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 sandbox scripts set socket sorters statistics status storage streams string structures table thirddata token tokens tracers trackers typesetters unicode url userdata utilities vf visualizers xml zip zlib

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

## global (alias: \_G)

| MP             | table    | 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    |

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| 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    |
| sandbox         | table    |
| scripts         | table    |
| select          | function |
|                 |          |

| set          | table    |
|--------------|----------|
| setfenv      | function |
| setinspector | function |
| setmetatable | function |
| socket       | table    |
| sorters      | table    |
| statistics   | table    |
| status       | table    |
| storage      | table    |
| streams      | table    |
| string       | table    |
| structures   | table    |
| swiglib      | function |
| table        | table    |
| tex          | table    |
| texconfig    | table    |
| texio        | table    |
| thirddata    | table    |
| toboolean    | function |
| token        | table    |
| tokens       | table    |
| tonumber     | function |
| tostring     | function |
| tracers      | table    |
| trackers     | table    |
| type         | function |
| typesetters  | table    |
| unicode      | table    |
| unpack<br>-  | function |
| url          | table    |
| userdata     | table    |
| utf          | table    |
| utilities    | table    |
| vf           | table    |
| visualizers  | table    |
| xml          | table    |
| xpcall       | function |
| zip          | table    |
| zlib         | table    |
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## 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 T originals F hyphenate F kerning F ligaturing paragraphs table T constructors N attribute F define F disable F enable F handler T methods F basic F default F oneline D names D numbers F set F start F stop T expansion F trace F keeptogether F registertogether T solutions T splitters F define F optimize T registered F reset F set F split F start F stop F tag

vspacing

table

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

#### caches (context)

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

#### callback (basic tex)

find function
list function

register overloaded function

#### callbacks (context)

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

#### catcodes (context)

names data table
numbers data table
register function

## characters (context)

| 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             | SN         |
| 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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## chemistry (context)

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

## commands (context)

| Alphabetic              | function | applytofirstcharacter     | function |
|-------------------------|----------|---------------------------|----------|
| Character               | function | 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          | 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 |
| ${\tt doifelsecurrent fonthas feature}$ | 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 |
| exportreferences       | function | forceendjob                 | function |
| extendregister         | function | forcequitjob                | function |
| extensiblecode         | function | format                      | function |
| feature                | function | formatcolor                 | function |
| featureattribute       | function | formatgray                  | function |
| featurelist            | function | freezerandomseed            | function |
| feedback               | function | from                        | function |
| fetchallmarks          | function | getbidimode                 | function |
| fetchmultipar          | function | getbodyfontsizes            | function |
| fetchmultishape        | function | getbuffer                   | function |
| fetchonemark           | function | getbufferctxlua             | function |
| fetchposboxes          | function | getbuffermkvi               | function |
| fetchtwomarks          | function | getcommandline              | function |
| figurefilename         | function | getctxfile                  | function |
| figurefilepath         | function | getcurrentprefixspec        | function |
| figurefiletype         | function | getcurrentreferencemetadata | function |
| figurerequest          | function | getcurrentsectionlevel      | function |
| 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 | getreadfilename             | function |

| 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          |
| F L                            |          | F XmlSnippetCdata             |
| F LL                           |          | F XmlSnippetComment           |
| F LuaSnippet                   |          | F XmlSnippetEntity            |
| F LuaSnippetBoundary           |          | F XmlSnippetEqual             |
| F LuaSnippetComment            |          | F XmlSnippetKey               |
| F LuaSnippetName               |          | F XmlSnippetName              |
| F LuaSnippetNameBase           |          | F XmlSnippetString            |
| F LuaSnippetNameCore           |          | Fflush                        |
| F LuaSnippetNameLibraries      |          | Fflushdirect                  |
| F LuaSnippetQuote              |          | Fflushlines                   |
| F LuaSnippetSpecial            |          | Fa                            |
| 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               |
| = 110                          |          | E 1 . G . I . II              |

F btxflushauthor

F NC

F btxhandlelistentrv F btxstopcite F btxhandlelisttextentry F btxstopciteauthor F btxlistauthorsetup F btxstopsubcite

F callfunctiononce

F constructcs

F btxlistparameter Fς

F btxlistsetup F btxlistvariantparameter F char F btxpagesetup F chardef F btxsetafter F color F htysetauthorindex F colordefage F htysetauthorvariant F colordefagt F btxsetbacklink F colordefalc F btxsetbacktrace

