriq14 N nundagesh N hirig21 N odblacute N hiriq2d N onearabic N hirighebrew N overscore N hirignarrowhebrew N patah N hiriqquarterhebrew N patah11 N holam N patahld N holam19 N patah2a N holam26 N patahhebrew

N patahnarrowhebrew N aubuts31 N patahquarterhebrew N gubutshebrew N gubutsnarrowhebrew N pe N pedagesh N qubutsquarterhebrew N gamats N quoteleftreversed N gamats10 N rafe N gamatsla N rcedilla N reharabic N gamats1c N gamats27 N resh N reshhatafpatah N gamats29 N gamats33 N reshhatafpatahhebrew N gamatsde N reshhatafsegol N gamatshebrew N reshhatafsegolhebrew N gamatsnarrowhebrew N reshhebrew N gamatsgatanhebrew N reshhiriq N qamatsqatannarrowhebrew N reshhirighebrew N qamatsqatanquarterhebrew N reshholam N reshholamhebrew N gamatsgatanwidehebrew N gamatsquarterhebrew N reshpatah N qof N reshpatahhebrew N qofdagesh N reshaamats N qofhatafpatah N reshgamatshebrew N qofhatafpatahhebrew N reshqubuts N gofhatafsegol N reshqubutshebrew N qofhatafsegolhebrew N reshseaol N qofhebrew N reshsegolhebrew N qofhiriq N reshsheva N qofhiriqhebrew N reshshevahebrew N reshtsere N qofholam N gofholamhebrew N reviahebrew N gofpatah N samekh N qofpatahhebrew N samekhdagesh N qofqamats N segol N gofgamatshebrew N segol13 N gofgubuts N segol1f N qofqubutshebrew N segol2c N gofsegol N segolhebrew N qofsegolhebrew N segolnarrowhebrew N qofsheva N segolquarterhebrew N qofshevahebrew N sevenarabic N goftsere N sfthyphen N shaddaarabic N qubuts N qubuts18 N sheqel N gubuts25 N sheva

N	sheval15	N yoddages	sh
N	sheva15	N zayin	
N	sheva22	N zayindag	gesh
N	sheva2e	N zdot	
N	shevahebrew	N zeroarab	oic
N	shevanarrowhebrew	D unicodes	
N	shevaquarterhebrew	D cache	
N	shin	F is_known	
N	shindagesh	D known	
N	shindageshshindot	F load	
N	shindageshsindot	F make_unicod	e_vector
N	shinshindot	D math	
N	shinsindot	N version	
N	siluqhebrew	expansions	data table
N	sixarabic	formats	data table
N	tav	goodies	table
N	tavdages	D colorscheme	S
N	tavdagesh	D data	
N	tcedilla	D designsizes	
N	tchehinitialarabic	D filenames	
N	tet	F getcomposit	ions
N	tetdagesh	T list	
N	tevirhebrew	F compositi	ons
N	thousandsseparatorarabic	F designsiz	es
N	threearabic	F expansion	s
N	tildecmb	F featurese	t
N	tipehahebrew	F filenames	
N	tsadi	F files	
N	tsadidagesh	F mathemati	cs
N	tsere	F protrusio	ns
N	tsere12	F solutions	
N	tserele	F treatment	s
N	tsere2b	F typefaces	
N	tserehebrew	F load	
N	tserenarrowhebrew	F prepare_fea	tures
N	tserequarterhebrew	F register	
N	twoarabic	F registerpos	tprocessor
N	udblacute	F report	
N	vav	handlers	table
N	vavdagesh	T afm	
N	vavdagesh65	B addkerns	
N	vavholam	B addligatu	res
N	yerahbenyomohebrew	B addtexlig	atures
	yod	B autoprefi	
		•	

D cache	F gsub_ligature
D features	F gsub_multiple
T helpdata	F gsub_reversecontextchain
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
T 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
F gpos_context	D csnames
F gpos_contextchain	D descriptions
F gpos_cursive	D dynamics
F gpos_mark2base	D emwidths
F gpos_mark2ligature	D exheights
F gpos_mark2mark	D extensibles
F gpos_pair	D features
F gpos_single	D identifiers
F gsub_alternate	D italics
F gsub_context	D lastmathids
F gsub_contextchain	D marks

Т

D modes		F loadlumtable	
D original	S	F makenameparser	
D paramete	rs	D overloads	
T processe	S	F reset	
D properti	es	F tounicode	
D quads		F tounicode16	
D resource	S	F tounicode16seq	luence
T setdynam	ics	mp	table
D spaces		D cache	
D spacings		B inline	
D unicodes		N version	
D xheights		names	data table
helpers	table	nulldata	data table
F addpriva	te	protrusions	data table
F dimenfac	tor	readers	table
F expandgl	yph	F afm	
F fontpatt	ernhassize	F check_lua	
F getdigit	width	F check_tfm	
F getparam	eters	F dfont	
F getpriva	tenode	F lua	
F haspriva	te	F opentype	
F indextos	lot	F otf	
F name		F pfb	
F nametosl	ot	D sequence	
F setdigit	width	F tfm	
F splitfon	tpattern	F ttc	
F tochar		F ttf	
iterators	table	select	table
F characte	rs	T data	
F descript	ions	F define	
F glyphs		F definetypeface	!
loggers	table	T fallbacks	
F add_plac	eholders	F filterinput	
D category	_to_placeholder	T methods	
F format		F default	
F onetimem	essage	F features	
F register		F file	
F reportde	finedfonts	F goodies	
F reportus	edfeatures	F name	
mappings	table	F selectfont	
F addtouni	code	F simplefonts	
F fromunic	ode16	F spec	
F loadfile		F style	
F loadline		F registerfallba	ick

