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

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

## global (alias: \_G)

| MP             | table    | error           | function |
|----------------|----------|-----------------|----------|
| LUAVERSION     | number   | experiments     | table    |
| MAJORVERSION   | number   | figures         | table    |
| MINORVERSION   | number   | file            | table    |
| _<br>cldo      | function | floats          | table    |
| arg            | table    | font            | table    |
| assert         | function | fontloader      | table    |
| attributes     | table    | fonts           | table    |
| backends       | table    | frozen          | boolean  |
| beginpage      | function | functions       | table    |
| bit            | table    | gcinfo          | function |
| bit32          | table    | getfenv         | function |
| blobs          | table    | getmetatable    | function |
| boolean        | table    | getpos          | function |
| border_set     | boolean  | getreadfilename | function |
| buffers        | table    | getvpos         | function |
| builders       | table    | global          | table    |
| caches         | table    | graphics        | table    |
| callback       | table    | gzip            | table    |
| callbacks      | table    | img             | table    |
| catcodes       | table    | inspect         | function |
| characters     | table    | interactions    | table    |
| chemistry      | table    | interfaces      | table    |
| collectgarbage | function | io              | table    |
| commands       | table    | ipairs          | function |
| containers     | table    | jit             | table    |
| context        | function | job             | table    |
| converters     | table    | lang            | table    |
| coroutine      | table    | languages       | table    |
| ctx_doifelse   | function | layouts         | table    |
| ctxrunner      | table    | lfs             | table    |
| debug          | table    | libraries       | table    |
| dimen          | function | lmx             | table    |
| dir            | table    | load            | function |
| directives     | table    | loadfile        | function |
| document       | table    | loadstring<br>- | function |
| documentdata   | table    | logs            | table    |
| dofile         | function | lpdf            | table    |
| endpage        | function | lpeg            | table    |
| environment    | table    | ltn12           | table    |
| epdf           | table    | lua             | table    |

| luatex          | table    |
|-----------------|----------|
| lxml            | table    |
| math            | table    |
| mathematics     | table    |
| mbox            | table    |
| md5             | table    |
| metapost        | table    |
| mime            | table    |
| module          | function |
| moduledata      | table    |
| modules         | table    |
| mp              | table    |
| mplib           | table    |
| newproxy        | function |
| next            | function |
| noads           | table    |
| node            | table    |
| nodes           | table    |
| number          | table    |
| optionalrequire | function |
| os              | table    |
| outputpagestree | function |
| package         | table    |
| pagebuilders    | table    |
| pairs           | function |
| parametersets   | table    |
| pcall           | function |
| pdf             | table    |
| pdfscanner      | table    |
| physics         | table    |
| print           | function |
| profiler        | table    |
| protect         | function |
| publications    | table    |
| rawequal        | function |
| rawget          | function |
| rawlen          | function |
| rawset          | function |
| regimes         | table    |
| require         | function |
| resolvers       | table    |
| scripts         | table    |
| select          | function |
| set             | table    |

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

### attributes (context)

| <pre>colorintents table</pre> | F mpoptions    |            |
|-------------------------------|----------------|------------|
| N attribute                   | U none         |            |
| D data                        | F popset       |            |
| F enable                      | F processcolor | components |
| F handler                     | F pushset      |            |
| F register                    | F register     |            |
| D registered                  | D registered   |            |
| colors table                  | F registerspot | color      |
| N attribute                   | F rgb          |            |
| F cmyk                        | F rgbtocmyk    |            |
| F cmyktogray                  | F rgbtogray    |            |
| F cmyktorgb                   | F rgbtohsv     |            |
| F colorcomponents             | N selector     |            |
| B couple                      | F setlist      |            |
| D data                        | F setmodel     |            |
| N default                     | D sets         |            |
| F defineintermediatecolor     | F spec         |            |
| F definemixcolor              | F spot         |            |
| F definemultitonecolor        | F spotcolornam | e          |
| F defineprocesscolor          | F spotcolorpar | ent        |
| F definesimplegray            | F spotcolorval | ıe         |
| F definespotcolor             | B supported    |            |
| F definetransparency          | F transparency | components |
| F enable                      | B triggering   |            |
| F filter                      | F usecolors    |            |
| F forcedmodel                 | F value        |            |
| F forcesupport                | D values       |            |
| F formatcolor                 | B weightgray   |            |
| F formatgray                  | define         | function   |
| F gray                        | effects        | table      |
| F graytohsv                   | N attribute    |            |
| F handler                     | D data         |            |
| F hsvtogray                   | F enable       |            |
| F hsvtorgb                    | F handler      |            |
| F iccprofile                  | F register     |            |
| F isblack                     | D registered   |            |
| N main                        | D values       |            |
| S model                       | handlers       | table      |
| D models                      | list           | data table |
| F mpcolor                     | names          | data table |
| F mpnamedcolor                | negatives      | table      |

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

F forcesupport
F handler
B hasorder
D listwise

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

#### backends (context)

F getypos

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

F comment

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

# registrations table tables table

#### bit (context)

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

### bit32 (basic lua)

```
arshift function
band
       function
       function
bnot
bor
       function
       function
btest
bxor function
extract function
lrotate function
lshift function
replace function
rrotate function
rshift function
```

### blobs (context)

| append      | function |
|-------------|----------|
| dimensions  | function |
| dispose     | function |
| new         | function |
| pack        | function |
| strdp       | function |
| strhd       | function |
| strht       | function |
| strwd       | function |
| tohpack     | function |
| tohpackfast | function |
| tonodes     | function |
| tovpack     | function |
| tovpackfast | function |
| write       | function |

### boolean (context)

tocontext function
tonumber function

#### buffers (context)

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

F define

F hassomecontent

F next
F place
F reset
F save

prepend function
raw function

#### builders (context)

#### kernel table F hyphenation F kernina F ligaturing F mlist\_to\_hlist paragraphs table T constructors N attribute F define F disable F enable F handler T methods F basic F default F oneline D names D numbers F set F start F stop T expansion F trace F keeptogether F registertogether T solutions T splitters F define F optimize T registered F reset F set F split F start F stop F tag vspacing table F analyze D categories F collapsevbox

T data

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

#### caches (context)

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

#### callback (basic tex)

find function
list function

register overloaded function

#### callbacks (context)

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

#### catcodes (context)

names data table
numbers data table
register function

### characters (context)

| activeoffset               | number                 | C D        |
|----------------------------|------------------------|------------|
| activeoriset               | function               | S B        |
| bidi                       | data table             | S C        |
|                            | function               | S D        |
| blockrange<br>blocks       | data table             | SE         |
|                            | table                  | S F        |
| casemap                    | 10.010                 | 5 G        |
| categories                 | data table             | SH         |
| category                   | function<br>data table | SI         |
| categorytags               | data table             | S J        |
| collapsed<br>combined      | data table             | S K        |
| combined                   | function               | S L        |
| data                       | data table             | S M        |
|                            | data table             | S N        |
| decomposed<br>define       | function               | S 0        |
| description                | function               | S P        |
| •                          | data table             | 5 Q        |
| descriptions<br>directions | table                  | S R<br>S S |
| enccodes                   | data table             | 5 5<br>S T |
| entities                   | data table             | SU         |
| fallbacks                  | data table             | S V        |
| filters                    | data table             | S W        |
| fromnumber                 | function               | s w        |
| fschars                    | data table             | 5 Y        |
| fscodes                    | data table             | SZ         |
| getrange                   | function               | S À        |
| graphemes                  | data table             | SÁ         |
| hangul                     | data table             | SÂ         |
| initialize                 | function               | SÃ         |
| is character               | data table             | SÄ         |
| is_command                 | data table             | s Å        |
| is letter                  | data table             | S Æ        |
| is mark                    | data table             | S C        |
| is punctuation             | data table             | SÈ         |
| is_spacing                 | data table             | SÉ         |
| lcchars                    | data table             | SÊ         |
| lccode                     | function               | SË         |
| lccodes                    | data table             | SÌ         |
| lettered                   | function               | SÍ         |
| lhash                      | table                  | SÎ         |
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| S ai         |            | otfscripts           | data table |
| S al         |            | ranges               | data table |
| S b2         |            | registerentities     | function   |
| S ba         |            | remap_hangul_syllabe | function   |
| S bb         |            | setcodes             | function   |
| S bk         |            | shape                | function   |
| S cb         |            | shaped               | function   |
| S cj         |            | shash                | table      |
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| S Ђ  | s ä |
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| Sỹ   | S Ή  |
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| Sα̈́ | Sΐ   |
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S unicodechar function function upper

## chemistry (context)

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

## commands (context)

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

| btxlistvariant         | function | currentreferencedefault   | function |
|------------------------|----------|---------------------------|----------|
| btxloadjournallist     | function | currentreferenceorder     | function |
| btxpreparelistentries  | function | currentregime             | function |
| btxsavedataset         | function | currentsectiontolist      | function |
| btxsavejournallist     | function | datasetvariable           | function |
| btxsingularorplural    | function | dayname                   | function |
| btxtoregister          | function | deferredproperty          | function |
| btxuservariable        | function | defineattribute           | function |
| buildtextaccent        | function | definebreakpoint          | function |
| character              | function | definebreakpoints         | function |
| characters             | function | definecatcodetable        | function |
| chardescription        | function | definecharacterspacing    | function |
| checkcharactersinfont  | function | definechemical            | function |
| checkcountersetup      | function | defineconversion          | function |
| checkedconversion      | function | definecounter             | function |
| checkedpagefloat       | function | definedviewerlayer        | function |
| checkinjector          | function | definefallbackfamily      | function |
| checktwopassdata       | function | definefield               | function |
| chemicalcomponent      | function | definefieldset            | function |
| chineseallnumerals     | function | definefilefallback        | function |
| chinesecapnumerals     | function | definefilesynonym         | function |
| chinesenumerals        | function | definefont_one            | function |
| cleanfontname          | function | definefont_two            | function |
| cleanupbox             | function | definefontfamily          | function |
| cleanuplayers          | function | definefontfeature         | function |
| clonefield             | function | definefontsolution        | function |
| collectfloat           | function | definehyphenationfeatures | function |
| collecthelp            | function | defineinsertion           | function |
| colorcomponents        | function | defineintermediatecolor   | function |
| concatcommalist        | function | definelabels              | function |
| consultfloat           | function | definelanguage            | function |
| convertbtxdatasettoxml | function | definelinkedlist          | function |
| converteddimen         | function | definemarking             | function |
| copyposition           | function | definemetafont            | function |
| cos                    | function | definemultitonecolor      | function |
| cosd                   | function | definenote                | function |
| countervalue           | function | defineparallel            | function |
| counttwopassdata       | function | defineparbuilder          | function |
| ctxfunction            | function | defineprocesscolor        | function |
| currentcomponent       | function | defineprogram             | function |
| currentdate            | function | definereference           | function |
| currentenvironment     | function | defineregister            | function |
| currentproduct         | function | definesectionlevels       | function |
| currentproject         | function | defineselectfont          | function |

| definesnapmethod                         | function | doiffieldelse                | function |
|--|----------|------------------------------|----------|
| definespotcolor                          | function | doiffieldsetelse             | function |
| definestructureblock                     | function | doiffiledefinedelse          | function |
| definestructureset                       | function | doiffileexistelse            | function |
| definetransparency                       | function | doiffirstcharelse            | function |
| definetwopasslist                        | function | doifinputfileelse            | function |
| defineviewerlayer                        | function | doifinsetelse                | function |
| defrostrandomseed                        | function | doifleapyearelse             | function |
| depthnumber                              | function | doiflisthasentry             | function |
| digits                                   | function | doiflisthasnumberelse        | function |
| disableautofontscript                    | function | doiflisthaspageelse          | function |
| disableparbuilder                        | function | doiflisthastitleelse         | function |
| disableregime                            | function | doiflocfileelse              | function |
| disablespellchecking                     | function | doifnot                      | function |
| discardfromlist                          | function | doifnotcounter               | function |
| doanalyzeframedbox                       | function | doifnotecontent              | function |
| doif                                     | function | doifnoteonsamepageasprevious | function |
| doifblackelse                            | function | doifobjectreferencefoundelse | function |
| doifcommonelse                           | function | doifolderversionelse         | function |
| doifcounter                              | function | doifoverlappingelse          | function |
| doifdimenstringelse                      | function | doifparentfileelse           | function |
| doifdrawingblackelse                     | function | doifpathexistelse            | function |
| doifelse                                 | function | doifposition                 | function |
| doifelsebuffer                           | function | doifpositionelse             | function |
| doifelsecontinuewithfile                 | function | doifpositiononpage           | function |
| doifelseconverter                        | function | doifpositionsonsamepageelse  | function |
| doifelsecounter                          | function | doifpositionsonthispageelse  | function |
| ${\tt doifelse current fonthas feature}$ | function | doifurldefinedelse           | function |
| doifelseintwopassdata                    | function | doprocesstypescriptfile      | function |
| doifelsemarking                          | function | doreshapeframedbox           | function |
| doifelsemessage                          | function | dostarttextfile              | function |
| doifelsemultipar                         | function | dostoptextfile               | function |
| doifelseparallel                         | function | ecolumn                      | function |
| doifelsepositionsused                    | function | elapsedtime                  | function |
| doifelserangeonpage                      | function | enableautofontscript         | function |
| doifelsereference                        | function | enablecolor                  | function |
| doifelsesavedfloat                       | function | enablecolorintents           | function |
| doifelsespaces                           | function | enablecrlf                   | function |
| doifelseutfmathabove                     | function | enablefontcolorschemes       | function |
| doifelseutfmathaccent                    | function | enableparbuilder             | function |
| doifelseutfmathbelow                     | function | enableregime                 | function |
| doifelseutfmathfiller                    | function | enablespellchecking          | function |
| doifelsevisualizer                       | function | enabletransparency           | function |
| doiffieldcategoryelse                    | function | enhancelinkedlist            | function |

| enhancelist                        | function   | fontcollectionreport                             | function |
|------------------------------------|------------|--|----------|
| enhancereference                   | function   | fontcollectionreset                              | function |
| enhanceregister                    | function   | fontlookupgetkey                                 | function |
| erasebuffer                        | function   | fontlookupgetkeyofindex                          | function |
| expandcurrentreference             | function   | fontlookupinitialize                             | function |
| exportformdata                     | function   | fontlookupnoffound                               | function |
| •                                  | function   |  | function |
| exportreferences<br>extendregister | function   | forceendjob<br>forcequitjob                      | function |
| extensiblecode                     | function   | format   | function |
| feature                            | function   | formatcolor                                      | function |
| featureattribute                   | function   |  | function |
| featurelist                        | function   | formatgray<br>freezerandomseed                   | function |
| feedback                           | function   | from   | function |
| fetchallmarks                      | function   |  | function |
| fetchmultipar                      | function   | getbidimode<br>getbodyfontsizes                  | function |
|                                    | function   | getbuffer  | function |
| fetchmultishape<br>fetchonemark    | function   | getbufferctxlua                                  | function |
|                                    | function   | qetbuffermkvi                                    | function |
| fetchposboxes<br>fetchtwomarks     | function   | getcommandline                                   | function |
| figurefilename                     | function   | getctxfile                                       | function |
| figurefilepath                     | function   | getcurrentprefixspec                             | function |
| figurefiletype                     | function   | getcurrentprefixspec getcurrentreferencemetadata | function |
|                                    | function   | getcurrentsectionlevel                           | function |
| figurerequest<br>figurestatus      | function   | getdefaultfieldvalue                             | function |
| figureused                         | function   | getelementtag                                    | function |
| figurevariable                     | function   | getfieldcategory                                 | function |
| filterdefaultreference             | function   | getfirstcharacter                                | function |
| filterreference                    | function   | getfirsttwopassdata                              | function |
| finalizebox                        | function   | getfloatvariable                                 | function |
| findtwopassdata                    | function   | getfullsectionnumber                             | function |
| firstcountervalue                  | function   | getinternallistreference                         | function |
| firstinset                         | function   | getinternalreference                             | function |
| firstofrange                       | function   | getlasttwopassdata                               | function |
| flushfloat                         | function   | getmarking                                       | function |
| flushmarked                        | function   | getmessage                                       | function |
| flushnotes                         | function   | getmpextensions                                  | function |
| flushpostponedblocks               | function   | getnotestate                                     | function |
| flushpostponednotes                | function   | getplaceholderchar                               | function |
| fontchar                           | function   | getprivatechar                                   | function |
| fontcharbyindex                    | function   | getprogram                                       | function |
| fontcollectionclone                | function   | getrandomcounta                                  | function |
| fontcollectiondefine               | function   | getrandomcountb                                  | function |
| fontcollectionprepare              | function   | getrandomseed                                    | function |
| fontcollectionregister             | function   | getrandomseed<br>getreadfilename                 | function |
| ionicorrectioni edizini            | TUITCETOIL | ge ci cau i Trelialle                            | Tunction |