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 definefontsynonym F btxsetlanguage F btxsetlastinternal T delayed F btxsetlastpage F digitsdigit

F btxsetlefttext F digitsfinalcomma F btxsetlistreference F digitsfinalperiod F htxsetnumber F digitshighspace

F htxsetoverflow 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 btxstartsubcite F digitssignspace

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

F newtoks F sprint F newverbosehandler F startLuaSnippet F nointerlineskip F startMetapostSnippet F normalatop F startParsedXmlSnippet F normalover F startTexSnippet F overstrike F startXmlSnippet F par F startblankhandling F startcolumns F pdfliteral F popcatcodes F startcomponentindeed F startenvironmentindeed F poplogger 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 rlap F startyboxregister F rotate F startxtitle 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 stopprojectindeed F setupsystem F setupwithargument F stopreadingfile F setvalue F stopregisterentries F setvboxregister F stopregisterentry F setxvalue F stopregisteroutput F space F stopregisterpages

F stopregistersection F LuaSnippetOuote F stopregisterseewords F LuaSnippetSpecial F stoptabulate F LuaSnippetString F MetapostSnippetBoundary F stoptext F stoptitle F MetapostSnippetComment F stopyboxregister F MetapostSnippetConstructor F stopxtitle F MetapostSnippetName F storenode F MetapostSnippetNameMetafun F synonymentry F MetapostSnippetNamePlain F tabulaterow F MetapostSnippetNamePrimitive F tabulaterowbold F MetapostSnippetOuote F tabulaterowtvp F MetapostSnippetSpecial F tabulaterowtype F MetapostSnippetString F template F ParsedXmlSnippetCdata T templates F ParsedXmlSnippetComment F texsetup F ParsedXmlSnippetDoctype F tobuffer F ParsedXmlSnippetElement F tocontext 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 units0 F XmlSnippetCdata F XmlSnippetComment F unitsP 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 vrule F unprotect F xmlcdataafter F unregisterfunction F usemodule F xmlcdatabefore F utfchar F xmlcdataobeyedline T verbatim F xmlcdataobeyedspace F xmlprocessbuffer F LuaSnippetBoundary F LuaSnippetComment F xmlsetup F LuaSnippetName numbers function F LuaSnippetNameBase F C F LuaSnippetNameCore F FI F LuaSnippetNameLibraries F HL

FΙ F XmlSnippetCdata F LL F XmlSnippetComment F LuaSnippet F XmlSnippetEntity F XmlSnippetEqual F LuaSnippetBoundary F LuaSnippetComment F XmlSnippetKey F LuaSnippetName F XmlSnippetName F LuaSnippetNameBase F XmlSnippetString F LuaSnippetNameCore F flush F LuaSnippetNameLibraries F flushdirect F flushlines F LuaSnippetQuote F LuaSnippetSpecial Fa F LuaSnippetString F addaskedblankskip F ML F addpredefinedblankskip F MPLIBsetCtext F applyprocessor F MPLIBsetNtext F MPcolor F beginhbox F MetapostSnippet F beginvbox F bf F MetapostSnippetBoundary F MetapostSnippetComment F bgroup F MetapostSnippetConstructor F blank F MetapostSnippetName F bold F MetapostSnippetNameMetafun F btxchecklistcombi F btxchecklistentry F MetapostSnippetNamePlain F MetapostSnippetNamePrimitive F btxciteauthorsetup F MetapostSnippetQuote F btxcitesetup F MetapostSnippetSpecial F btxcitevariantparameter F btxdirectlink F MetapostSnippetString F NC F btxflushauthor 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 btxsetbacklink F TexSnippetComment F TexSnippetGroup F btxsetbacktrace F TexSnippetName F btxsetbefore F TexSnippetSpecial F btxsetcategory F XmlSnippet F btxsetcitereference F XmlSnippetBoundary F btxsetcombis