#### F searchfiles

#### specifiers table

D contextmerged

F contextnumber

D contextnumbers

D contextsetups

F contexttostring

F definecontext

F mergecontext

F presetcontext

F registercontext

F showcontext

F splitcontext

D synonyms

D variants

#### symbols

table

F uselibrary

tables

table

tracers

table

treatments

table

F applyfixes

D data

S filename

F ignoredfile

F report

F trace

typefaces

data table

# functions (context)

**dummy** function

### graphics (context)

#### backgrounds table

F calculatemultipar

F fetchmultipar

F pair

F path

F point

### gzip (extra lua)

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

## img (basic tex)

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

#### interactions (context)

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

## interfaces (context)

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

F btxaddjournal F btxtoregister F btxauthor F btxusedataset F btxauthorfield F btxuservariable F btxcollectlistentries F buildtextaccent F btxcurrentfirstnames F character F btxcurrentinitials F characters F btxcurrentjuniors F chardescription F checkcountersetun F htxcurrentsurnames F htxcurrentyons F checkedconversion F htydetail F checkedpagefloat F btxdirect F checkiniector F btxdoif F checknextiniector F btxdoifelse F checkpreviousinjector F btxdoifelsesameasprevious F checktwopassdata F btxdoifelseuservariable F chemicalcomponent F btxdoifnot F chinesenumerals F btxexpandedjournal F cleanfontname F btxfetchlistentries F cleanupbox F btxfield F cleanuplayers F btxfieldname F clonefield F btxfieldtvpe F collectfloat F btxfirstofrange F collecthelp F btxflush F colorcomponents F btxflushlistentry F concatcommalist F btxflushmarked F consultfloat F btxflushpages F convertbtxdatasettoxml F btxfoundname F convertmpstopdf F btxfoundtype F copyposition F btxhandlecite F cos F btxhandlenocite F cosd F btxlastofrange F countervalue F htxlistvariant F counttwopassdata F btxloaddefinitionfile F currentcomponent F btxloadjournallist F currentdate F btxloadreplacementfile F currentdesignsize F btxoneorrange F currentenvironment F btxpreparelistentries F currentposthyphenchar F btxsavedataset F currentprehyphenchar F btxsavejournallist F currentproduct F btxsetdataset F currentproject F btxsetentry F currentreferenceorder F btxsetregister F currentsectiontolist F btxsetspecification F datasetvariable

F dayname

F btxsingularorplural

F decrement counter F defineshift F decrementedcounter F definesnapmethod F decrementsubcounter F definespotcolorglobal F definestructureblock F defineaccents F defineattribute F definestructureset F definebreakpoint F definetransparency F definebreakpoints F definetwopasslist F definecharacterspacing F definetypeface F definechemical F defineviewerlayer 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 disableiobsave F definefont one F disableparbuilder F definefont two F disableregime F definefontfamily F disablespellchecking F definefontfeature F disablestatetriggering F definefontsolution F disablestream F disabletrackers F definehyphenationfeatures F discardfromlist F defineinsertion E defineintermediatecolor F doanalvzeframedbox F definelabels F doifcounter F doifelseblack F definelanguage F definelinkedlist F doifelsebuffer F definemarking F doifelsecommon F definemetafont F doifelsecontinuewithfile F definemultitonecolorglobal F doifelseconverter F definenamespace F doifelsecounter F definenote E doifelsecurrentfonthasfeature F defineparallel F doifelsedrawingblack F defineparbuilder F doifelsefieldcategory F defineprocesscolordummy F doifelsefiledefined F defineprocesscolorglobal F doifelsefileexist F defineprocesscolorlocal F doifelsefirstchar F doifelsefontpresent F defineprogram F definereference F doifelseinelement F defineregister F doifelseinputfile F definerule F doifelseinset F definesectionlevels F doifelseintwopassdata

F doifelseleapyear

F defineselectfont

F doifelselisthasentry F dosetpositionwhd F doifelselisthasnumber F dostarttextfile F doifelselisthaspage F dostoptextfile F doifelselisthastitle F elapsedtime F doifelselocfile F enableasciimode F doifelsemarking F enableautofontscript F doifelsemessage F enablebackgroundalign F doifelseobjectreferencefound F enablebackgroundboxes F doifelseolderversion F enablecolor F doifelseoverlapping F enablecolorintents F doifelseparallel F enablecrlf F doifelseparentfile F enabledirectives F doifelsepathexist F enableexperiments F doifelseposition F enablefontcolorschemes F doifelsepositiononpage F enableinteraction F doifelsepositionsonsamepage F enableparbuilder F doifelsepositionsonthispage F enableregime F enablerules F doifelsepositionsused F enableshifts F doifelserangeonpage F doifelsereference F enablespellchecking F doifelsesame F enablestatetriggering F doifelsestackedfloats F enablestream F doifelseurldefined F enabletrackers F doifelseutfmathabove F enabletransparency E 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 doprocesstypescriptfile F exportreferences F doreshapeframedbox F extendregister F dosaveposition F extensiblecode F featureattribute F dosavepositionplus F dosavepositionwhd F featurelist F dosetposition F feedback F fetchallmarks F dosetpositionbox

