MP attributes backends basexx bit32 blobs boolean buffers builders caches callbacks catcodes characters chemistry commands containers context converters coroutine ctxrunner debug dir directives document documentdata drivers environment experiments figures file fio floats font fonts functions global graphics gzip images interactions interfaces io job languages layouts <a href="libraries">libraries</a> <a href="lim">lmx</a> <a href="logs">logs</a> <a href="lip">lpdf</a> luatex lxml math mathematics md5 metapost mime moduledata modules mp mplib noads mode nodes number objects optional os ckage pagebuilders parametersets pdfdecode pdfe physics pngdecode publications regimes resolvers sandbox scripts set sha2 sio socket sorters statistics status storage streams string structures table nfin texconstants texifs texconditionals texco texisdefined texmodes texsystemmodes thirddata token tokens tracers trackers typesetters updaters url userdata utf8 utilities visualizers xcomplex xdecimal xmath xml xzip zip zlib

# global (alias: \_G)

CONTEXTLMTXMODE	number	directives	table
FFISUPPORTED	boolean	document	table
INITEXMODE	boolean	documentdata	table
LUAMAJORVERSION	number	dofile	function
LUAMINORVERSION	number	drivers	table
LUATEXENGINE	string	environment	table
LUATEXFORMATID	number	error	function
LUATEXFUNCTIONALITY		experiments	table
LUATEXVERSION	number	figures	table
LUAVERSION	number	file	table
MP	function	fio	table
	table	floats	table
arg assert	function	flushfontchar	function
attributes	table	flushsimplerule	function
backends	table	flushspecialrule	function
basexx	table	font	table
bit32	table	fonts	table
blobs	table	functions	table
blockrequire	function	getmetatable	function
boolean	table	getrpos	function
buffers	table	getscriptstatus	function
builders	table	global	table
caches	table	graphics	table
callback	table	grid_to_mp	function
callbacks	table	gzip	table
catcodes	table	images	table
characters	table	inspect	function
checkimage	function	interactions	table
chemistry	table	interfaces	table
collectgarbage	function	io	table
commands	table	ipairs	function
containers	table	job	table
context	function	language	table
converters	table	languages	table
coroutine	table	layouts	table
createmask	function	lfs	table
ctxrunner	table	libraries	table
data	table	lmx	table
debug	table	load	function
dimen	function	loadfile	function
dir	table	loadstring	function
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1	+ahla		£
logs	table table	require required	function function
lpdf	table	required	table
lpeg			
lua	table	ruledspace	function
luatex	table	sandbox	table
lxml	table	scanarray	function
math	table	scanhash	function
mathematics	table	scripts	table
md5	table	select	function
metapost	table	set	table
mime	table	setinspector	function
moduledata	table	setmetatable	function
modules	table	sha2	table
mp	function	shipbox_ref_h	number
mplib	table	shipbox_ref_v	number
next	function	sio	table
noads	table	socket	table
node	table	sorters	table
nodes	table	statistics	table
number	table	status	table
objects	table	storage	table
optional	table	streams	table
optionalrequire	function	string	table
os	table	structures	table
package	table	table	table
pagebuilders	table	tex	table
pairs	function	texconditionals	data table
parametersets	table	texconfig	table
pcall	function	texconstants	data table
pdf	table	texifs	data table
pdfdecode	table	texio	table
pdfe	table	texisdefined	data table
physics	table	texmodes	data table
pngdecode	table	texsystemmodes	data table
poporientation	function	thirddata	table
print	function	toboolean	function
publications	table	todecimal	function
pushorientation	function	token	table
rawequal	function	tokens	table
rawget	function	tonumber	function
rawlen	function	tostring	function
rawset	function	tracers	table
readarray	function	trackers	table
regimes	table	type	function
-			

typesetters	table	warn	function
unpack	function	xcomplex	table
updaters	table	xdecimal	table
url	table	xmath	table
userdata	table	xml	table
utf	table	xpcall	function
utf8	table	xzip	table
utilities	table	zip	table
visualizers	table	zlib	table

## attributes (context)

F inbetween

applyoverloads function	F justone
<pre>colorintents table</pre>	F hsvtogray
N attribute	F hsvtorgb
D data	F hwbtorgb
F enable	F iccprofile
F handler	F isblack
F register	N main
D registered	S model
colors table	D models
N attribute	F mpcolor
F cmyk	F mpnamedcolor
F cmyktogray	F mpoptions
F cmyktorgb	F namedcolorattributes
F colorcomponents	N none
D counts	F popset
B couple	F processcolorcomponents
F currentmodel	F pushset
F currentnamedmodel	F register
D data	D registered
N default	F registerspotcolor
F defineintermediatecolor	F rgb
F definemultitonecolor	F rgbtocmyk
F defineprocesscolor	F rgbtogray
F defineprocesscolordirect	F rgbtohsv
F definesimplegray	N selector
F definespotcolor	F setlist
F definetransparency	F setmodel
F enable	F setpagecolormodel
F filter	D sets
N forced	F spec
F forcedmodel	F spot
F forcesupport	F spotcolorname
F formatcolor	F spotcolorparent
F formatgray	F spotcolorvalue
F getpagecolormodel	B supported
F gray	F toattributes
F graytohsv	F transparencycomponents
F handler	B triggering
T helpers	F usecolors
F complement	D valid

F value

D values		F	enable	
B weightgray		F	forcesupport	
define	function	F	handler	
effects	table	Т	names	
N attribute			N color	
D data			N colorburn	
F enable			N colordodge	
F handler			N darken	
F register			N difference	
D registered			N exclusion	
D values			N hardlight	
handlers	table		N hue	
list	data table		N lighten	
${\tt markasoverload}$	function		N luminosity	
names	data table		N multiply	
negatives	table		N none	
N attribute			N normal	
D data			N overlay	
F enable			N saturation	
F handler			N screen	
F register			N softlight	
D registered		N	none	
F set		F	register	
numbers	data table	D	registered	
ofnode	function	В	supported	
private	function	F	toattribute	
public	function	В	triggering	
restore	function	F	value	
save	function	D	values	
showcurrent	function		etvalue	number
states	table	view	verlayers	table
F disabletrigge	ring	N	attribute	
F enabletrigger	ing	F	cleanup	
F finalize		D	data	
F initialize		F	define	
F process		F	definedlayout	component
F selective		F	enable	
F stacked		F	forcesupport	
F stacker		F	handler	
system	function	В	hasorder	
tooverloads	function	D	listwise	
transparencies	table	F	register	
N attribute		D	registered	
D data		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 exportformdata

closeout function F fieldsurrounding codeinjections table F flushmergelayer F boxresourcedimensions F getbookmarks F registerboxresource F getdefaultfieldvalue F restoreboxresource F getfieldcategory current string F getfieldset defaults table F getformatoption T codeinjections F getidentityvariable F getpagedimensions F getinfo F setpagedimensions F getpreviewfigure T nodeiniections F insertrenderingwindow T registrations F maptag D tables F mergebookmarks getcallbackstate function F mergecomments included table F meraefields B context F mergereferences B date F mergeviewerlayers B id F newimage B metadata F prerollreference B pdf F presetsymbol function install F presetsymbollist latelua function F processrendering nodeinjections table F registerdocumentcloseaction nothing function F registerdocumentopenaction function openout F registeredsymbol table pdf F registerpagecloseaction T codeinjections F registerpageopenaction F addbookmarks F registersymbol F scanimgage F analyzenormalsymbol F analyzesymbol F setattachmentsupport F attachmentid F setfieldcalculationset F bitmap F setfigurealternative F clonefield F setfigurecolorspace F copyimage F setfiguremask F definefield F setformat F definefieldset F setformsmethod F defineviewerlaver F setpagetransition F embedfile F settaggingsupport F embedimage F setupcanvas F enabletags F setupidentity

F setxmpfile

F knockout F startlayer F startunicodetoactualtext F negative F startunicodetoactualtextdirect F overprint F stoplayer F positive F stopunicodetoactualtext F reference F stopunicodetoactualtextdirect F rgbcolor F supportedformats F spotcolor F unicodetoactualtext F startlayer F useviewerlaver F startstackedlayer F validfield F stoplayer F validfieldcategory F stopstackedlayer F validfieldset F transparency F wrapimage F typesetfield S comment T registrations T nodeinjections F cmykindexcolor F addtags F cmykspotcolor F annotation F getspotcolorreference F attachfile F grayindexcolor F changestackedlayer F grayspotcolor

F changestackedlayer

F cmykcolor

F comment

F comment

F rgbspotcolor

F destination

F effect

F transparency

F graycolor

F trables

F effect
F graycolor
F injectbitmap
F insertmovie
F insertsound

t

F insertu3d

registrations table tables table function

D vfspecials

#### basexx (extra lua)

decode16	function
decode64	function
decode85	function
${\tt decodeLZW}$	function
decodeRL	function

encode16 function
encode64 function
encode85 function
encodeLZW function
encodeRL function

# bit32 (basic lua)

arshift	function	extract	$ \hbox{function} $
band	function	lrotate	$ \hbox{function} $
bnot	function	lshift	$ \hbox{function} $
bor	function	replace	$ \hbox{function} $
btest	function	rrotate	$ \hbox{function} $
bxor	function	rshift	$ \hbox{function} $

## blobs (context)

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

## boolean (context)

tocontext function
tonumber function

## buffers (context)

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

F define	
F hassomeconte	ent
F next	
F place	
F reset	
F save	
prepend	function
raw	function
run	function
samplefile	function
undent	function

## builders (context)

kernel       table       profiling       table         F hyphenating       F add       F add         F hyphenation       F distance       F fixedprofile         F kerning       F fixedprofile       F fixedprofile         F ligaturing       F get       F get         F mlist_to_hlist       F list       Pagehandler         T constructors       F profilebox       F set         N attribute       F set       F profilebox         F define       Vspacing       table         F define       Vspacing       table         F define       Vspacing       table         F define       Vspacing       table         F define       P coclapseries       table         F define       F checkstrutdepth       F collapsevbox       T data         F basic       D map       D skip       D skip       D skip         F default       D skip       D skip       D skip       D skip       D skip       D skip       F define snapmethods       F define snapmethods       F forcepageflush       F forcepageflush       F set       F forcepageflush       F forcepageflush       F forcepageflush       F stopect       F inject       F inject       F injectdisable       F injectdi	chacksidaflast	function	F 4
F hyphenation F hyphenation F kerning F ligaturing F ligaturing F ligaturing F mist_to_hlist F list  paragraphs F define F define F handler F basic F default F handle D namp F define D skip F hist F set F define F rorepageflush F rorepageflush F start F start F stop F strace F injectdisable F registered F registered F poptiane F poptimize F reset F define F start F poptimize F reset F start F reset F stonticategory F stocked F synchronizepage F strocked F start F set F forcatcupchol F start F poptimize F setskip F reset F start F spenotractions F start F spenotractions F start F spenotractions F spenotractions F start F spenotractions F start F spenotractions F spenotractions F start F sta			F tag
F hyphenation F kerning F ligaturing F ligaturing F mist_to_hlist  F mist_to_hlist F paragraphs F mist_to_hlist F pagehandler F constructors F profilebox F set F define F disable F checkstrutdepth F handler F collapsevbox T methods F basic F default F hpack F oneline D names B fixed D names B fixed D numbers F set F start F start F stop F trace F keeptogether F registertogether F set F define F pushatsame F pushatsame F pettocategories F set F foreset F picet F pagebox F set F forieser F pageoverflow F setskip F registered F set F forieser F starb F solutions F set F stoputions F specoverflow F specoverflow F set F stoputions F set F foriese F starb F set F set F solutions F specoverflow F specoverflow F set F starbit F starbit F set F starbit F starbit F set F starbit F tocategory		table	
F kerning F ligaturing F ligaturing F mist_to_hlist  paragraphs table F pagehandler  T constructors N attribute F define F define F desable F enable F enable F collapsevbox T methods F basic F default F handler F oneline F noneline F noneline F set F set F set F forcespageflush F set F set F forcespageflush F start F set F forcestrutdepth F start F set F forcestrutdepth F forcespageflush F start F set F forcestrutdepth F start F start F set F forcestrutdepth F start F stop F inject F sinject F sinject F spagehandler F solutions F set F poptimize F setskip F reset F set F snapbox F set F snapbox F set F snapbox F set F snapbox F set F spocategories F stocategories F tocategories F tocategories F tocategories F tocategories F tocategory			
F ligaturing F milst_to_hlist  Paragraphs table F pagehandler T constructors N attribute F define F define F disable F enable F enable F handler F handler F collapsevbox T methods F basic F default F hack F oneline F neline F set F set F defineshopether F set F forcespageflush F start F start F start F stop F stop F stop F stop F stop F spechandler F solutions F pagehandler F pagehandler F pagehandler F collapsevbox T data D map D skip D snapmethods F definesnapmethod B fixed D numbers F forcepageflush F stop F inject F start F getnofpreviouslines F stop F inject F stop F inject F superiouslines F stop F spechandler F solutions F pagehandler F solutions F pageoverflow F pagebandler F solutions F spitters F popatsame F pushatsame F optimize F setmap F reset F setskip F reset F snapbox F set F snapbox F set F stocategories F stocategory			
F mist to hist  paragraphs table  T constructors  N attribute  F define  F define  F disable  F enable  F handler  F handler  F basic  F default  F hack  F oneline  D names  D names  D names  D names  F set  F forcepageflush  F start  F start  F start  F start  F stop  T expansion  F trace  F keeptogether  F solutions  F define  F define  F pageoverflow  T splitters  F optimize  F reset  F set  F setmap  F reset  F setmap  F reset  F start  F setmap  F reset  F setmap  F reset  F stoncategories  F stoncategories  F setskip  F reset  F stoncategories  F stoncategories  F stoncategories  F stoncategories  F setmap  F reset  F soncategories  F soncategories  F stoncategories  F stoncategories  F stoncategory	-		·
paragraphs table  T constructors  N attribute  F define  F define  F define  F checkstrutdepth  F handler  F basic  F default  F hack  F oneline  D names  D names  D names  D names  F set  F forcepageflush  F start  F start  F start  F start  F stop  F trace  F keeptogether  F registertogether  F optimize  F optimize  F optimize  F set  F set  F set  F reset  F set  F set  F set  F set  F set  F popatsame  F set  F spushatsame  F soptimize  F set  F set  F set  F set  F setskip  F reset  F spushcronizepage  F split  F start  F tocategories  F sonapbox  F set  F sonapbox  F set  F sonapbox  F set  F sonappox		+	•
T constructors  N attribute F set  F define Vspacing table  F disable D categories F enable F checkstrutdepth F handler F collapsevbox T methods T data F basic D map F default D skip F hpack D snapmethods F oneline F oneline F set F forcepageflush F start F start F start F getnofpreviouslines F stop F trace F injectdisable F registertogether F solutions T splitters F define F pagehandler F popatsame F optimize F set F reset F start F setskip F reset F start F setskip F reset F starphox F stephorizepage F split F start F stoategory			
R attribute F define Vspacing Table F disable D categories F enable F enable F checkstrutdepth F handler F collapsevbox T methods T data F basic D map F default D skip F hpack D snapmethods F oneline F definesnapmethod D names B fixed D numbers F set F forcepageflush F start F start F stop F trace F injectdisable F trace F injectdisable F registertogether F solutions T splitters F define F pageoverflow T registered F reset F start F setmap F reset F start F stoacategories F story F stephonizepage F split F reset F start F tocategories F tocategory		tabte	
F define F disable F disable F enable F enable F handler F handler F basic F default F hack F oneline F oneline F set F start F start F start F start F starc F trace			,
F disable F enable F enable F enable F handler F handler F collapsevbox  T methods F basic D map F default D skip F hpack D snapmethods F oneline F define F forcestrutdepth F start F trace F trace F registertogether F solutions F define F define F pushatsame F optimize F reset F set F sonapbox F set F reset F sonapbox F set F setskip F reset F setskip F reset F snapbox F set F sonaportic for start for succession of the			
F enable F handler F handler F collapsevbox T methods F basic D map F default D skip F hpack F oneline F oneline F definesnapmethod D names B fixed D numbers F set F forcepageflush F start F getnofpreviouslines F stop F inject T expansion F trace F injectdisable F trace F injectskip F registertogether F solutions F solutions F define F pageoverflow T splitters F define F optimize F registered F setskip F reset F snapbox F snapbox F set F snapbox F stoategories F start F tocategory			, <del>,</del>
F handler  T methods  T data  F basic  D map  F default  D skip  F hpack  D snapmethods  F oneline  F definesnapmethod  D names  B fixed  D numbers  F forcepageflush  F set  F forcestrutdepth  F start  F getnofpreviouslines  F stop  F inject  T expansion  F trace  F injectdisable  F trace  F injectskip  F registertogether  F solutions  T splitters  F define  F optimize  T registered  F reset  F snapbox  F set  F snapbox  F stortocategory			
T methods F basic D map F default D skip D snapmethods F oneline F definesnapmethod D names B fixed D numbers F set F forcepageflush F start F getnofpreviouslines F stop F inject T expansion F trace F injectdisable F trace F injectdisable F trace F injectskip F registertogether F solutions T solutions T splitters F define F optimize T registered F reset F set psynchronizepage F split F start F tocategory			·
F basic F default F default D skip D snapmethods F oneline F definesnapmethod D names B fixed D numbers F set F forcepageflush F set F forcestrutdepth F start F getnofpreviouslines F stop F inject T expansion F trace F injectdisable F trace F injectdisable F trace F injectskip F registertogether F solutions F solutions F pageoverflow T splitters F define F optimize F registered F reset F set psetskip F reset F setskip F reset F setskip F setskip F setskip F reset F setskip F reset F sonapbox F set psynchronizepage F split F tocategory			·
F default F hpack D snapmethods F oneline F oneline F definesnapmethod D names B fixed D numbers F forcepageflush F set F forcestrutdepth F start F getnofpreviouslines F stop F inject T expansion F trace F injectdisable F trace F injectskip F registertogether F solutions F solutions F pagehandler T solutions F pageoverflow T splitters F define F popatsame F optimize F registered F setmap F reset F setskip F tocategories F start			
F hpack F oneline F oneline F oneline F oneline F definesnapmethod  D names B fixed  D numbers F set F forcepageflush F set F forcestrutdepth F start F getnofpreviouslines F stop F inject  T expansion F trace F injectdisable F trace F injectskip F registertogether F solutions F solutions F pageoverflow T splitters F define F optimize F optimize F reset F set pshabsame F setskip F reset F synchronizepage F split F tocategory			·
F oneline  D names  B fixed  D numbers  F set  F forcepageflush  F set  F forcestrutdepth  F start  F getnofpreviouslines  F stop  T expansion  F trace  F injectdisable  F trace  F injectpenalty  F keeptogether  F registertogether  F solutions  T splitters  F define  F optimize  F optimize  T registered  F reset  F set  F set  F setskip  F reset  F setskip  F reset  F setskip  F reset  F split  F tocategories  F tocategory			·
D names D numbers F set F forcepageflush F set F forcestrutdepth F start F getnofpreviouslines F stop F inject T expansion F trace F injectpenalty F keeptogether F registertogether F registertogether F solutions F pageoverflow T splitters F define F optimize F optimize F registered F reset F set F set F sinject F pagehandler F pagehandler F pageoverflow F pageoverflow F pageoverflow F splitters F popatsame F optimize F setmap F registered F setskip F reset F snapbox F set F snapbox F set F snapbox F set F stocategories F start F tocategory	·		·
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F start F getnofpreviouslines F stop F inject  T expansion F injectdisable F trace F injectpenalty F keeptogether F injectskip F registertogether F pagehandler  T solutions F pageoverflow  T splitters F popatsame F define F pushatsame F optimize F setmap  T registered F setskip F reset F snapbox F set F set F synchronizepage F split F tocategory	F set		
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F trace F injectpenalty F keeptogether F injectskip F registertogether F pagehandler T solutions F pageoverflow T splitters F popatsame F define F pushatsame F optimize F setmap T registered F setskip F reset F snapbox F set F synchronizepage F split F tocategory	F stop		F inject
F keeptogether F registertogether F registertogether F solutions F pageoverflow T splitters F popatsame F define F pushatsame F optimize F setmap T registered F reset F reset F samp F setskip F reset F synchronizepage F split F start F tocategory	T expansion		F injectdisable
F registertogether T solutions F pageoverflow T splitters F popatsame F define F optimize F optimize F registered F reset F reset F set F set F set F synchronizepage F split F start F tocategory	F trace		F injectpenalty
T solutions F pageoverflow T splitters F popatsame F define F pushatsame F optimize F setmap T registered F setskip F reset F snapbox F set F synchronizepage F split F tocategories F start F tocategory	F keeptogether		F injectskip
T splitters F popatsame F define F pushatsame F optimize F setmap T registered F setskip F reset F snapbox F set F synchronizepage F split F tocategories F start F tocategory	F registertoget	her	F pagehandler
F define F pushatsame F optimize F setmap T registered F setskip F reset F snapbox F set F synchronizepage F split F tocategories F start F tocategory	T solutions		F pageoverflow
F optimize F setmap T registered F setskip F reset F snapbox F set F synchronizepage F split F tocategories F start F tocategory	T splitters		F popatsame
T registered F setskip F reset F snapbox F set F synchronizepage F split F tocategories F start F tocategory	F define		F pushatsame
F reset F snapbox F set F synchronizepage F split F tocategories F start F tocategory	F optimize		F setmap
F set F synchronizepage F split F tocategories F start F tocategory	T registered	I	F setskip
F split F tocategories F start F tocategory	F reset		F snapbox
F start F tocategory	F set		F synchronizepage
	F split		F tocategories
F stop F vboxhandler	F start		F tocategory
	F stop		F vboxhandler