| getsectionnumber        | function | listgroupindex             | function |
|-------------------------|----------|----------------------------|----------|
| getstructuredata        | function | listlabel                  | function |
| getsubstring            | function | listlocation               | function |
| gettexbuffer            | function | listprefixednumber         | function |
| gettwopassdata          | function | listprefixedpage           | function |
| gettwopassdatalist      | function | listrealpage               | function |
| geturl                  | function | listsize                   | function |
| grabbuffer              | function | listtitle                  | function |
| hboxtovbox              | function | listuserdata               | function |
| helpaction              | function | loadbtxdefinitionfile      | function |
| helpreference           | function | loadexamodes               | function |
| hexstringtonumber       | function | loadfontgoodies            | function |
| horizontalcode          | function | loadspellchecklist         | function |
| hour                    | function | loadtypescriptfile         | function |
| hyphenatedlist          | function | loadvisualizer             | function |
| hyphenatedurl           | function | locatefilepath             | function |
| D characters            |          | locfilename                | function |
| N lefthyphenmin         |          | lower                      | function |
| D mapping               |          | makeactive                 | function |
| N righthyphenmin        |          | manipulated                | function |
| F setcharacters         |          | markfonts                  | function |
| immediateproperty       | function | markingnumber              | function |
| incrementedcounter      | function | markingtitle               | function |
| initializetexdirectives | function | markinjector               | function |
| initializetextrackers   | function | markregionbox              | function |
| injectcurrentreference  | function | math_frac                  | function |
| injectreference         | function | mathrenderset              | function |
| inlinechemical          | function | minute                     | function |
| insertattachment        | function | mixcleanup                 | function |
| insertcomment           | function | mixfinalize                | function |
| insertfield             | function | mixflushlist               | function |
| insertionnumber         | function | mixflushrest               | function |
| insertrenderingwindow   | function | mixgetsplit                | function |
| insertsoundclip         | function | mixsetsplit                | function |
| installedlanguages      | function | mixstate                   | function |
| installtexdirective     | function | molecule                   | function |
| installtextracker       | function | month                      | function |
| languagenumber          | function | monthmnem                  | function |
| lastcountervalue        | function | monthname                  | function |
| lchexnumber             | function | mpcolor                    | function |
| lchexnumbers            | function | mpoptions                  | function |
| leapyear                | function | mprunvar                   | function |
| linenumbersstageone     | function | namedstructureuservariable | function |
| linenumbersstagetwo     | function | namedstructurevariable     | function |

| nbfs                           | function | F NR                          |
|--------------------------------|----------|-------------------------------|
| nextcountervalue               | function | F ParsedXmlSnippetCdata       |
| nextparallel                   | function | F ParsedXmlSnippetComment     |
| nofdays                        | function | F ParsedXmlSnippetDoctype     |
| nofstackedfloats               | function | F ParsedXmlSnippetElement     |
| notedeltapage                  | function | F ParsedXmlSnippetInstruction |
| notelistindex                  | function | F ParsedXmlSnippetKey         |
| notenumberpage                 | function | F ParsedXmlSnippetValue       |
| noteprefixednumber             | function | F TexSnippet                  |
| notesymbolpage                 | function | F TexSnippetBoundary          |
| notetitle                      | function | F TexSnippetComment           |
| ntimes                         | function | F TexSnippetGroup             |
| number                         | function | F TexSnippetName              |
| F C                            |          | F TexSnippetSpecial           |
| F FL                           |          | F XmlSnippet                  |
| F HL                           |          | F XmlSnippetBoundary          |
| FL                             |          | F XmlSnippetCdata             |
| F LL                           |          | F XmlSnippetComment           |
| F LuaSnippet                   |          | F XmlSnippetEntity            |
| F LuaSnippetBoundary           |          | F XmlSnippetEqual             |
| F LuaSnippetComment            |          | F XmlSnippetKey               |
| F LuaSnippetName               |          | F XmlSnippetName              |
| F LuaSnippetNameBase           |          | F XmlSnippetString            |
| F LuaSnippetNameCore           |          | Fflush                        |
| F LuaSnippetNameLibraries      |          | Fflushdirect                  |
| F LuaSnippetQuote              |          | Fflushlines                   |
| F LuaSnippetSpecial            |          | F a                           |
| F LuaSnippetString             |          | F addaskedblankskip           |
| F ML                           |          | F addpredefinedblankskip      |
| F MPLIBsetCtext                |          | F applyprocessor              |
| F MPLIBsetNtext                |          | F b                           |
| F MPcolor                      |          | F beginhbox                   |
| F MetapostSnippet              |          | F beginvbox                   |
| F MetapostSnippetBoundary      |          | F bf                          |
| F MetapostSnippetComment       |          | F bgroup                      |
| F MetapostSnippetConstructor   |          | F blank                       |
| F MetapostSnippetName          |          | F bold                        |
| F MetapostSnippetNameMetafun   |          | F btxchecklistcombi           |
| F MetapostSnippetNamePlain     |          | F btxchecklistentry           |
| F MetapostSnippetNamePrimitive |          | F btxciteauthorsetup          |
| F MetapostSnippetQuote         |          | F btxcitesetup                |
| F MetapostSnippetSpecial       |          | F btxcitevariantparameter     |
| F MetapostSnippetString        |          | F btxdirectlink               |
| F NC                           |          | F btxflushauthor              |

F btxhandlelistentry F btxstopcite
F btxhandlelisttextentry F btxstopciteauthor
F btxlistauthorsetup F btxstopsubcite

F btxlistparameter F c

F btxlistsetup F callfunctiononce

F char

F chardef

F colordefage

F colordefagt

F constructcs

F digitssignspace

F color

F btxlistsetup

F btxlistvariantparameter

F btxpagesetup

F btxsetafter

F btxsetauthorindex

F btxsetauthorvariant

F btxsetbacklink

F btxsetbacktrace

F colordefalc F colordefalt F btxsetbefore F colordeffqc F btxsetcategory F colordeffat F btxsetcitereference F colordefflc F btxsetcombis F colordefflt F btxsetconcat F colordefrac F htxsetcount F colordefrgt F btxsetdataset F colordefrlc F btxsetfirst F colordefrlt F btxsetfirstinternal F concat

F btxsetfirstpage F constructcsonly
F btxsetinitials F convertnumber
F btxsetinternal F ctxreport
F btxsetjuniors F d

F btxsetfirstnames

F btxstartsubcite

F btxsetlanguage F definefontsynonym

F btxsetlastinternal T delayed
F btxsetlastpage F digitsdigit
F btxsetlefttext F digitsfinalcomma
F btxsetlistreference F digitsfinalperiod
F btxsetnumber F digitshighspace

F btxsetoverflow F digitsintermediatecomma
F btxsetrighttext F digitsintermediateperiod

F btxsetsecond F digitsminus F btxsetsurnames F digitsnegative F btxsettag F digitsplus F btxsetthird F digitspositive F btxsetvons F digitspower F btxstartauthor F digitspowerminus F btxstartcite F digitspowerplus F btxstartciteauthor F digitsseparatorspace

F btxstopauthor F digitsspace

F digitszeropadding F fntsetdefname F direct F fntsetnopsize F doactivateinjector F fntsetsomename F dodisplayverbatimbeginline F fntsetsomesize F dodisplayverbatimemptyline T formatted F dodisplayverbatiminitialize F monobold F dodisplayverbatimnewline F fprint F dodisplayverbatimstart T generics F dodisplayverbatimstop S starttabulate F dofastdefinetypeface S stoptabulate F dofinishsomereference F getlogger F doflushparallel F getreferencestructureprefix F dofromfiledescription F getvalue F dofromfileliteral F glyph F dofromurldescription F gobbleoneargument F dofromurlliteral F aoto F doinlineverbatimbeginline F hrule F doinlineverbatimemptyline F input F doinlineverbatimnewline T knownfunctions F 1 F doinlineverbatimstart F doinlineverbatimstop F lateluafunction F domarkiniector F letvaluerelax F donestedtypingstart F llap F donestedtypingstop F loadfile F dosetfastregisterentry F loadfoundtypescriptfile F dostarttext F luasetup F doverbatimspace F m F egroup F makelinenumber T metafun F emptyreference F enablemode F color F endhbox T delayed F endybox F start F environment F stop F expandreferencearguments T nested F markingcommand F expandreferenceoperation F finalizeautostructurelevel F markingseparator F finishjob F newbox F firstofoneargument F newcount F firstoftwoarguments F newdimen F fixedblankskip F newindexer F flexibleblankskip F newmuskip F flushblankhandling F newskip F flushboxregister F newtexthandler F flushnode F newtoks

F newverbosehandler F startLuaSnippet F nointerlineskip F startMetapostSnippet F normalatop F startParsedXmlSnippet F normalover F startTexSnippet F overstrike F startXmlSnippet F par F startblankhandling F pdfliteral F startcolumns F startcomponentindeed F popcatcodes F poplogger F startenvironmentindeed F printlines F startfontclass F processfilemany F starthboxregister F processfilenone F startproductindeed F processfileonce F startprojectindeed F protect F startreadingfile T puretext F startregisterentries F pushcatcodes F startregisterentry F pushlogger F startregisteroutput F registerentry F startregisterpages F registerfunction F startregistersection F registeronepage F startregisterseewords F registerpagerange F starttabulate F registerseeword F starttext F reservefunction F starttitle F startyboxregister F rlap F rotate F startxtitle F runfile F stopLuaSnippet F secondoftwoarguments F stopMetapostSnippet F setblankcategory F stopParsedXmlSnippet F setblankorder F stopTexSnippet F setblankpenalty F stopXmlSnippet F setconditional F stopblankhandling F setfalsevalue F stopcolumns F sethboxregister F stopcomponentindeed F setsomevalue F stopenvironmentindeed F settabulateentry F stopfontclass F settabulatelastentry F stophboxregister F settracing F stopproductindeed F setupsystem F stopprojectindeed F setupwithargument F stopreadingfile F setvalue F stopregisterentries F setvboxregister F stopregisterentry F setxvalue F stopregisteroutput F space F stopregisterpages

F stopregistersection

F sprint

| F stopregisterseewords    | F LuaSnippetSpecial                    |          |
|---------------------------|--|----------|
| F stoptabulate            | F LuaSnippetString                     |          |
| F stoptext                | F MetapostSnippetBoundary              |          |
| F stoptitle               | F MetapostSnippetComment               |          |
| F stopvboxregister        | F MetapostSnippetConstructor           |          |
| F stopxtitle              | F MetapostSnippetName                  |          |
| F storenode               | F MetapostSnippetNameMetafun           |          |
| F synonymentry            | F MetapostSnippetNamePlain             |          |
| F tabulaterow             | F MetapostSnippetNamePrimitive         |          |
| F tabulaterowbold         | F MetapostSnippetQuote                 |          |
| F tabulaterowtyp          | F MetapostSnippetSpecial               |          |
| F tabulaterowtype         | F MetapostSnippetString                |          |
| F template                | F ParsedXmlSnippetCdata                |          |
| T templates               | F ParsedXmlSnippetComment              |          |
| F texsetup                | F ParsedXmlSnippetDoctype              |          |
| F tobuffer                | F ParsedXmlSnippetElement              |          |
| F tocontext               | ${\sf F\ ParsedXmlSnippetInstruction}$ |          |
| F tolines                 | F TexSnippetBoundary                   |          |
| F unitsC                  | F TexSnippetComment                    |          |
| F unitsN                  | F TexSnippetGroup                      |          |
| F unitsNspace             | F TexSnippetName                       |          |
| F unitsNstart             | F TexSnippetSpecial                    |          |
| F unitsNstop              | F XmlSnippetBoundary                   |          |
| F unitsO                  | F XmlSnippetCdata                      |          |
| F unitsP                  | F XmlSnippetComment                    |          |
| F unitsPS                 | F XmlSnippetEntity                     |          |
| F unitsPU                 | F XmlSnippetEqual                      |          |
| F unitsPUS                | F XmlSnippetKey                        |          |
| F unitsQ                  | F XmlSnippetName                       |          |
| F unitsS                  | F XmlSnippetString                     |          |
| F unitsU                  | F ctxreport                            |          |
| F unitsUS                 | F viafile                              |          |
| F unprotect               | F vrule                                |          |
| F unregisterfunction      | F xmlcdataafter                        |          |
| F usemodule               | F xmlcdatabefore                       |          |
| F utfchar                 | F xmlcdataobeyedline                   |          |
| T verbatim                | F xmlcdataobeyedspace                  |          |
| F LuaSnippetBoundary      | F xmlprocessbuffer                     |          |
| F LuaSnippetComment       | F xmlsetup                             |          |
| F LuaSnippetName          | numbers                                | function |
| F LuaSnippetNameBase      | F C                                    |          |
| F LuaSnippetNameCore      | F FL                                   |          |
| F LuaSnippetNameLibraries | F HL                                   |          |
| F LuaSnippetQuote         | F L                                    |          |

FIL F XmlSnippetComment F XmlSnippetEntity F LuaSnippet F XmlSnippetEqual F LuaSnippetBoundary F LuaSnippetComment F XmlSnippetKey F LuaSnippetName F XmlSnippetName F LuaSnippetNameBase F XmlSnippetString F LuaSnippetNameCore F flush F flushdirect F LuaSnippetNameLibraries F LuaSnippetQuote F flushlines F LuaSnippetSpecial Fa F LuaSnippetString F addaskedblankskip F ML F addpredefinedblankskip F MPLIBsetCtext F applyprocessor F MPLIBsetNtext F h F MPcolor F beginhbox F MetapostSnippet F beginvbox F MetapostSnippetBoundary F bf F MetapostSnippetComment F bgroup F MetapostSnippetConstructor F blank F MetapostSnippetName F bold F MetapostSnippetNameMetafun F btxchecklistcombi F MetapostSnippetNamePlain F btxchecklistentry F MetapostSnippetNamePrimitive F btxciteauthorsetup F MetapostSnippetQuote F btxcitesetup F MetapostSnippetSpecial F btxcitevariantparameter F MetapostSnippetString F btxdirectlink F btxflushauthor F NC F NR F btxhandlelistentry F ParsedXmlSnippetCdata F btxhandlelisttextentry F ParsedXmlSnippetComment F btxlistauthorsetup F ParsedXmlSnippetDoctype F btxlistparameter F ParsedXmlSnippetElement F btxlistsetup F ParsedXmlSnippetInstruction F btxlistvariantparameter F ParsedXmlSnippetKey F btxpagesetup F ParsedXmlSnippetValue F btxsetafter F TexSnippet F btxsetauthorindex F TexSnippetBoundary F btxsetauthorvariant F TexSnippetComment F btxsetbacklink F btxsetbacktrace F TexSnippetGroup F TexSnippetName F btxsetbefore F TexSnippetSpecial F btxsetcategory F btxsetcitereference F XmlSnippet F btxsetcombis F XmlSnippetBoundary F XmlSnippetCdata F btxsetconcat