F fetchmultipar

F fetchmultishape

F dosetpositionplus

F dosetpositionstrut

F fetchonemark F fontlookupgetkeyofindex F fetchposboxes F fontlookupinitialize F fetchtwomarks F fontlookupnoffound F figure check F forceendjob F figure done F forcequitjob F figure dummy F formatcolor F figure identify F formatoray F freezerandomseed F figure include F figure mergegoodies F from F getbidimode F figure pop F figure push F getbodyfontsizes F figure reset F getbuffer F figure scale F getbufferctxlua F figurefilename F aetbuffermkvi 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 getfloatvariable F firstsubcountervalue 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 fontcollectionprepare F getreadfilename F fontcollectionregister F getsomefullstructurenumber F fontcollectionreport F getsomestructurenumber F fontcollectionreset F getspecificstructuretitle F fontlookupgetkey F getstructurelevel

F getstructurenumber F 1chexnumber F getsubstring F lchexnumbers F gettexbuffer F leapyear F gettwopassdata F linenumbersstageone F gettwopassdatalist F linenumbersstagetwo F geturl F listgroupindex F getvisual F listlabel F listlocation F hhoxtovhox F helpaction F listnamespaces F helpreference F listprefixednumber F hexstringtonumber F listprefixedpage F horizontalcode F listrealpage F hour F listsize F hyphenatedlist F listtitle F hyphenatedurl F listuserdata F immediatemessage F loadexamodes F incrementcounter F loadfontgoodies F loadluamodule F incrementedcounter F loadmapfile F incrementsubcounter F initializejob F loadmapline F initializestream F loadspellchecklist F initializetexdirectives F loadtypescriptfile F initializetextrackers F loadvisualizer F locatefilepath F injectcurrentreference F injectcurrentreferencehtdp F locfilename F lower F injectreference F inlinechemical F lpdf\_adddocumentcolorspace F lpdf\_adddocumentextgstate F inputfilebarename 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 lxmlid F jobfilename F markingnumber F jobfilesuffix F markingtitle F markinjector F languagenumber F markregionbox F lastcountervalue

F markregionboxcorrected

F lastsubcountervalue

F markregionboxtagged F notedeltapage 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 number F minute F mixcleanup F numbers F mixfinalize F objectnumber F mixflushlist F objectpage F mixflushrest F octnumber F mixgetsplit F octstringtonumber F mixsetsplit F operatingsystem F mixstate F ordinal F molecule F outputfilename F month F overloadbookmark F monthmnem F overloaderror F monthname F pagestaterealpage F mpcolor F parpos F mpflushliteral F pdfrotation F mpflushreset F pdfstartmatrix F pdfstartmirroring F mpgettext F pdfstartrotation F mpgraphic F mpoptions F pdfstartscaling F mprunset F pdfstopmatrix F pdfstopmirroring F mpruntab F mprunvar F pdfstoprotation F pdfstopscaling F mpsetclippath F mpsetoutercolor F percentageof F mpsetsxsy F pqfxcolorspec F mpsettext F pickupbuffer F mptexget F placeparallel F mptexreset F popfloat F mptexset F pophyphenation F mptexsetfrombuffer F popitaliccorrection F namedstructureuservariable F poplist F namedstructurevariable F popreferenceprefix F nbfs F popregime F nextcountervalue F popsectionblock F nextparallel F postponenotes F nextsubcountervalue F prefixedconverted F nofdays F presetsymbollist

F presettabulate

F nofstackedfloats

F prevcountervalue F registeritemaroup F previoussubcountervalue F registerlanguagefeatures F processbodyfontsizes F registerlinenumbering F processbuffer F registermaintextcolor F processcolorcomponents F registermpyfile F processedfile F registernamedlua F processedfiles F registernamespace F processfile F registerpostponedblock F processfilemany F registerrendering F processfilenone F registersection F processfileonce F registerstructureprocessor F processiob F registersynonym F processlist F registerunit F processregister F registerusedsynonym F processsplit F registeruserdata F processsynonyms F relatemarking F purefontname F removepunctuation F pushfloat F renderingvar F pushhyphenation F replacefeature F pushitaliccorrection F replacepospxywhd F pushlist 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 resetinjector F referencepagedetail F resetitaliccorrection F referencepagestate F resetmapfiles F referencerealpage F resetmarking F registerattachment F resetmathattributes F resetmathitalics F registerbackendsymbol F resetnullfont F registerbodyfontsize F registerbookmark F resetparallel F registerbuttons F resetprevdepth F registercolorintent F resetreference F registeredviewerlayer F resetscript F registerfigurepattern F resetstructureprocessor F registerfiguresuffix F resetsubcounter F registerhelp F resettimer F registerhyphenationexception F resettrackers

F restartcounter

F registerhyphenationpattern

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 setfontsolution F savemargindata 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 setinsertionlocation F savetwopassdata F savevariable F setinterfaceconstant F setinterfaceelement F second F selectstructureblock F setinterfacemessage F setactivecatcodes F setinterfacemessages F setbreakpoints E setinterfacevariable F setcharacteralign F setinternalreference F setcharactercasing F setitaliccorrection F setcharactercleaning F setjavascriptpreamble F setcharacterkerning F setjobcomment F setcharacterspacing F setlanguageexceptions F setcharacterstripping F setlanguagesynonym F setclosedocumentaction F setlettercatcodes F setclosepageaction F setmarking F setcolormodel F setmathalphabet F setcounter F setmathalternate E setmathattribute F setdataset F setdigitsmanipulation F setmathdirection