## caches (context)

base	string	loadcontent	function
collapsecontent	function	loaddata	function
configfiles	function	more	string
contentstate	function	savecontent	function
defaults	table	savedata	function
getfirstreadablefile	function	setfirstwritablefile	function
getreadablepaths	function	setluanames	function
getwritablepath	function	treehash	function
hashed	function	usedpaths	function
is writable	function		

### callback (basic tex)

find function
known function
list function

register overloaded function
usage function

#### callbacks (context)

freeze function functions table F process rule F start page number F stop\_page\_number known function list data table pop function function push register function function report supported table B append to vlist filter

B begin\_paragraph
B build\_page\_insert
B buildpage\_filter
B contribute\_filter
B define\_font

B find\_format\_file
B find\_log\_file
B handle\_overload
B hpack\_filter
B hpack\_quality
B hyphenate
B insert par

B intercept\_lua\_error
B intercept\_tex\_error

B kerning
B ligaturing
B linebreak\_filter
B make\_extensible
B mlist\_to\_hlist
B open\_data\_file

B post\_linebreak\_filter

 ${\tt B} \ {\tt pre\_dump}$ 

B pre\_linebreak\_filter
B pre\_output\_filter
B process\_jobname
B show\_error\_message
B show\_lua\_call
B show\_warning\_message
B show\_whatsit
B start\_file
B start\_run

B stop\_run
B trace\_memory
B vpack\_filter
B vpack\_quality
B wrapup run

B stop\_file

### catcodes (context)

names data table
numbers data table

register function

### characters (context)

activeoffset	number	T anudatta	
adobename	function	T before_half	
bidi	data table	T before_main	
blockrange	function	T before_postscript	
blocks	data table	T before_subscript	
casemap	table	T below_mark	
categories	data table	T consonant	
category	function	T dependent_vowel	
categorytags	data table	T halant	
classifiers	table	T independent_vowel	
collapsed	data table	T nukta	
contextname	function	T post_mark	
csletters	data table	T pre_mark	
data	data table	T ra	
decomposed	data table	T stress_tone_mark	
description	function	T twopart_mark	
descriptions	data table	T vowel_modifier	
detailtags	data table	initialize	function
directions	table	is_character	data table
emoji	table	is_command	data table
F compact		is_letter	data table
F known		is_mark	data table
F resolve		is_punctuation	data table
emojized	function	is_spacing	data table
enccodes	data table	is_symbol 	data table
entities	data table	lcchars	data table
fallbacks	data table	lccode	function
filters	data table	lccodes	data table
fractions	table	lettered	function
fromnumber	function	lhash	data table
fschars	data table	linebreaks	data table
fscodes	data table	lower	function
getrange	function	mathlists	data table
graphemes	data table	mirrors	table
hangul · .·	data table	otfscripts	data table
indicgroups	table	private	table
T above_mark		ranges	data table
T after_half		registerentities	function
T after_main		remap_hangul_syllabe	
T after_postscript		setactivecatcodes	function
T after_subscript		setlettercatcodes	function

shape function shaped function shash data table data table shchars shcodes data table showstring function specialchars data table specials data table splits table

T char T compat

subscripts
superscripts
synonyms
tex
table
table
table

D accentmapping
D commandmapping
F defineaccents
F safechar
F toutf

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

### chemistry (context)

component	function
define	function
definitions	data table
format	string
inlinechemical	function
instance	strina

method string
molecule function
moleculeparser userdata
start function
stop function
undefine string

### containers (context)

cleanname	function
content	function
define	function
is usable	function

is\_valid function
read function
usecache boolean
write function

## converters (context)

A	function	cn-c	function
A:es	function	convert	function
A:ru	function	decimals	function
A:sl	function	define	function
AK	function	gregorian_to_hebrew	function
Alphabetic	function	gregorian_to_jalali	function
Alphabetic:es	function	hebrewnumerals	function
Alphabetic:ru	function	helpers	table
Alphabetic:sl	function	hexstringtonumber	function
Character	function	i	function
Characters	function	isleapyear	function
I	function	jalali_to_gregorian	function
KA	function	lchexnumber	function
KR	function	lchexnumbers	function
R	function	leapyear	function
RK	function	lower	function
Romannumerals	function	max	function
Russiannumerals	function	maxchrs	function
Sloveniannumerals	function	nicenumber	function
Spanishnumerals	function	nofdays	function
Word	function	number	function
Words	function	numbers	function
a	function	octnumber	function
a:es	function	octstringtonumber	function
a:ru	function	ordinal	function
a:sl	function	r	function
abjadnodotnumerals	function	rawcharacter	function
abjadnumerals	function	romannumerals	function
alphabetic	function	russiannumerals	function
alphabetic:es	function	sequences	data table
alphabetic:ru	function	settime	function
alphabetic:sl	function	sloveniannumerals	function
character	function	spaceddigits	function
characters	function	spanishnumerals	function
chineseallnumerals	function	textime	function
chinesecapnumerals	function	toabjad	function
chinesenumerals	function	tochinese	function
chr	function	tohebrew	function
chrs	function	toroman	function
cn	function	totime	function
cn-a	function	uchexnumber	function

uchexnumbers upper verbose function function table

F translate

weekday function
word function
words function

# coroutine (basic lua)

close	function	running	function
create	function	status	function
isyieldable	function	wrap	function
resume	function	yield	function

### ctxrunner (context)

load function
preparedfile function

prepfiles data table
resolve function

### data (context)

action function depth number height number prerolled string
width number

## debug (basic lua)

getinfo function
sethook function

traceback function

## dir (context)

collectpattern	function
current	function
expandname	function
found	function
glob	function
globdirs	function
globfiles	function

globpattern	function
ls	function
makedirs	function
mkdirs	function
рор	function
push	function

## directives (context)

data	data table	name	string
default	function	register	$ \hbox{function} $
disable	function	report	$ \hbox{function} $
done	table	reset	$ \hbox{function} $
enable	function	show	$ \hbox{function} $
list	function	value	$ \hbox{function} $

#### document (context)

arguments
files
functions
getargument
getfilename
options

data table table table function function table

T commandline

D environments

D modes
D modules
T ctxfile

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

## documentdata (context)

variable function

## drivers (context)

convent	function	<b>-</b>
convert	function	T actions
converters	table	F cleanup
F engine		F convert
F lmtx	£	F finalize
enable	function	F initialize
gethpos	function	F outputfilename
getpos	function	F prepare
getrpos	function	F wrapup
getvpos	function	T flushers
helpers	table	F character
install	function	F rule
instances	table	F simplerule
T default		F specialrule
T actions		F updatefontstate
F convert		S name
F outputfil	ename	T lua
T flushers		T actions
S name		F cleanup
T empty		F convert
T actions		F finalize
F convert		F initialize
F prepare		F outputfilename
T flushers		F prepare
S name		F wrapup
T js		T flushers
T actions		F character
F cleanup		F rule
F convert		F simplerule
F finalize		F specialrule
F initializ	e	F updatefontstate
F outputfil	ename	S name
F prepare		T mps
F wrapup		T actions
T flushers		F cleanup
F character		F convert
F rule		F finalize
F simplerul	e	F initialize
F specialru	le	F outputfilename
F updatefon	tstate	F prepare
S name		F wrapup
T json		T flushers

F character T flushers F rule F character F fontchar F simplerule F specialrule F group F updatefontstate F image S name F literal T none F poporientation T actions F pushorientation T flushers F restore S name F rule T pdf F save T actions

actions F save
actions F setmatrix
F cleanup F simplerule
F convert F specialrule
F finalize F updatefontstate
F initialize S name

F outputfilename

F prepare

F wrapup

Imtxversion number

outputfilename function

report function

## environment (context)

argument	function	luafile	function
arguments	data table	luafilechunk	function
basicengines	data table	luatexengine	string
currentrun	number	luatexfunctionality	number
definefilefallback	function	luatexversion	number
definefilesynonym	function	maxnofruns	number
engineflags	data table	oldhome	string
filename	string	originalarguments	data table
filenames	table	outputfilename	string
files	table	ownbin	string
filesynonyms	data table	ownmain	string
forcedruns	number	ownname	string
getargument	function	ownpath	string
homedir	string	prerollrun	boolean
initex	boolean	rawarguments	data table
initexmode	boolean	reconstructcommandline	function
initializearguments	function	relativepath	function
initializefilenames	function	setargument	function
inputfilebarename	string	splitarguments	function
inputfilename	string	suffix	string
inputfilesuffix	string	texfile	function
jobfilefullname	string	texmfos	string
jobfilename	string	texos	string
jobfilesuffix	string	texroot	string
jobname	string	truefilename	function
kindofrun	number	useluamodule	function
lmtxmode	number	usemodules	function
loadexamodes	function	validengines	data table
loadluafile	function	version	string

### 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)

B art

applyratio	function	B bleed	
badname	function	B crop	
bases	data table	B media	
bitmapimage	function	B none	
boxnumber	number	B trim	
cachepaths	data table	F totable	
check	function	T types	
checkers	data table	N jbig2	
converters	data table	N jp2	
current	function	N jpg	
defaultdepth	number	N memstream	
defaultheight	number	N none	
defaultsearch	boolean	N pdf	
defaultwidth	number	N png	
done	function	N stream	
dummy	function	F wrap	
existers	data table	include	function
exists	function	includers	data table
formats	data table	initialize	function
found	data table	loaded	data table
get	function	localpaths	data table
getinfo	function	magics	data table
getpdfinfo	function	mergegoodies	function
getrealpage	function	nofmissing	number
guess	function	nofprocessed	number
guessfromstring	function	order	data table
hash	function	paths	data table
identifiers	data table	patterns	data table
identify	function	рор	function
images	table	preferquality	boolean
F check		programs	data table
F checksize		push	function
F copy		registerpattern	function
F create		registerresource	function
F embed		registersuffix	function
T keys		remappers	data table
F print		resources	data table
F scan		scale	function
F serialize		set	function
T sizes		setlookups	function

setmemstream

function

setorderfunctionsuffixesdata tablesetpathsfunctionuseddata table

# file (basic lua)

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

# fio (extra lua)

getposition	$ \hbox{function} $
read2dot14	$ \hbox{function} $
readbytes	$ \hbox{function} $
readbytetable	$ \hbox{function} $
readcardinal1	$ \hbox{function} $
readcardinal1le	$ \hbox{function} $
readcardinal2	$ \hbox{function} $
readcardinal2le	$ \hbox{function} $
readcardinal3	$ \hbox{function} $
readcardinal3le	$ \hbox{function} $
readcardinal4	$ \hbox{function} $
readcardinal4le	$ \hbox{function} $
${\bf read cardinal table}$	$ \hbox{function} $
readfixed2	$ \hbox{function} $
readfixed4	$ \hbox{function} $
readinteger1	$ \hbox{function} $
readinteger1le	$ \hbox{function} $
readinteger2	$ \hbox{function} $

readinteger2le	function
readinteger3	function
readinteger3le	function
readinteger4	function
readinteger4le	function
readintegertable	function
readline	function
setposition	function
skipposition	function
writecardinal1	function
writecardinal1le	function
writecardinal2	function
writecardinal2le	function
writecardinal3	function
writecardinal3le	function
writecardinal4	function
writecardinal4le	function

# floats (context)

analysemethod	function	nofstacked	$ \hbox{function} $
checkedpagefloat	function	pop	function
collect	function	push	function
consult	function	resave	function
flush	function	save	function
getvariable	function	stacked	function
hasstacked	function		

# font (basic tex)

addcharacters	function
current	function
define	function
each	function
getfont	function
getfontdimen	function

id	function
max	function
nextid	function
setfont	function
setfontdimen	function

# fonts (context)

	+ahla	
analyzers	table	F collectprocessors
D features		F currentfonthasfeature
D initializers		D designsizes
D methods		D dontembed
F setstate		F enhanceparameters
D states		T enhancers
B useunicodemarks		T afm
checkers	table	F apply
F getmissing		F patch
F missing		T patches
F placeholder	table	F register
cid	table	F report
F getmap		F register
F loadfile	table	F report
collections	table	T otf
F checkenabled		F addfeature
F clonevector		F apply
F define		F enhance
T definitions		F patch
F found		T patches
F prepare		F register
F process		F report
F registermain		F register
F report		F report
F reset T vectors		T tfm F apply
constructors	table	F patch
F addcharacters	tabte	T patches
F addcoreunicodes	-	F register
B addtounicode		F report
F aftercopyingcha	aracters	F register
F applymanipulato		F report
F assignmathparar		N factor
B autocleanup		T features
F beforecopyingch	haracters	D afm
D cache		D otf
B cacheintex		D tfm
F calculatescale		F finalize
F checkedfeatures	S	B fixprotrusion
F checkedfilename		F getfeatureaction
F cleanuptable		F getmathparameter