F htxsetcount F colordefrat F btxsetdataset F colordefrlc F btxsetfirst F colordefrlt F btxsetfirstinternal F concat F btxsetfirstnames F constructcs F btxsetfirstpage F constructcsonly F btxsetinitials F convertnumber F btxsetinternal F ctxrenort F btxsetjuniors Εd F btxsetlanguage F definefontsynonym F btxsetlastinternal T delayed F btxsetlastpage F digitsdigit F btxsetlefttext F digitsfinalcomma F btxsetlistreference F digitsfinalperiod F btxsetnumber F digitshighspace F btxsetoverflow F digitsintermediatecomma F btxsetrighttext F digitsintermediateperiod F btxsetsecond F digitsminus F btxsetsurnames F digitsnegative F btxsettag F digitsplus F btxsetthird F digitspositive F btxsetvons F digitspower F digitspowerminus F btxstartauthor F btxstartcite F digitspowerplus F btxstartciteauthor F digitsseparatorspace F btxstartsubcite F digitssignspace F digitsspace F btxstopauthor F btxstopcite F digitszeropadding F btxstopciteauthor F direct F btxstopsubcite F doactivateinjector F c F dodisplayverbatimbeginline F callfunctiononce F dodisplayverbatimemptyline F char F dodisplayverbatiminitialize F chardef F dodisplayverbatimnewline F color F dodisplayverbatimstart F colordefage F dodisplayverbatimstop F dofastdefinetypeface F colordefagt F colordefalc F dofinishsomereference F colordefalt F doflushparallel F colordeffac F dofromfiledescription F colordeffat F dofromfileliteral F colordefflc F dofromurldescription F colordefflt F dofromurlliteral

F doinlineverbatimbeginline

F colordefrqc

F doinlineverbatimemptvline F input F doinlineverbatimnewline T knownfunctions F doinlineverbatimstart F 1 F doinlineverbatimstop F lateluafunction F domarkinjector F letvaluerelax F donestedtypingstart F llap F donestedtypingstop F loadfile F dosetfastregisterentry F loadfoundtypescriptfile F dostarttext F luasetup F doverbatimspace F m F earoup F makelinenumber F emptyreference T metafun F enablemode F color F endhbox T delayed F endvbox F start F environment F stop F expandreferencearguments T nested F expandreferenceoperation F markingcommand F finalizeautostructurelevel F markingseparator F finishjob F newbox F firstofoneargument F newcount F firstoftwoarguments F newdimen F fixedblankskip F newindexer F flexibleblankskip F newmuskip F flushblankhandling F newskip F flushboxregister F newtexthandler F flushnode F newtoks F fntsetdefname F newverbosehandler F fntsetnopsize F nointerlineskip F fntsetsomename F normalatop F normalover F fntsetsomesize T formatted F overstrike F monobold F par F fprint F pdfliteral T generics F popcatcodes S starttabulate F poplogger S stoptabulate F printlines F getlogger F processfilemany F getreferencestructureprefix F processfilenone F getvalue F processfileonce F protect F glyph F gobbleoneargument T puretext F pushcatcodes F goto F hrule F pushlogger

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

| F tolines  | F TexSnippetBoundary   |  |
|--|--|--|
| F unitsC   | F TexSnippetComment  |  |
| F unitsN   | F TexSnippetGroup  |  |
| F unitsNspace  | F TexSnippetName   |  |
| F unitsNstart  | F TexSnippetSpecial  |  |
| F unitsNstop   | F XmlSnippetBoundary   |  |
| F unitsO   | F XmlSnippetCdata  |  |
| F unitsP   | F XmlSnippetComment  |  |
| F unitsPS  | F XmlSnippetEntity   |  |
| F unitsPU  | F XmlSnippetEqual  |  |
| F unitsPUS   | F XmlSnippetKey  |  |
| F unitsQ   | F XmlSnippetName   |  |
| F unitsS   | F XmlSnippetString   |  |
| F unitsU   | F ctxreport  |  |
| F unitsUS  | F viafile  |  |
| F unprotect  | F vrule  |  |
| F unregisterfunction   | F xmlcdataafter  |  |
| F usemodule  | F xmlcdatabefore   |  |
| F utfchar  | F xmlcdataobeyedline   |  |
| T verbatim   | F xmlcdataobeyedspace  |  |
| F LuaSnippetBoundary   | F xmlprocessbuffer   |  |
| F LuaSnippetComment  | F xmlsetup   |  |
| F LuaSnippetName   | objectnumber   | function   |
| F LuaSnippetNameBase   | objectpage   | function   |
| F LuaSnippetNameCore   | octnumber  | function   |
| F LuaSnippetNameLibraries  | octstringtonumber  | function   |
| F LuaSnippetQuote  | oneorrange   | function   |
| F LuaSnippetSpecial  | ordinal  | function   |
| F LuaSnippetString   | overloadbookmark   | function   |
| F MetapostSnippetBoundary  | <pre>page_injections_flush_after</pre>   | function   |
| F MetapostSnippetComment   | <pre>page_injections_flush_before</pre>  | function   |
| F MetapostSnippetConstructor   | <pre>page_injections_save</pre>  | function   |
| F MetapostSnippetName  | pagestaterealpage  | function   |
| F MetapostSnippetNameMetafun   | parpos   | function   |
| F MetapostSnippetNamePlain   | pu. pos  |  |
| The capos continue taxin   | pdfrotation  | function   |
| F MetapostSnippetNamePrimitive   |  | function<br>function   |
|  | pdfrotation  |  |
| F MetapostSnippetNamePrimitive   | pdfrotation<br>pdfstartmatrix  | function   |
| F MetapostSnippetNamePrimitive<br>F MetapostSnippetQuote   | pdfrotation<br>pdfstartmatrix<br>pdfstartmirroring   | function function  |
| F MetapostSnippetNamePrimitive F MetapostSnippetQuote F MetapostSnippetSpecial   | pdfrotation<br>pdfstartmatrix<br>pdfstartmirroring<br>pdfstartrotation   | function<br>function<br>function                                     |
| F MetapostSnippetNamePrimitive F MetapostSnippetQuote F MetapostSnippetSpecial F MetapostSnippetString   | pdfrotation pdfstartmatrix pdfstartmirroring pdfstartrotation pdfstartscaling  | function<br>function<br>function<br>function                         |
| F MetapostSnippetNamePrimitive F MetapostSnippetQuote F MetapostSnippetSpecial F MetapostSnippetString F ParsedXmlSnippetCdata   | pdfrotation pdfstartmatrix pdfstartmirroring pdfstartrotation pdfstartscaling pdfstopmatrix                                  | function<br>function<br>function<br>function<br>function             |
| F MetapostSnippetNamePrimitive F MetapostSnippetQuote F MetapostSnippetSpecial F MetapostSnippetString F ParsedXmlSnippetCdata F ParsedXmlSnippetComment                           | pdfrotation pdfstartmatrix pdfstartmirroring pdfstartrotation pdfstartscaling pdfstopmatrix pdfstopmirroring                 | function<br>function<br>function<br>function<br>function<br>function |
| F MetapostSnippetNamePrimitive F MetapostSnippetQuote F MetapostSnippetSpecial F MetapostSnippetString F ParsedXmlSnippetCdata F ParsedXmlSnippetComment F ParsedXmlSnippetDoctype | pdfrotation pdfstartmatrix pdfstartmirroring pdfstartrotation pdfstartscaling pdfstopmatrix pdfstopmirroring pdfstoprotation | function<br>function<br>function<br>function<br>function<br>function |

| pgfxcolorspec          | function | rawdate                    | function |
|------------------------|----------|----------------------------|----------|
| placeparallel          | function | referencepagestate         | function |
| popfloat               | function | referencerealpage          | function |
| pophyphenation         | function | registerattachment         | function |
| popitaliccorrection    | function | registerbodyfontsize       | function |
| poplist                | function | registerbookmark           | function |
| popreferenceprefix     | function | registerbtxcitevariant     | function |
| popregime              | function | registerbtxlistvariant     | function |
| popsectionblock        | function | registerbuttons            | function |
| pos                    | function | registercatcodetable       | function |
| posplus                | function | registercolor              | function |
| posstrut               | function | registercolorintent        | function |
| postponenotes          | function | registeredviewerlayer      | function |
| poswhd                 | function | registerhelp               | function |
| posxy                  | function | registerhyphenationpattern | function |
| prefixedconverted      | function | registeritemgroup          | function |
| prepareMPvariable      | function | registerlanguagefeatures   | function |
| preparedfile           | function | registerlinenumbering      | function |
| presetsymbollist       | function | registermaintextcolor      | function |
| presettabulate         | function | registernamespace          | function |
| prevcountervalue       | function | registerpostponedblock     | function |
| processbodyfontsizes   | function | registerrendering          | function |
| processbuffer          | function | registersection            | function |
| processcolorcomponents | function | registersoundclip          | function |
| processedfile          | function | registerstructureprocessor | function |
| processedfiles         | function | registersynonym            | function |
| processfile            | function | registertransparency       | function |
| processfilemany        | function | registerunit               | function |
| processfilenone        | function | registerusedsynonym        | function |
| processfileonce        | function | registeruserdata           | function |
| processlist            | function | relatemarking              | function |
| processregister        | function | remapentity                | function |
| processsplit           | function | removemissingcharacters    | function |
| processsynonyms        | function | renderingvar               | function |
| purefontname           | function | replacemissingcharacters   | function |
| pushfloat              | function | replacepospxywhd           | function |
| pushhyphenation        | function | reportstructure            | function |
| pushitaliccorrection   | function | resavefloat                | function |
| pushlist               | function | resetcharacteralign        | function |
| pushreferenceprefix    | function | resetcounter               | function |
| pushregime             | function | resetfontfeature           | function |
| pushsectionblock       | function | resetfontsolution          | function |
| rawcharacter           | function | resetinjector              | function |
| rawcountervalue        | function | resetmarking               | function |
|                        |          |                            |          |

| resetmathattributes                      | function             | setcharacterstripping                    | function             |
|--|----------------------|--|----------------------|
| resetmathitalics                         | function             | setclosedocumentaction                   | function             |
| resetnullfont                            | function             | setclosepageaction                       | function             |
| resetparallel                            | function             | setcolormodel                            | function             |
| resetprevdepth                           | function             | setcounter                               | function             |
| resetreference                           | function             | setdataset                               | function             |
| resetstructureprocessor                  | function             | setdigitsmanipulation                    | function             |
| resettimer                               | function             | setdirection                             | function             |
| restartcounter                           | function             | setdocumentenvironments                  | function             |
| restorecounter                           | function             | setdocumentfilenames                     | function             |
| restorecurrentattributes                 | function             | setdocumentmodes                         | function             |
| restorenote                              | function             | setdocumentmodules                       | function             |
| romannumerals                            | function             | setelementuserproperties                 | function             |
| runbuffer                                | function             | setfigurelookuporder                     | function             |
| safechar                                 | function             | setfirstline                             | function             |
| savebuffer                               | function             | setfontfeature                           | function             |
| savecounter                              | function             | setfontofid                              | function             |
| savecurrentattributes                    | function             | setfontsolution                          | function             |
| savedlistnumber                          | function             | setformat                                | function             |
| savedlistprefixednumber                  | function             | setformsmethod                           | function             |
| savedlisttitle                           | function             | sethyphenationfeatures                   | function             |
| savefloat                                | function             | setinitial                               | function             |
| savemargindata                           | function             | setinjector                              | function             |
| savenote                                 | function             | setinsertionlocation                     | function             |
| saveobject                               | function             | setinterfaceconstant                     | function             |
| savepagedata                             | function             | setinterfaceelement                      | function             |
| saveparallel                             | function             | setinterfacemessage                      | function             |
| savestructureblock                       | function             | setinterfacemessages                     | function             |
| savetaggedtwopassdata                    | function             | setinterfacevariable                     | function             |
| savetwopassdata                          | function             | setinternalreference                     | function             |
| savevariable                             | function             | setjobcomment                            | function             |
| second                                   | function             | setlanguageexceptions                    | function             |
| selectstructureblock                     | function             | setlanguagesynonym                       | function<br>function |
| setbreakpoints<br>setbtxdataset          | function<br>function | setlayer                                 | function             |
|  | function             | setmarking<br>setmathalphabet            | function             |
| setbtxentry                              |                      | setmathalternate                         | function             |
| setbtxregister                           | function             | setmathattribute                         |                      |
| setbtxspecification<br>setcharacteralign | function<br>function | setmathdirection                         | function<br>function |
| setcharactercasing                       | function             | setmathulics                             | function             |
| setcharactercleaning                     | function             | setmathstyle                             | function             |
| setcharactercodes                        | function             | setmathstyte<br>setnextinternalreference | function             |
| setcharacterkerning                      | function             | setnextreferenceorder                    | function             |
|  | function             |  | function             |
| setcharacterspacing                      | TUITCLION            | setnotestate                             | Tunction             |

| setnotesymbolpage       | function | setupidentity              | function |
|-------------------------|----------|----------------------------|----------|
| setobject               | function | setupinsertion             | function |
| setopendocumentaction   | function | setupitaliccorrection      | function |
| setopenpageaction       | function | setuplinenumbering         | function |
| setowncounter           | function | setvisual                  | function |
| setpagestate            | function | setxmpfile                 | function |
| setpagestaterealpageno  | function | showassignerror            | function |
| setpagetransition       | function | showattributes             | function |
| setparbuilder           | function | showbtxdatasetcompleteness | function |
| setpos                  | function | showbtxdatasetfields       | function |
| setrandomseed           | function | showbtxfields              | function |
| setrealign              | function | showbtxtables              | function |
| setrealspaces           | function | showcallbacks              | function |
| setreferencearguments   | function | showchardata               | function |
| setreferenceattribute   | function | showcounter                | function |
| setreferenceoperation   | function | showfontparameters         | function |
| setregistermethod       | function | showhyphenatedinlist       | function |
| setreplacements         | function | showhyphenationtrace       | function |
| setsectionblock         | function | showinjector               | function |
| setsectionentry         | function | showjustification          | function |
| setsectionlevel         | function | showmessage                | function |
| setsectionnumber        | function | sin                        | function |
| setstructureblockstate  | function | sind                       | function |
| settagaspect            | function | splitfilename              | function |
| settagcombination       | function | spotcolorname              | function |
| settagdescription       | function | spotcolorparent            | function |
| settagdescriptionsymbol | function | spotcolorvalue             | function |
| settagfigure            | function | startactualtext            | function |
| settaghighlight         | function | startchemical              | function |
| settagitemgroup         | function | startcolorset              | function |
| settaglist              | function | startcomponent             | function |
| settagproperty          | function | startenvironment           | function |
| settagregister          | function | startfontsolution          | function |
| settagsorting           | function | startparbuilder            | function |
| settagsynonym           | function | startproduct               | function |
| settagtablecell         | function | startproject               | function |
| settagtabulatecell      | function | startregime                | function |
| setupbookmarks          | function | startsectionlevel          | function |
| setupcanvas             | function | starttag                   | function |
| setupcharacterspacing   | function | starttext                  | function |
| setupexport             | function | startviewerlayer           | function |
| setupfontexpansion      | function | stopactualtext             | function |
| setupfontprotrusion     | function | stopchemical               | function |
| setuphyphenation        | function | stopcolorset               | function |

| stopcomponent             | function | triggernegative       | function |
|---------------------------|----------|-----------------------|----------|
| stopenvironment           | function | truefilename          | function |
| stopfontsolution          | function | typebuffer            | function |
| stopparbuilder            | function | typefile              | function |
| stopproduct               | function | typestring            | function |
| stopproject               | function | uchexnumber           | function |
| stopregime                | function | uchexnumbers          | function |
| stopsectionlevel          | function | undefinechemical      | function |
| stoptag                   | function | unicodechar           | function |
| stoptext                  | function | unit                  | function |
| stopviewerlayer           | function | unloadlanguage        | function |
| storejavascriptcode       | function | upper                 | function |
| storejavascriptpreamble   | function | useMPlibrary          | function |
| storenote                 | function | useanyfile            | function |
| storeregister             | function | usebtxdataset         | function |
| strdp                     | function | usecldfile            | function |
| strhd                     | function | usecolors             | function |
| strht                     | function | usecomponent          | function |
| strip                     | function | useenvironment        | function |
| structureautocatcodedget  | function | usefile               | function |
| structurecatcodedget      | function | usejavascriptpreamble | function |
| structuregivencatcodedget | function | usejavascriptscripts  | function |
| structurenumber           | function | uselibrary            | function |
| structuretitle            | function | useluafile            | function |
| structureuservariable     | function | useluamodule          | function |
| structurevariable         | function | usemodules            | function |
| strwd                     | function | usepath               | function |
| subcountervalues          | function | useproduct            | function |
| synchronizecolormodel     | function | useproject            | function |
| synchronizemarking        | function | usesubpath            | function |
| synonymmeaning            | function | usesymbols            | function |
| synonymname               | function | usetexfile            | function |
| systemlog                 | function | useurl                | function |
| taggedmathfunction        | function | usexmlfile            | function |
| tan                       | function | usezipfile            | function |
| tand                      | function | utfchar               | function |
| testcase                  | function | utfmathclass          | function |
| textime                   | function | utfmathcommand        | function |
| thefirstcharacter         | function | utfmathcommandabove   | function |
| theremainingcharacters    | function | utfmathcommandbelow   | function |
| thetexdefinition          | function | utfmathcommandfiller  | function |
| tochar                    | function | utfmathfiller         | function |
| transparencycomponents    | function | utfmathstretch        | function |
| triggereffect             | function | vboxlisttohbox        | function |

| verbose                    | function |
|----------------------------|----------|
| visual                     | function |
| vspacing                   | function |
| vspacingcollapse           | function |
| vspacingdefine             | function |
| vspacingsetamount          | function |
| vspacingsnap               | function |
| way                        | function |
| weekday                    | function |
| weekdayname                | function |
| writestatus                | function |
| x_table_c                  | function |
| x_table_cleanup            | function |
| x_table_construct          | function |
| x_table_create             | function |
| x_table_flush              | function |
| x_table_init_construct     | function |
| x_table_init_reflow_height | function |
| x_table_init_reflow_width  | function |
| x_table_next_row           | function |
| x_table_r                  | function |
| x_table_reflow_height      | function |
| x_table_reflow_width       | function |
| x_table_set_construct      | function |
| x_table_set_reflow_height  | function |
| x_table_set_reflow_width   | function |
| year                       | function |
|                            |          |