F setmathitalics F settaglist F setmathstyle F settagproperty F setmpextensions F settagproperty b F setnegative F settagproperty n F setnextinternalreference F settagregister F setnextreferenceorder F settagsorting F setnotestate F settagsvnonvm F settagtablecell F setnotesymbolpage F setobject F settagtabulatecell F setupbookmarks F setopendocumentaction F setopenpageaction F setupcanvas F setowncounter F setupcharacterspacing F setownsubcounter F setupexport F setpagecolormodel F setupfontexpansion F setpagestate F setupfontprotrusion F setpagestaterealpageno F setupidentity F setpagetransition F setupinsertion F setparbuilder F setupitaliccorrection F setrandomseed F setuplinenumbering F setrealign F setuserinterface F setrealspaces F setvalidinterfacekevs F setreferencearguments F setvisual F setreferenceattribute F setvisualfont F setreferenceoperation F setvisuallayer F setregionbox F setxmpfile F setregionboxtagged F showassignerror F showattributes F setregistermethod F setreplacements F showcounter F showdebuginfo F setscript F setsectionblock F showdirectives F setsectionentry F showdiscretionaries F setstructurehlockstate F showexperiments F setstructurelevel F showhyphenatedinlist F setstructurenumber F showhyphenationtrace F setsubcounter F showinjector F settagaspect F showjustification F settagcombination F showlogcategories F settagdescription F showmessage F showtrackers F settagdescriptionsymbol F settagfigure F sin F settaggedmetadata F sind F settaghighlight F splitfilename

F spotcolorname

F spotcolorparent

F settagitem

F settagitemgroup

_		_	
	spotcolorvalue		structuregivencatcodedget
	tartactualtext		structurenumber
	startchemical		structuretitle
	startcolorset		structureuservariable
		•	structurevariable
			strwd
			subcountervalue
	F		subcountervalues
	r r		subsubcountervalues
Fs	tartproject	F	subtractfeature
Fs			synchronizemarking
Fs	tartsectionlevel	F	synchronizestream
Fs	startstream	F	synonymmeaning
Fs	tarttag	F	synonymname
Fs	starttag_c	F	systemlog
Fs	tarttag_d	F	taggedmathfunction
Fs	starttag_u	F	tan
Fs	tarttext	F	tand
Fs	tartviewerlayer	F	texdefinition_one
Fs	topactualtext	F	texdefinition_two
Fs	topchemical	F	textime
Fs	topcolorset	F	thefirstcharacter
Fs	stopcomponent	F	theremainingcharacters
Fs	stopenvironment	F	tochar
Fs	topfontsolution	F	transparencycomponents
Fs	stopparbuilder	F	truefilename
Fs	topproduct	F	type
Fs	topproject	F	typebuffer
Fs	topregime	F	typefile
Fs	topsectionlevel	F	uchar
Fs	stopstream	F	uchexnumber
Fs	toptag	F	uchexnumbers
Fs	toptext	F	undefinechemical
Fs	topviewerlayer	F	unicodechar
Fs	torejavascriptcode	F	unihex
Fs	torejavascriptpreamble	F	unit_normal
Fs	torenote	F	unit_reverse
Fs			unloadlanguage
			upper
			useMPlibrary
			useanyfile
			useanyfileonce
			usecldfile
	tructurecatcodedget		usecldfileonce
. 3	action courted and the courted		assistant confec

F usecolors F x table create F usecomponent F x table finish row F useenvironment F x table flush F usefigurebase F x table init construct F usefile F x table init reflow height F usejavascriptpreamble F x\_table\_init\_reflow\_height\_option F useiavascriptscripts F x\_table\_init\_reflow\_width F useluafile F x table init reflow width option F useluafileonce F x table next row F useluamodule F x table next row option F usemodules F x table r F usepath F x table reflow height F useproduct F x\_table\_reflow\_width F useproject F x table set construct F usesubpath F x table set reflow height F usesymbols F x\_table\_set\_reflow\_width F usetexfile F xmlafterdocumentsetup F usetexfileonce F xmlaftersetup F xmlall F useurl F usexmlfile F xmlappenddocumentsetup F usexmlfileonce F xmlappendsetup F usezipfile F xmlapplyselectors F utfchar F xmlatt F utfmathclass F xmlattdef F utfmathcommand F xmlattribute F utfmathcommandabove F xmlattributedef F utfmathcommandbelow F xmlbeforedocumentsetup F utfmathcommandfiller F xmlbeforesetup F utfmathfiller F xmlchainatt F utfmathstretch F xmlchainattdef F vboxlisttohbox F xmlchecknamespace F verbose F xml command F vspacing F xmlconcat F vspacingcollapse F xmlconcatrange F vspacingdefine F xmlcontext F vspacingsetamount F xmlcount F vspacingsnap F xmldelete F xmldirect F way F xmldirectives F weekday F weekdavname F xmldirectivesafter F writestatus F xmldirectivesbefore F xmldisplayverbatim F x\_table\_c F xmldoif F x table cleanup F x\_table\_construct F xmldoifelse