F htxsetconcat F colordefrac F btxsetcount F colordefrat F btxsetdataset F colordefrlc F colordefrlt F btxsetfirst F btxsetfirstinternal F concat F btxsetfirstnames F constructes F constructcsonly F btxsetfirstpage F htxsetinitials F convertnumber F htysetinternal F ctxreport Εd F btxsetjuniors 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 diaitsplus F btxsetthird F digitspositive F btxsetvons F digitspower F btxstartauthor F digitspowerminus F btxstartcite F digitspowerplus F btxstartciteauthor F digitsseparatorspace F btxstartsubcite F digitssignspace F btxstopauthor F digitsspace F digitszeropadding F btxstopcite F btxstopciteauthor F direct F btxstopsubcite F doactivateinjector Fς F dodisplayverbatimbeginline F callfunctiononce F dodisplayverbatimemptyline F char F dodisplayverbatiminitialize F chardef F dodisplayverbatimnewline F color F dodisplayverbatimstart F colordefage F dodisplayverbatimstop F colordefagt F dofastdefinetypeface F colordefalc F dofinishsomereference F colordefalt F doflushparallel F colordeffqc F dofromfiledescription F colordeffat F dofromfileliteral F colordefflc F dofromurldescription

F dofromurlliteral

F colordefflt

F doinlineverbatimbeginline F aoto F doinlineverbatimemptyline F hrule F doinlineverbatimnewline F input F doinlineverbatimstart T knownfunctions F doinlineverbatimstop Fι F lateluafunction F domarkinjector F donestedtypingstart F letvaluerelax F donestedtypingstop F llan F dosetfastregisterentry F loadfile F dostarttext F loadfoundtypescriptfile F doverbatimspace F luasetup F m F dummvxcell F egroup F makelinenumber F emptyreference T metafun F enablemode F color F endhbox T delayed F endybox F start F environment F stop F expandreferencearguments T nested F expandreferenceoperation F markingcommand F finalizeautostructurelevel F markingseparator F finishiob 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 fntsetsomesize F normalover 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 glyph F protect F gobbleoneargument T puretext

F pushcatcodes F startregisterentry F startregisteroutput 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 startvboxregister 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 setyboxregister 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 stopyboxregister 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

T templates

F texsetup

F startreadingfile

F startregisterentries

| F tobuffer                     | F ParsedXmlSnippetElement               |          |
|--------------------------------|---|----------|
|                                | •••                                     |          |
| F tolines                      | F ParsedXmlSnippetInstruction           |          |
| F unitsC                       | F TexSnippetBoundary                    |          |
|                                | F TexSnippetComment                     |          |
| F unitsN                       | F TexSnippetGroup                       |          |
| F unitsNspace                  | F TexSnippetName                        |          |
| FunitsNstart                   | F TexSnippetSpecial                     |          |
| F unitsNstop                   | F XmlSnippetBoundary                    |          |
| F units0                       | 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      | page_injections_flush_after             | 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     | pdfrotation                             | function |
| F MetapostSnippetNamePrimitive | pdfstartmatrix                          | function |
| F MetapostSnippetQuote         | pdfstartmirroring                       | function |
| F MetapostSnippetSpecial       | pdfstartrotation                        | function |
| F MetapostSnippetString        | pdfstartscaling                         | function |
| F ParsedXmlSnippetCdata        | pdfstopmatrix                           | function |
| F ParsedXmlSnippetComment      | pdfstopmirroring                        | function |
|                                |   |          |

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

| resetcharacteralign      | function | setcharacteralign        | function |
|--------------------------|----------|--------------------------|----------|
| resetcounter             | function | setcharactercasing       | function |
| resetfontfeature         | function | setcharactercleaning     | function |
| resetfontsolution        | function | setcharactercodes        | function |
| resetinjector            | function | setcharacterkerning      | function |
| resetmarking             | function | setcharacterspacing      | 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 |
| setbreakpoints           | function | setlayer                 | function |
| setbtxdataset            | function | setmarking               | function |
| setbtxentry              | function | setmathalphabet          | function |
| setbtxregister           | function | setmathalternate         | function |
| setbtxspecification      | function | setmathattribute         | function |
|                          |          |                          |          |