F. autoriusta	F
F getprivate	F featuresinitializer
T handlers	F featuresprocessor
T afm	F getactualtext
B autoprefixed	F getalternate
D cache	F getgsub
D features	F getkern
F getkern	F getmultiple
T helpdata	F getstreamhash
D bothkerned	F getsubstitution
D leftkerned	T handlers
D ligatures	F devanagari_remove_joiners
D rightkerned	F devanagari_reorder_matras
D texligatures	F devanagari_reorder_pre_base_reordering_consonants
F load	F devanagari_reorder_reph
T readers	F gpos_context
F getinfo	F gpos_contextchain
Floadfont	F gpos_cursive
F loadshapes	F gpos_mark2base
F setfeatures	F gpos_mark2ligature
B syncspace	F gpos_mark2mark
N version	F gpos_pair
T otf	F gpos_single
F addfeature	F gsub_alternate
F basemodeinitializer	F gsub_context
D cache	F gsub_contextchain
F collectlookups	F gsub_ligature
T coverup	F gsub_multiple
T actions	F gsub_reversecontextchain
F alternate	F gsub_single
F chainposition	F trigger_space_kerns
F chainsubstitution	T helpers
F kern	F blockligatures
F ligature	F pardirstate
F multiple	F txtdirstate
F pair	F load
F single	F loadoutlinedata
F substitution	F loadstreamdata
F register	F modeinitializer
S stepkey	D mpscache
F dataset	D pdfcache
F datasetpositionprocessor	F plugininitializer
S defaultbasealternate	F pluginprocessor
S defaultnodealternate	T plugins
D features	D pngcache

B pngenabled	F reversechainedcontextsingle
T readers	F single
F addunicodetable	Fgvar
F avar	F head
F cbdt	T helpers
F cblc	F axistofactors
F cff	F cleanname
F cff2	F getaxisscale
F cffcheck	F getfactors
T cffencoder	F getscales
F checkhash	F gotodatatable
F cmap	F normalizedaxis
Fcolr	T normalizedaxishash
F compact	F readvariationdata
F cpal	F reportskippedtable
F ebdt	F setvariabledata
F eblc	F hhea
F ebsc	F hmtx
F expand	F hvar
F extend	F kern
F fvar	F loadfont
F gdef	F loadshapes
F getcomponents	F loca
F getinfo	F math
F glyf	F maxp
F gpos	F mvar
T gposhandlers	F name
F chainedcontext	F os/2
F context	F pack
F cursive	F parsecharstrings
F extension	F post
F marktobase	F registerextender
F marktoligature	F rehash
F marktomark	F sbix
F pair	F stat
F single	T streamreader
F gsub	F close
T gsubhandlers	F getposition
F alternate	F getsize
F chainedcontext	F look
F context	F open
F extension	F read2dot14
F ligature	F readbyte
F multiple	F readbytes

F readbytetable	F writeinteger2
F readcardinal	F writeinteger2le
F readcardinal1	F writeinteger3
F readcardinal1le	F writeinteger3le
F readcardinal2	F writeinteger4
F readcardinal2le	F writeinteger4le
F readcardinal3	F writestring
F readcardinal3le	F stripredundant
F readcardinal4	F svg
F readcardinal4le	N tableversion
F readcardinaltable	F unifymissing
F readchar	F unpack
F readfixed2	F vhea
F readfixed4	F vmtx
F readinteger	F vorg
F readinteger1	F vvar
F readinteger1le	F woff2otf
F readinteger2	F registerpalette
F readinteger2le	F registerplugin
F readinteger3	F reorderlookups
F readinteger3le	F scriptandlanguage
F readinteger4	F setdynamics
F readinteger4le	F setfeatures
F readintegertable	T statistics
F readsignedbyte	D usedfeatures
F readstring	D svgcache
F readtag	B svgenabled
F setposition	T tables
F size	D baselines
F skip	D features
F skiplong	D featuretypes
F skipposition	D languages
F skipshort	D scripts
F writebyte	N version
F writecardinal1	T pfb
F writecardinal1le	F loadvector
F writecardinal2	T tfm
F writecardinal2le	D cache
F writecardinal3	D features
F writecardinal3le	N maxnestingdepth
F writecardinal4	N maxnestingsize
F writecardinal4le	T readers
F writeinteger1	F loadpk
F writeintegerlle	F loadtfm

r landsons	6
F loadtfmvf	S scriptpercentage
Floadvf	S scriptscriptpercentage
F pktopdf	S size
F showpk	S slantfactor
F reencode	S slantperpoint
F setfeatures	T spacing
N version	S extra
T vf	S shrink
T combinations	S stretch
F combine	S width
T combiner	S units
D commands	S vfactor
D helpers	S width
D math	S xheight
D predefined	T properties
N version	S autoitalicamount
D whatever	S cidinfo
F hashfeatures	T effect
F hashinstance	S ddelta
T hashmethods	S effect
F normal	S factor
F virtual	S hdelta
	C 1-4
F initializefeatures	S hfactor
F initializefeatures T keys	S vfactor
T keys	S vfactor
T keys T characters	S vfactor S wdelta
T keys T characters T descriptions	S vfactor S wdelta S width
T keys T characters T descriptions T parameters	S vfactor S wdelta S width S embedding
T keys T characters T descriptions T parameters S ascender	S vfactor S wdelta S width S embedding S encodingbytes
T keys T characters T descriptions T parameters S ascender S descender	S vfactor S wdelta S width S embedding S encodingbytes S filename
T keys T characters T descriptions T parameters S ascender S descender S designsize	S vfactor S wdelta S width S embedding S encodingbytes S filename S finalized
T keys T characters T descriptions T parameters S ascender S descender S designsize T expansion	S vfactor S wdelta S width S embedding S encodingbytes S filename S finalized S fontname
T keys T characters T descriptions T parameters S ascender S descender S designsize T expansion S auto	S vfactor S wdelta S width S embedding S encodingbytes S filename S finalized S fontname S format
T keys T characters T descriptions T parameters S ascender S descender S designsize T expansion S auto S shrink	S vfactor S wdelta S width S embedding S encodingbytes S filename S finalized S fontname S format S fullname
T keys T characters T descriptions T parameters S ascender S descender S designsize T expansion S auto S shrink S step	S vfactor S wdelta S width S embedding S encodingbytes S filename S finalized S fontname S format S fullname S hasitalics
T keys T characters T descriptions T parameters S ascender S descender S designsize T expansion S auto S shrink S step S stretch	S vfactor S wdelta S width S embedding S encodingbytes S filename S finalized S fontname S format S fullname S hasitalics S hasmath
T keys T characters T descriptions T parameters S ascender S descender S designsize T expansion S auto S shrink S step S stretch S extendfactor	S vfactor S wdelta S width S embedding S encodingbytes S filename S finalized S fontname S format S fullname S hasitalics S hasmath S mathitalics
T keys T characters T descriptions T parameters S ascender S descender S designsize T expansion S auto S shrink S step S stretch S extendfactor S factor	S vfactor S wdelta S width S embedding S encodingbytes S filename S finalized S fontname S format S fullname S hasitalics S hasmath S mathitalics S mode
T keys T characters T descriptions T parameters S ascender S descender S designsize T expansion S auto S shrink S step S stretch S extendfactor S factor	S vfactor S wdelta S width S embedding S encodingbytes S filename S finalized S fontname S format S fullname S hasitalics S hasmath S mathitalics S mode S name
T keys T characters T descriptions T parameters S ascender S descender S designsize T expansion S auto S shrink S step S stretch S extendfactor S factor S hfactor S mathsize	S vfactor S wdelta S width S embedding S encodingbytes S filename S finalized S fontname S format S fullname S hasitalics S hasmath S mathitalics S mode S name S nostackmath
T keys T characters T descriptions T parameters S ascender S descender S designsize T expansion S auto S shrink S step S stretch S extendfactor S factor S hfactor S mathsize S mode	S vfactor S wdelta S width S embedding S encodingbytes S filename S finalized S fontname S format S fullname S hasitalics S hasmath S mathitalics S mode S name S nostackmath S psname
T keys T characters T descriptions T parameters S ascender S descender S designsize T expansion S auto S shrink S step S stretch S extendfactor S factor S hfactor S mathsize S mode T protrusion S auto	S vfactor S wdelta S width S embedding S encodingbytes S filename S finalized S fontname S format S fullname S hasitalics S hasmath S mathitalics S mode S name S nostackmath S psname S textitalics S virtualized
T keys T characters T descriptions T parameters S ascender S descender S designsize T expansion S auto S shrink S step S stretch S extendfactor S factor S hfactor S mathsize S mode T protrusion	S vfactor S wdelta S width S embedding S encodingbytes S filename S finalized S fontname S format S fullname S hasitalics S hasmath S mathitalics S mode S name S nostackmath S psname S textitalics

N noffontsloaded		F name	
N nofsharedfonts		F spec	
N nofsharedhashes	;	definetypeface	function
N nofsharedvector	`s	dropins	table
N privateoffset		F clone	
D privateslots		F nextid	
F readanddefine		F provide	
F registerfeature	<u> </u>	F registerglyph	
F resetfeature		F registerglyphs	
B resolvevirtual	00	F swap	
F scale		encodings	table
F scaled		T agl	
F setfactor		D ctxcodes	
F setfeature		D extras	
F setmathparamete	er	D names	
F setname		D synonyms	
B sharefonts		D unicodes	
F trytosharefont		D cache	
N version		F is_known	
current	function	D known	
currentid	function	F load	
definers	table	F make_unicode_ve	ctor
F addlookup		D math	
F analyze		N version	
F applypostproces	sors	enhanceid	function
F checkedmode		expansions	data table
F checkedscript		formats	data table
S defaultlookup		getalternate	function
F define		getindices 	function
F getspecification	on	getkern	function
Finternal		getmultiple	function
F loadfont		getsubstitution	
F makespecificati	.on	getters	table
T methods		T alternate	
F install		F opentype	
D variants		T kern	
F read		F opentype	
F register F registered		F type1 F type3	
•		•	
F registersplit F resetnullfont		T multiple F opentype	
F resethulitont F resolve		r opentype T substitution	
T resolvers		F opentype	
F file		goodies	table
L ITTE		goodtes	table

D colorschemes	5	D parameters
T data		T processes
T dejavu-mat	h	D properties
S author		D quads
S comment		D resources
S copyrigh	t	T setdynamics
B initiali	zed	T shapes
T mathemat	ics	D spaces
T alterna	ates	D spacings
T dotle	ss	T streams
S com	ment	D unicodes
S fea	ture	D variants
N val	ue	D xheights
T kerns		<b>helpers</b> table
S name		F addextraprivate
S version		F addprivate
D designsizes		F appendcommands
D filenames		F appendcommandtable
F getcompositi	ions	F checkflags
T list		F checkmerge
F load		F checksteps
F prepare_feat	ures	F collectanchors
F register		D commands
F registerpost	processor	F descriptiontoslot
F report		F dimenfactor
T suffixes		F expandglyph
handlers	table	T extraprivates
hashes	table	F fontpatternhassize
D characters		F getcoloredglyphs
D classes		F getdigitwidth
D csnames		F getinstancespec
D descriptions	;	F getparameters
D dynamics		F getprivatecharornode
D emwidths		F getprivatenode
D exheights		F getprivates
D extensibles		F getprivateslot
D features		F hasprivate
D identifiers		F indextoslot
D italics		F name
D lastmathids		F nametoslot
D marks	are	F newprivateslot F prependcommands
D mathparamete D modes	:13	, ,
		F prependcommandtable
D originals		F privateslot

F setdigitwidth B keepnames F splitfontpattern N mathbase F tochar N mathextrabase infofont function N textbase iterators table N textextrabase protrusions data table F characters table readers F descriptions F glyphs F afm loggers table F check lua F add placeholders F check tfm D category to placeholder F lua F format F ofm F onetimemessage F opentype F register F otf F reportdefinedfonts F pfb F reportusedfeatures D sequence mappings F tfm F addtounicode F ttc F fromunicode16 F ttf F woff F loadfile reserveid function F loadline select table F makenameparser D overloads D alternatives F reset F bodyfont F tounicode D data F default F tounicode16 F tounicode16sequence D defaults table metapost F definefallbackfamily F boundingbox F definefontfamily F boxtomp F definefontfamilypreset F draw D extras F fill F fallback F maxbounds D fallbacks F features F output F filefallback F paths F widthline F fontdata F fontfallback F zeroline table mp F fontsynonym D cache F goodies B inline F mathfallback N version D methods names data table D presets nulldata data table F registerfallback privateoffsets table F registerfiles

F registerfontalternative D variants symbols F registerfontfamily table F textfallback T emoji F typeface F checked F typescript F resolved F userdata F uselibrary specifiers table tables table D contextmerged D data F contextnumber F savefont D contextnumbers F saveoriginal tracers table D contextsetups treatments table F contexttostring F definecontext F applyfixes D data F mergecontext S filename F presetcontext F registercontext F ignoredfile F showcontext F report F splitcontext F trace

typefaces

table

D synonyms

## functions (context)

dummy function

### graphics (context)

backgrounds table

F fetchmultipar

F pair

F path

F point

bitmaps table

F flush

F new

F placeholder

F tocontext

identifiers table

F bitmap

F jp2

F jpg

F png

identify function

# gzip (extra lua)

compress	function	load	function
compressed	function	save	function
decompress	function	suffix	function

### images (context)

check function B none checksize function B trim function totable function сору create function table types embed function N jbig2 keys table N jp2 print function N jpg function scan N memstream serialize function N none table sizes N pdf B art N png B bleed N stream wrap function B crop B media

## interactions (context)

atta	achments	data <sup>-</sup>	table			D	functions		
fie	lds	table				D	preambles		
F	F clone					F	setpreamb <sup>1</sup>	le	
F	F define					F	storecode		
F	F defineset					F	storepream	mble	
F	Finsert					F	usepreamb <sup>1</sup>	lenow	
gen	eral	table				F	usescript	5	
F	F getidenti	ty			li	.nk	edlists	data	table
F	F setupiden	tity			pa	ge	S	table	9
help	р	table				F	setpagetra	ansitio	n
F	F collect					F	setupcanva	as	
F	F reference				re	fe	rences	table	9
F	F register					F	setclosed	ocument	
java	ascripts	table				F	setclosepa	age	
F addtopreamble		F setopendocument							
F	F code					F	setopenpa	ge	
	) codes				re	nde	erings	data	table
F	F flushprea	mbles			so	un	dclips	data	table

## interfaces (context)

arrays	table	namesofscanners	table
cachedsetups	data table	namespaces	table
cachesetup	function	F define	
cardinals	table	F list	
checkedspecification	function	numbers	table
complete	data table	registernamespace	function
constants	data table	registerscanner	function
corenamespaces	data table	scanners	data table
currentinterface	string	setconstant	function
currentresponse	string	setcount	function
definecommand	function	setdimen	function
defined	function	setelement	function
doifelsemessage	function	setformat	function
elements	data table	setmacro	function
floats	table	setmessage	function
formats	data table	setmessages	function
getmessage	function	settranslation	function
getnamespace	function	setupstrings	data table
getsetupstring	function	setvariable	function
hashedsetups	data table	showmessage	function
implement	function	storedscanners	data table
integers	table	tolist	function
interfacedcommand	function	translations	data table
interfaces	table	usednamespaces	data table
knownscanner	function	variables	data table
message	function	writestatus	function
nameofscanner	function		

#### io (basic lua)

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

input overloaded function overloaded function lines

loadchunk function loaddata function loadlines function newreader function noflines function

open overloaded function output overloaded function

pathseparator string

overloaded function popen

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

# job (context)

<b>-</b>	for this a		
comment	function	D tobesaved	4-61-
datasets	table	parwrappers	table
D collected		D collected	
F extend		D tobesaved	+-bl-
F getdata		passes	table
F setdata		F check	
D tobesaved		D collected	
disablesave	function	F count	
embedded	table	F define	
D collected		F find	
D tobesaved		F first	
fileobjreferences	table	F get	
D collected		F getcollected	
D tobesaved		F getdata	
files	table	F getfield	
D collected		F gettobesaved	
F context		F inlist	
B forcerun		F last	
F run		F list	
D tobesaved		F save	
getrandomseed	function	F savetagged	
initialize	function	D tobesaved	
load	function	positions	table
loadother	function	F b_column	
objects	table	F b_region	
D collected		Fc	
F get		D collected	
F number		F column	
F page		F columnofpos	
F save		F copy	
F set		F depth	
D tobesaved		F e_column	
pack	boolean	F e_region	
packversion	number	F enhance	
pagestates	table	F extra	
D collected		F get	
F countervalue		F getfree	
F extend		F gethpos	
F realpage		F getpos	
F realpageorder		F getreserved	
		i getreserveu	
F setstate		F getrpos	

F gettobesaved	D tobesaved	
F getvpos	F upperleft	
F hangafter	F upperright	
F hangindent	F used	
F height	F whd	
F hsize	F width	
F leftskip	F x	
F lowerleft	F xy	
F lowerright	F y	
F markregionbox	register	function
Fn	save	function
F onsamepage	structure	table
F overlapping	D collected	
F p	T components	
F page	T tobesaved	
T pagedata	T branches	
F paragraph	S name	
F parindent	S type	
F position	variables	table
Fr	D checksums	
F region	D collected	
F registerhandlers	F getchecksum	
F replace	F makechecksum	
F rightskip	F restore	
F set	F save	
F setall	F setchecksum	
F setregionbox	D tobesaved	