F xmldoifelseemptv F xmlregisterns F xmldoifelseselfempty F xmlremapname F xmldoifelsetext F xmlremapnamespace F xmldoifemptv F xmlremovedocumentsetup F xmldoifnot F xmlremovesetup F xmldoifnotempty F xmlresetdocumentsetups F xmldoifnotselfemptv F xmlresetiniectors F xmldoifnottext F xmlsave F xmldoifselfempty F xmlsetcommandtonone F xmldoiftext F xmlsetcommandtotext F xmlelement F xmlsetentity F xmlfilter F xmlsetfunction F xmlfilterlist F xmlsetiniectors 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 xmlaetindex F xmlstripanvwhere F xmlinclude F xmlstripnolines F xmlincludeoptions F xmlstripped F xmlinclusion F xmlstrippednolines F xmlinclusions F xmltaq F xmlindex F xmltexentity F xmlinfo F xmltext F xmlinlineverbatim F xmltobuffer F xmlinstalldirective F xmltobufferverbose F xmllast F xmltofile F xmlload F xmltoparameters F xmlloadbuffer F xmlverbatim F xmlloaddata F xmlwithindex F xmlloaddirectives F year setconstant function F xmlloadregistered setcount function F xmlmain setdimen function F xmlmatch setelement function F xmlname setformat function F xmlnamespace function F xmlnonspace setmacro F xmlpos setmessage function F xmlprependdocumentsetup setmessages function settranslation function F xmlprependsetup setuserinterface function F xmlraw

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

#### io (basic lua)

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

loadchunk function
loaddata function
loadlines function
noflines function

pathseparator string

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

#### jit (context)

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

F start

os string
status function
util table

F funcbc

F funcinfo

F funck

F funcuvname

F ircalladdr

F traceexitstub

F traceinfo

F traceir

F tracek

F tracemc

F tracesnap

version string
version\_num number

## job (context)

_			
comment	function	F getcollected	
datasets	table	F getdata	
D collected		F getfield	
F extend		F gettobesaved	
F getdata		F inlist	
F setdata		F last	
D tobesaved		F list	
	function	F save	
files	table	F savetagged	
D collected		D tobesaved	
F context			able
B forcerun		F b_col	
F run		F b_region	
D tobesaved		Fc	
initialize	function	D collected	
load	function	F column	
loadother	function	F copy	
objects	table	F depth	
D collected		F e_col	
F get		F e_region	
F number		F enhance	
F page		F extra	
F save		F get	
F set		F getreserved	
D tobesaved		F hangafter	
pack	boolean	F hangindent	
packversion		F height	
pagestates	table	F hsize	
D collected		F leftskip	
F extend		F lowerleft	
F realpage		F lowerright	
F setstate		F markregionbox	
D tobesaved		Fn	
passes	table	F onsamepage	
F check		F overlapping	
D collected		Fр	
F count		F page	
F define		F paragraph	
F find		F parindent	
F first		F position	
F get		Fr	

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

register function
save function
structure table

- D collected
- T components
- T tobesaved
- T branches
- i branche
- 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 Fa

Ftd

F th

include function
inherited table

S color-background-four

S color-background-one

S color-background-three

S color-background-two

S title

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

S color-background-blue

S color-background-body

S color-background-green

S color-background-main

S color-background-purple
S color-background-yellow

S title-default

#### logs (context)

application function categories function direct function disable function function enable exporters table extendbanner function flush function help function 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

F lines

F version

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

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

# lpdf (context)

action	function	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 toeight function topdfdoc function tosixteen function transform function transparency function transparencycode function transparencygroups table

B none

transparencyvalue function
unicode function
verbose function

### lpeg (basic lua)

В	function
C	function
Carg	function
Cb	function
Сс	function
Cf	function
Cg	function
Cmt	function
Ср	function
Cs	function
Ct	function
P	function
R	function
S	function
UP	function
UR	function
US	function
V	function
afterprefix	function
anywhere	function
append	function
balancer	function
beforesuffix	function
checkedsplit	function
counter	function
endstripper	function
finder	function
firstofsplit	function
frontstripper	function
instringchecker	function
is_lpeg	function
keeper	function
locale	function
match	function
oneof	function
patterns	data table
pcode	function
print	function
ptree	function
replacer	function
secondofsplit	function

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

### ltn12 (extra lua)

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

F string

#### lua (basic tex)

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

### luatex (context)

cleanuptempfiles function
registerstartactions function
registerstopactions
registertempfile function
starttime number

## lxml (context)

addindex	function	flushlinewise	function
all	function	flushsetups	function
applyfunction	function	flushspacewise	function
applyselectors	function	get id	function
appryserectors	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 function
setcommandtotext function
setsetup function
snippet function
sorters table

F add F compare

F flush F reset

F show F sort

text

splitid function
startraw function
stopraw function
store function
strip function
stripped function
tag function

tobuffer function
tofile function
toparameters function
toverbatim function
verbatim function
withindex function

function

## math (basic lua)

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

#### mathematics (context)

addfallbacks	function
alphabets	data table
alternatives	data table
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 function setalternate 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 function utfmathstretch

D numbers

D sets

#### mbox (context)

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

## md5 (extra lua)

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

# metapost (context)

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

settextfunctionshowlogbooleansvformatfunctiontextable

F get

F reset

F set

F setfrombuffer

texerrorsbooleantextextsdatafunctiontheclippathfunctiontotablefunctionunloadfunctionuntagvariablefunctionvariablestable