# containers (context)

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

### converters (context)

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

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

function function function function

# coroutine (basic lua)

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

### ctxrunner (context)

load function
prepfiles data table
resolve function

# debug (basic lua)

| function |
|----------|
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
|          |

# dir (context)

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

### directives (context)

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

### document (context)

arguments data table
files table
getargument function
getfilename function
options table

T commandline

D environments

D modes

D modules

T ctxfile

D environments

D modes

D modules

setargument function
setdefaultargument function
setfilename function
variables data table

### environment (context)

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

texos

texroot truefilename validengines string function data table

string

# epdf (extra tex)

| Array               | tunction |
|---------------------|----------|
| Attribute           | function |
| AttributeOwner_Type | function |
| Attribute_Type      | function |
| Dict                | function |
| <b>Object</b>       | function |
| PDFRectangle        | function |
| StructElement_Type  | function |
| open                | function |
| type                | function |

### experiments (context)

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

### figures (context)

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

F check
F checksize
F clone
F copy
F immediatewrite
F keys
F new
F node
F ofindex
F package
F print
F scan

F serialize

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

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

F totable

# file (basic lua)

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

# floats (context)

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

### font (basic tex)

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

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

# fontloader (extra tex)

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

# fonts (context)

| analyzers                 | table | F report                      |  |
|---------------------------|-------|-------------------------------|--|
| T features                |       | F reset                       |  |
| N blwf                    |       | T vectors                     |  |
| N fina                    |       | <pre>constructors table</pre> |  |
| N half                    |       | F addcoreunicodes             |  |
| N init                    |       | F aftercopyingcharacters      |  |
| N isol                    |       | F applymanipulators           |  |
| N medi                    |       | F assignmathparameters        |  |
| N pref                    |       | B autocleanup                 |  |
| N pstf                    |       | F beforecopyingcharacters     |  |
| N rphf                    |       | D cache                       |  |
| D initializers            |       | B cacheintex                  |  |
| D methods                 |       | F calculatescale              |  |
| F setstate                |       | F checkedfeatures             |  |
| T states                  |       | F checkedfilename             |  |
| N blwf                    |       | F checkvirtualids             |  |
| N fina                    |       | F cleanuptable                |  |
| N half                    |       | F collectprocessors           |  |
| N init                    |       | D designsizes                 |  |
| N isol                    |       | D dontembed                   |  |
| N mark                    |       | F enhanceparameters           |  |
| N medi                    |       | N factor                      |  |
| N pref                    |       | F finalize                    |  |
| N pstf                    |       | F getfeatureaction            |  |
| N rest                    |       | F hashfeatures                |  |
| N rphf                    |       | F hashinstance                |  |
| B useunicodemar           |       | T hashmethods                 |  |
| checkers                  | table | F normal                      |  |
| F getmissing              |       | F virtual                     |  |
| F missing                 |       | F initializefeatures          |  |
| cid                       | table | T keys                        |  |
| F getmap                  |       | T character                   |  |
| F loadfile<br>collections | table | S depth                       |  |
|                           | table | S height                      |  |
| F checkenabled            |       | S italic                      |  |
| F clonevector<br>F define |       | S width                       |  |
| T definitions             |       | T description                 |  |
| F prepare                 |       | T boundingbox<br>S depth      |  |
| F process                 |       | S height                      |  |
| F registermain            |       | S neight<br>S width           |  |
| ı registerilidili         |       | 2 MIULII                      |  |

| T parameters             | T cidinfo           |          |
|--------------------------|---------------------|----------|
| S ascender               | S embedding         |          |
| S descender              | S encodingby        | ytes     |
| S designsize             | S filename          |          |
| T expansion              | S finalized         |          |
| S auto                   | S fontname          |          |
| S shrink                 | S format            |          |
| S step                   | S fullname          |          |
| S stretch                | S hasitalic         | S        |
| S extendfactor           | S hasmath           |          |
| S factor                 | S mathitali         | cs       |
| S hfactor                | S mode              |          |
| S mathsize               | S name              |          |
| T protrusion             | S noglyphna         | nes      |
| S auto                   | S nostackma         | th       |
| S quad                   | S psname            |          |
| S scaledpoints           | S textitali         | cs       |
| S scriptpercentage       | S virtualiz         | ed       |
| S scriptscriptpercentage | D loadedfonts       |          |
| S size                   | S namemode          |          |
| S slantfactor            | F newfeatures       |          |
| S slantperpoint          | F newhandler        |          |
| T spacing                | N noffontsloade     | ed       |
| S extra                  | N nofsharedfont     | :s       |
| S shrink                 | N nofsharedhash     | nes      |
| S stretch                | N nofsharedvect     | ors      |
| S width                  | N privateoffset     |          |
| T synonyms               | F readanddefine     | 2        |
| S em                     | F registerfeatu     | ire      |
| S ex                     | B resolvevirtualtoo |          |
| S extra_space            | F scale             |          |
| S extraspace             | F scaled            |          |
| S slant                  | F setfactor         |          |
| S space                  | F setname           |          |
| S space_shrink           | B sharefonts        |          |
| S space_stretch          | F trytosharefor     | nt       |
| S spaceshrink            | N version           |          |
| S spacestretch           | current             | function |
| S x_height               | currentid           | function |
| S units                  | definers            | table    |
| S vfactor                | F addlookup         |          |
| S xheight                | F analyze           |          |
| T properties             | F applypostprod     | cessors  |
| S autoitalicamount       | F checkedmode       |          |
|                          |                     |          |

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

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

N hamzaarahic N holamhebrew N hamzadammaarabic N holamnarrowhebrew N hamzadammatanarabic N holamquarterhebrew N hamzafathaarabic N ilde N hamzafathatanarabic N integralbottom N hamzalowarabic N integraltop N hamzalowkasraarabic N kaf N hamzalowkasratanarabic N kafdagesh N hatafpatah N kashidaautoarabic N hatafpatah16 N kashidaautonosidebearingarabic N hatafpatah23 N kcedilla N hatafpatah2f N lamed N hatafpatahhebrew N lameddagesh N hatafpatahnarrowhebrew N lamedhebrew N hatafpatahquarterhebrew N lamedholam N hatafgamats N lamedholamdagesh N hatafgamats1b N lamedholamdageshhebrew N hatafqamats28 N laminitialarabic N hatafqamats34 N lammeemjeeminitialarabic N hatafgamatshebrew N lcedilla N hatafqamatsnarrowhebrew N logicalnotreversed N hatafqamatsquarterhebrew N mahapakhhebrew N hatafsegol N mem N hatafsegol17 N memdagesh N hatafsegol24 N merkhahebrew N hatafsegol30 N merkhakefulahebrew N hatafsegolhebrew N middot N hatafsegolnarrowhebrew N munahhebrew N hatafsegolquarterhebrew N nbspace N he N ncedilla N hedagesh N newshegelsign N hehfinalalttwoarabic N ninearabic N het N noonhehinitialarabic N hiriq N nun N hirig14 N nundagesh N hiriq21 N odblacute N hiriq2d N onearabic N hirighebrew N overscore N hirignarrowhebrew N patah N hiriqquarterhebrew N patah11 N holam N patah1d N holam19 N patah2a N holam26 N patahhebrew N holam32 N patahnarrowhebrew

| N. | and the same about the same |   |                      |
|----|-----------------------------|---|----------------------|
|    | patahquarterhebrew          |   | qubutshebrew         |
|    | pe                          |   | qubutsnarrowhebrew   |
|    | pedagesh .                  |   | qubutsquarterhebrew  |
|    | qamats                      |   | quoteleftreversed    |
|    | qamats10                    | • | rafe                 |
|    | qamatsla                    |   | rcedilla             |
|    | qamats1c                    |   | reharabic            |
|    | qamats27                    |   | resh                 |
|    | qamats29                    |   | reshhatafpatah       |
| N  | qamats33                    |   | reshhatafpatahhebrew |
| N  | qamatsde                    |   | reshhatafsegol       |
| N  | qamatshebrew                | N | reshhatafsegolhebrew |
| N  | qamatsnarrowhebrew          | N | reshhebrew           |
| N  | qamatsqatanhebrew           | N | reshhiriq            |
| N  | qamatsqatannarrowhebrew     | N | reshhiriqhebrew      |
| N  | qamatsqatanquarterhebrew    | N | reshholam            |
| N  | qamatsqatanwidehebrew       | N | reshholamhebrew      |
| N  | qamatsquarterhebrew         | N | reshpatah            |
| N  | qof                         | N | reshpatahhebrew      |
| N  | qofdagesh                   | N | reshqamats           |
| N  | qofhatafpatah               | N | reshqamatshebrew     |
| N  | qofhatafpatahhebrew         | N | reshqubuts           |
| N  | qofhatafsegol               | N | reshqubutshebrew     |
| N  | qofhatafsegolhebrew         | N | reshsegol            |
| N  | qofhebrew                   | N | reshsegolhebrew      |
| N  | qofhiriq                    | N | reshsheva            |
| N  | qofhiriqhebrew              | N | reshshevahebrew      |
| N  | qofholam                    | N | reshtsere            |
| N  | qofholamhebrew              | N | reviahebrew          |
| N  | qofpatah                    | N | samekh               |
| N  | qofpatahhebrew              | N | samekhdagesh         |
| N  | qofqamats                   | N | segol                |
| N  | qofqamatshebrew             | N | segol13              |
| N  | qofqubuts                   | N | segol1f              |
| N  | qofqubutshebrew             | N | segol2c              |
| N  | qofsegol                    | N | segolhebrew          |
| N  | qofsegolhebrew              | N | segolnarrowhebrew    |
| N  | qofsheva                    | N | segolquarterhebrew   |
| N  | qofshevahebrew              | N | sevenarabic          |
| N  | qoftsere                    | N | sfthyphen            |
|    | qubuts                      |   | shaddaarabic         |
|    | qubuts18                    | N | sheqel               |
|    | qubuts25                    | N | sheva                |
|    | qubuts31                    | N | sheval15             |
|    |                             |   |                      |

| N | sheva15                  | N zayin          | N zayin                 |  |  |
|---|--------------------------|------------------|-------------------------|--|--|
| N | sheva22                  | N zayindages     | N zayindagesh           |  |  |
| N | sheva2e                  | N zdot           |                         |  |  |
| N | shevahebrew              | N zeroarabio     | 0                       |  |  |
| N | shevanarrowhebrew        | D unicodes       |                         |  |  |
| N | shevaquarterhebrew       | D cache          |                         |  |  |
| N | shin                     | F is_known       |                         |  |  |
| N | shindagesh               | D known          |                         |  |  |
| N | shindageshshindot        | F load           |                         |  |  |
| N | shindageshsindot         | F make_unicode_  | F make_unicode_vector   |  |  |
| N | shinshindot              | D math           |                         |  |  |
| N | shinsindot               | N version        |                         |  |  |
| N | siluqhebrew              | expansions       | data table              |  |  |
| N | sixarabic                | formats          | data table              |  |  |
| N | tav                      | goodies          | table                   |  |  |
| N | tavdages                 | D colorschemes   |                         |  |  |
| N | tavdagesh                | D data           |                         |  |  |
| N | tcedilla                 | D designsizes    |                         |  |  |
| N | tchehinitialarabic       | D filenames      |                         |  |  |
| N | tet                      | F getcomposition | getcompositions         |  |  |
| N | tetdagesh                | T list           | T list                  |  |  |
| N | tevirhebrew              | F composition    | F compositions          |  |  |
| N | thousandsseparatorarabic | F designsizes    | designsizes             |  |  |
| N | threearabic              | F expansions     | expansions              |  |  |
| N | tildecmb                 | F featureset     | featureset              |  |  |
| N | tipehahebrew             | F filenames      | filenames               |  |  |
| N | tsadi                    | F files          | files                   |  |  |
| N | tsadidagesh              | F mathematics    | mathematics             |  |  |
| N | tsere                    | F protrusions    | F protrusions           |  |  |
| N | tsere12                  | F solutions      | - solutions             |  |  |
| N | tserele                  | F treatments     | treatments              |  |  |
| N | tsere2b                  | F typefaces      | typefaces               |  |  |
| N | tserehebrew              | F load           | load                    |  |  |
| N | tserenarrowhebrew        | F prepare_featu  | prepare_features        |  |  |
| N | tserequarterhebrew       | F register       | register                |  |  |
| N | twoarabic                | F registerpostp  | F registerpostprocessor |  |  |
| N | udblacute                | F report         |                         |  |  |
| N | vav                      | handlers         | table                   |  |  |
| N | vavdagesh                | T afm            |                         |  |  |
| N | vavdagesh65              | B addkerns       |                         |  |  |
| N | vavholam                 | B addligature    | B addligatures          |  |  |
| N | yerahbenyomohebrew       | B addtexligat    | B addtexligatures       |  |  |
| N | yod                      | B autoprefixe    | B autoprefixed          |  |  |
| N | yoddagesh                | D cache          | D cache                 |  |  |
|   |                          |                  |                         |  |  |

| D features  | F gsub_multiple            |
|---|----------------------------|
| T helpdata  | F gsub_reversecontextchain |
| D bothkerned  | F gsub_single              |
| D leftkerned  | F load                     |
| D ligatures   | F scriptandlanguage        |
| D rightkerned                                       | F setcontextchain          |
| D texligatures                                      | F setdynamics              |
| F load  | F setfeatures              |
| F setfeatures                                       | T statistics               |
| B syncspace   | D usedfeatures             |
| N version   | T tables                   |
| T otf   | D baselines                |
| F addfeature  | D features                 |
| D cache   | D languages                |
| T chainhandlers                                     | D scripts                  |
| F normal  | N version                  |
| F verbose   | T pfb                      |
| F collectlookups                                    | T tfm                      |
| F dataset   | D features                 |
| S defaultbasealternate                              | F setfeatures              |
| S defaultnodealternate                              | T vf                       |
| D enhancers   | T combinations             |
| D features  | F combine                  |
| F fileformat  | T combiner                 |
| F getalternate                                      | D commands                 |
| T glists  | F find                     |
| T handlers  | D helpers                  |
| F contextchain                                      | D math                     |
| F devanagari_remove_joiners                         | D predefined               |
| F devanagari_reorder_matras                         | D whatever                 |
| F devanagari_reorder_pre_base_reordering_consonants | hashes table               |
| F devanagari_reorder_reph                           | D characters               |
| F gpos_context                                      | D csnames                  |
| F gpos_contextchain                                 | D descriptions             |
| F gpos_cursive                                      | D dynamics                 |
| F gpos_mark2base                                    | D emwidths                 |
| F gpos_mark2ligature                                | D exheights                |
| F gpos_mark2mark                                    | D extensibles              |
| F gpos_pair   | D features                 |
| F gpos_single                                       | D identifiers              |
| F gsub_alternate                                    | D italics                  |
| F gsub_context                                      | D lastmathids              |
| F gsub_contextchain                                 | D marks                    |
| F gsub_ligature                                     | D originals                |