F setspec F settobesaved version

number

# language (basic tex)

clean	function
${\tt clear\_hyphenation}$	function
clear_patterns	function
current	function
gethjcode	function
has_language	function
hyphenate	function
hyphenation	function
hyphenationmin	function

id	function
new	function
patterns	function
postexhyphenchar	function
posthyphenchar	function
preexhyphenchar	function
prehyphenchar	function
sethjcode	function

# languages (context)

associate	function	F registerpattern	
associated	data table	F setfeatures	
association	function	installed	function
counters	data table	labels	table
current	function	F define	
data	data table	F split	
decimals	data table	loadable	function
define	function	loadwords	function
explicithyphen	function	logger	table
flatten	function	F report	
frequencies	table	nofflattened	function
F averagecharwidth		numbers	data table
F getdata		postexhyphenchar	function
getdata	function	posthyphenchar	function
getnumber	function	preexhyphenchar	function
hjcounts	table	prehyphenchar	function
hyphenate	function	registered	data table
hyphenators	table	replacements	table
T dictionaries		F add	
D featuresets		F addlist	
F handler		F handler	
T methods		F set	
F expanded		serializediscretionary	function
B none		setexceptions	function
F original		setsynonym	function
F tex		showdiscretionaries	function
F traditional		transliteration	table
F popmethod		F define	
F pushmethod		F handler	
F setmethod		F set	
F setup		unload	function
F showhyphenationtrace		urls	table
T traditional		D characters	
F definefeatures		N lefthyphenmin	
F gettrace		D mapping	
F hyphenate		B packslashes	
F injecthyphens		N righthyphenmin	
F installmethod		F setcharacters	
F lasttrace		version	number
F loadpatterns		visualizediscretionaries	
F registerexception		words	table

F	check	В	enables
Т	data	F	found
F	disable	F	load
F	enable	Т	methods
Т	enablers	N	threshold

## layouts (context)

status table
 F isleftpage

F leftorrightpageaction

#### lfs (extra lua)

attributes overloaded function chdir overloaded function

currentdir function

isfound function
isreadabledir function
isreadablefile function
iswriteabledir function

iswriteablefile function

**mkdir** overloaded function

mkdirs function
modification
readlink function

setexecutable function
symlink function

touch overloaded function

### libraries (context)

basiclua data table
basictex data table
builtin data table
extralua data table

extratex data table
functions data table
globals data table

#### lmx (context)

color function function convert convertfile function convertstring function einject function eprint function escape function finalized function finject function **fprint** function aet function getvariables function function htmfile h+ml table Fa

F td F th

include function
inherited table

S color-background-four

S color-background-one

S color-background-three

S color-background-two

S title

initialize function
inject function
lmxfile function

loadedfile function function make new function overloaderror function popupfile function function print pν function function report reset function result function set function function show showerror function stripcss function tν function function type function urlescape 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	setformatters	function
categories	function	setlogfile	function
direct	function	setmessenger	function
disable	function	setprocessor	function
enable	function	settarget	function
finalactions	function	settimedlog	function
flush	function	settranslations	function
loggingerrors	function	show	function
messenger	function	start_page_number	function
new	function	start_run	function
newline	function	starterrorlogging	function
poptarget	function	startfilelogging	function
private	table	status	function
F enablepagetiming		stop_page_number	function
F getpagetiming		stoperrorlogging	function
pushtarget	function	stopfilelogging	function
registerfinalactions	function	subdirect	function
report	function	subreport	function
reporter	function	texerrormessage	function
setformats	function	writer	function

# lpdf (context)

action	function	delayedobject	function
adddocumentcolorspace	function	destinationspecification	function
adddocumentextgstate	function	dictionary	function
adddocumentpattern	function	docstring	function
adddocumentshade	function	epdf	table
addtocatalog	function	F analyzefonts	
addtoinfo	function	F contenttotext	
addtonames	function	F expanded	
addtopageattributes	function	F getpagecontent	
addtopageresources	function	F getstructure	
addtopagesattributes	function	T image	
addxmpinfo	function	F close	
annotationspecification	function	F copy	
array	function	F new	
attachmentsymbols	function	F open	
boolean	function	F query	
border	function	F load	
checkedkey	function	F parsecontent	
checkedvalue	function	F plugin	
circularshade	function	T resolvers	
cmykcode	function	F destinations	
collectedresources	function	F embeddedfiles	
color	function	F javascripts	
colorspace	function	F layers	
colorspaceconstants	data table	F pages	
colorspec	function	F structure	
colorvalue	function	F widgets	
colorvalues	function	F stripcontent	
commentsymbols	function	F unload	
compresslevel	function	escaped	function
constant	function	finalizedocument	function
copyarray	function	finalizefonts	function
copyboolean	function	finalizepage	function
copyconstant	function	finishtransparencycode	function
copydictionary	function	flags	table
copyfloat	function	T annotations	
copyinteger	function	N AutoView	
copynumber	function	N Hidden	
copystring	function	N Invisible	
copyunicode	function	N Locked	
deferredobject	function	N LockedContents	

N NoRotate		fromeight	function
N NoView		frompdfdoc	function
N NoZoom		fromsixteen	function
N Print		getcatalog	function
N Printable		getcompression	function
N ReadOnly		getfontname	function
N ToggleNoView		getfontobjectnumber	function
N auto		getinfo	function
N hidden		getmapentry	function
N printable		getmatrix	function
T widgets		getmetadata	function
N Comb		getnofpages	function
N CommitOnSelChange		getpageproperties	function
N DoNotScroll		getpagereference	function
N DoNotSpellCheck		getpagetags	function
N Edit		getpos	function
N FileSelect		getversion	function
N MultiLine		getxformname	function
N NoExport		graycode	function
N NoToggleToOff		hasmatrix	function
N Password		id	function
N PopUp		immediateobject	function
N PushButton		includeimage	function
N Radio		injectors	table
N RadiosInUnison		F bitmap	
N ReadOnly		F jp2	
N Required		F jpg	
N RichText		F png	
N Sort		injectxmpinfo	function
N file		insertxmpinfo	function
N fixed		layerreference	function
N nocheck		limited	function
N protected		linearshade	function
N readonly		literal	function
N required		loadmapfile	function
N sorted		loadmapline	function function
N unavailable flushfonts	function	majorversion makenametree	function
flushgroup	function	minorversion	function
flushobject	function		function
flushstreamfileobject	function	nofpages null	function
flushstreamobject	function	nucc number	function
formats	data table	object	function
frombytes	function	object	function
i i oliiby tes	TUILCETOIL	onjectcompresstevet	Tunction

pagereference	function	setpageorder	function
patternstream	function	setpagetag	function
pdfcolor	function	settime	function
pdftimestamp	function	setversion	function
permitdetail	function	shareobject	function
print	function	shareobjectreference	function
procset	function	spotcode	function
protectresources	boolean	stream	function
rectangle	function	string	function
reference	function	toeight	function
registerannotation	function	topdfdoc	function
registerdestination	function	tosixteen	function
registerdocumentfinalizer	function	transparency	function
registerfont	function	transparencycode	function
registerpagefinalizer	function	transparencygroups	table
registerpattern	function	B none	
reserveobject	function	transparencyvalue	function
rgbcode	function	unicode	function
rotationcm	function	usedcharacters	table
setcompression	function	verbose	function
setomitcharset	function	vfimage	function
setomitcidset	function		

# lpeg (basic lua)

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

## lua (basic tex)

bytecode	table	macros	table
bytedata	data table	B enabled	
bytedone	table	F loaded	
callbytecode	function	F required	
collectgarbage	function	F reset	
delay	function	F resolvestring	
finalize	function	F resolving	
firstbytecode	number	F showdefinitions	
flush	function	messages	data table
flushdelayed	function	newindex	function
<pre>get_functions_table</pre>	function	newtable	function
getbytecode	function	numbers	data table
getcurrenttime	function	registercode	function
getfunctionstable	overloaded function	registeredcodes	function
getpreciseseconds	function	registerfinalizer	function
getpreciseticks	function	registername	function
getruntime	function	setbytecode	function
getstacktop	function	setexitcode	function
getstartupfile	function	startupfile	string
getversion	function	version	string
lastbytecode	number		

### luatex (context)

F disable

F enable

abort function F finish cleanup function F pause cleanuptempfiles function F popline currentfile function F pushline registerdumpactions function F registerdisabler registerpageactions function F registerenabler registerstartactions function F resetfilename registerstopactions function F resume registertempfile function F setfilename starttime number F setup synctex table F start F blockfilename F stop F collect F wrapup

wrapup

function

## lxml (context)

addindex	function	first	function
all	function	flush	function
applyfunction	function	flushlinewise	function
applyselectors	function	flushsetups	function
att	function	flushspacewise	function
attribute	function	<del>get_id</del>	<del>function</del>
badinclusions	function	getid	function
chainattribute	function	getindex	function
checkindex	function	id	function
collected	function	idsplitter	userdata
command	function	include	function
concat	function	inclusion	function
concatrange	function	inclusions	function
content	function	index	function
context	function	inlineverbatim	function
convert	function	installsetup	function
count	function	last	function
delete	function	lastatt	function
depth	function	lastmatch	function
direct	function	lastpar	function
directives	table	load	function
	cubic	codd	Tunction
F after	cubic	loadbuffer	function
	tubte		
F after	cubic	loadbuffer	function
F after F before	Capte	loadbuffer loaddata	function function table function
F after F before F handle		loadbuffer loaddata loaded	function function table
F after F before F handle F load F setup  displayverbatim	function	loadbuffer loaddata loaded main	function function table function
F after F before F handle F load F setup displayverbatim doif		loadbuffer loaddata loaded main match	function function table function function
F after F before F handle F load F setup displayverbatim doif doifelse	function function function	loadbuffer loaddata loaded main match name	function function table function function function function function
F after F before F handle F load F setup displayverbatim doif	function function function function	loadbuffer loaddata loaded main match name namespace	function function table function function function function function
F after F before F handle F load F setup displayverbatim doif doifelse	function function function function function function	loadbuffer loaddata loaded main match name namespace nonspace	function function table function function function function function function
F after F before F handle F load F setup displayverbatim doif doifelse doifelseempty	function function function function	loadbuffer loaddata loaded main match name namespace nonspace par	function function table function function function function function
F after F before F handle F load F setup displayverbatim doif doifelse doifelseempty doifelsetext doifempty doifnot	function function function function function function	loadbuffer loaddata loaded main match name namespace nonspace par param	function function table function function function function function function
F after F before F handle F load F setup displayverbatim doif doifelse doifelseempty doifelsetext doifempty	function function function function function function function	loadbuffer loaddata loaded main match name namespace nonspace par param parameter	function function table function function function function function function function
F after F before F handle F load F setup displayverbatim doif doifelse doifelseempty doifelsetext doifempty doifnot	function function function function function function function function	loadbuffer loaddata loaded main match name namespace nonspace par param parameter path	function function table function function function function function function function function
F after F before F handle F load F setup displayverbatim doif doifelse doifelseempty doifelsetext doifempty doifnot doifnotempty	function function function function function function function function function	loadbuffer loaddata loaded main match name namespace nonspace par param parameter path popmatch	function function table function function function function function function function function function
F after F before F handle F load F setup displayverbatim doif doifelse doifelseempty doifelsetext doifempty doifnot doifnotempty doifnotext	function	loadbuffer loaddata loaded main match name namespace nonspace par param parameter path popmatch pos	function function table function function function function function function function function function function function
F after F before F handle F load F setup displayverbatim doif doifelse doifelseempty doifelsetext doifempty doifnot doifnotempty doifnottext element elements	function	loadbuffer loaddata loaded main match name namespace nonspace par param parameter path popmatch pos position	function function table function function function function function function function function function function function function
F after F before F handle F load F setup  displayverbatim  doif  doifelse  doifelseempty  doifenpty  doifnot  doifnotempty  doifnottext  element elements entities	function	loadbuffer loaddata loaded main match name namespace nonspace par param parameter path popmatch pos position pure	function function table function function function function function function function function function function function function function
F after F before F handle F load F setup displayverbatim doif doifelse doifelseempty doifelsetext doifempty doifnot doifnotempty doifnottext element elements	function	loadbuffer loaddata loaded main match name namespace nonspace par param parameter path popmatch pos position pure pushmatch	function function table function function function function function function function function function function function function function function

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

## math (basic lua)

abs	function
acos	function
asin	function
atan	function
atan2	function
ceil	function
ceiling	function
cos	function
cosd	function
cosh	function
deg	function
div	function
even	function
exp	function
floor	function
fmod	function
huge	number
initialseed	number
ldexp	function
log	function
log10	function
max	function
maxinteger	number

min	function	
mininteger	number	
mod	function	
modf	function	
odd	function	
pi	number	
pow	function	
rad	function	
random	${\tt overloaded}$	$ \hbox{function} $
randomseed	function	
round	function	
setrandomseedi	function	
sin	function	
sind	function	
sinh	function	
sqrt	function	
tan	function	
tand	function	
tanh	function	
tointeger	function	
type	function	

function

ult

## mathematics (context)

addfall backs	function		data tabla
addfallbacks	function	mapremap	data table
alphabets	data table	overloaddimensions	function
alternatives	data table	overloadparameters	function
big	function	privatebase	number
boldmap	data table	registerdomain	function
categories	table	registerfallbackid	function
D functions		remapalphabets	function
charactersets	data table	renderings	table
checkaccentbaseheight	function	D mappings	
checkprivateparameters	function	D numbers	
classes	data table	D sets	
codes	data table	renderset	function
define	function	resetattributes	function
dimensions	function	resetitalics	function
domains	table	resolvefallbacks	function
extensiblecode	function	scaleparameters	function
extensibles	data table	setdomain	function
extrabase	number	setitalics	function
extras	table	setridofprime	function
F add		sets	data table
F copy		styles	data table
fallbacks	table	syncboth	function
F apply		syncname	function
F install		syncstyle	function
fallbackstyleattr	function	toname	function
families	data table	tostyle	function
finishfallbacks	function	tweakaftercopyingfont	function
gaps	data table	tweakbeforecopyingfont	function
getboth	function	tweaks	table
getdomain	function	utfmathaccent	function
getitalics	function	utfmathclass	function
getridofprime	function	utfmathcommand	function
getstyle	function	utfmathfiller	function
horizontalcode	function	utfmathstretch	function
initializeparameters	function	virtualize	function
makefont	function	virtualized	data table

## md5 (extra lua)

HEXfunctionsumfunctiondecfunctionsumHEXAfunctionhexfunctionsumhexafunction

#### metapost (context)

checkformat function function cm codes table N addto N ampersand N and N assignment N atleast N begingroup N btex N capsule N colon N comma N controls N curl N cycle N declare N def N definedmacro N delimiters N endgroup N equals N etex N everyjob N exitif N expandafter N fi or else Nif N input N interim N internal N iteration N join N leftbrace N leftbracket N leftdelimiter N let

N macrospecial

N maketext

N message

N mode

N newinternal N nullary N numeric N of N ofbinary N outertag N parametertype N plus or minus N primarybinary N primarydef N randomseed N relax N repeat loop N rightbrace N rightbracket N rightdelimiter N runscript N save N scantokens N scope N secondarybinary N secondarydef N semicolon N setbounds N shipout N show N skip N slash N special N step N stop N str N string N tag N tension N tertiarybinary N tertiarydef N thingstoadd N to N unary N undefinedcs

N until		getparameter	function
N void		getparameterset	function
N with		getstatistics	function
N within		gettext	function
N write		graphic	function
colorinitializer	function	graphic_base_pass	function
comment	function	includesvgbuffer	function
convert	function	includesvgfile	function
currentmpx	function	installplugin	function
currentmpxstatus	function	isobject	function
defaultformat	string	lastlog	string
defaultinstance	string	load	function
defaultmethod	string	maketext	function
directrun	function	metafun	table
escaped	function	F interpolate	
exectime	table	F topath	
extensiondata	data table	mptopdf	table
filterclippath	function	F convertmpstopdf	
flush	function	N nofconverted	
flushers	table	n	number
T pdf		nofruns	number
F comment		nofscriptruns	function
F flushfigure		nvformat	function
F startfigure		pdfliterals	function
F stopfigure		pluginactions	function
F textfigure		popformat	function
flushliteral	function	popscriptrunner	function
flushnormalpath	function	popvariable	function
flushreset	function	popvariables	function
fonts	table	preparetextextsdata	function
F define		process	function
T flusher		processing	function
F flushfigure		processplugins	function
F startfigure		processspecial	function
F stopfigure		properties	table
N instances		pushformat	function
F process		pushscriptrunner	function
format_number	function	pushvariable	function
format_string	function	pushvariables	function
formatnumber	function	reducetogray	boolean
getclippath	function	registerscript	function
getextensions	function	remappedtext	function
getextradata	function	remaptext	function
getjobdata	function	reporterror	function

reportsvgfonts	function	F setfrombuffer	
reset	function	texerrors	boolean
resetlastlog	function	texexp	function
resetplugins	function	theclippath	function
run	function	tographic	function
runscript	function	totable	function
scanparameters	function	types	table
scripterror	function	N boolean	
scriptindex	function	N cmykcolor	
setextensions	function	N color	
setoutercolor	function	N dependent	
setparameterset	function	N independent	
settext	function	N known	
setvariable	function	N numeric	
showlog	boolean	N pair	
showsvgpage	function	N path	
simple	function	N pen	
splitprescript	function	N picture	
startgraphic	function	N protodependent	
startsvghashing	function	N string	
stopgraphic	function	N structured	
stopsvghashing	function	N suffixedmacro	
svformat	function	N tokenlist	
svgcolorremapper	function	N transform	
svgglyphtomp	function	N unknownboolean	
svgshapestomp	function	N unknownpath	
svgshapestopdf	function	N unknownpen	
svgsplitcolor	function	N unknownpicture	
svgtomp	function	N unknownstring	
svgtopdf	function	N unsuffixedmacro	
sxsy	function	N vacuous	
tex	table	typesvgpage	function
F get		unload	function
F reset		untagvariable	function
F set		variables	table