| setmathdirection         | function | setupcanvas                | function |
|--------------------------|----------|----------------------------|----------|
| setmathitalics           | function | setupcharacterspacing      | function |
| setmathstyle             | function | setupexport                | function |
| setnextinternalreference | function | setupfontexpansion         | function |
| setnextreferenceorder    | function | setupfontprotrusion        | function |
| setnotestate             | function | setuphyphenation           | function |
| 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 | showdiscretionaries        | function |
| setregistermethod        | function | showfontparameters         | function |
| setreplacements          | function | showhyphenatedinlist       | function |
| setsectionblock          | function | showhyphenationtrace       | function |
| setsectionentry          | function | showinjector               | function |
| setsectionlevel          | function | showjustification          | function |
| setsectionnumber         | function | showmessage                | function |
| setstructureblockstate   | function | sin                        | function |
| settagaspect             | function | sind                       | function |
| settagcombination        | function | splitfilename              | function |
| settagdescription        | function | spotcolorname              | function |
| settagdescriptionsymbol  | function | spotcolorparent            | function |
| settagfigure             | function | spotcolorvalue             | function |
| settaghighlight          | function | startactualtext            | function |
| settagitemgroup          | function | startchemical              | function |
| settaglist               | function | startcolorset              | function |
| settagproperty           | function | startcomponent             | function |
| settagregister           | function | startenvironment           | function |
| settagsorting            | function | startfontsolution          | function |
| settagsynonym            | function | startparbuilder            | function |
| settagtablecell          | function | startproduct               | function |
| settagtabulatecell       | function | startproject               | function |
| setupbookmarks           | function | startregime                | function |

| startsectionlevel         | function | textime                | function |
|---------------------------|----------|------------------------|----------|
| starttag                  | function | thefirstcharacter      | function |
| starttext                 | function | theremainingcharacters | function |
| startviewerlayer          | function | thetexdefinition       | function |
| stopactualtext            | function | tochar                 | function |
| stopchemical              | function | transparencycomponents | function |
| stopcolorset              | function | triggereffect          | 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 |

| utfmathcommand             | function |
|----------------------------|----------|
| utfmathcommandabove        | function |
| utfmathcommandbelow        | function |
| utfmathcommandfiller       | function |
| utfmathfiller              | function |
| utfmathstretch             | function |
| vboxlisttohbox             | function |
| verbose                    | function |
| visual                     | function |
| vspacing                   | function |
| vspacingcollapse           | function |
| vspacingdefine             | function |
| vspacingsetamount          | function |
| vspacingsnap               | function |
| way                        | function |
| weekday                    | function |
| weekdayname                | function |
| write                      | function |
| writestatus                | function |
| x_table_c                  | function |
| x_table_cleanup            | function |
| x_table_construct          | function |
| x_table_create             | function |
| x_table_finish_row         | 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
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)

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

# dir (context)

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

## directives (context)

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

## document (context)

arguments data table
files table
getargument function
getfilename function
options table

T commandline

D environments

D modes

D modules

T ctxfile

D environments

D modes

D modules

setargument function
setdefaultargument function
setfilename function
variables data table

### environment (context)

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

texos

texroot truefilename validengines string function data table

string

## epdf (extra tex)

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

type function

## experiments (context)

data data table default function disable function enable function list function name string register function report function 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 write include includers initialize loaded localpaths magics mergegoodies nofprocessed order paths patterns pop preferguality programs push registerpattern registersuffix resources scale setlookups setorder setpaths suffixes used

F totable F types function data table function data table data table data table function number data table data table data table function boolean data table function function function registerresource function data table function function function function data table data table

# file (basic lua)

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

# floats (context)

| analysemethod              | function |
|----------------------------|----------|
| ${\tt checked page float}$ | function |
| collect                    | function |
| consult                    | function |
| flush                      | function |
| getvariable                | function |
| nofstacked                 | function |
| pop                        | function |
| push                       | function |
| resave                     | function |
| save                       | function |
| stacked                    | function |

## font (basic tex)

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

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 cid          | table | F initializefeatures          |
|                        | table | T keys                        |
| F getmap<br>F loadfile |       | T character                   |
| collections            | table | S depth<br>S height           |
| F checkenabled         | tabte | S italic                      |
| F clonevector          |       | S width                       |
| F define               |       | T description                 |
| T definitions          |       | T boundingbox                 |
| F prepare              |       | S depth                       |
| F process              |       | S height                      |
| F registermain         |       | S width                       |
|                        |       |                               |