| D parameters              | S pd                  |
|---------------------------|-----------------------|
| T processes               | S pe                  |
| D properties              | S pf                  |
| D quads                   | S pi                  |
| D resources               | S po                  |
| T setdynamics             | S ps                  |
| D spaces                  | S sc                  |
| D spacings                | S sk                  |
| D unicodes                | S sm                  |
| D xheights                | S so                  |
| <b>helpers</b> table      | F format              |
| F addprivate              | F onetimemessage      |
| F dimenfactor             | F register            |
| F expandglyph             | F reportdefinedfonts  |
| F fontpatternhassize      | F reportusedfeatures  |
| F getdigitwidth           | <b>mappings</b> table |
| F getparameters           | F addtounicode        |
| F getprivatenode          | F fromunicode16       |
| F hasprivate              | F loadfile            |
| F indextoslot             | F loadline            |
| F name                    | F loadlumtable        |
| F nametoslot              | F makenameparser      |
| F setdigitwidth           | T overloads           |
| F splitfontpattern        | T IJ                  |
| F tochar                  | N mess                |
| iterators table           | S name                |
| F characters              | T unicode             |
| F descriptions            | T I_J<br>             |
| F glyphs                  | N mess                |
| loggers table             | S name                |
| F add_placeholders        | T unicode             |
| T category_to_placeholder | T f_f                 |
| S ll<br>S lm              | N mess                |
| S lo                      | S name<br>T unicode   |
| S lt                      | T f_f_i               |
| S lu                      | N mess                |
| S mc                      | S name                |
| S me                      | T unicode             |
| S mn                      | T f_f_l               |
| S nd                      | N mess                |
| S nl                      | S name                |
| S no                      | T unicode             |
| S pc                      | T f_i                 |
| - p~                      | · '_ <del>*</del>     |

| N mess    | N mess           |            |
|-----------|------------------|------------|
| S name    | S name           |            |
| T unicode | T unicode        |            |
| T f_j     | F reset          |            |
| S name    | F tounicode      |            |
| T unicode | F tounicode16    |            |
| T f_k     | F tounicode16seq | juence     |
| S name    | mp               | table      |
| T unicode | D cache          |            |
| T f_l     | B inline         |            |
| N mess    | N version        |            |
| S name    | names            | data table |
| T unicode | nulldata         | data table |
| T ff      | protrusions      | data table |
| N mess    | readers          | table      |
| S name    | Fafm             |            |
| T unicode | F check_lua      |            |
| T ffi     | F check_tfm      |            |
| N mess    | F dfont          |            |
| S name    | F lua            |            |
| T unicode | F opentype       |            |
| T ffl     | F otf            |            |
| N mess    | F pfb            |            |
| S name    | D sequence       |            |
| T unicode | F tfm            |            |
| T fi      | F ttc            |            |
| N mess    | F ttf            |            |
| S name    | select           | table      |
| T unicode | T data           |            |
| T fj      | F definetypeface | !          |
| S name    | T fallbacks      |            |
| T unicode | F filterinput    |            |
| T fk      | T methods        |            |
| S name    | F default        |            |
| T unicode | F features       |            |
| T fl      | F file           |            |
| N mess    | F goodies        |            |
| S name    | F name           |            |
| T unicode | F selectfont     |            |
| Т і_ј     | F simplefonts    |            |
| N mess    | F spec           |            |
| S name    | F style          |            |
| T unicode | F registerfallba | ick        |
| T ij      | F searchfiles    |            |
|           |                  |            |

#### specifiers table D contextmerged F contextnumber D contextnumbers D contextsetups F contexttostring F definecontext F mergecontext F presetcontext F registercontext F showcontext F splitcontext D synonyms D variants table symbols F uselibrary tables table tracers table table treatments F applyfixes D data S filename F ignoredfile F report F trace

data table

typefaces

# functions (context)

**dummy** function

### graphics (context)

#### backgrounds table

F calculatemultipar

F fetchmultipar

F pair

F path

F point

### gzip (extra lua)

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

# img (basic tex)

| function |
|----------|
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
|          |

### interactions (context)

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

### interfaces (context)

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

F define F list

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

### io (basic lua)

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

T paranoid

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

T paranoid

output function
pathseparator string

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

## jit (context)

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

F start

os string
status function
util table

F funcbc

F funcinfo

F funck

F funcuvname

F ircalladdr

F traceexitstub

F traceinfo

F traceir

F tracek

F tracemc

F tracesnap

version string
version\_num number

# job (context)

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

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

#### variables table

D checksums

D collected

F getchecksum

F makechecksum

F restore

F save

F setchecksum

D tobesaved

version number

# lang (basic tex)

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

#### languages (context)

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

F averagecharwidth

F getdata

getdata function getnumber function function hyphenate table hyphenators

T dictionaries

D featuresets

F popmethod

F pushmethod

F setmethod

T traditional

F definefeatures

F gettrace

F hyphenate

F injecthyphens

F installmethod

F lasttrace

F loadpatterns

F registerpattern

installed function labels table

F define F split

lefthyphenmin function loadable function loadwords function table logger

F report

numbers data table posthyphenchar function prehyphenchar function registered data table replacements table

F add

F handler

F set

righthyphenmin function setexceptions setsynonym unload version

function function function number

table

F check

words

T data

F disable

F enable

T enablers

B enables

F found F load

T methods

N threshold

# layouts (context)

#### **status** table

F isleftpage

F leftorrightpagection

### lfs (extra lua)

attributes function
chdir function
currentdir function
dir function

lock function lock dir function mkdir function mkdirs function readlink function rmdir function function setmode function shortname symlinkattributes function touch function unlock function

## libraries (context)

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

#### lmx (context)

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

Fa

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

S color-background-blue

S color-background-body

S color-background-green

S color-background-main

S color-background-purple

S color-background-yellow

S title-default

### logs (context)

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

> F banner F export

F help

Finfo

F lines

F version

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

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

# lpdf (context)

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

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

B none

transparencyvalue function
unicode function
verbose function

## lpeg (basic lua)

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

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

## ltn12 (extra lua)

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

F string

#### lua (basic tex)

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

## luatex (context)

cleanuptempfiles function
registerstartactions function
registerstopactions
registertempfile function
starttime number

# lxml (context)

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

setcommandtotextfunctionsetsetupfunctionsnippetfunctionsorterstable

F add

F compare

F flush

F reset

F show

xmltexhandler

F sort

splitid function startraw function function stopraw store function strip function stripped function function tag text function tofile function toparameters function toverbatim function verbatim function withindex function

data table

# math (basic lua)

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

#### mathematics (context)

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

table

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

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

F copy
fallbacks

F apply

F install

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

D mappings

D numbers

D sets

renderset function

### mbox (context)

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

# md5 (extra lua)

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

# metapost (context)

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

setoutercolorfunctionsettextfunctionshowlogbooleansvformatfunctiontextable

F get
F reset
F set

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

### mime (extra lua)

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

# mp (context)

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

## mplib (extra tex)

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

## noads (context)

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

T unscript

# node (basic tex)

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

| has_attribute        | function |
|----------------------|----------|
| has_field            | function |
| has_glyph            | function |
| hpack                | function |
| id                   | function |
| insert_after         | function |
| insert_before        | function |
| is_node              | function |
| kerning              | function |
| last_node            | function |
| length               | function |
| ligaturing           | function |
| mlist_to_hlist       | function |
| new                  | function |
| next                 | function |
| prev                 | function |
| protect_glyphs       | function |
| protrusion_skippable | function |
| remove               | function |
| set_attribute        | function |
| set_properties_mode  | function |
| setfield             | function |
| setproperty          | function |
| slide                | function |
| subtype              | function |
| tail                 | function |
| tostring             | function |
| traverse             | function |
| traverse_id          | function |
| type                 | function |
| types                | function |
| unprotect_glyphs     | function |
| unset_attribute      | function |
| usedlist             | function |
| vpack                | function |
| whatsits             | function |
| write                | function |

## nodes (context)

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

| injections              | table      | load             |
|-------------------------|------------|------------------|
| F getligaindex          |            | locate           |
| F handler               |            | margincodes      |
| F installnewkern        |            | markers          |
| Freset                  |            | F get            |
| F setcursive            |            | mathcodes        |
| F setkern               |            | maxboxwidth      |
| F setligaindex          |            | mlist_to_hlist   |
| F setmark               |            | new              |
| F setpair               |            | noadcodes        |
| insert after            | function   | nodecodes        |
| insert before           | function   | nopts            |
| _<br>insert_list_after  | function   | nuts             |
| installattributehandler | function   | F append         |
| is direct               | function   | F concat         |
| _<br>is_display_math    | function   | F copy           |
| is_mirrored             | data table | F copy_list      |
| is node                 | function   | F count          |
| is nut                  | function   | F current_attr   |
| is rotated              | data table | F delete         |
| _<br>kerncodes          | data table | F dimensions     |
| kerning                 | function   | F do_ligature_n  |
| keys                    | table      | F end_of_math    |
| T whatsit               |            | F fasthpack      |
| last_node               | function   | F first_glyph    |
| leftmarginwidth         | function   | F firstcharacter |
| ligaturing              | function   | F firstcharinbox |
| lines                   | table      | F firstglyph     |
| T boxed                 |            | F flush_list     |
| F register              |            | F flush_node     |
| F setup                 |            | F free           |
| F stage_one             |            | F getattr        |
| F stage_two             |            | F getattribute   |
| F stage_zero            |            | F getbox         |
| D data                  |            | F getchar        |
| F finalize              |            | F getfield       |
| F number                |            | F getfont        |
| N scratchbox            |            | F getid          |
| link                    | function   | F getleader      |
| linked                  | function   | F getlist        |
| list                    | function   | F getnext        |
| listablefields          | data table | F getprev        |
| listcodes               | data table | F getprop        |
| listtoutf               | function   | F getskip        |

function
function
data table
table

data table function function function data table data table function table F getsubtype F pdfsave F has attribute F pdfsetmatrix F has field F penalty F has glyph F register F hpack F rightmarginkern F insert after F rightskip F insert\_before F rule F insert list after F shrink F is direct F special F is display math F stretch F is node F temp F textdir F is nut F kerning F usage F last node T userids F leftmarginwidth N margins.inline F ligaturing N property F link N splitters.one F linked N splitters.two F userlist F locate F usernumber F mlist to hlist F nestedtracedslide F userstring F new F usertokens T pool F vlist F baselineskip F zeroglue F cleanup F prepend F disc F protect\_glyphs F fontkern F protrusion\_skippable F glue F reference F gluespec F remove F glyph F repackhlist F hlist F replace F kern F rightmarginwidth F latelua F set attribute F lateluafunction F setattr F leftmarginkern F setattribute F leftskip F setattributes F lineskip F setbox F negatedglue F setfield F noad F setprop F pdfannotation F setunsetattributes F pdfdestination F slide F pdfdirect F somepenalty F pdfliteral F somespace F pdfrestore F tail

| F takebox           |            | F register              |          |
|---------------------|------------|-------------------------|----------|
| F tonode            |            | D registered            |          |
| F tonodes           |            | D values                |          |
| F tonut             |            | F processor             |          |
| F tosequence        |            | points                  | function |
| F tostring          |            | pool                    | table    |
| F tracedslide       |            | F baselineskip          |          |
| F traverse          |            | F cleanup               |          |
| F traverse_id       |            | F glyph                 |          |
| T typesetters       |            | F kern                  |          |
| F fast_hpack        |            | F latelua               |          |
| F hpack             |            | F lateluafunction       |          |
| F tohpack           |            | F lineskip              |          |
| F tohpackfast       |            | F pdfdirect             |          |
| F tonodes           |            | F pdfliteral            |          |
| F tovpack           |            | F pdfrestore            |          |
| F tovpackfast       |            | F pdfsave               |          |
| F vpack             |            | F pdfsetmatrix          |          |
| F unprotect_glyphs  |            | F register              |          |
| F unset_attribute   |            | F rule                  |          |
| F unsetattribute    |            | F special               |          |
| F unsetattributes   |            | F usage                 |          |
| F untracedslide     |            | T userids               |          |
| F usedlist          |            | N margins.inline        |          |
| F vianodes          |            | N property              |          |
| F vianuts           |            | N splitters.one         |          |
| F vpack             |            | N splitters.two         |          |
| F writable_spec     |            | F usernumber            |          |
| F write             |            | prepend                 | function |
| packlist            | function   | print                   | function |
| pardir_is_equal     | data table | processors              | table    |
| pardir_is_opposite  | data table | B enabled               |          |
| pardir_is_parallel  | data table | F hpack_filter          |          |
| partextdir_is_equal | data table | F post_linebreak_filter |          |
| penaltycodes        | data table | F pre_linebreak_filter  |          |
| plugindata          | table      | F tracer                |          |
| F finalizer         |            | processwords            | function |
| F initializer       |            | properties              | table    |
| S name              |            | T actions               |          |
| T namespace         |            | F delayed               |          |
| N attribute         |            | F fdelayed              |          |
| D data              |            | F immediate             |          |
| F enable            |            | F attach                |          |
| F handler           |            | T data                  |          |

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

F getparameters

tonut

function

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

#### number (context)

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

#### os (basic lua)

\_\_getenv function setenv function binsuffix string **binsuffixes** table clock function converttime function date function difftime function data table env overloaded function exec execute overloaded function exit function fulltime function overloaded function aetenv gettimeofday function isleapyear function launch function libsuffix strina localtime function name string nofdays function function now string platform function remove function rename resolvers table F bits resultof function runtime function selfdir string seteny overloaded function setlocale overloaded function sleep function spawn overloaded function function time times function timezone function tmpdir function function tmpname

function string

today

type

uname
uuid function
validdate function
weekday function
where function
which function

# package (basic lua)

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

### pagebuilders (context)

### injections table

F flushafter

F flushbefore

F save

#### mixedcolumns table

F cleanup

F finalize

F getlist

F getrest

F getsplit

F setsplit

#### pdf (basic tex)

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

setpagesattributes overloaded function

overloaded function

settrailer

# pdfscanner (context)

scan function

# physics (context)

units table
 D tables

### profiler (extra lua)

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

### publications (context)

T order

| addtexentry     | function   | <b>enhancers</b> table |          |
|-----------------|------------|------------------------|----------|
| analyze         | function   | F details              |          |
| anywhere        | function   | F order                |          |
| casters         | table      | F suffixes             |          |
| F author        |            | finder                 | function |
| F keyword       |            | found                  | function |
| F pagenumber    |            | get                    | function |
| citevariants    | table      | getcasted              | function |
| F author        |            | getdirect              | function |
| F authornum     |            | getindex               | function |
| F authoryear    |            | indexers               | table    |
| F authoryears   |            | F author               |          |
| F category      |            | journals               | table    |
| F default       |            | F abbreviated          |          |
| F entry         |            | F add                  |          |
| F index         |            | F expanded             |          |
| F key           |            | F load                 |          |
| F num           |            | F save                 |          |
| F page          |            | lists                  | table    |
| F serial        |            | F collectentries       |          |
| F short         |            | F fetchentries         |          |
| F tag           |            | F filterall            |          |
| F type          |            | F flushentries         |          |
| F year          |            | T methods              |          |
| collected       | data table | F dataset              |          |
| components      | table      | F force                |          |
| F author        |            | F global               |          |
| concatstate     | function   | F local                |          |
| converttoxml    | function   | F nofregistered        |          |
| datasets        | table      | F prepareentries       |          |
| detailed        | table      | F register             |          |
| endnotes_to_btx | function   | T sorters              |          |
| enhancer        | table      | F author               |          |
| S arguments     |            | F dataset              |          |
| T askip         |            | F default              |          |
| B dirty         |            | F reference            |          |
| T gskip         |            | F short                |          |
| T kind          |            | F uservariable         |          |
| T list          |            | listvariants           | table    |
| T system        |            | F bib                  |          |