### mime (extra lua)

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

## mp (context)

get count	function	color	function
_get_count_ _get_dimen_	function	dataset	function
_get_macro_	function	datasets	function
	function	F load	Tullection
_get_toks_ _set_count_	function	dimension	function
_set_count_ set dimen	function	direct	function
set macro	function	direct1	function
set toks	function	direct2	function
_set_toks_ autoinject	function	direct3	function
aux	table	direct4	function
F boolean	tabte	disposehash	function
F color		draw	function
F direct		fill	function
F direct1		flatten	function
F direct2		flush	function
F direct3		format	function
F direct4		formatted	function
F draw		fprint	function
F fill		fromhash	function
F flush		get	table
F fprint		getcount	function
Finteger		getdimen	function
F number		getmacro	function
F numeric		gettoks	function
F pair		graphformat	function
F pairpoints		inhash	function
F path		inject	function
F pathpoints		F boolean	
F points		F cmykcolor	
F print		F color	
F quadruple		F integer	
F quadruplepoints		F number	
F quoted		F numeric	
F size		F pair	
F string		F path	
F transform		F string	
F triplet		F transform	
F tripletpoints		F whatever	
F vprint		integer	function
boolean	function	isarray	function
cleaned	function	isobject	function

<pre>lmt_color_functions</pre>	table	mf_blob_raw_content	function
F shade		mf_blob_raw_dimensions	function
F step		mf_blob_raw_reset	function
lmt_contours_bitmap_get	function	mf_blob_raw_toutf	function
<pre>lmt_contours_bitmap_set</pre>	function	mf_blob_raw_wipe	function
lmt_contours_cleanup	function	mf_blob_size	function
lmt_contours_color	function	mf_blob_width	function
lmt_contours_edge_get_band	function	mf_external_figure	function
lmt_contours_edge_get_cell	function	mf_finish_saving_data	function
lmt_contours_edge_paths	function	mf_formatted_text	function
<b>lmt_contours_edge_set</b>	function	mf_get_outline_text	function
<pre>lmt_contours_edge_set_by_band</pre>	<b>I</b> function	mf_graphic_text	function
<pre>lmt_contours_edge_set_by_cell</pre>	. function	mf_inject_blob	function
lmt_contours_format	function	mf_made_text	function
<pre>lmt_contours_function</pre>	function	mf_map_move	function
lmt_contours_maxmean	function	mf_map_text	function
lmt_contours_maxz	function	mf_named_color	function
lmt_contours_minmean	function	mf_outline_text	function
lmt_contours_minz	function	mf_save_data	function
<pre>lmt_contours_nofvalues</pre>	function	mf_script_index	function
lmt_contours_nx	function	mf_some_text	function
lmt_contours_ny	function	mf_start_saving_data	function
<b>lmt_contours_range</b>	function	mf_stop_saving_data	function
<pre>lmt_contours_shade_paths</pre>	function	mf_tb_dimensions	function
<pre>lmt_contours_shade_set</pre>	function	mf_tt_dimensions	function
<pre>lmt_contours_shape_paths</pre>	function	mf_tt_initialize	function
lmt_contours_start	function	mode	function
lmt_contours_stop	function	n	function
lmt_contours_value	function	newhash	function
lmt_contours_xrange	function	number	function
lmt_contours_yrange	function	numeric	function
<pre>lmt_do_remaptext</pre>	function	pair 	function
lmt_function_x	function	pairpoints	function
lmt_mesh_set	function	path	function
<pre>lmt_mesh_update</pre>	function	pathpoints	function
lmt_poisson_generate	function	points	function
lmt_register_glyph	function	positionanchor	function
lmt_register_glyphs	function	positionbox	function
lmt_surface_do	function	positioncurve	function
lmt_svg_include	function	positionpage 	function
mf_blob_add	function	positionpath 	function
mf_blob_dimensions	function	positionpxy	function
mf_blob_index	function	positionregion	function
mf_blob_new	function	positionwhd	function

positionxy	function	F token	
prefix	function	F transform	
print	function	set	table
processingmode	function	setcount	function
quadruple	function	setdimen	function
quadruplepoints	function	setmacro	function
quoted	function	settoks	function
report	function	size	function
scan	table	solve	function
F boolean		string	function
F cmykcolor		systemmode	function
F color		texstr	function
F expression		textextanchor	function
F integer		texvar	function
F next		tohash	function
F number		transform	function
F numeric		triplet	function
F pair		tripletpoints	function
F path		utflen	function
F pen		utfsub	function

F string F symbol vprint

function

## mplib (extra tex)

execute

function

finder	function
finders	table
F file	
F mpstemplate	
finish	function
getcallbackstate	function
getcodes	function
getfields	function
getstates	function
getstatistics	function
getstatus	function
gettype	function
gettypes	function
inject_boolean	function
<pre>inject_cmykcolor</pre>	function
inject_color	function
inject_integer	function
inject_number	function
inject_numeric	function
inject_pair	function
inject_path	function
inject_string	function

inject_transform	function	
inject_whatever	function	
new	overloaded	function
pen_info	function	
realtimelogging	boolean	
scan_boolean	function	
scan_cmykcolor	function	
scan_color	function	
scan_expression	function	
scan_integer	function	
scan_next	function	
scan_number	function	
scan_numeric	function	
scan_pair	function	
scan_path	function	
scan_pen	function	
scan_string	function	
scan_symbol	function	
scan_token	function	
scan_transform	function	
solve_path	function	
version	function	

## noads (context)

handlers	table	F resize	
F align		F showtree	
F alternates		F tags	
F autofences		F unscript	
F classes		F unstack	
F collapse		F variants	
F domains		process	function
F families		processnested	$ \hbox{function} $
F fixscripts		processors	table
F italics		F mlist_to_hli	st
F kernpairs		T unscript	
F makeup		T unstack	
F relocate		processouter	function
F render			

#### node (basic tex)

F getfam

check discretionaries function F getfield check discretionary function F getfont copy function F getglue copy list function F getglyphdata function count F getalvphdimensions current attributes function F getheight dimensions function F getid direct table F getindex F check discretionaries F getkern F check discretionary F getkerndimension F copy F getlanguage F copy list F getleader F copy only F getlist F count F getnext F current attributes F getnormalizedline F dimensions F getnucleus F effective glue F getoffsets F end of math F getoptions F getorientation F exchange F find attribute F getparstate F find attribute range F getpenalty F find node F getpost F first glyph F getpre F flatten discretionaries F getprev F flush list F getproperty F flush node F getreplace F getscript F getshift F get attribute F get attributes F getstate F get\_properties\_table F getsub F get synctex fields F getsubpre F getattributelist F getsubtype F getboth F getsup F getbox F getsuppre F getchar F gettotal F getdata F aetwhd F getdepth F getwidth F getdirection F has attribute F getdisc F has dimensions F getexpansion F has field

F has glyph

F has\_glyph\_option F setheight F setindex F hpack F hyphenating F setkern F ignore math skip F setlanguage F insert after F setleader F insert before F setlink F is\_char F setlist F setnext F is direct F is glyph F setnucleus F is node F setoffsets F is valid F setoptions F is zero glue F setorientation F kerning F setpenalty F last node F setpost F length F setpre F ligaturing F setprev F make extensible F setproperty F migrate F setreplace F mlist to hlist F setscript F naturalwidth F setshift F new F setsplit F protect\_glyph F setstate F setsub F protect glyphs F setsubpre F protrusion skippable F rangedimensions F setsubtype F remove F setsup F reverse F setsuppre F set attribute F settotal F set attributes F setwhd F set synctex fields F setwidth F setattributelist F slide F sethoth F start of par F setbox F tail F todirect F setchar F setdata F tonode F setdepth F tostring F setdirection F tovaliddirect F setdisc F traverse F setexpansion F traverse char F setfam F traverse content F setfield F traverse glyph F setfont F traverse id F traverse list F setglue

F setglyphdata

F type

F unprotect_glyph		last_node	function
F unprotect_glyphs		length	$ \hbox{function} $
F unset_attribute		ligaturing	function
F usedlist		make_extensible	$ \hbox{function} $
F uses_font		mlist_to_hlist	function
F vertical_break		new	function
F vpack		optimize_unset_attribute	function
F write		protect_glyph	function
effective_glue	function	protect_glyphs	function
end_of_math	function	protrusion_skippable	function
family_font	function	rangedimensions	function
fields	function	remove	function
find_attribute	function	set_attribute	function
first_glyph	function	set_glue	function
flatten_discretionaries	function	setfield	function
flush_list	function	setproperty	function
flush_node	function	slide	function
free	function	subtypes	function
get_attribute	function	tail	function
get_glue	function	tostring	function
get_properties_table	function	traverse	function
getfield	function	traverse_char	function
getproperty	function	traverse_glyph	function
has_attribute	function	traverse_id	function
has_field	function	traverse_list	function
has_glyph	function	type	function
hpack	function	types	function
hyphenating	function	unprotect_glyph	function
id	function	unprotect_glyphs	function
insert_after	function	unset_attribute	function
insert_before	function	usedlist	function
instock	function	uses_font	function
inuse	function	values	function
is_node	function	vpack	function
is_zero_glue	function	write	function
kerning	function		

## nodes (context)

accentcodes	data table	end of math	function
aligned	function	fencecodes	data table
append	function	fields	function
apply	function	fieldtypes	table
applyvisuals	function	fillcodes	data table
astable	function	fillvalues	data table
basepoints	function	find_attribute	function
boundarycodes	data table	first_glyph	function
boxes	table	firstcharacter	function
F dimensions		firstcharinbox	function
F direct		firstdirinbox	function
F found		firstglyph	function
F reset		flatten_discretionaries	function
F restore		flush	function
F save		flush_list	function
F savenode		flush_node	function
builders	table	free	function
F buildpage_filter		fullhpack	function
F vpack_filter		getattr	function
<pre>check_discretionaries</pre>	function	getattribute	function
concat	function	getboth	function
сору	function	getbox	function
copy_list	function	getchar	function
copy_node	function	getfield	function
count	function	getfont	function
countall	function	getid	function
current_attributes	function	getleader	function
delete	function	getlist	function
destinations	table	getnext	function
N attribute		getprev	function
T done		getsubtype	function
F handler		gluecodes	data table
T stack		glyphcodes	data table
dimensions	function	handlers	table
dircodes	data table	F accessibility	
directioncodes	data table	F backgrounds	
directionvalues	data table	F backgroundspage	
dirvalues	data table	F backgroundsvbox	
disccodes	data table	F characters	
discretionarycodes	data table	F checkglyphs	
effective_glue	function	F checkparcounter	

F cleanuppage		kerncodes	data table
F export		kerning	function
F finalizebox		keys	table
F flatten		T whatsit	
F flattenline		last_node	function
F migrate		leftmarginwidth	function
F protectglyphs		length	function
F stripping		ligaturing	function
F textbackgrounds		linefillers	table
F unprotectglyphs		D data	
has_attribute	function	F define	
has_field	function	F enable	
has_glyph	function	F filler	
hpack	function	F handler	
hyphenating	function	lines	table
idsandsubtypes	function	T boxed	
idstostring	function	F addlinenumbers	
injections	table	F register	
F copy		F setup	
F getligaindex		D data	
F getthreshold		F finalize	
F handler		F number	
F installgetspaceboth		link	function
F installnewkern		linked	function
F isspace		list	function
F keepcounts		listcodes	data table
F reset		listtoutf	function
F resetcounts		literalvalues	data table
F setcursive		load	function
F setkern		locate	function
F setligaindex		markers	table
F setmark		F get	
F setmove		mathcodes	data table
F setposition		maxboxwidth	function
F setspacekerns		migrations	table
insert_after	function	F setinserts	
insert_before	function	F setmarks	
insert_list_after	function	mlist_to_hlist	function
installattributehandler		new	function
is_direct	function	noadcodes	data table
is_display_math	function	noadoptions	table
is_node	function	N axis	
is_nut	function	N exact	
is_zero_glue	function	N left	

N middle F get components N no axis F getattr N right F getattribute F getattributelist N set N unused 1 F getattrlist N unused 2 F getattrs data table nodecodes F aetboth function nopts F aetbox nuts table F getboxglue F append F getchar F apply F getcomponents F applyvisuals F getdata F check discretionaries F getdepth F concat F getdirection F getdisc F copy F copy list F getdiscretionary F copy no components F getexpansion F copy node F getfam F copy only F getfield F copy only glyphs F getfont F copy properties F getglue F copyvisual F getglyphdata F getglyphdimensions F count F count components F getheight F countall F getid F current attributes F getkern F getkerndimension F delete F dimensions F getlang F dirdimensions F getlanguage F effective glue F getleader F end of math F getlist F exchange F getnext F find attribute F getnormalizedline F first glyph F getnucleus F getoffsets F firstcharacter F firstcharinbox F getoptions F firstqlyph F getorientation F flatten discretionaries F getpenalty F getpost F flush F flush components F getpre F flush list F getprev F flush node F getprop

F free

F fullhpack

F getreplace

F getruledata

F baselineskip F getscript F getshift F boundary F getstate F choice F cleanup F getsub F getsubpre F delim F delimiter F getsubtype F getsup F direction F directliteral F getsuppre F disc F getsurround F getsynctexfields F emptyrule F gettotal F fence F fontkern F getvalue F getwhd F fraction F getwidth F glue F has\_attribute F gluespec F has dimensions F glyph F hlist F has field F indentskip F has glyph F italickern F hpack F kern F hyphenating F insert after F latelua F insert\_before F leader F insert list after F lefthangskip F is display math F leftmarginkern F is node F leftskip F is\_nut F lineskip F literal F is zero glue F mathchar F ischar F isdone F mathtextchar F isqlyph F negatedglue F kerning F noad F last node F originliteral F leftmarginwidth F outlinerule F pageliteral F length F ligaturing F penalty F link F radical F rawliteral F linked F register F locate F migrate F restore F mlist\_to\_hlist F righthangskip F nestedtracedslide F rightmarginkern F new F rightskip F rule T pool

F accent

F save

F savepos F setattributelist F setmatrix F setattributes F shrink F setattrlist F stock F setattrs F stretch F setboth F subbox F setbox F submlist F setboxalue F temp F setchar F usage F setcomponents T userids F setdata N margins.inline F setdepth N splitters.one F setdirection N splitters.two F setdisc F usernode F setdiscretionary F userrule F setexpansion F vlist F setfam F wordboundary F setfield F setfont F prepend F processranges F setglue F processwords F setqlyphdata F protect\_glyph F setheight F protect\_glyphs F setkern F protrusion skippable F setlang F rangedimensions F setlanguage F rawprop F setleader F reference F setlink F setlist F rehpack F remove F setnext F repackhlist F setnucleus F replace F setoffsets F reverse F setoptions F rightmarginwidth F setorientation T rules F setparproperty T ruleactions F setpenalty F box F setpost F draw F setpre F fill F setprev F mp F setprop F stroke F setreplace F userrule F setruledata F set attribute F setscript F set components F setshift

F setattr

F setattribute

F setsplit

F setstate

F setsub	F hlist	
F setsubpre	F list	
F setsubtype	F next	
F setsup	F node	
F setsuppre	F vlist	
F setsurround	F whatsit	
F setsynctexfields	T typesetters	
F setunsetattributes	F tohbox	
F setvalue	F tohpack	
F setvisual	F tonodes	
F setvisuals	F tovbox	
F setwhd	F tovpack	
F setwidth	F unprotect_glyph	
F slide	F unprotect_glyphs	
F somepenalty	F unset_attribute	
F somespace	F unsetattribute	
F splitbox	F unsetattributes	
F start_of_par	F untracedslide	
F striprange	F usedlist	
F tail	F uses_font	
F takeattr	F vianodes	
F takebox	F vianuts	
F takelist	F vpack	
F theprop	F write	
F tonode	packlist	function
F tonodes	parcodes	data table
F tonut	penaltycodes	data table
F tosequence	plugindata	table
F tostring	F finalizer	
F tracedslide	F initializer	
F traverse	S name	
F traverse_char	T namespace	
F traverse_content	N attribute	
F traverse_glyph	D data	
F traverse_id	F enable	
F traverse_list	F handler	
T traversers	F register	
F boundary	D registered	
F char	D values	
F content	F processor	
F dir	points	function
F disc	pool	table
F glue	F baselineskip	
F glyph	F cleanup	