| Γ parameters             | T cidinfo     |          |
|--------------------------|---------------|----------|
| S ascender               | S embeddir    | ng       |
| S descender              | S encoding    | gbytes   |
| S designsize             | S filename    | e        |
| T expansion              | S finalize    | ed       |
| S auto                   | S fontname    | e        |
| S shrink                 | S format      |          |
| S step                   | S fullname    | 9        |
| S stretch                | S hasitali    | ics      |
| S extendfactor           | S hasmath     |          |
| S factor                 | S mathital    | lics     |
| S hfactor                | S mode        |          |
| S mathsize               | S name        |          |
| T protrusion             | S noglyphr    | names    |
| S auto                   | S nostack     | nath     |
| S quad                   | S psname      |          |
| S scaledpoints           | S textital    | lics     |
| S scriptpercentage       | S virtuali    | ized     |
| S scriptscriptpercentage | D loadedfonts |          |
| S size                   | S namemode    |          |
| S slantfactor            | F newfeatures |          |
| S slantperpoint          | F newhandler  |          |
| T spacing                | N noffontsloa | ded      |
| S extra                  | N nofsharedfo | nts      |
| S shrink                 | N nofsharedha | shes     |
| S stretch                | N nofsharedve | ctors    |
| S width                  | N privateoffs | et       |
| T synonyms               | F readanddefi | ne       |
| S em                     | F registerfea | ture     |
| S ex                     | B resolvevirt | ualtoo   |
| 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 trytosharef | ont      |
| 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     |          |
| Γ properties             | F applypostpr | ocessors |
| 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 Ereversedcyrillic N Yericyrillic 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               |
| Ν | daletdagesh               | N | finalnun               |
| N | dalethatafpatah           | N | finalpe                |
| Ν | 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 hamzalowkasratanarahic 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                 |
| N  | qamats29                    |   | reshhatafpatah       |
| N  | qamats33                    | N | 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             |
|    |                             |   |                      |

|    | ahava 15                 | N ====d=                |            |  |
|----|--------------------------|-------------------------|------------|--|
|    | sheva15                  | N zayin                 |            |  |
|    | sheva22                  | N zayindag              | esn        |  |
|    | sheva2e                  | N zdot                  |            |  |
|    | shevahebrew              | N zeroarab              | 10         |  |
|    | shevanarrowhebrew        | D unicodes              |            |  |
|    | shevaquarterhebrew       | D cache                 |            |  |
| N  | shin                     | F is_known              |            |  |
|    | shindagesh               | D known                 |            |  |
| N  | shindageshshindot        | F load                  |            |  |
| N  | shindageshsindot         | F make_unicod           | e_vector   |  |
| N  | shinshindot              | D math                  |            |  |
| N  | shinsindot               | N version               |            |  |
| N  | siluqhebrew              | expansions              | data table |  |
| N  | sixarabic                | formats                 | data table |  |
| N  | tav                      | goodies                 | table      |  |
| N  | tavdages                 | D colorscheme           | S          |  |
| N  | tavdagesh                | D data                  |            |  |
| N  | tcedilla                 | D designsizes           |            |  |
| N  | tchehinitialarabic       | D filenames             |            |  |
| N  | tet                      | F getcompositions       |            |  |
| N  | tetdagesh                | T list                  |            |  |
| N  | tevirhebrew              | F compositions          |            |  |
| N  | thousandsseparatorarabic | F designsizes           |            |  |
| N  | threearabic              | F expansions            |            |  |
| N  | tildecmb                 | F featureset            |            |  |
| N  | tipehahebrew             | F filenames             |            |  |
| N  | tsadi                    | F files                 |            |  |
| N  | tsadidagesh              | F mathematic            | cs         |  |
| N  | tsere                    | F protrusion            | าร         |  |
| N  | tsere12                  | F solutions             |            |  |
| N  | tserele                  | F treatments            | 5          |  |
| N  | tsere2b                  | F typefaces             |            |  |
| N  | tserehebrew              | F load                  |            |  |
| N  | tserenarrowhebrew        | F prepare_features      |            |  |
| N  | tserequarterhebrew       | F register              |            |  |
| N  | twoarabic                | F registerpostprocessor |            |  |
| N  | udblacute                | F report                |            |  |
|    | vav                      | handlers                | table      |  |
| N  | vavdagesh                | T afm                   |            |  |
|    | vavdagesh65              | B addkerns              |            |  |
|    | vavholam                 | B addligatu             | res        |  |
|    | yerahbenyomohebrew       | B addtexliga            |            |  |
|    | yod                      | B autoprefix            |            |  |
|    | yoddagesh                | D cache                 |            |  |
| IV | youuugesii               | D Cacile                |            |  |

| 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 modes                    |