F default

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| F num                  |            | S subtitle  |
| F page                 |            | S title     |
| F short                |            | S type      |
| F yes                  | £ ± ÷      | S url       |
| load                   | function   | S volume    |
| loadbibdata            | function   | S year      |
| loaders                | table      | T optional  |
| F bib                  |            | T required  |
| F buffer               |            | T sets      |
| F endnote              |            | T author    |
| F lua                  |            | T doi       |
| F refman               |            | T isbn      |
| F xml                  |            | T virtual   |
| new                    | function   | T book      |
| parenttag              | function   | S category  |
| permitted              | function   | T extra     |
| refman_to_btx          | function   | T fields    |
| registeredcitevariants | data table | S address   |
| registeredlistvariants | data table | S author    |
| resolvedname           | function   | S day       |
| save                   | function   | S doi       |
| search                 | function   | S edition   |
| setcategory            | function   | S editor    |
| setspecification       | function   | S file      |
| singularorplural       | function   | S isbn      |
| sorters                | table      | S month     |
| F author               |            | S note      |
| specifications         | table      | S number    |
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| S author               |            | S publisher |
| T categories           |            | S series    |
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| T required    | S publisher    |
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| T patent      | S volume       |
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| S doi          | S category     |
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| S file        | S keywords                |          |  |
| S isbn        | S page                    |          |  |
| S month       | S pages                   |          |  |
| S note        | S producer                |          |  |
| S school      | S url                     |          |  |
| S subtitle    | S version                 |          |  |
| S title       | T virtual                 |          |  |
| S type        | statistics                | table    |  |
| S url         | N nofbytes                |          |  |
| S year        | N nofdatasets             |          |  |
| T optional    | N nofdefinitions          |          |  |
| T required    | N nofshortcuts            |          |  |
| T sets        | tables                    | table    |  |
| T doi         | D implicits               |          |  |
| T virtual     | D origins                 |          |  |
| T unpublished | D privates                |          |  |
| S category    | D specials                |          |  |
| T extra       | D types                   |          |  |
| T fields      | D virtuals                |          |  |
| S author      | tracers                   | table    |  |
| S doi         | F showdatasetcompleteness |          |  |
| S file        | F showdatasetfields       |          |  |
| S month       | F showfields              |          |  |
| S note        | F showtables              |          |  |
| S subtitle    | typesetters               | table    |  |
| S title       | F author                  |          |  |
| S url         | F string                  |          |  |
| S year        | usedentries               | function |  |
| T optional    | writers                   | table    |  |
| T required    | F author                  |          |  |
| T sets        |                           |          |  |
| T doi         |                           |          |  |
| T virtual     |                           |          |  |
| comment       |                           |          |  |
| copyright     |                           |          |  |
| fields        |                           |          |  |
| name          |                           |          |  |
| types         |                           |          |  |
| S artist      |                           |          |  |
| S author      |                           |          |  |
| S composer    |                           |          |  |
| S doi         |                           |          |  |
|               |                           |          |  |

S S T

Т

S editor

### regimes (context)

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

#### resolvers (context)

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

data table function function function function function function function function function function data table data table function function function function data table string table function function table

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

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

### scripts (context)

```
autofontfeature
                    table
   F disable
   F enable
   F handler
categorytonumber data table
colors
                    data table
decomposehangul
                    function
defaults
                    table
   N inter_char_half_shrink_factor
   N inter_char_half_stretch_factor
   N inter_char_hangul_penalty
   N inter_char_quarter_shrink_factor
   N inter char quarter stretch factor
   N inter char shrink factor
   N inter_char_stretch_factor
   N inter_word_stretch_factor
handlers
                    data table
hash
                    table
injectors
                    data table
installdataset
                    function
installmethod
                    function
numbertocategory data table
numbertodataset
                    data table
numbertohandler
                    data table
reset
                    function
set
                    function
splitters
                    data table
```

### set (context)

contains function
create function
tolist function
tonumber function
totable function

#### socket (extra lua)

**BLOCKSIZE** number S connection DEBUG boolean S content-description SETSIZE number S content-disposition bind function S content-encoding choose function S content-id function connect S content-language connect4 function S content-length connect6 function S content-location dns table S content-md5 F getaddrinfo S content-range F gethostname S content-transfer-encoding F getnameinfo S content-type F tohostname S date F toip S diagnostic-code ftp table S dsn-gateway S PASSWORD S etag N PORT S expect N TIMEOUT S expires S USER S final-log-id F command S final-recipient F get S from S host F open S if-match F put gettime function S if-modified-since headers table S if-none-match S if-range T canonic S accept S if-unmodified-since S accept-charset S in-reply-to S accept-encoding S keywords S accept-language S last-attempt-date S last-modified S accept-ranges S action S location S age S max-forwards S allow S message-id S alternate-recipient S mime-version S original-envelope-id S arrival-date S authorization S original-recipient S bcc S pragma S cache-control S proxy-authenticate S cc S proxy-authorization S comments S range

| S recei   | ved              | sinkt     | table     |
|-----------|------------------|-----------|-----------|
| S recei   | ved-from-mta     | F close-v | vhen-done |
| S refer   | rences           | F default |           |
| S refer   | er               | F http-ch | nunked    |
| S remot   | e-mta            | F keep-op | en        |
| S reply   | r-to             | skip      | function  |
| S repor   | ting-mta         | sleep     | function  |
| S reser   | t-bcc            | smtp      | table     |
| S reser   | t-cc             | S DOMAIN  |           |
| S reser   | t-date           | N PORT    |           |
| S reser   | t-from           | S SERVER  |           |
| S reser   | t-message-id     | N TIMEOUT | Г         |
| S reser   | t-reply-to       | S ZONE    |           |
| S reser   | t-sender         | F message | e         |
| S reser   | t-to             | F open    |           |
| S retry   | -after           | F send    |           |
| S retur   | n-path           | source    | function  |
| S sende   | r                | sourcet   | table     |
| S serve   | r                | F by-leng | jth       |
| S smtp-   | remote-recipient | F default | :         |
| S statu   | s                | F http-ch | nunked    |
| S subje   | ct               | F until-o | closed    |
| S te      |                  | tcp       | function  |
| S to      |                  | tcp6      | function  |
| S trail   | er               | tp        | table     |
| S trans   | fer-encoding     | N TIMEOUT | Г         |
| S upgra   | de               | F connect | :         |
| S user-   | agent            | try       | function  |
| S vary    |                  | udp       | function  |
| S via     |                  | udp6      | function  |
| S warni   | ng               | url       | table     |
| S will-   | retry-until      | F absolut | e         |
|           | uthenticate      | F build   |           |
| S x-mai   |                  | F build_p | oath      |
| http      | table            | F escape  |           |
| N PORT    |                  | F parse   |           |
| N TIMEOU  |                  | F parse_p |           |
| S USERAGI | ENT              | F unescap | e         |
| F open    |                  |           |           |
| F request |                  |           |           |
| newtry    | function         |           |           |
| protect   | function         |           |           |
| select    | function         |           |           |
| sink      | function         |           |           |

#### sorters (context)

```
basicsorter
                function
                table
comparers
   F basic
constants
                table
   S defaultdigits
   S defaultlanguage
   S defaultmethod
   N digitsmaximum
   N digitsoffset
   N ignoredoffset
   N replacementoffset
   T validmethods
    B ch
    B mc
    B mm
    Врс
    B pm
    B uc
    B zc
    B zm
definitions
                data table
firstofsplit function
setlanguage
                function
                function
sort
splitters
                table
   F utf
strip
                function
tracers
                data table
update
                function
```

### statistics (context)

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

### status (basic tex)

list function

### storage (context)

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

### streams (context)

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

# string (basic lua)

| autodouble     | function |
|----------------|----------|
| autosingle     | function |
| booleanstring  | function |
| byte           | function |
| bytepairs      | function |
| bytes          | function |
| char           | function |
| characterpairs | function |
| characters     | function |
| checkedsplit   | function |
| collapsespaces | function |
| count          | function |
| dump           | function |
| escapedpattern | function |
| explode        | function |
| find           | function |
| format         | function |
| formatter      | function |
| formatters     | function |
| fullstrip      | function |
| gmatch         | function |
| gsub           | function |
| is_boolean     | function |
| is_empty       | function |
| itself         | function |
| len            | function |
| limit          | function |
| longtostring   | function |
| lower          | function |
| match          | function |
| nspaces        | table    |
| optionalquoted | function |
| quote          | function |
| quoted         | function |
| rep            | function |
| reverse        | function |
| split          | function |
| splitlines     | function |
| splitup        | function |
| strip          | function |
| sub            | function |

| function |
|----------|
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| function |
| table    |
| function |
| function |
| function |
| function |
| function |
| function |
|          |

### structures (context)

| atlocation  | function | F previous   |       |  |
|---|----------|--|-------|--|
| blocks  | table    | F raw  |       |  |
| D collected   |          | F record   |       |  |
| F define  |          | F reset  |       |  |
| F print   |          | F restart  |       |  |
| F save  |          | F restore  |       |  |
| F select  |          | F save   |       |  |
| F setstate  |          | F set  |       |  |
| D states  |          | F setlevel   |       |  |
| D tobesaved   |          | F setoffset  |       |  |
| bookmarks   | table    | F setown   |       |  |
| T extras  |          | F setstate   |       |  |
| F get   |          | F setvalue   |       |  |
| F mergesections   |          | T specials   |       |  |
| F register  |          | F userpage   |       |  |
| F reset   |          | F subs   |       |  |
| F tosections  |          | D tobesaved  |       |  |
| F finalize  |          | F value  |       |  |
| F flatten   |          | <pre>currentsectionnumber funct</pre>  |       |  |
| F installhandler  |          | descriptions   | table |  |
| F merge   |          | documents  | table |  |
| S method  |          | D data   |       |  |
| F overload  |          | F initialize   |       |  |
| F place   |          | F preset   |       |  |
| F register  |          | F reset  |       |  |
| F setup   |          | floats   | table |  |
| counters  | table    |  |       |  |
|   |          | formulas   | table |  |
| F add   | 14010    | <b>formulas</b> F current  | table |  |
| F add<br>F analyze  | 100.10   |  | table |  |
|   |          | F current F simplify F store   |       |  |
| F analyze   |          | F current F simplify   | table |  |
| F analyze<br>F check  |          | F current F simplify F store   |       |  |
| F analyze<br>F check<br>D collected   |          | F current F simplify F store helpers   |       |  |
| F analyze<br>F check<br>D collected<br>F compact  |          | F current F simplify F store helpers F analyze   |       |  |
| F analyze F check D collected F compact F converted   |          | F current F simplify F store helpers F analyze F formulanumber   |       |  |
| F analyze F check D collected F compact F converted F currentvalue D data F define                      |          | F current F simplify F store helpers F analyze F formulanumber F merged  |       |  |
| F analyze F check D collected F compact F converted F currentvalue D data F define F first              |          | F current F simplify F store helpers F analyze F formulanumber F merged F page F prefix F prefixlastpage                         |       |  |
| F analyze F check D collected F compact F converted F currentvalue D data F define F first F get        |          | F current F simplify F store helpers F analyze F formulanumber F merged F page F prefix F prefixlastpage F prefixpage            |       |  |
| F analyze F check D collected F compact F converted F currentvalue D data F define F first F get F last |          | F current F simplify F store helpers F analyze F formulanumber F merged F page F prefix F prefixlastpage F prefixpage F simplify |       |  |
| F analyze F check D collected F compact F converted F currentvalue D data F define F first F get        |          | F current F simplify F store helpers F analyze F formulanumber F merged F page F prefix F prefixlastpage F prefixpage            |       |  |

| inserts   | table | F sectionnumber  |   |
|---|-------|--|---|
| D data  |       | F size   |   |
| F define  |       | F title  |   |
| F getdata   |       | D tobesaved  |   |
| F getlocation   |       | F userdata   |   |
| F getname   |       | F uservalue  |   |
| F getnumber   |       | marks table  | e |
| F setlocation   |       | D data   |   |
| F setup   |       | F define   |   |
| D stored  |       | F exists   |   |
| itemgroups  | table | F fetch  |   |
| lists   | table | F fetchallmarks  |   |
| F addto   |       | F fetched  |   |
| F analyze   |       | F fetchonemark   |   |
| B autoreorder   |       | F fetchtwomarks  |   |
| D cached  |       | F get  |   |
| D collected   |       | F number   |   |
| F discard   |       | F relate   |   |
| F enhance   |       | F reset  |   |
| T enhancers   |       | F set  |   |
| F filter  |       | F show   |   |
| F formulanumber   |       | F synchronize  |   |
|   |       |  |   |
| F getresult   |       | F title  |   |
| F getresult<br>F groupindex   |       | F title<br>T tracers   |   |
|   |       |  |   |
| F groupindex  |       | T tracers  | e |
| F groupindex<br>F hasnumberdata   |       | T tracers<br>F showtable   | e |
| F groupindex<br>F hasnumberdata<br>F haspagedata  |       | T tracers F showtable notes table  | е |
| F groupindex F hasnumberdata F haspagedata F hastitledata   |       | T tracers F showtable notes table F checkpagechange  | 9 |
| F groupindex F hasnumberdata F haspagedata F hastitledata F iscached  |       | T tracers F showtable  notes table F checkpagechange F define  | e |
| F groupindex F hasnumberdata F haspagedata F hastitledata F iscached F label  |       | T tracers F showtable  notes table F checkpagechange F define F doifonsamepageasprevious   | е |
| F groupindex F hasnumberdata F haspagedata F hastitledata F iscached F label F location   |       | T tracers F showtable  notes table F checkpagechange F define F doifonsamepageasprevious F get   | e |
| F groupindex F hasnumberdata F haspagedata F hastitledata F iscached F label F location F number  |       | T tracers F showtable  notes table F checkpagechange F define F doifonsamepageasprevious F get F getdeltapage  | e |
| F groupindex F hasnumberdata F haspagedata F hastitledata F iscached F label F location F number D ordered  |       | T tracers F showtable  notes table F checkpagechange F define F doifonsamepageasprevious F get F getdeltapage F getn   | е |
| F groupindex F hasnumberdata F haspagedata F hastitledata F iscached F label F location F number D ordered F page   |       | T tracers F showtable  notes table F checkpagechange F define F doifonsamepageasprevious F get F getdeltapage F getn F getnumberpage   | e |
| F groupindex F hasnumberdata F haspagedata F hastitledata F iscached F label F location F number D ordered F page F popnesting  |       | T tracers F showtable  notes table  F checkpagechange F define F doifonsamepageasprevious F get F getdeltapage F getn F getnumberpage F getstate   | e |
| F groupindex F hasnumberdata F haspagedata F hastitledata F iscached F label F location F number D ordered F page F popnesting F prefix   |       | T tracers F showtable  notes table  F checkpagechange F define F doifonsamepageasprevious F get F getdeltapage F getn F getnumberpage F getstate F getsymbolpage   | 9 |
| F groupindex F hasnumberdata F haspagedata F hastitledata F iscached F label F location F number D ordered F page F popnesting F prefix F prefixednumber  |       | T tracers F showtable  notes table  F checkpagechange F define F doifonsamepageasprevious F get F getdeltapage F getn F getnumberpage F getstate F getsymbolpage F hascontent F internal F internalid  | e |
| F groupindex F hasnumberdata F haspagedata F hastitledata F iscached F label F location F number D ordered F page F popnesting F prefix F prefixednumber F prefixednumber F prefixedpage F process D pushed                     |       | T tracers F showtable  notes table  F checkpagechange F define F doifonsamepageasprevious F get F getdeltapage F getn F getnumberpage F getstate F getsymbolpage F hascontent F internal F internalid F listindex  | e |
| F groupindex F hasnumberdata F haspagedata F hastitledata F iscached F label F location F number D ordered F page F popnesting F prefix F prefixednumber F prefixednumber F prefixedpage F process D pushed F pushnesting       |       | T tracers F showtable  notes table  F checkpagechange F define F doifonsamepageasprevious F get F getdeltapage F getn F getnumberpage F getstate F getsymbolpage F hascontent F internal F internalid F listindex F ordered  | e |
| F groupindex F hasnumberdata F haspagedata F hastitledata F iscached F label F location F number D ordered F page F popnesting F prefix F prefixednumber F prefixedpage F process D pushed F pushnesting F realpage             |       | T tracers F showtable  notes table  F checkpagechange F define F doifonsamepageasprevious F get F getdeltapage F getn F getnumberpage F getstate F getsymbolpage F hascontent F internal F internalid F listindex F ordered F postpone                             | e |
| F groupindex F hasnumberdata F haspagedata F hastitledata F iscached F label F location F number D ordered F page F popnesting F prefix F prefixednumber F prefixedpage F process D pushed F pushnesting F realpage F reordered |       | T tracers F showtable  notes table  F checkpagechange F define F doifonsamepageasprevious F get F getdeltapage F getn F getnumberpage F getstate F getsymbolpage F hascontent F internal F internal F internalid F listindex F ordered F postpone F resetpostponed | e |
| F groupindex F hasnumberdata F haspagedata F hastitledata F iscached F label F location F number D ordered F page F popnesting F prefix F prefixednumber F prefixedpage F process D pushed F pushnesting F realpage             |       | T tracers F showtable  notes table  F checkpagechange F define F doifonsamepageasprevious F get F getdeltapage F getn F getnumberpage F getstate F getsymbolpage F hascontent F internal F internalid F listindex F ordered F postpone                             | e |