F directliteral		report	function
F glyph		rightmarginwidth	function
F hlist		rulecodes	data table
F latelua		rules	table
F lineskip		D data	
F literal		F define	
F originliteral		F enable	
F register		F handler	
F restore		F userrule	
F rule		save	function
F save		serialize	function
F savepos		serializebox	function
F setmatrix		set_attribute	function
F special		setattr	function
F stock		setattribute	function
F usage		setattributes	function
F vlist		setboth	function
prepend	function	setbox	function
print	function	setboxtonaturalwd	function
processors	table	setchar	function
F contribute_filter		setfield	function
B enabled		setfont	function
F hpack_filter		setleader	function
<pre>F post_linebreak_filter</pre>		setlink	function
<pre>F pre_linebreak_filter</pre>		setlist	function
F tracer		setnext	function
properties	table	setprev	function
T data		setunsetattributes	function
protect_glyph	function	shifts	table
protect_glyphs	function	D data	
protrusion_skippable	function	F define	
pts	function	F enable	
radicalcodes	data table	F handler	
rangedimensions	function	show	function
reference	function	showboxes	function
references	table	showlist	function
N attribute		showsimplelist	function
T done		skipcodes	data table
F handler		slide	function
T stack	<b>.</b>	snapshots	table
rehpack	function	F getsamples	
remove	function	F resetsamples	
repackhlist	function	F takesample	£
replace	function	somepenalty	function

function somespace function totree function **splitbox** function toutf start of par function table tracers function stripdiscretionaries T colors stripping table F reset T glyphs F set F set F setlist subtypes data table F directions tail function F fontchar takeattr function T frequencies takebox function F register tasks table T pool F actions T nodes F rule F appendaction F disableaction T nuts F disablegroup F rule F enableaction F resetproperties F enablegroup F rule F setlist F freeze F freezegroup F setproperties F start F prependaction T steppers F removeaction F check F replaceaction F codes F restart F features F setaction F font F showactions F glyphs F table F message tobasepoints function F messages tocentimeters function F nofsteps tociceros function F register todidots function F reset todimen function F start toinches function F stop tomillimeters function F stop tonode function T transparencies tonodes function F reset tonut function F set topicas function F setlist topoints function function traverse toscaledpoints function traverse char function tosequence function traverse glyph function tostring function traverse id function totable function traverse list function

<pre>traversers   F char   F glyph   F list   F node</pre>	table	usercodes uses_font vianodes vianuts visualizebox	data table function function function function
typesetters	table	visualizers	table
F hbox		F attribute	
F hpack		T attributes	
F tohbox		F box	
F tohpack		F handler	
F tonodes		F markfonts	
F tovbox		F register	
F tovpack		F setfont	
F vpack		F setlayer	
unprotect_glyph	function	F setruledglyph	
unprotect_glyphs	function	F setvisual	
unset_attribute	function	vpack	function
unsetattribute	function	whatcodes	data table
unsetattributes	function	whatsitcodes	data table

write

function

usedlist

function

## number (context)

	function
basepoints	function
bytetodecimal	function
compactfloat	function
decimaltobyte	function
dimenfactors	data table
formatted	function
$for {\tt mattedfloat}$	function
idiv	function
maxdimen	number
nopts	function
percent	function
points	function
pts	function
signed	function
${\tt sparse exponent}$	function
splitdimen	function
to16dot16	function

tobasepoints	function
tobitstring	function
tocentimeters	function
tociceros	function
tocontext	function
todidots	function
todimen	function
toevenhex	function
toinches	function
tomillimeters	function
tonumberf	function
tonumberg	function
topicas	function
topoints	function
toscaled	function
${\tt toscaled points}$	function
valid	function

## objects (context)

data table
dimensions function
found function
n number

page function
reference function
register function
restore function

## optional (context)

curl	table	F reset	
F escape		F setclosefile	
F fetch		F setconsole	
F getversion		F setfindfile	
F initialize		F setopenfile	
F unescape		F setreadfile	
ghostscript	table	F setseekfile	
F execute		mysql	table
F initialize		F close	
graphicsmagick	table	F execute	
F execute		F getmessage	
F initialize		F initialize	
kpse	table	F open	
F expand_brace	5	postgress	table
F expand_path		F close	
F expand_var		F execute	
F find_file		F getmessage	
F find_files		F initialize	
F get_file_type	25	F open	
F initialize		sqlite	table
F readable_file	2	F close	
F set_program_	name	F execute	
F var_value		F getmessage	
loaded	table	F initialize	
mujs	table	F open	
F dofile		zint	table
F execute		F execute	
F initialize		F initialize	

## os (basic lua)

getenv	function	rename	overloaded function
setenv	function	resolvers	table
binsuffix	string	F bits	
binsuffixes	table	resultof	function
clock	function	runtime	function
converttime	function	selfarg	table
date	overloaded function	selfbase	string
difftime	function	selfbin	string
enableansi	function	selfcore	string
env	data table	selfdir	string
execute	overloaded function	selfname	string
exit	overloaded function	selfpath	string
fulltime	function	seteny	overloaded function
	function	setexitcode	
getenv	overloaded function	setlocale	overloaded function
gettimeofday		sleep	function
isleapyear	function	time	function
launch	function	timezone	function
libsuffix	string	tmpname	function
localtime	function	•	function
		today	
name	string	type	string function
newline	string	uname	
nofdays	function	uuid	function
now	function	validdate	function
pipeto	function	weekday	function
platform	string	where	function
remove	overloaded function	which	function

## package (basic lua)

config	string	loadlib	function
cpath	string	luapaths	function
extralibpath	function	path	string
extralibpaths	function	poplibpath	function
extraluapath	function	popluapath	function
extraluapaths	function	preload	table
helpers	table	pushlibpath	function
libpaths	function	pushluapath	function
loaded	table	searchers	table
loaders	table	searchpath	function