#### 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	<b>OverlayHeight</b>	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	PaperHeight	function
EmWidth	function	PaperWidth	function
ExHeight	function	PrintPaperHeight	function
FooterDistance	function	PrintPaperWidth	function
FooterHeight	function	RealPageNumber	function
HSize	function	RightEdgeDistance	function
HeaderDistance	function	RightEdgeWidth	function
HeaderHeight	function	RightMarginDistance	function
InPageBody	function	RightMarginWidth	function
InnerEdgeDistance	function	StrutDepth	function
InnerEdgeWidth	function	StrutHeight	function
InnerMarginDistance	function	TextHeight	function
InnerMarginWidth	function	TextWidth	function
LastPageNumber	function	TopDistance	function
LayoutColumnDistance	function	TopHeight	function
LayoutColumnWidth	function	TopSkip	function
LayoutColumns	function	TopSpace	function
LeftEdgeDistance	function	VSize	function
LeftEdgeWidth	function	_f_	function
LeftMarginDistance	function	boolean	function
LeftMarginWidth	function	dataset	function
LineHeight	function	datasets	table
MakeupHeight	function	F load	
MakeupWidth	function	defaultcolormodel	function
NOfColumns	function	format	function
NO f Pages	function	formatted	function
OnOddPage	function	get	table
OnRightPage	function	F boolean	
OuterEdgeDistance	function	F number	
OuterEdgeWidth	function	F numeric	
OuterMarginDistance	function	F string	
OuterMarginWidth	function	graphformat	function

function
function
function
function
function
function
function
function
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 collapse F mlist\_to\_hlist T relocate T render T resize

T unscript

## node (basic tex)

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

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### nodes (context)

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

<pre>injections  F copy F getligaindex F handler F installnewkern F keepcounts</pre>	table	listablefields listcodes listtoutf load locate margincodes
F reset		markers
F resetcounts		F get
F setcursive		mathcodes
F setkern		maxboxwidth
F setligaindex		mlist_to_hlist
F setmark		new
F setpair		noadcodes
insert_after	function	nodecodes
insert_before	function	nopts
insert_list_after	function	nuts
installattributehandler	function	F append
is_direct	function	F concat
is_display_math	function	F copy
is_mirrored	data table	F copy_list
is_node	function	F 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	6	F end_of_math
last_node	function	F fasthpack
leftmarginwidth	function	F first_glyph
ligaturing lines	function	F firstcharacter
T boxed	table	F firstcharinbox
		F firstglyph
F register		F flush_list F flush node
F setup 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
list	function	F getlist
		3

data table data table function function function data table table

data table function function function data table data table function table F getnext F pdfdestination F getprev F pdfdirect F pdfliteral F getprop F getskip F pdfrestore F getsubtype F pdfsave F pdfsetmatrix F has attribute 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 shrink F insert list after F is\_direct F special F is display math F stretch F is node F temp F is\_nut F textdir F kerning F usage 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 gluespec F remove F repackhlist F glyph F hlist F replace F kern F rightmarginwidth F set\_attribute F latelua F setattr F lateluafunction F leftmarginkern F setattribute F leftskip F setattributes F lineskip F setbox F negatedglue F setfield F noad F setprop F pdfannotation F setunsetattributes

F 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		F post_linebreak_filter	
packlist	function	F pre_linebreak_filter	
pardir_is_equal	data table	F tracer	
pardir_is_opposite	data table	processwords	function
pardir_is_parallel	data table	properties	table
<pre>partextdir_is_equal</pre>	data table	T actions	
penaltycodes	data table	F delayed	
plugindata	table	F fdelayed	
F finalizer		F immediate	
F initializer		F attach	
S name		T data	
T namespace		F delayed	

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
F getsamples		tonut	function

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

### number (context)

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

### os (basic lua)

\_\_getenv function setenv function string binsuffix **binsuffixes** table clock function 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 function time times function timezone function

function function

function string

tmpdir

tmpname today

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)

T fields

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

S institution

S organization		B dirty	
S subtitle		T gskip	
S title		T kind	
S year		T list	
T optional		T system	
T required		T order	
T sets		enhancers	table
T author		F details	
T virtual		F order	
T demo-b		F suffixes	
S category		finder	function
T extra		firstofrange	function
T fields		found	function
S author		get	function
S institution		getcasted	function
S organization		getdetail	function
S subtitle		getdirect	function
S title		getfaster	function
S year		getfield	function
T optional		getfuzzy	function
T required		getindex	function
T sets		inspectors	data table
T authors		journals	table
T virtual		F abbreviated	
S comment		F add	
S copyright		F expanded	
T fields		F load	
S name		F save	
T types		lastofrange	function
S author		lists	table
S editor		F collectentries	
S keywords		F fetchentries	
S number		F filterall	
S page		F flushentry	
S pages		T methods	
S volume		F dataset	
S version		F force	
T virtual		F global	
datasets	table	F local	
detailed	table	F nofregistered	
<pre>detailed endnotes_to_btx</pre>	function	F prepareentries	
detailed endnotes_to_btx enhancer		F prepareentries F register	
<pre>detailed endnotes_to_btx</pre>	function	F prepareentries	