| _    |                      |       |                            |
|------|----------------------|-------|----------------------------|
|      | setstate             |       | F getinnermethod           |
|      | setsymbolpage<br>    |       | F getinternallistreference |
|      | states               |       | F getinternalreference     |
|      | store                | +     | D handlers                 |
| page |                      | table | F identify                 |
|      | analyze              |       | F import                   |
|      | collected            |       | F inject                   |
|      | is_odd               |       | F injectcurrentset         |
|      | nofpages             |       | S innermethod              |
|      | number               |       | D internals                |
|      | save                 |       | F load                     |
|      | tobesaved            | 4-61- | F loadpresets              |
|      | rences               | table | F mark                     |
|      | analyze              |       | D pages                    |
|      | checkedfile          |       | U prefixsplitter           |
|      | checkedfileorurl     |       | D productdata              |
|      | checkedprogram       |       | T programs                 |
|      | checkedrealpage      |       | T data                     |
|      | checkedurl           |       | F define                   |
|      | collected            |       | F get                      |
|      | componentsplitter    |       | F realpageofpage           |
|      | currentmetadata      |       | U referencesplitter        |
|      | currentorder         |       | D referred                 |
|      | currentset           |       | F referredpage             |
|      | define               |       | F registerfinalizer        |
|      | defined              |       | F registerinitializer      |
|      | derived              |       | F registerpage             |
|      | enableinteraction    |       | F reportproblems           |
|      | enhance              |       | F reset                    |
|      | executers            |       | D runners                  |
|      | expandcurrent        |       | F set                      |
|      | export               |       | F setandgetattribute       |
|      | files                |       | F setcomponent             |
|      | T data               |       | F setinnermethod           |
|      | F define             |       | F setinternalreference     |
|      | F get                |       | F setnextinternal          |
|      | filter               |       | F setnextorder             |
|      | filterdefault        |       | F setreferencerealpage     |
|      | filters              |       | D specials                 |
|      | flaginternals        |       | F splitcomponent           |
|      | from                 |       | F splitprefix              |
|      | get                  |       | F splitreference           |
|      | getcurrentmetadata   |       | F synchronizepage          |
| F    | getcurrentprefixspec |       | T testrunners              |

| F inner               |               | F    | cct                 |     |
|-----------------------|---------------|------|---------------------|-----|
| F special             |               | D    | collected           |     |
| F special operation   |               | F    | current             |     |
| F special operation w | ith arguments | F    | currentblock        |     |
| T testspecials        |               | F    | currentid           |     |
| F deltapage           |               | F    | currentlevel        |     |
| Fi                    |               | F    | currentsectionindex |     |
| F internal            |               | F    | depthnumber         |     |
| F page                |               | F    | finddata            |     |
| F realpage            |               | F    | findnumber          |     |
| F section             |               | F    | fullnumber          |     |
| F userpage            |               | F    | getcurrentlevel     |     |
| D tobereferred        |               | F    | getlevel            |     |
| D tobesaved           |               | F    | getnumber           |     |
| T urls                |               | F    | internalreference   |     |
| T data                |               | D    | levelmap            |     |
| F define              |               | D    | levels              |     |
| F get                 |               | F    | load                |     |
| D usedinternals       |               | F    | matchingtilldepth   |     |
| D usedviews           |               | F    | numberatdepth       |     |
| F valid               |               | F    | numbers             |     |
| F whatfrom            |               | F    | popblock            |     |
| registers             | table         | F    | prefixedconverted   |     |
| F analyze             |               | F    | pushblock           |     |
| D collected           |               | F    | register            |     |
| F compare             |               | D    | registered          |     |
| F define              |               | F    | reportstructure     |     |
| F enhance             |               | F    | save                |     |
| F extend              |               | Т    | sectionblockdata    |     |
| F filter              |               |      | T bodypart          |     |
| F filtercollected     |               |      | S bookmark          |     |
| F finalize            |               | F    | set                 |     |
| F flush               |               | F    | setblock            |     |
| F get                 |               | F    | setchecker          |     |
| F prepare             |               |      | setentry            |     |
| F process             |               | F    | setlevel            |     |
| F setmethod           |               |      | setnumber           |     |
| F sort                |               |      | structuredata       |     |
| F store               |               |      | title               |     |
| D tobesaved           |               | D    | tobesaved           |     |
| F unique              |               |      | typesetnumber       |     |
| F userdata            |               |      | userdata            |     |
| sections              | table         |      | verbose             |     |
| F autodepth           |               | sets | ta                  | ble |

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

F sethighlight

#### table (basic lua)

| 111                        | <b>.</b>             |                        |                      |
|----------------------------|----------------------|------------------------|----------------------|
| allkeys                    | function             | sequenced              | function             |
| append                     | function             | serialize              | function             |
| are_equal                  | function             | setmetatablecall       | function             |
| autokey                    | function             | setmetatableindex      | function             |
| compact                    | function             | setmetatablekey        | function             |
| concat                     | function             | setmetatablenewindex   | function             |
| contains                   | function             | sort                   | function             |
| copy                       | function             | sorted                 | function             |
| count                      | function             | sortedhash             | function             |
| derive                     | function             | sortedhashkeys         | function             |
| deserialize                | function             | sortedhashonly         | function             |
| drop                       | function             | sortedindexonly        | function             |
| fastcopy                   | function             | sortedkeys             | function             |
| fastserialize              | function             | sortedpairs            | function             |
| filtered                   | function             | sparse                 | function             |
| flattened                  | function             | strip                  | function             |
| foreach<br>foreachi        | function             | sub                    | function             |
|                            | function             | swapped                | function             |
| fromhash                   | function<br>function | tocontext<br>tocsv     | function<br>function |
| getmetatablekey            | function             | tofile                 | function             |
| getn                       | function             | tofice                 | function             |
| has_one_entry<br>identical | function             | tohash                 | function             |
| imerge                     | function             | tomasn                 | function             |
| imerged                    | function             |                        | function             |
| insert                     | function             | twowaymapper<br>unique | function             |
| is empty                   | function             | unnest                 | function             |
| keys                       | function             | unpack                 | function             |
| load                       | function             | values                 | function             |
| loweredkeys                | function             | vacaes                 | runction             |
| maxn                       | function             |                        |                      |
| merge                      | function             |                        |                      |
| merged                     | function             |                        |                      |
| mirrored                   | function             |                        |                      |
| pack                       | function             |                        |                      |
| prepend                    | function             |                        |                      |
| print                      | function             |                        |                      |
| remove                     | function             |                        |                      |
| reverse                    | function             |                        |                      |
| reversed                   | function             |                        |                      |
| save                       | function             |                        |                      |
|                            |                      |                        |                      |

# tex (basic tex)

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

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

### texconfig (basic tex)

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

kpse init boolean max in open number max print line number max\_strings number nest\_size number param\_size number save size number shell escape string

## texio (basic tex)

write function
write\_nl function

## token (basic tex)

| command_id    | function |
|---------------|----------|
| command_name  | function |
| create        | function |
| csname_id     | function |
| csname_name   | function |
| expand        | function |
| get_next      | function |
| is_activechar | function |
| is_expandable | function |
| is_protected  | function |
| lookup        | function |

### tokens (context)

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

vbox

vtop

table table

#### tracers (context)

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

T context
T internals
T scratch

name function
primitive function
printerror function
showlines function
strings table

S undefined

toks function
type function

#### trackers (context)

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

# typesetters (context)

| F handler F set  F set  F set  F set  F set  F set  F set  F set  F setcolor  F define F handler F handler D mapping F methods T methods T methods T methods T numbers F set F set F set F set F set F set F set F handler T actions T actions T numbers F set F set F set F set F set F handler T actions F set F handler F register F set F register F set F resetcharacteralign F set F resetcharacteralign F sethandler F replacenbsp F setharacters F replacenbsp F setharacters F handler F handler F handler F handler F handler F replacenbspaces Checkers T actions F set F handler F set F handler F handler F reset F reset F reset F handler F handler F handler F handler F handler F handler F handler F handler F handler F handler F handler F handler F set F set Checkers T actions F handler F set F  |                  |       |                   |       |
|--|------------------|-------|-------------------|-------|
| F set  breakpoints table F define F define F handler F handler D mapping F set T methods T numbers F set F set F set F set F set F set F set F set F set F set F handler F register F set F register F resetcharacteralign F resetcharacteralign F replacenbsp F handler F replacenbsp F handler F replacenbsp F replacenbsp F replacenbsp F reset F handler F set  Character F handler F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F set Checkers F set Checkers F set F  | alignments       | table | F installhandler  |       |
| F define   | F handler        |       | F processmath     |       |
| F define F handler D mapping T methods T numbers F set F set F set F setreplacement  T actions F handler F handler F handler F set F handler F set F handler F register F register F resetcharacteralign F resetcharacteralign F handler F handler F handler F handler F handler F handler F handler F handler F handler F handler F handler F handler F set F handler F set F resetcharacteralign F check Characters F handler F handler F handler F set F handler F handler F reset F resetcharacteralign F check Characters F set F handler F set F handler F set F handler F set F handler F set F handler F set F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F set F handler F set F handler F set F set F handler F set F set F handler F set F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F set F handler F set F handler F set F handler F set F set F handler F set F set F handler F set F set F set F handler F set F s |                  |       | F set             |       |
| F handler D mapping T methods T methods T numbers F set F set F set F setreplacement Cases table F handler F register F set F handler F set F handler F set F handler F set F handler F register F set F handler F set F handler F set F handler F set F handler F set F handler F set F set F set F handler F set | breakpoints      | table | F setcolor        |       |
| T methods T methods T numbers F set F set F set F setreplacement  Cases  | F define         |       | F setmath         |       |
| T methods T numbers F set F set F set F set F set placement  Cases T actions F set F default  Characteralign T actions F set F set F set F resetcharacteralign F set F set F setcharacteralign F set F setcharacteralign F set F set F set F set F set F set F set F set F set F set F set F set F set F set Checkers F set Checkers T actions F set F | F handler        |       | F tomode          |       |
| F set F line F setreplacement  Cases table F handler  T actions F handler F register F handler F handler F set F handler F set F handler F set F handler F set F handler F set F handler F handler F handler F handler F handler F handler F handler F handler F handler F set F resetcharacteralign F check Characters T list F handler F replacenbsp F replacenbspaces F replacenbspaces F handler F handler F handler F handler F handler F handler F handler F handler F handler F handler F handler F handler F handler F set Checkers T list F handler F reset F replacenbspaces F set Checkers T able F handler F handler F handler F set F handler F handler F handler F handler F handler F handler F handler F handler F handler F handler F handle  | D mapping        |       | firstlines        | table |
| F set F berreplacement  Cases table F handler  T actions F set F handler F register F set F handler F set F handler F set F handler F set F handler F set F default  Characteralign F set F handler F resetcharacteralign F setcharacteralign F setcharacteralign F setcharacteralign F setcharacteralign F setcharacteralign F setcharacters F set F handler F mark F replacenbsp F reset F replacenbspaces F set  Checkers F handler F set F handler F set F set F handler F set F set F handler F set F set F handler F set F set F handler F set F set F handler F set F set F set F handler F set F set F set F handler F set F set F handler F set F set F handler F set F set F handler F set F handler F set F handler F set F set F handler F set F handler F set F set F set F set F handler F set | T methods        |       | T actions         |       |
| F setreplacement  Cases table F handler  T actions F set F handler F register F set F handler F set F handler F set F handler F set F default  Characteralign T actions F set F handler F handler F handler F set F resetcharacteralign F setcharacteralign F setcharacteralign F set F replacenbsp F set F replacenbsp F replacenbsp F replacenbsp F reset F replacenbsp F set  Checkers T actions F handler F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F set  Cleaners F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set F handler F set  | T numbers        |       | F default         |       |
| cases table F handler   T actions F set   F handler initials table   F register T actions   F set F default   Characteralign F handler F set   F resetcharacteralign injectors table   F setcharacteralign F check   Characters table T list   F handler F mark F reset   F replacenbspaces F set   Checkers table F show   F handler F sondler F forcevariant   F set F handler F reset   F set F handler F set   Cleaners table F reset   F handler F set kerns table   Cleaners table D factors   F handler F set kerns table   digits table D factors   F set B keeptogether directions table   F set B keeptogether directions table   F getfences F set manipulators table   F getfenthod F apply F apply   F handler F applyspecification   | F set            |       | F line            |       |
| Tactions F set F handler F register F set  Characteralign F set F resetcharacteralign F setcharacteralign F set set F set set F set set F  | F setreplacement |       | F word            |       |
| F handler   F register   F register   F set   F default     Characteralign   table   F handler   F set     F handler   F set   F default     F handler   F set   F set     F resetcharacteralign   F check     F handler   F mark     F handler   F mark     F replacenbsp   F reset     F replacenbspaces   F set     F handler   F show     F handler   F set     F handler   F set     F handler   F handler     F reset   F forcevariant     F set   F handler     F set   F handler     F set   F handler     F set   F handler     F set   Kerns   table     Gigits   table   D factors     F handler   F keepligature     F set   B keeptogether     directions   table   D mapping     F getfences   F set     F getglobal   D manipulators   table     F getmethod   F apply     F applyspecification     F appl    | cases            | table | F handler         |       |
| F register F set  Characteralign table F handler F handler F resetcharacteralign F set  F resetcharacteralign F setcharacteralign F setcharacteralign F setcharacteralign F setcharacters F handler F handler F mark F replacenbsp F replacenbsp F replacenbsp F reset F replacenbspaces F set  Checkers | T actions        |       | F set             |       |
| F set  characteralign table F handler F handler F resetcharacteralign F setcharacteralign F setcharacteralign F setcharacteralign F setcharacters T able F handler F handler F replacenbsp F replacenbsp F replacenbspaces F set Checkers T able F handler F handler F handler F reset F show F handler F reset F set F forcevariant F set F handler F set F handler F set F handler F set F handler F set F set  Cleaners T actions F handler F set  Gigits T actions F handler F set  Gigetfences F getfences F getglobal F getmethod F getmethod F papplyspecification  | F handler        |       | initials          | table |
| characteralign table F handler   F resetcharacteralign injectors table   F setcharacters f check   characters table T list   F handler F mark F mark   F replacenbspaces F set   Checkers table F show   F handler F show   F handler F forcevariant   F set F handler   F set F reset   F handler F set   R handler F set   Gligits table   D factors T actions   F handler F keepligature   F set B keeptogether   directions table   D mapping F set   Girections table   F getfences F set   F getfences F set   F getfences F set   F getfenchod F apply   F handler F apply   F handler F apply   F handler F apply   F handler F apply  | F register       |       | T actions         |       |
| F handler F resetcharacteralign F setcharacteralign F setcharacteralign F setcharacteralign F setcharacteralign F setcharacters T actions F handler F set F set | F set            |       | F default         |       |
| F resetcharacteralign F setcharacteralign F setcharacters table T list F handler F replacenbspp F replacenbspaces F set  Checkers table F handler F handler F set F handler F set F set F handler F set F handler F set F handler F set F  | characteralign   | table | F handler         |       |
| F setcharacteralign  Characters  table  F handler  F replacenbsp  F replacenbspaces  Checkers  table  F handler  F handler  F reset  F set  Checkers  table  F handler  F set  F forcevariant  F set  F handler  F set  F handler  F set  F handler  F set  B keeptogether  Chirections  F set  B keeptogether  Chirections  F set   | F handler        |       | F set             |       |
| characters table T list   F handler F mark   F replacenbsp F reset   F replacenbspaces F set   Checkers table F show   F handler italics table   F reset F forcevariant F set   F set F handler F reset   F handler F set kerns table   Gigits table D factors   T actions F handler F keepligature   F handler F keepligature F keepligature   F set B keeptogether   directions table D mapping   F getfences F set   F getglobal manipulators table   F getmethod F apply   F handler F applyspecification  | F resetcharacter | align | injectors         | table |
| F handler F replacenbsp F replacenbspaces F replacenbspaces F replacenbspaces F set  Checkers table F handler F reset F set F forcevariant F set F handler F set F handler F set F handler F set F handler F set F set F set F set F set F set F set F set F set F set F set F set F handler F set F set F handler F set F set F handler F set F handler F handler F handler F set F | F setcharacteral | ign   | F check           |       |
| F replacenbspaces F replacenbspaces F replacenbspaces F set  Checkers table F handler F reset F set F forcevariant F set F handler F set F handler F set F handler F set | characters       | table | T list            |       |
| F replacenbspaces table F show  F handler italics table  F reset F forcevariant F set F handler  Cleaners table F reset F handler F set  F set Kerns table  digits table D factors  T actions F handler F set B keepligature F set  directions table D mapping F getfences F getglobal F getmethod F getmethod F handler F apply F handler F applyspecification  | F handler        |       | F mark            |       |
| checkers table F show   F handler italics table   F reset F forcevariant   F set F handler   Cleaners table F reset   F handler F set kerns table   digits table D factors   T actions F handler F keepligature   F handler F keepligature F keepligature   F set B keeptogether   directions table D mapping   F getfences F set   F getglobal manipulators table   F getmethod F apply   F handler F applyspecification  | F replacenbsp    |       | F reset           |       |
| F handler F reset F reset F set F handler  Cleaners F handler F set F handler F set F handler F set  Kerns  T actions F handler F set B keepligature F set  directions F getfences F getglobal F getmethod F getmethod F handler F applyspecification  | F replacenbspace | s     | F set             |       |
| F reset F set F handler  Cleaners table F handler F set F handler F set  Kerns table  digits T actions F handler F set B keepligature F set  directions T able F getfences F getglobal F getmethod F handler F handler F set F getglobal F getmethod F handler F apply F handler F applyspecification  | checkers         | table | F show            |       |
| F set  cleaners table F handler F set F set  kerns table  digits table  T actions F handler F set B keepligature F set  directions table  F getfences F getglobal F getmethod F handler F handler F set F getmethod F handler F apply F handler F applyspecification   | F handler        |       | italics           | table |
| cleaners table F reset   F handler F set kerns table   digits table D factors   T actions F handler F keepligature   F set B keeptogether   directions table D mapping   F getfences F set   F getglobal manipulators table   F getmethod F apply   F handler F applyspecification   | F reset          |       | F forcevariant    |       |
| F handler F set  kerns table  digits table  T actions F handler F handler F set  B keeptogether  directions table  F getfences F getglobal F getmethod F handler F applyspecification  | F set            |       | F handler         |       |
| F set kerns table  digits table D factors  T actions F handler F handler F set B keeptogether  directions table D mapping  F getfences F getglobal manipulators table F getmethod F handler F handler F apply F handler F set papplyspecification  | cleaners         | table | F reset           |       |
| digits table D factors T actions F handler F handler F set B keeptogether  directions table D mapping F getfences F getglobal manipulators table F getmethod F apply F handler F applyspecification  | F handler        |       | F set             |       |
| T actions F handler F handler F set  directions F getfences F getglobal F getmethod F handler F handler F handler F handler F petmethod F apply F handler F applyspecification   | F set            |       | kerns             | table |
| F handler F set  directions F getfences F getglobal F getmethod F handler F handler F handler F keepligature F keepligature B keeptogether D mapping F set F set F apply F apply F applyspecification  | digits           | table | D factors         |       |
| F set  directions  F getfences  F getglobal  F getmethod  F handler  B keeptogether  D mapping  F set  manipulators  table  F apply  F applyspecification  | T actions        |       | F handler         |       |
| directions     table     D mapping       F getfences     F set       F getglobal     manipulators     table       F getmethod     F apply       F handler     F applyspecification   | F handler        |       | F keepligature    |       |
| F getfences F set F getglobal manipulators table F getmethod F apply F handler F applyspecification  | F set            |       | B keeptogether    |       |
| F getglobal manipulators table F getmethod F apply F handler F applyspecification  | directions       | table | D mapping         |       |
| F getmethod F apply F handler F applyspecification   | F getfences      |       | F set             |       |
| F handler F applyspecification   | F getglobal      |       | manipulators      | table |
|  | F getmethod      |       | F apply           |       |
| T handlers   | F handler        |       | F applyspecificat | ion   |
| i manuters   | T handlers       |       | T methods         |       |