### pagebuilders (context)

columnsets table		
F add		
F block		
F check		
F currentcolumn		
F define		
F finishflush		
F flushareas		
F flushcolumn		
F flushrest		
F goto		
F noto		
F prepareflush		
F put		
F registerarea		
F reset		
F setarea		

```
F sethsize
   F sethspan
   F setlines
   F setproperties
   F setstart
   F setvsize
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)

 $\textbf{immediateobj} \ \texttt{function}$ 

# pdfe (extra tex)

arraytotable	function
close	function
closestream	function
dictionarytotable	function
encryptioncodes	data table
getarray	function
getboolean	function
getbox	function
getcatalog	function
getdictionary	function
getfromarray	function
${\tt getfromdictionary}$	function
getfromreference	function
getfromstream	function
getinfo	function
getinteger	function
getmemoryusage	function
getname	function
getnofobjects	function
getnofpages	function

function
function
data table
function

# physics (context)

units table

D tables

F registerunit

### pngdecode (extra tex)

applyfilter function
expand function
interlace function

splitmask function
tocmyk function

# publications (context)

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

T sets	S pages	
T author	S volume	
T editionset	S version	
T virtual	D virtual	
T demo-a	T virtualfields	
S category	B authornum	
T extra	B authoryear	
T fields	B authoryears	
S author	B num	
S institution	B suffix	
S organization	datasets	table
S subtitle	detailed	table
S title	endnotes_to_btx	function
S year	enhancer	table
T optional	S arguments	
T required	T askip	
T sets	B dirty	
T author	T gskip	
T virtual	T kind	
T demo-b	T list	
S category	T system	
T extra	T order	
T fields	N steps	
S author	enhancers	table
S institution	F details	
S organization	F order	
S subtitle	F suffixes	
S title	finder	function
S year	firstofrange	function
T optional	found	function
T required	get	function
T sets	getcasted	function
T authors	getdetail	function
T virtual	getdirect	function
comment	getfaster	function
copyright	getfield	function
fields	getfuzzy	function
name	getindex	function
types	inspectors	data table
S author	journals	table
S editor	F abbreviated	
S keywords	F add	
S number	F expanded	
S page	F load	

S S

S T

F save		F lua	
lastofrange	function	F refman	
lists	table	F registercleaner	
F collectentries		F xml	
F combiinlist		loadreplacementfile	function
F fetchentries		new	function
F filterall		okay	function
F flushcombi		oneorrange	function
F flushentry		parenttag	function
F flushtag		permitted	function
T methods		prerollcmdstring	function
F dataset		refman_to_btx	function
F force		resolvedname	function
F global		save	function
F local		savers	table
F nofregistered		F bib	
F prepareentries		F lua	
F register		F xml	
F sameasprevious		search	function
T sorters		setcategory	function
F cite		setspecification	function
F dataset		singularorplural	function
F default		sortedentries	function
F index		sortmethods	table
F list		T authoryear	
F reference		T sequence	
F short		specifications	table
F used		T default	
F uservariable		S author	
listvariants	table	S comment	
F default		S copyright	
F index		S name	
F num		S version	
F short		D virtual	
F tag		splitauthor	function
load	function	splitoneauthor	function
loadbibdata	function	statistics	table
loaddefinitionfile	function	N nofbytes	
loaders	table	N nofdatasets	
F bbl		N nofdefinitions	
F bib		N nofshortcuts	
F buffer		tables	table
F endnote		D implicits	
F json		D origins	

D privates F showtables D sets F showvariants typesetters table D specials F author D types F string D virtuals function function tags usedataset table usedentries function tracers writers table F showdatasetauthors F showdatasetcompleteness F author F showdatasetfields F keyword F showentry F pagenumber

F range

F showfields

F showhashedauthors

# regimes (context)

backmapping	data table	mapping	data table
cleanup	function	pop	function
disable	function	process	function
enable	function	push	function
fromregime	function	toregime	function
list	function	translate	function

# resolvers (context)

allprefixes	function	findtexfile	function
appendhash	function	findwildcardfile	function
automount	function	findwildcardfiles	function
booleanvariable	function	formatofsuffix	function
cacheversion	string	formatofvariable	function
checkedvariable	function	formats	data table
cleanedpathlist	function	foundintree	function
cleanpath	function	foundintrees	function
cleanpathlist	function	generators	data table
concatinators	data table	get_from_content	function
configbanner	string	getenv	function
configurationfiles	function	getextrapaths	function
dangerous	data table	getfilehashes	function
datastate	function	gethashes	function
defaultsuffixes	table	getownpath	function
dirstatus	function	getreadfilename	function
dowithfilesandreport	function	hashers	data table
dowithfilesintree	function	homedir	string
dowithpath	function	initialized	function
dowithvariable	function	installinputfilehandler	function
executers	table	installinputlinehandler	function
expandbraces	function	jobpath	function
expandedpathfromlist	function	jobs	table
expandedpathlist	function	F currentcomponent	
expandedpathlistfromvariable	function	F currentenvironment	
expandpath	function	F currentproduct	
expandpathfromvariable	function	F currentproject	
expansion	function	F justacomponent	
extendtexmfvariable	function	D processors	
filtered_from_content	function	F productcomponent	
find_file	function	F usefile	
find_files	function	joinpath	function
findbinfile	function	knownvariables	function
findctxfile	function	libraries	table
finders	data table	F optionalloaded	
findfile	function	F validoptional	
findfiles	function	load	function
findgivenfile	function	loadbinfile	function
findgivenfiles	function	loaders	data table
findlib	function	loadlualib	function
findpath	function	loadtexfile	function

loadtime function function resetmemstream locateformat function resetresolve function locators data table resol ve function luacnffallback data table strina savers luacnfname scandata function string luacnfspec string scanfiles function schemes table luacnfstate strina table macros T cleaners F md5 F convertfile F decodecomment F none F enablecomment F strip F encodecomment F cleanname F preprocessed F fetchstring F fetchtable F processmk F install F processmklx setdvnamic function F processmkvi function setenv F version maxreadlevel number setmemstream function methodhandler function showpath function openbinfile function simplescanfiles function data table splitconfigurationpath function openers openfile function splitexpansions function function function splitmethod opentexfile function ownpath string splitpath stackpath function popextrapath function popinputname function starttiming function function stoptiming function poppath suffixes prefixes data table data table prependhash function suffixmap data table pushextrapath function suffixofformat function pushinputname function texdatablob function pushpath function function toppath registerextrapath function unexpandedpath function registerfile function unexpandedpathlist function registerfilehash function unresolve function registerintrees updaterelations function function registermethod function updatescript function registerzipfile function uselibrary function relations data table usertypes data table function function usezipfile renew renewcache function validatedpath function

variable

variableofformat

function

function

function

function

function

repath

reset

resetextrapaths

variableofformatorsuffix function wildcardpattern

function

# sandbox (context)

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

### scripts (context)

#### autofontfeature table

F disable

F enable

F handler

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

getdata getinjector function function

getsplitter getstatus

function function handlers

hash table

injectors data table

data table

inserters table

F nobreakspace after

F nobreakspace before

F space after

F space before

F zerowidthspace after

F zerowidthspace before

installdataset function installmethod function

numbertodataset data table numbertohandler data table

reset function function set function setstatus

data table splitters

### set (context)

contains function
create function
tolist function

tonumber function
totable function

# sha2 (extra lua)

HASH256	function	hash256	function
HASH384	function	hash384	function
HASH512	function	hash512	function
HEX256	function	hex256	function
HEX384	function	hex384	function
HEX512	function	hex512	function
digest256	function	sum256	function
digest384	function	sum384	function
digest512	function	sum512	function

### sio (extra lua)

read2dot14	function	readfixed2	function
readbytes	function	readfixed4	function
readbytetable	function	readinteger1	function
readcardinal1	function	readinteger1le	function
readcardinal1le	function	readinteger2	function
readcardinal2	function	readinteger2le	function
readcardinal2le	function	readinteger3	function
readcardinal3	function	readinteger3le	function
readcardinal3le	function	readinteger4	function
readcardinal4	function	readinteger4le	function
readcardinal4le	function	readintegertable	function
readcardinaltable	function		

#### socket (extra lua)

S content-location

**BLOCKSIZE** number S content-md5 DATAGRAMSIZE number S content-range SETSIZE number S content-transfer-encoding **SOCKETINVALID** number S content-type bind function S cookie function choose S date connect function S diagnostic-code connect4 function S dsn-gateway connect6 function S etag dns table S expect F getaddrinfo S expires F gethostname S final-log-id F getnameinfo S final-recipient F tohostname S from F toip S host aettime function S if-match headers table S if-modified-since T canonic S if-none-match S if-range S accept S accept-charset S if-unmodified-since S accept-encoding S in-reply-to S accept-language S keywords S last-attempt-date S accept-ranges S action S last-modified S age S location S allow S max-forwards S alternate-recipient S message-id S arrival-date S mime-version S authorization S original-envelope-id S bcc S original-recipient S cache-control S pragma S cc S proxy-authenticate S comments S proxy-authorization S connection S range S content-description S received S content-disposition S received-from-mta S content-encoding S references S content-id S referer S remote-mta S content-language S content-length S reply-to

S reporting-mta

S resent-b	осс	protect	function
S resent-o	cc	report	function
S resent-d	late	select	function
S resent-f	rom	sink	function
S resent-m	nessage-id	sinkt	table
S resent-r	reply-to	F close-when-d	one
S resent-s	sender	F default	
S resent-t	:0	F http-chunked	
S retry-af	ter	F keep-open	
S return-p	path	skip	function
S sender		sleep	function
S server		source	function
S smtp-rem	note-recipient	sourcet	table
S status		F by-length	
S subject		F default	
S te		F http-chunked	
S to		F until-closed	
S trailer		tcp	function
S transfer	encoding	tcp4	function
S upgrade		tcp6	function
S user-age	ent	tp	table
S vary		N TIMEOUT	
S via		F connect	
S warning		try	function
S will-ret	ry-until	udp	function
S www-auth	nenticate	udp4	function
S x-mailer	-	udp6	function
F lower		url	table
F normalize		F absolute	
http	table	F build	
N TIMEOUT		F build_path	
S USERAGENT		F escape	
F genericfo	rm	F parse	
F open		F parse_path	
F request		F unescape	
newtry	function		

### sorters (context)

	_		
basicsorter	function	B pm	
comparers	table	B uc	
F basic		B zc	
constants	table	B zm	
S defaultdigits		definitions	data table
S defaultlanguage	2	firstofsplit	function
S defaultmethod		packch	function
N digitsmaximum		packuc	function
N digitsoffset		replacementlist	function
N ignoredoffset		setlanguage	function
N replacementoffs	set	sort	function
T validmethods		splitters	table
B ch		F utf	
B mc		strip	function
B mm		tracers	data table
В рс		update	function

# statistics (context)

${\tt benchmarktimer}$	function
${\tt checkfmtstatus}$	function
currenttime	function
elapsed	function
elapsedindeed	function
elapsedseconds	function
elapsedtime	function
enable	boolean
formatruntime	function
hastiming	function
memused	function
register	function

resettiming	function
runtime	function
savefmtstatus	function
show	function
showmemory	function
showusage	function
starttiming	function
stoptiming	function
threshold	number
timed	function
tracefunction	function

# status (basic tex)

getbufferstate	function	getmarksstate	function
getcallbackstate	function	getneststate	function
getconstants	function	getnodestate	function
geterrorlinestate	function	getparameterstate	function
geterrorstate	function	getpoolstate	function
getexpandstate	function	getreadstate	function
getextrastate	function	getsavestate	function
getfilestate	function	getsparsestate	function
getfontstate	function	getstringstate	function
gethalferrorlinestate	function	gettexstate	function
gethashstate	function	gettokenstate	function
getinputstate	function	getwarningstate	function
getlanguagestate	function	iocodes	table
getlookupstate	function	list	function
getluastate	function	resetmessages	function

### storage (context)

allocate	function
data	table
mark	function
marked	function
max	number
min	number
nofmodules	number

### streams (context)

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

# string (basic lua)

autodouble	function	nspaces	table
autosingle	function	optionalquoted	function
booleanstring	function	pack	function
byte	function	packsize	function
bytepairs	function	quote	function
bytes	function	quoted	function
bytetable	function	rep	function
char	function	replacenewlines	function
characterpairs	function	reverse	function
characters	function	split	function
checkedsplit	function	splitlines	function
collapsespaces	function	splitup	function
containsws	function	strip	function
count	function	sub	function
dawson	function	tformat	function
dump	function	toHEX	function
erf	function	toboolean	function
erfc	function	tobytes	function
erfcx	function	tocontext	function
erfi	function	todec	function
escapedpattern	function	todimen	function
escapedquotes	function	tohex	function
explode	function	tonodes	function
f6	function	topattern	function
find	function	totable	function
format	function	tounicode16	function
formatter	function	toutf	function
formatters	function	toutf32	function
fullstrip	function	toutf8	function
gmatch	function	tracedchar	function
gsub	function	tracedchars	table
is_boolean	function	unpack	function
is_empty	function	unquote 	function
itself	function	unquoted	function
len	function	upper	function
limit	function	utfcharacter	function
linetable	function	utfcharacters	function
longtostring	function	utfcharactertable	
lower	function function	utflength	function
match		utfpadd	function
nospaces	function	utfpadding	function

utfvalue	function	valid	function
utfvalues	function	voigt	function
utfvaluetable	function	voigt_hwhm	function

### structures (context)

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

F touserdata		F reordere	ed
inserts	table	T result	
D data		F savedlis	stnumber
F define		F savedlis	stprefixednumber
F getdata		F savedlis	sttitle
F getlocation		D section	olocks
F getname		F sectionr	number
F getnumber		F size	
F setlocation		F title	
F setup		D tobesave	ed
D stored		F userdata	a
itemgroups	table	F uservalı	ıe
lists	table	marks	table
F addto		D data	
F analyze		F define	
B autoreorder		F exists	
D cached		F fetch	
D collected		F fetchall	Lmarks
F discard		F fetched	
F enhance		F fetchone	emark
T enhancers		F fetchtwo	omarks
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 synchron	nize
F iscached		F title	
D kinds		T tracers	
F label		F showta	ble
F location		notes	table
D names		F check_sp	oacing
F number		F checkpag	gechange
D ordered		F define	
F page		F doifonsa	amepageasprevious
F popnesting		F get	
F prefix		F getdelta	apage
F prefixednumber		F getinter	rnal
F prefixedpage		F getn	
F process		F getstate	2
D pushed		F hasconte	ent
F pushnesting		F internal	L
F realpage		F internal	lid

F listindex	T files
D numbers	T data
F ordered	F define
F postpone	F found
F resetpostponed	F get
F restore	F filter
F save	F filterdefault
F setstate	D filters
D states	D flaginternals
F store	F from
<b>pages</b> table	D functions
F allmarked	F get
F analyze	F getcurrentmetadata
D collected	F getcurrentprefixspec
F fraction	F getinnermethod
F in_body	F getinternalcachedlistreference
F is_odd	F getinternallistreference
F mark	F getinternalreference
F marked	F getoutermethod
N nofpages	D handlers
F number	F identify
F on_right	F import
F save	F inject
D tobesaved	F injectcurrentset
F toranges	S innermethod
references table	D internals
F analyze	F load
F checkedfile	F loadpresets
F checkedfileorurl	F mark
F checkedprogram	S outermethod
F checkedrealpage	D pages
F checkedurl	U prefixsplitter
D collected	D productdata
U componentsplitter	T programs
F currentmetadata	T data
F currentorder	F define
D currentset	F get
F define	F realpageofpage U referencesplitter
D defined	D referred
D derived F enhance	р reterred F referredpage
D executers	r reterreapage F registerfinalizer
F expandcurrent	F registerinitializer
	F registerinitiatizer
F export	r registerpage

F reset	F define
D runners	F enhance
F set	F extend
F setandgetattribute	F filter
F setcomponent	F filtercollected
F setinternalreference	F finalize
F setlinkmethod	F findinternal
F setnextinternal	F flush
F setnextorder	F get
F setreferencerealpage	F prepare
D specials	F process
F splitcomponent	F setmethod
F splitprefix	F sort
F splitreference	F store
F synchronizepage	D tobesaved
T testrunners	F unique
Finner	F userdata
F special	<b>sections</b> table
F special operation	F autodepth
F special operation with arguments	F cct
T testspecials	D collected
F deltapage	F current
Fi	F currentblock
F internal	F currentid
F page	F currentlevel
F realpage	F currentsectionindex
F section	F depthnumber
F userpage	F finddata
D tobereferred	F findnumber
D tobesaved	F fullnumber
D tracedpages	F getcurrentlevel
T urls	F getlevel
T data	F getnumber
F define	F internalreference
F found	D levelmap
F get	D levels
F untex	F matchingtilldepth
D usedinternals	F numberatdepth
D usedviews	F numbers
F valid	F popblock
<b>registers</b> table	F prefixedconverted
F analyze	F pushblock
D collected	F register
F compare	D registered

F reportstructure	F	registerused
F save		resetshown
T sectionblockdata		resetused
T bodypart		sort
S bookmark		synonym
F set		tobesaved
F setblock	tags	
F setchecker	•	current
F setentry		elementtag
F setinitialblock		finishexport
F setlevel		getextradata
F setnumber		getid
F showstructure		getmetadata
F structuredata		gettablecell
F title		gettabulatecell
D tobesaved	F	handler
F typesetnumber	F	initializeexport
F userdata	D	labels
B verbose	F	last
sets t	able F	lastinchain
F define	F	locatedtag
F get	т	patterns
F getall		U splitter
D setlist	D	properties
<b>specials</b> t	able F	registerextradata
D collected	F	registermetadata
F retrieve	F	restart
F store	F	setaspect
D tobesaved	F	setattributehash
synonyms t	able F	setcombination
F analyzed	F	setconstruct
D collected	F	setfigure
F compare	F	setfloat
F define	F	setformulacontent
F filter	F	sethighlight
F finalize	F	setitem
F flush	F	setitemgroup
F isshown	F	setlist
F isused	F	setnotation
F meaning	F	setnotationsymbol
F prepare		setparagraph
F process	F	setproperty
F accesses	F	setpublication
F register		

F setsorting
F setsynonym
F settablecell
F settabulatecell
F settagdelimitedsymbol
F settagsubsentencesymbol
F setupexport

F setuserproperties

D specifications
F start
F stop
F strip
D taglist
T usewithcare
T images

# table (basic lua)

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

# tex (basic tex)

attribute	table	getcount	function
badness	function	getdelcode	function
box	table	getdelcodes	function
boxresources	table	getdimen	function
F getbox		getdimensionvalue	function
F getdimensions		geterrorvalues	function
F save		getflagvalues	function
F use		getfontoffamily	function
catcode	table	getfrozenparvalues	function
chardef	function	getglue	function
conditionals	data table	getglyphdata	function
constants	data table	getglyphoptionvalues	function
count	table	getglyphscript	function
cprint	function	getglyphstate	function
ctdcatcodes	number	getgroupvalues	function
ctxcatcodes	number	gethelptext	function
definefont	function	gethyphenationvalues	function
delcode	table	getintegervalue	function
dimen	table	getinteraction	function
dimensiondef	function	getiovalues	function
directives	data table	getlargestusedmark	function
enableprimitives	function	getlccode	function
error	function	getlinedir	function
experiments	data table	getlist	function
extraprimitives	function	getlocallevel	function
fatalerror	function	getmark	function
flagcodes	data table	getmath	function
fontidentifier	function	getmathcode	function
fontname	function	getmathcodes	function
forcehmode	function	getmathdir	function
forcesynctexline	function	getmodevalues	function
forcesynctextag	function	getmuglue	function
fprint	function	getmuskip 	function
frozenparcodes	data table	getnest	function
get	function	getnormalizevalues	function
getattribute	function	getoutputactive	function
getbox	function	getpagestate	function
getboxdir	function	getpardir	function
getboxresourcebox	function	getsfcode	function function
getboxresourcedimensions		getskip	
getcatcode	function	getsynctexline	function

getsynctexmode	function	muskip	table
getsynctextag	function	nest	table
gettextdir	function	nilcatcodes	number
gettoks	function	normalizecodes	data table
getuccode	function	notcatcodes	number
glue	table	number	function
glyphoptioncodes	data table	poplocal	function
groupcodes	data table	primitives	function
hashtokens	function	print	function
hyphenationcodes	data table	prtcatcodes	number
ifs	data table	pushlocal	function
inicatcodes	number	quitlocal	function
integerdef	function	quittoks	function
isattribute	function	resetparagraph	function
isbox	function	romannumeral	function
iscount	overloaded function	round	function
isdefined	function	runlocal	function
isdimen	overloaded function	runtoks	function
isglue	function	saveboxresource	function
ismuglue	function	scale	function
ismuskip	overloaded function	scantoks	function
isprintable	function	set	function
isskip	overloaded function	setattribute	function
istoken	function	setbox	function
istoks	function	setboxdir	function
lastnodetype	function	setcatcode	function
lccode	table	setcount	function
linebreak	function	setdelcode	function
lists	table	setdimen	function
luacatcodes	number	setdimensionvalue	function
magicconstants	table	setglue	function
N maxdimen		setglyphdata	function
N running		setglyphscript	function
N trueinch		setglyphstate	function
mathchardef	function	setintegervalue	function
mathcode	table	setinteraction	function
modelevels	table	setlccode	function
N horizontal		setlinedir	function
N math		setlist	function
N unset		setmath	function
N vertical		setmathcode	function
modes	data table	setmathdir	function
mprint	function	setmuglue	function
muglue	table	setmuskip	function

setnest function setpardir function setsfcode function setskip function setsynctexline function setsynctexmode function setsynctextag function settextdir function settoks function setuccode function sfcode table shipout function showcontext function skip table sp function **splitbox** function sprint function data table systemmodes