1 dataset		5 Comment	
F default		S copyright	
F reference		S name	
F short		S version	
F uservariable		statistics	table
listvariants	table	N nofbytes	
F bib		N nofdatasets	
F default		N nofdefinitions	
F num		N nofshortcuts	
F page		tables	table
F short		D implicits	
F yes		D origins	
load	function	D privates	
loadbibdata	function	D sets	
loaddefinitionfile	function	D specials	
loaders	table	D types	
F bbl		D virtuals	
F bib		tags	function
F buffer		tracers	table
F endnote		F showdatasetauthors	
F lua		F showdatasetcompleten	iess
F refman		F showdatasetfields	
F registercleaner		F showentry	
F xml		F showfields	
loadreplacementfile	function	F showtables	
new	function	F showvariants	
okay	function	typesetters	table
oneorrange	function	F author	
parenttag	function	F string	
permitted	function	usedataset	function
refman_to_btx	function	usedentries	function
resolvedname	function	writers	table
save	function	F author	
search	function	F keyword	
setcategory	function	F pagenumber	
setspecification	function	F range	
singularorplural	function		
sortedentries	function		
sortmethods	table		
T authoryear			
T sequence			
specifications	table		
T default			

S comment

F dataset

S author

### 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	strina	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	
${\it expanded path list from variable}$	function	D foundintrees	
expandpath	function	D hashed	
expandpathfromvariable	function	D hashes	
expansion	function	D lists	
extendtexmfvariable	function	B loaderror	
filtered_from_content	function	D order	
find_file	<del>function</del>	D pathlists	
find_files	<del>function</del>	T pathstack	
findbinfile	function	B remember	
findctxfile	function	B renewcache	
finders	data table	B renewtree	
findfile	function	B savelists	
findfiles	function	D setups	
findgivenfile	function	D specification	
findgivenfiles	function	D variables	
findpath	function	jobpath	function

jobs	table	registerfilehash	function
F currentcomponent		registerintrees	function
F currentenvironment		registermethod	function
F currentproduct		registerzipfile	function
F currentproject		relations	data table
F justacomponent		renew	function
D processors		repath	function
F productcomponent		reset	function
F usefile		resetextrapath	function
joinpath	function	resetresolve	function
load	function	resolve	function
loadbinfile	function	savers	data table
loaders	data table	scandata	function
loadlualib	function	scanfiles	function
loadtexfile	function	schemes	table
loadtime	function	T cleaners	
locateformat	function	F md5	
locators	data table	F none	
luacnfname	string	F strip	
luacnfspec	string	F cleanname	
luacnfstate	string	F fetchstring	
macros	table	F fetchtable	
F convertfile		F install	
F decodecomment		setdynamic	function
F enablecomment		setenv	function
F encodecomment		setinstance	function
F preprocessed		showpath	function
F processmk		simplescanfiles	function
F processmkvi		splitconfigurationpath	function
F version		splitexpansions	function
maxreadlevel	number	splitmethod	function
methodhandler	function	splitpath	function
newinstance	function	stackpath	function
openbinfile	function	suffixes	data table
openers	data table	suffixmap	data table
openfile	function	suffixofformat	function
opentexfile	function	texdatablob	function
ownpath	string	toppath	function
poppath	function	unexpandedpath	function
prefixes	data table	unexpandedpathlist	function
prependhash	function	unresolve	function
pushpath	function	updaterelations	function
registerextrapath	function	updatescript	function
registerfile	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	ived	sinkt	table
S recei	ived-from-mta	F close-v	vhen-done
S refe	rences	F default	:
S refe	rer	F http-ch	nunked
S remot	te-mta	F keep-op	oen
S reply	y-to	skip	function
S repor	rting-mta	sleep	function
S reser	nt-bcc	smtp	table
S reser	nt-cc	S DOMAIN	
S reser	nt-date	N PORT	
S reser	nt-from	S SERVER	
S reser	nt-message-id	N TIMEOUT	Г
S reser	nt-reply-to	S ZONE	
S reser	nt-sender	F message	2
S reser	nt-to	F open	
S retry	y-after	F send	
S retu		source	function
S sende		sourcet	table
S serve		F by-leng	
	-remote-recipient	F default	
S stati		F http-ch	
S subj€	ect	F until-o	
S te		tcp	function
S to		tcp6	function
S trail		tp	table
	sfer-encoding	N TIMEOUT	
S upgra		F connect	
S user-	-agent	try	function
S vary		udp udp6	function function
S via	·	url	table
S warni		F absolut	
	retry-until authenticate	F build	.e
S x-mai		F build p	nath
http	table	F escape	, a cii
N PORT	cab to	F parse	
N TIMEOU	Т	F parse_p	nath
S USERAG		F unescap	
F open			
F reques	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)

function
function
function
function
function
boolean
function
function
function
function
function
function
function
function
function
function
number
function
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	
-			
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	table	documents 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	table
S method F overload F place F register F setup counters	table	documents 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	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 F current F simplify F store	table table
S method F overload F place F register F setup Counters F add F analyze F check	table	documents  D data F initialize F preset F reset floats formulas F current F simplify	table
S method F overload F place F register F setup  Counters F add F analyze F check D collected	table	documents  D data F initialize F preset F reset floats formulas F current F simplify F store	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 F current F simplify F store helpers	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 F current F simplify F store helpers F analyze	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 F current F simplify F store helpers F analyze F formulanumber F merged F page	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	table	documents  D data F initialize F preset F reset floats formulas F current F simplify F store helpers F analyze F formulanumber F merged F page F prefix	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 F current F simplify F store helpers F analyze F formulanumber F merged F page F prefix F prefixlastpage	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 F current F simplify F store helpers F analyze F formulanumber F merged F page F prefix F prefixlastpage F prefixpage	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 F current F simplify F store helpers F analyze F formulanumber F merged F page F prefix F prefixlastpage	table table