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

F construct

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

F set reflow width

## unicode (extra lua)

| ascii    | table F | len        |
|----------|---------|------------|
| F byte   |         | lower      |
| F char   |         | match      |
| F dump   |         | rep        |
| F find   |         | reverse    |
| F format |         | sub        |
| F gfind  |         | upper      |
| F gmatch | utf8    | table      |
| F gsub   | F       | byte       |
| F len    |         | char       |
| Flower   |         | characters |
| F match  | F       | chrlen     |
| F rep    | F       | count      |
| F revers | e F     | dump       |
| F sub    | F       | filetype   |
| F upper  | F       | find       |
| grapheme | table F | format     |
| F byte   | F       | gfind      |
| F char   | F       | gmatch     |
| F dump   | F       | gsub       |
| F find   | F       | is_valid   |
| F format | F       | len        |
| F gfind  | F       | length     |
| F gmatch | F       | lower      |
| F gsub   | F       | magic      |
| F len    | F       | match      |
| F lower  | F       | remapper   |
| F match  | F       | rep        |
| F rep    | F       | replacer   |
| F revers | e F     | reverse    |
| F sub    | F       | split      |
| F upper  | F       | splitlines |
| latin1   | table F | sub        |
| F byte   | F       | subtituter |
| F char   | F       | tocodes    |
| F dump   | F       | toeight    |
| F find   | F       | toentities |
| F format |         | tostring   |
| F gfind  |         | totable    |
| F gmatch |         | upper      |
| F gsub   | F       | ustring    |

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

# url (context)

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

# utilities (context)

| debugger           | table | N version            |                  |
|--------------------|-------|----------------------|------------------|
| F disable          |       | parsers              | table            |
| F enable           |       | F add_settings_      | to array         |
| F savestats        |       | F arguments_to_table |                  |
| F showstats        |       | F array_to_stri      |                  |
| F showtraceback    |       | F csvsplitter        |                  |
| formatters         | table | F getparameters      |                  |
| F formatcolumns    |       | F hash_to_strin      | g                |
| F list             |       | F iterator           |                  |
| F stripzeros       |       | F keq_to_hash        |                  |
| garbagecollector   | table | F listitem           |                  |
| F check            |       | F make_settings      | _to_hash_pattern |
| N criterium        |       | F mergehashes        |                  |
| B enabled          |       | F options_to_ha      | sh               |
| lua                | table | T patterns           |                  |
| B alwaysstripcode  |       | U settings_to_       | _array           |
| F compile          |       | U settings_to_       | _hash_a          |
| F loadedluacode    |       | U settings_to_       | _hash_b          |
| F loadstripped     |       | U settings_to_hash_c |                  |
| N nofstrippedbytes |       | U unittotex          |                  |
| N nofstrippedchunk | .s    | F process_strip      | ped_settings     |
| B stripcode        |       | F rfc4180splitt      | er               |
| T strippedchunks   |       | F runtime            |                  |
| F strippedloadstri | .ng   | F settings_to_a      | rray             |
| T suffixes         |       | F settings_to_a      | rray_with_repeat |
| S lua              |       | F settings_to_h      | ash              |
| S luc              |       | F settings_to_h      |                  |
| S lui              |       | F settings_to_h      | ash_tolerant     |
| S luj              |       | F settings_to_s      | et               |
| S luv              |       | F simple_hash_t      | o_string         |
| S tma              |       | F splitmethod        |                  |
| S tmc              |       | F splitthousand      | S                |
| S tua              |       | F stepper            |                  |
| S tuc              |       | F stripped_sett      | ings_to_array    |
| packers            | table | F unittotex          |                  |
| F hashed           |       | F unittoxml          |                  |
| F new              |       | report               | function         |
| F pack             |       | sequencers           | table            |
| F simplehashed     |       | F appendaction       |                  |
| F strip            |       | F appendgroup        |                  |
| F unpack           |       | F compile            |                  |

F disableaction F disablegroup F enableaction F enablegroup D functions F localize F new F nodeprocessor F prependaction F prependgroup F removeaction F replaceaction F setkind F tostring setters table F disable F enable F initialize F list F new F register F report F reset F show table stacker F new table storage F allocate F checked F mark F marked F setinitializer F sparse strings table F collapsecrlf T formatters F add F new F newrepeater F nice T striplinepatterns U collapse U prune

U prune and collapse

U prune and no empty U retain U retain and collapse U retain and no empty F striplines F striplong F tabtospace T tracers tables table F accesstable F definedtable F definetable F encapsulate F insertaftervalue F insertbeforevalue F migratetable F removevalue F replacevalue templates table F load F replace F replacer

#### vf (context)

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

## visualizers (context)

| escapepatterns                               | data ta  | ble |
|--|----------|-----|
| getvisualizer                                | function |     |
| load   | functio  | n   |
| makenested                                   | functio  | n   |
| makepattern                                  | functio  | n   |
| newgrammar                                   | functio  | n   |
| newhandler                                   | functio  | n   |
| parsedxml                                    | functio  | n   |
| pattern                                      | functio  | n   |
| register                                     | function |     |
| registerescapecommand                        | function |     |
| registerescapeline                           | function |     |
| r <mark>egisterescapepattern</mark> function |          | n   |
| signal                                       | string   |     |
| signalpattern                                | userdat  | а   |
| specifications                               | data ta  | ble |
| visualize                                    | functio  | n   |
| visualizebuffer                              | functio  | n   |
| visualizefile                                | functio  | n   |
| visualizestring                              | functio  | n   |
| write  | functio  | n   |
| writeargument                                | functio  | n   |
| writedefault                                 | functio  | n   |
| writeemptyline                               | functio  | n   |
| writenewline                                 | function |     |
| writespace                                   | functio  | n   |

## xml (context)

| addentitiesdoctype   | function | D tex                     |            |
|----------------------|----------|---------------------------|------------|
| after                | function | D texline                 |            |
| all                  | function | D textine D texspace      |            |
| applylpath           | function | D texspace D verbose      |            |
| assign               | function | defaultprotocol           | string     |
| attribute            | function | delete                    | function   |
| before               | function | <del>delete_element</del> | function   |
| body                 | function | each                      | function   |
| builtinentities      | table    | each element              | function   |
| B amp                | cabic    | elements                  | function   |
| B apos               |          | elementtocdata            | function   |
| B gt                 |          | empty                     | function   |
| B lt                 |          | entities                  | data table |
| B quot               |          | erase                     | function   |
| cdata                | function | errorhandler              | function   |
| cdatatotext          | function | escaped                   | function   |
| checkbom             | function | expressions               | table      |
| checkerror           | function | F boolean                 | 100 10     |
| checknamespace       | function | F child                   |            |
| checkns              | function | F contains                |            |
| cleansed             | function | F count                   |            |
| collect              | function | F error                   |            |
| collect_elements     | function | F find                    |            |
| _<br>collect_tags    | function | F lower                   |            |
| collect texts        | function | F name                    |            |
| collected            | function | F number                  |            |
| collecttexts         | function | F oneof                   |            |
| content              | function | F print                   |            |
| convert              | function | F quit                    |            |
| сору                 | function | F tag                     |            |
| count                | function | F text                    |            |
| cprint               | function | F undefined               |            |
| CSS                  | table    | F upper                   |            |
| F colorspecification |          | fillin                    | function   |
| F dimension          |          | filter                    | function   |
| F fontspecification  |          | finalizers                | table      |
| F padding            |          | F paragraphs              |            |
| defaulthandlers      | table    | T tex                     |            |
| D file               |          | F all                     |            |
| D parsedxml          |          | F attribute               |            |
| D string             |          | F chainattribute          |            |
|                      |          |                           |            |

| F   | command        | F table                          |                     |
|-----|----------------|----------------------------------|---------------------|
| F   | concat         | F tag                            |                     |
| F   | concatrange    | F tags                           |                     |
| F   | context        | F text                           |                     |
| F   | count          | F texts                          |                     |
| F   | ctxtext        | F upperall                       |                     |
| F   | default        | first                            | function            |
| F   | first          | found                            | function            |
| F   | function       | functions                        | table               |
| F   | index          | getbuffer                        | function            |
| F   | last           | gethandlers                      | function            |
| F   | lettered       | gethandlersfunction              | function            |
| F   | lower          | helpers                          | table               |
| F   | lowerall       | F recursetext                    |                     |
| F   | match          | include                          | function            |
| F   | name           | inclusion                        | function            |
| F   | position       | inclusions                       | function            |
| F   | reverse        | index                            | function            |
| F   | stripped       | inheritedconvert                 | function            |
| F   | tag            | inject                           | function            |
| F   | tags           | <pre>inject_element</pre>        | function            |
| F   | text           | <pre>inject_element_after</pre>  | function            |
| F   | upper          | <pre>inject_element_before</pre> | function            |
| F   | upperall       | injectafter                      | function            |
| T × | cml .          | injectbefore                     | function            |
| F   | all            | insert                           | function            |
| F   | att            | insert_element                   | function            |
| F   | attribute      | <pre>insert_element_after</pre>  | <del>function</del> |
| F   | attributes     | <pre>insert_element_before</pre> | <del>function</del> |
| F   | cdata          | insertafter                      | function            |
| F   | chainattribute | insertbefore                     | function            |
| F   | count          | insertcdata                      | function            |
| F   | default        | insertcomment                    | function            |
| F   | elements       | inspect                          | function            |
| F   | empty          | is_valid                         | function            |
| F   | first          | kind                             | function            |
| F   | function       | last                             | function            |
| F   | index          | load                             | function            |
| F   | last           | lpath                            | function            |
| F   | lowerall       | lpathcached                      | function            |
| F   | match          | lpathcalls                       | function            |
| F   | name           | lshow                            | function            |
| F   | position       | makestandalone                   | function            |
| F   | reverse        | match                            | function            |
|     |                |                                  |                     |

Т

function name newhandlers function nodesettostring function originalload function package function function parent userdata parsedentitylpeg pihandlers table placeholders table F unknown\_any\_entity F unknown dec entity F unknown hex entity position function table function function **function** function. function table function

privatecodes privatetoken process process attributes process elements processattributes profiled raw registerentity function registerns function function remap name function remap namespace function remap tag function remapname remapnamespace function remaptag function function renamespace replace function replace element function resolvens function root function function save selection function separate function serialize function setcdata function setcomment function sethandlersfunction function function setproperty

settings

specialhandler

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

table

function

table

wrap

xmlns

#### zip (extra lua)

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

#### zlib (extra lua)

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