takebox texcatcodes toks tonumber toscaled tpacatcodes tpbcatcodes tprint trackers triggerbuildpage txtcatcodes tvpe uccode uprint useboxresource vrbcatcodes write

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

# texconfig (basic tex)

buffer_size	number		max_pool	number
error_line	number		max_print_line	number
expand_depth	number		max_strings	number
firstline	string		nest_size	number
formatname	string		node_size	number
function_size	number		param_size	number
half_error_line	number		<pre>properties_size</pre>	number
hash_extra	number		save_size	number
init	${\tt overloaded}$	function	shell_escape	string
kpse_init	boolean		stack_size	number
max_in_open	number		token_size	number

# texio (basic tex)

closeinput function
terminal function

write function
write\_nl function

# token (basic tex)

accessors	table	get_tok	function
F active		get_tolerant	function
F cmd		getcommandid	function
F cmdchrcs		getcommandvalues	function
F cmdname		getfunctionvalues	function
F command		getprimitives	function
F csname		gobble	function
F expandable		gobble_dimen	function
F frozen		gobble_integer	function
F index		is_defined	function
F name		is_next_char	function
F protected		is_token	function
F range		new	function
create	function	peek_next	function
expand	function	peek_next_char	function
expand_macro	function	<pre>peek_next_expanded</pre>	function
future_expand	function	pop_macro	function
get_active	function	push_macro	function
get_cmdchrcs	function	put_back	function
<pre>get_cmdname</pre>	function	put_next	function
get_command	function	save_lua	function
<pre>get_csname</pre>	function	scan_argument	function
get_cstoken	function	scan_box	function
get_dimension	function	scan_cardinal	function
get_expandable	function	scan_char	function
get_fields	function	scan_cmdchr	function
get_flags	function	scan_cmdchr_expanded	function
get_frozen	function	scan_code	function
get_id	function	scan_csname	function
get_immutable	function	scan_delimited	function
get_index	function	scan_dimen	function
get_instance	function	scan_dimen_argument	function
get_integer	function	scan_float	function
get_macro	function	scan_glue	function
get_meaning	function	scan_integer	function
get_noaligned	function	scan_integer_argument	function
get_parameters	function	scan_key	function
<pre>get_permanent</pre>	function	scan_keyword	function
get_primitive	function	scan_keyword_cs	function
get_protected	function	scan_letters	function
get_range	function	scan_luacardinal	function

scan luainteger	function	scan value	function
scan_luanumber	function	scan_word	function
scan_next	function	serialize	function
scan_next_char	function	set_char	function
scan next expanded	function	set dimension	function
scan real	function	set integer	function
scan skip	function	set lua	function
scan string	function	set macro	function
scan_token	function	skip next	function
scan token code	function	skip next expanded	function
scan tokenlist	function	type	function
scan toks	function	undefine macro	function

#### tokens (context)

astal	ble	function		U resetc	txscanner
bits		table		U rlap	
N	active			U second	oftwoarguments
N	alignmen	it		U setfal	sevalue
N	begingro	oup		U setsec	tionblock
N	characte	er		U setups	ystem
N	close			U startc	olumns
N	comment			U startt	abulate
N	endgroup	)		U startt	itle
N	endoflin	ie		U startx	title
N	escape			U stopco	lumns
N	ignore			U stopta	bulate
N	invalid			U stopti	tle
N	letter			U stopxt	itle
N	mathshif	t		U texset	up
N	open			U xmlw	
N	other		С	ommands	data table
N	paramete	er	С	ompile	function
N	space			onstant	function
N	subscrip	t	С	onverter	<b>s</b> table
N	superscr	ript		S tobool	ean
	whitespa			S todime	n
cache	е	table		S toglue	
U	NC			S tonumb	er
U	NR			S tostri	3
U	bf		_	reate	function
U	color		-	efined	function
U	colordef	alc		lags	function
	colordef		_	-	<b>r</b> function
U	colordef	flt	g	etters	table
	colordef			F box	
U	dofinish	reference		F count	
U	dostartt	ext		F cstoke	n
U	finishjo	b		F dimen	
U	firstofo	neargument		F glue	
		woarguments		F macro	
U	gobbleor	eargument		F meanin	g
	goto			F skip	
U	iftrue		_	F token	
U	input		_	sdefined	
U	loadfour	dtypescriptfile	i	stoken	function

now	function	r	integerouseus
new			integerargument
pickup	function function		ischar
popmacro	table		key
presets			keyword
T 1 argum			keywordcs
T 1 string			letters
T 2 argum			list
T 2 string			luacardinal
T 3 argum			luainteger
T 3 string			luanumber
T 4 argum			lxmlid
T 4 string			next
T 5 string			nextexpanded
T 6 string			number
T 7 string			optional .
T 8 string	-		peek
	function		peekchar
scanners	table		peekexpanded
F argumen			real
F argumen	tasis		scanclose
F array			scanopen
F boolean			skip
F box			skipexpanded
F bracket			string
F bracket			table
F cardina	l		token
F char			tokencode
F cmdchr			tokenlist
F cmdchre	xpanded		tokens
F code			toks
F condition	onal		value
F count		·	vbox
F csname			verbatim
F delimit	ed		vtop
F dimen			whd
F dimenar			word
F dimensi	on		nteger function
F float		sett	
F glue			box
F gluespe			char
F glueval	ues		count
F hash			dimen
F hbox			glue
F integer		F	lua

F macro F scanglue F skip F scangluespec shortcuts table F scangluevalues T hits F scanhash N active F scanhbox F scaninteger N alignment N begingroup F scanintegerargument N character F scankeyword N close F scankeywordcs N comment F scanletters F scanlist N endgroup N endofline T scanners N escape F argument N ignore F argumentasis N invalid F array N letter F boolean N mathshift F box N open F bracketed N other F bracketedasis F cardinal N parameter N space F char N subscript F cmdchr N superscript F cmdchrexpanded N whitespace F code N close F conditional F inspect F count F csname N open F delimited F report F dimen F scanargument F scanargumentasis F dimenargument F scanarray F dimension F scanboolean F float F scanbox F glue F scanbracketed F gluespec F scanbracketedasis F gluevalues F scancardinal F hash F scanclose F hbox F scancode F integer F scanconditional F integerargument F scancsname F ischar F scandelimited F key F scandimen F keyword F scandimenargument F keywordcs F scandimension F letters

F list	F astable
F luacardinal	T cache
F luainteger	U NC
F luanumber	U NR
F lxmlid	U bf
F next	U color
F nextexpanded	U colordefalc
F number	U colordefflc
F optional	U colordefflt
F peek	U colordefrlt
F peekchar	U dofinishreference
F peekexpanded	U dostarttext
F real	U finishjob
F scanclose	U firstofoneargument
F scanopen	U firstoftwoarguments
F skip	U gobbleoneargument
F skipexpanded	U goto
F string	U iftrue
F table	U input
F token	U loadfoundtypescriptfile
F tokencode	U resetctxscanner
F tokenlist	U rlap
F tokens	U secondoftwoarguments
F toks	U setfalsevalue
F value	U setsectionblock
F vbox	U setupsystem
F verbatim	U startcolumns
F vtop	U starttabulate
F whd	U starttitle
F word	U startxtitle
scannumber	U stopcolumns
scanopen	U stoptabulate
scanoptional	U stoptitle
scanstring	U stopxtitle
scantable	U texsetup
scantokenlist	U xmlw
scantoks	D commands
scanvbox	F compile
scanverbatim	F constant
scanvtop	T converters
scanword	S toboolean
toboolean	S todimen
todimen	S toglue
tokens	S tonumber

F

Т

S tostring F scanbracketed F create F scanbracketedasis F defined F scancardinal F scanclose F flags F getinteger F scancode F scanconditional T getters F box F scancsname F count E scandelimited F scandimen F cstoken F dimen F scandimenargument F glue F scandimension F scanalue F macro F meaning F scangluespec F skip F scangluevalues F token F scanhash F isdefined F scanhbox F istoken F scaninteger F new F scanintegerargument F pickup F scankeyword F popmacro F scankeywordcs T presets F scanletters F pushmacro F scanlist F setinteger F scannumber T setters F scanopen F box F scanoptional F char F scanstring F count F scantable F scantokenlist F dimen F glue F scantoks F lua F scanvbox F scanverbatim F macro F skip F scanvtop T shortcuts F scanword N close F toboolean F todimen F inspect N open F tonumber F tostring F report F scanargument D values F scanargumentasis F tonumber F scanarray F tostrina F scanboolean values data table

F scanbox

#### tracers (context)

printerror function
printwarning function

showlines function

# trackers (context)

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

# typesetters (context)

alignments	table	T handlers	
F handler		F installhandle	er
F set		F processmath	
breakpoints	table	F set	
F define		F setcolor	
F handler		F setmath	
D mapping		F tomode	
T methods		firstlines	table
T numbers		T actions	
F set		F default	
F setreplaceme	nt	F line	
cases	table	F word	
T actions		F handler	
F handler		F set	
F register		fontkerns	table
F set		F handler	
characteralign	ı table	initials	table
F handler		T actions	
F resetcharact	eralign	F default	
F setcharacter	align	F addanchortoli	.ne
characters	table	F addtoline	
F handler		F calculatedelt	a
T methods		F checkline	
F replacenbsp		F handler	
F replacenbspa	ces	F moveinline	
checkers	table	F set	
F handler		injectors	table
F reset		F check	
F set		T list	
cleaners	table	F mark	
F handler		F reset	
F set		F set	
digits	table	F show	
T actions		italics	table
F handler		F enablemath	
F set		F enabletext	
directions	table	F forcevariant	
F getfences		F handler	
F getglobal		F reset	
F getmethod		F set	
F handler		kerns	table

D factors		F register	
		F register F reset	
F handler			
F keepligature		F split	
D mapping		F startapply	
F set	table	F stopapply	
manipulators	table	F stripped	
F apply		F tostring <b>rubies</b>	table
F applyspecifi	.cation		table
T methods		F attach	
F Word		F check	£
F Words		showsuspects	function table
F abbreviate		spacings	table
F expandedjo	urnal	F define	
F lowercase		F handler	
F stripperio	d	D mapping	
F uppercase		T numbers	
T patterns		T frenchpunc	
U list T charact		rs	
U pair		S name	
F splitspecifi		N number	
margins	table	F reset	
F finalhandler		F set	
F globalhandle		F setup	
F localhandler		wrappers	table
F save		F handler	
marksuspects	function	xtables	table
paragraphs	table	F cleanup	
F addanchortol	ine	F construct	
F addtoline		F create	
F calculatedel	.ta	F finish_row	
F checkline		F flush	
F handler		F initialize_c	
F moveinline		F initialize_r	
F set		F initialize_r	reflow_width
periodkerns	table	F next_row	
D factors		F reflow_heigh	nt
F handler		F reflow_width	
D mapping		F set_construc	t
F set		F set_reflow_h	_
processors	table	F set_reflow_w	vidth
F apply			

#### updaters (context)

apply function
register function

# url (context)

addscheme	function	hashed	$ \hbox{function} $
barepath	function	hasscheme	$ \hbox{function} $
construct	function	query	$ \hbox{function} $
decode	function	split	function
encode	function	toquery	$ \hbox{function} $
escape	function	unescape	function
filename	function	unescapeget	$ \hbox{function} $

# utf8 (basic lua)

char	function	codes	function
charpattern	string	len	function
codepoint	function	offset	function

# utilities (context)

debugger	table	F readtag
F disable		F setposition
F enable		F size
F savestats		F skip
F showstats		F skiplong
F showtraceback		F skipposition
files	table	F skipshort
F close		F writebyte
F getposition		F writecardinal1
F getsize		F writecardinal1le
F look		F writecardinal2
F open		F writecardinal2le
F read2dot14		F writecardinal3
F readbyte		F writecardinal3le
F readbytes		F writecardinal4
F readbytetable		F writecardinal4le
F readcardinal		F writeinteger1
F readcardinal1		F writeinteger1le
F readcardinal1le		F writeinteger2
F readcardinal2		F writeinteger2le
F readcardinal2le		F writeinteger3
F readcardinal3		F writeinteger3le
F readcardinal3le		F writeinteger4
F readcardinal4		F writeinteger4le
F readcardinal4le		F writestring
F readcardinaltab	le	<b>formatters</b> table
F readchar		F formatcolumns
F readfixed2		F list
F readfixed4		F stripzeros
F readinteger		<b>garbagecollector</b> table
F readinteger1		F check
F readinteger1le		N criterium
F readinteger2		B enabled
F readinteger2le		<b>ghostscript</b> table
F readinteger3		F convert
F readinteger3le		F statistics
F readinteger4		graphicmagick table
F readinteger4le	•	F convert F statistics
F readintegertabl	e	
F readsignedbyte		3 1, 11 13
F readstring		F convert

F statistics	B leftpage
<b>lua</b> table	B page
B alwaysstripcode	B paper
F checkmemory	B rightpage
F compile	B text
F loadedluacode	F iterator
F loadstring	F keq_to_hash
F loadstripped	F listitem
N nofstrippedbytes	F make_settings_to_hash_pattern
N nofstrippedchunks	F mergehashes
F registerfinalizer	F options_to_array
B stripcode	F options_to_hash
T strippedchunks	T patterns
F strippedloadstring	U settings_to_array
T suffixes	U settings_to_hash_a
S lua	U settings_to_hash_b
S luc	U settings_to_hash_c
S lui	U settings_to_hash_d
S luj	U unittotex
S luv	F process_stripped_settings
S tma	F rfc4180splitter
S tmc	F runtime
S tua	F settings_to_array
S tuc	F settings_to_array_obey_fences
<b>packers</b> table	F settings_to_array_with_repeat
F hashed	F settings_to_hash
F new	F settings_to_hash_colon_too
F pack	F settings_to_hash_strict
F simplehashed	F settings_to_hash_tolerant
F strip	F settings_to_numbers
F unpack	F settings_to_set
N version  parsers table	F simple_hash_to_string
F	F splitmethod
F add_settings_to_array	F splitthousands
F arguments_to_table	F stepper
F array_to_string	F stripped_settings_to_array
F csvsplitter F getparameters	F totime F unittotex
F groupedsplitat	F unittoxel
F hash to string	randomizer table
T hashes	F get
T settings to set	F getnumber
T text,hidden,paper,page,leftpage,rightpage	F getseed
B hidden	F popseed
5 11244011	. 6060000

F pushseed		F close
F reuseseed		F getposition
F setseed		F getsize
F setseedi		F getstring
randomizers	table	F look
F poisson		F open
sequencers	table	F openstring
F appendaction		F read2dot14
F appendgroup		F read2dot4
F compile		F readbyte
F disableaction		F readbytes
F disablegroup		F readbytetable
F enableaction		F readcardinal
F enablegroup		F readcardinal1
D functions		F readcardinal2
F localize		F readcardinal2le
F new		F readcardinal3
F nodeprocessor		F readcardinal3le
F prependaction		F readcardinal4
F prependgroup		F readcardinal4le
F removeaction		F readcardinaltable
F replaceaction		F readchar
F setkind		F readfixed2
F tostring		F readfixed4
setters	table	F readinteger
F disable		F readinteger1
F enable		F readinteger2
F initialize		F readinteger2le
F list		F readinteger3
F new		F readinteger3le
F register		F readinteger4
F report		F readinteger4le
F reset		F readintegertable
F show		F readsignedbyte
stacker	table	F readstring
F new		F setposition
storage	table	F size
F allocate		F skip
F checked		F skipbytes
F mark		F skiplong
F marked		F skipshort
F setinitializer	S	<b>strings</b> table
F sparse		F collapse
streams	table	F collapsecrlf

Т	formatters		F	definetable	
	F add		F	encapsulate	
	F new		F	insertaftervalue	
F	newcollector		F	insertbeforevalue	
F	newrepeater		F	migratetable	
F	nice		F	removevalue	
Т	striplinepatterr	IS	F	replacevalue	
	U collapse		temp	<b>lates</b> ta	ble
	U prune		F	load	
	U prune and coll	apse	F	replace	
	U prune and no e	mpty	F	replacer	
	U prune and to ${\sf s}$	pace	F	resolve	
	U retain		zipf	<b>iles</b> ta	ble
	U retain and col	lapse	F	close	
	U retain and no	empty	F	found	
F	striplines		F	gunzipfile	
F	striplong		F	hash	
F	tabtospace		F	list	
Т	tracers		F	open	
bΊ	.es	table	F	unzip	
F	accesstable		F	unzipdir	

F definedtable

F zipdir

# visualizers (context)

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

# xcomplex (extra lua)

I	function		F sqrt
add			F tan
div	function		F tanh
eq	function		F topair
ind			F tostring
FΙ			mul
_	_add		name
F_	_div		pow
F_	_eq		sub
т_	_index	F	tostring
	I	F	unm
F	add	F	abs
	div	F	acos
F	eq	F	acosh
F	mul	F	arg
	name	F	asin
	pow	F	asinh
	sub	F	atan
F	tostring	F	atanh
F	unm	F	conj
F	abs	F	cos
F	acos	F	cosh
F	acosh	F	exp
F	arg	F	i
F	asin	F	imag
F	asinh	F	log
F	atan	F	new
F	atanh	F	pow
F	conj	F	proj
F	COS	F	real
F	cosh	F	sin
F	exp	F	sinh
F	i	F	sqrt
F	imag	F	tan
F	log	F	tanh
F	new	F	topair
F	pow	F	tostring
F	proj	mu	
F	real	na	<b>me</b> string
F	sin	po	w function
F	sinh	su	<b>b</b> function

tostring	function	i	function
unm	function	imag	function
abs	function	log	function
acos	function	new	function
acosh	function	pow	function
arg	function	proj	function
asin	function	real	function
asinh	function	sin	function
atan	function	sinh	function
atanh	function	sqrt	function
conj	function	tan	function
cos	function	tanh	function
cosh	function	topair	function
exp	function	tostring	function

# xdecimal (extra lua)

add	function		F min
band	function		F minus
bor	function	1	F new
_bxor	function	1	F plus
div	function	I	F pow
eq	function	1	F rotate
index	table	I	F setprecision
Fadd		I	F shift
Fband		I	F sqrt
Fbor		1	F tonumber
Fbxor		1	F tostring
Fdiv			F trim
Feq			le
Tindex			lt
Fadd		F	mul
Fband		S	name
Fbor		F	pow
Fbxor			shl
Fdiv		F	shr
Feq			sub
Fle		F	tostring
Flt		F	unm
Fmul		F	abs
Sname		F	band
Fpow		F	bor
Fshl		F	bxor
Fshr		F	conj
Fsub		F	сору
Ftostri	ng	F	exp
Funm		F	getprecision
F abs		F	ln
F band		F	log
F bor		F	max
F bxor			min
F conj		F	minus
F copy			new
F exp			plus
F getpreci	sion		pow
Fln			rotate
F log			setprecision
F max		F	shift

F sqrt	
F tonumber	
F tostring	
F trim	
le	function
lt	function
mul	function
name	string
pow	function
shl	function
shr	function
sub	function
tostring	function
unm	function
abs	function
band	function
bor	function
bxor	function
conj	function

сору	function
exp	function
getprecision	function
ln	function
log	function
max	function
min	function
minus	function
new	function
plus	function
pow	function
rotate	function
setprecision	function
shift	function
sqrt	function
tonumber	function
tostring	function
trim	function

#### xmath (extra lua)

acos	function	isnormal	function
acosh	function	j0	function
asin	function	j1	function
asinh	function	jn	function
atan	function	ldexp	function
atan2	function	lgamma	function
atanh	function	log	function
cbrt	function	log10	function
ceil	function	log1p	function
copysign	function	log2	function
cos	function	logb	function
cosh	function	modf	function
deg	function	nan	number
erf	function	nearbyint	function
erfc	function	nextafter	function
exp	function	pi	number
exp2	function	pow	function
expm1	function	rad	function
fabs	function	remainder	function
fdim	function	remquo	function
floor	function	round	function
fma	function	scalbn	function
fmax	function	sin	function
fmin	function	sinh	function
fmod	function	sqrt	function
frexp	function	tan	function
gamma	function	tanh	function
hypot	function	tgamma	function
inf	number	trunc	function
isfinite	function	y0	function
isinf	function	y1	function
isnan	function	yn	function

#### xml (context)

addentitiesdoctype	function	F fontspecification	
addspecialcode	function	F mappedstylevalue	
after	function	F padding	
all	function	F size	
applylpath	function	F style	
applyselector	function	F stylevalue	
assign	function	F todimension	
attribute	function	F variant	
badinclusions	function	F weight	
before	function	defaulthandlers	table
body	function	D file	
builtinentities	table	D parsedxml	
B amp		D string	
B apos		D tex	
B gt		D texline	
B lt		D texspace	
B quot		D verbose	
cdata	function	defaultprotocol	string
cdatatotext	function	delete	function
checkbom	function	delete_element	<del>function</del>
checkerror	function	despecialized	function
checknamespace	function	each	function
checkns	function	each_element	<del>function</del>
cleansed	function	elements	function
collect	function	elementtocdata	function
collect_elements	<del>function</del>	empty	function
collect_tags	function	entities	data table
collect_texts	<del>function</del>	erase	function
collected	function	errorhandler	function
collecttexts	function	escaped	function
compactelement	function	expressions	table
content	function	F attribute	
convert	function	F boolean	
сору	function	F child	
count	function	F contains	
cprint	function	F count	
CSS	table	F error	
F applyselector		F find	
F colorspecification		F hasclass	
F dimension		F idstring	
F family		F lower	

F name		F upperall	
F number		F xml	
F oneof		T xml	
F print		F all	
F quit		F att	
F tag		F attribute	
F text		F attributes	
F undefined		F cdata	
F upper		F chainattribute	
fillin	function	F count	
filter	function	F default	
finalizers	table	F elements	
F paragraphs		F empty	
T tex		F first	
F all		F function	
F attribute		Findex	
F chainattribute		F last	
F chainpath		F lowerall	
F command		F match	
F concat		F name	
F concatrange		F position	
F context		F reverse	
F count		F table	
F ctxtext		F tag	
F default		F tags	
F depth		F text	
F first		F texts	
F function		F upperall	
F index		first	function
F last		found	function
F lettered		functions	table
Flower		F classes	
F lowerall		F hasclass	
F match		getbuffer	function
F name		gethandlers	function
F param		gethandlersfunctio	
F parameter		helpers	table
F position		F recursetext	
F reverse		include	function
F stripped		inclusion	function
F tag		inclusions	function
F tags		index	function
F text		inheritattributes	function
F upper		inheritedconvert	function

inject	function	process	function
inject element	function	process attributes	function
inject element after	function	process elements	function
inject_element_before		processattributes	function
injectafter	function	profiled	table
injectbefore	function	pure	function
insert	function	pushmatch	function
insert_element	function	raw	function
insert_element_after	function	registerentity	function
insert element before		registerns	function
insertafter	function	reindex	function
insertbefore	function	remap_name	function
insertcdata	function	remap_namespace	function
insertcomment	function	remap_tag	function
inspect	function	remapname	function
is_valid	function	remapnamespace	function
kind	function	remaptag	function
last	function	rename	function
lastmatch	function	renamespace	function
load	function	reparsedentitylpeg	userdata
lpath	function	replace	function
lpathcached	function	replace_element	<b>function</b>
lpathcalls	function	resetinjectors	function
lshow	function	resolvens	function
makestandalone	function	root	function
match	function	save	function
name	function	selection	function
newhandlers	function	separate	function
nodesettostring	function	serialize	function
originalload	function	serializetotext	function
package	function	setcdata	function
parent	function	setcomment	function
parsedentitylpeg	userdata	sethandlersfunction	function
pihandlers	table	setinjectors	function
F injector		setproperty	function
F tex		settings	function
placeholders	table	specialcodes	table
F unknown_any_entity		S "	
F unknown_dec_entity		S #	
F unknown_hex_entity		S \$	
popmatch	function	S %	
position	function	S &	
privatecodes	table	S '	
privatetoken	function	S <	

S >		tocdata	function
S \		toelement	function
S {		tostring	function
S		totable	function
S }		toxml	function
S ~		tprint	function
specialhandler	table	traverse	function
sprint	function	unescaped	function
string	function	unescapedentitylpeg	userdata
strip	function	unprivatized	function
strip_whitespace	<del>function</del>	unspecialized	function
stripelement	function	wipe	function
stripleadingspaces	function	withelement	function
table	function	withelements	function
text	function	wrap	function
textonly	function	xmlns	table
texttocdata	function		

#### xzip (extra lua)

adler32 function
compress function
crc32 function

decompress function
expandsize function

#### zip (extra lua)

archives table
closearchive function

openarchive function
registeredfiles table

#### zlib (extra lua)

adler32 function
compress function
crc32 function

decompress function
expandsize function