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

F listindex	F get
F ordered	F filter
F postpone	F filterdefault
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 setinternalrefe	erence	F	prepare	
F setnextinternal	-	F	process	
F setnextorder		F	setmethod	
F setreferencerea	alpage	F	sort	
D specials		F	store	
F splitcomponent		D	tobesaved	
F splitprefix		F	unique	
F splitreference		F	userdata	
F synchronizepage	2	sect	ions	table
T testrunners		F	autodepth	
F inner		F	cct	
F special		D	collected	
F special opera	tion	F	current	
F special opera	tion with arguments	F	currentblock	
T testspecials			currentid	
F deltapage			currentlevel	
Fi			currentsectionindex	
F internal			depthnumber	
F page			finddata	
F realpage			findnumber	
F section			fullnumber	
F userpage			getcurrentlevel	
D tobereferred			getlevel	
D tobesaved			getnumber	
T urls			internalreference	
T data			levelmap	
F define			levels	
F found			load	
F get D usedinternals			matchingtilldepth numberatdepth	
D usedviews			numberatuepth	
F valid			popblock	
registers	table		prefixedconverted	
F analyze			pushblock	
D collected			register	
F compare			registered	
F define			reportstructure	
F enhance			save	
F extend			sectionblockdata	
F filter			T bodypart	
F filtercollected	I		S bookmark	
F finalize		F	set	
F flush		F	setblock	
F get		F	setchecker	

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

### table (basic lua)

allkeys	function	sequenced
append	function	serialize
are_equal	function	setmetatableca
autokey	function	setmetatablein
compact	function	setmetatableke
concat	function	setmetatablene
contains	function	sort
сору	function	sorted
count	function	sortedhash
derive	function	sortedhashkeys
deserialize	function	sortedhashonly
drop	function	sortedindexonly
fastcopy	function	sortedkeys
fastserialize	function	sortedpairs
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	twowaymapper
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	

# 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 function tprint 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		dimensio	n
N space			glue	
N subscrip	ot	F	integer	
N superscr	ript		keyword	
N whitespace		F	list	
collectors	table	F	lxmlid	
T data		F	number	
F defaultw	vords	F	scanclos	е
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

#### 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 installhandle	r
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		len
F byte		F	lower
F char		F	match
F dump		F	rep
F find		F	reverse
F format		F	sub
F gfind		F	upper
F gmatch		utf8	table
F gsub		F	byte
F len		F	char
F lower		F	characters
F match		F	chrlen
F rep		F	count
F reverse	<u> </u>	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 format		F	len
F gfind		F	length
F gmatch		F	lower
F gsub		F	magic
F len		F	match
F lower		F	remapper
F match		F	rep
F rep		F	replacer
F reverse	<u> </u>	F	reverse
F sub		F	split
F upper		F	splitlines
latin1	table	F	sub
F byte		F	subtituter
F char		F	tocodes
F dump		F	toeight
F find		F	toentities
F format		F	tostring
F gfind		F	totable
F gmatch		F	upper
F gsub		F	ustring

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

# url (context)

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

## utilities (context)

debugger	table	N	version	
F disable		pars	ers	table
F enable		F	add_settings_to_a	rray
F savestats		F	arguments_to_tabl	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	ау
F loadstripped			U settings_to_hash	n_a
N nofstrippedbytes			U settings_to_hash	n_b
N nofstrippedchunks			U settings_to_hash	1_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			unittotex	
F pack			unittoxml	
F simplehashed		repo		function
F strip		-	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	func	tion
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	func	tion
registerescapecommand	func	tion
registerescapeline	function	
registerescapepattern	function	
signal	string	
signalpattern	userdata	
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	<del>inject_element</del>	<b>function</b>
F text	<del>inject_element_after</del>	function
F upper	<pre>inject_element_before</pre>	function
F upperall	injectafter	function
T xml	injectbefore	function
F all	insert	function
F att	insert_element	function
F attribute	<u>insert_element_after</u>	<b>function</b>
F attributes	<pre>insert_element_before</pre>	function
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
name	function
newhandlers	function
nodesettostring	function
originalload	function
package	function
parent	function
parsedentitylpeg	userdata
pihandlers	table
F injector	
placeholders	table
F unknown_any_entity	
F unknown_dec_entity	
F unknown_hex_entity	
position	function
privatecodes	table
privatetoken	function
process	function
process_attributes	<del>function</del>
process_elements	<del>function</del>
processattributes	function
profiled	table
raw	function
registerentity	function
registerns	function
reindex	function
<del>remap_name</del>	<del>function</del>
remap_namespace	function
remap_tag	<del>function</del>
remapname	function
remapnamespace	function
remaptag	function
renamespace	function
replace	function
replace_element	function
resetinjectors	function
resolvens	function
root	function
save	function
selection	function
separate	function
serialize	function
setcdata	function
setcomment	function

sethandlersfunction function setinjectors function setproperty function settings function specialhandler table sprint 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 tprint function function traverse function unescaped function unprivatized withelement function withelements function function wrap xmlns table

#### zip (extra lua)

archives table
close function
closearchive function

openarchive function
openfile function
registeredfiles table
type function

#### zlib (extra lua)

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