| D originals                | S pc                  |
|----------------------------|-----------------------|
| 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                  |
| helpers 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                |
| <pre>iterators table</pre> | S name                |
| F characters               | T unicode             |
| F descriptions             | T I_J                 |
| F glyphs                   | N mess                |
| <b>loggers</b> table       | S name                |
| F add_placeholders         | T unicode             |
| T category_to_placeholder  | T f_f                 |
| s II                       | N mess                |
| S lm                       | S name                |
| S lo                       | 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             |
|                            |                       |

| T f_i                         | Тіј  |  |  |  |  |
|-------------------------------|--|--|--|--|--|
| 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 tounicode16 F tounicode16sequence                  |  |  |  |  |
| S name                        | mp table   |  |  |  |  |
| T unicode                     | D cache  |  |  |  |  |
| T f_l                         | B inline   |  |  |  |  |
| N mess                        | N version  |  |  |  |  |
| S name                        | names data tabl                                      |  |  |  |  |
| T unicode                     | nulldata data tabl                                   |  |  |  |  |
| T ff                          | protrusions data tabl                                |  |  |  |  |
|                               | readers table  |  |  |  |  |
| N mess                        | F afm  |  |  |  |  |
| S name                        |  |  |  |  |  |
| T unicode                     | F check_lua  |  |  |  |  |
| T ffi<br>                     | 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                        | <b>select</b> 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   |  |  |  |  |
|                               | F file   |  |  |  |  |
| T fl                          |  |  |  |  |  |
| T fl<br>N mess                | F goodies  |  |  |  |  |
|                               |  |  |  |  |  |
| N mess                        | F goodies  |  |  |  |  |
| S name                        | F goodies<br>F name                                  |  |  |  |  |
| N mess<br>S name<br>T unicode | F goodies<br>F name<br>F selectfont                  |  |  |  |  |
| N mess S name T unicode T i_j | F goodies<br>F name<br>F selectfont<br>F simplefonts |  |  |  |  |

#### F searchfiles

#### specifiers table

D contextmerged

F contextnumber

D contextnumbers

D contextsetups

F contexttostring

F definecontext

F mergecontext

F presetcontext

F registercontext

F showcontext

F splitcontext

D synonyms

D variants

#### symbols

table

F uselibrary

tables

table

table tracers treatments table

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)

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

## interactions (context)

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

### interfaces (context)

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

F 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

loadchunk function
loaddata function
loadlines function
noflines function

open overloaded function
output overloaded function

pathseparator string

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

# jit (context)

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

F start

os string
status function
util table

F funcbc

F funcinfo

F funck

F funcuvname

F ircalladdr

F traceexitstub

F traceinfo

F traceir

F tracek

F tracemc

F tracesnap

version string
version\_num number

# job (context)

| comment     | function | _ |                        | ad    |  |
|-------------|----------|---|------------------------|-------|--|
| datasets    | table    |   | getcollected           |       |  |
| D collected | table    |   | getdata                |       |  |
| F extend    |          |   | getfield               |       |  |
| F getdata   |          |   | gettobesaved<br>inlist |       |  |
| F setdata   |          |   | last                   |       |  |
| D tobesaved |          |   | list                   |       |  |
| disablesave | function |   | save                   |       |  |
| files       | table    |   | save                   |       |  |
| D collected | table    |   | tobesaved              |       |  |
| F context   |          |   | itions                 | table |  |
| B forcerun  |          | - | b_col                  | table |  |
| F run       |          |   |                        |       |  |
| D tobesaved |          |   | b_region<br>c          |       |  |
| initialize  | function |   | collected              |       |  |
| load        | function |   | column                 |       |  |
| loadother   | function |   | сору                   |       |  |
| objects     | table    |   | depth                  |       |  |
| D collected | cubic    |   | e_col                  |       |  |
| F get       |          |   | e_region               |       |  |
| F number    |          |   | enhance                |       |  |
| F page      |          |   | extra                  |       |  |
| F save      |          |   | get                    |       |  |
| F set       |          |   | getreserved            |       |  |
| D tobesaved |          |   | hangafter              | u     |  |
| pack        | boolean  |   | hangindent             |       |  |
| packversion |          |   | height                 |       |  |
| pagestates  | table    |   | hsize                  |       |  |
| D collected |          |   | leftskip               |       |  |
| F extend    |          |   | lowerleft              |       |  |
| F realpage  |          |   | lowerright             |       |  |
| F setstate  |          |   | markregion             | box   |  |
| D tobesaved |          |   | n                      |       |  |
| passes      | table    |   | onsamepage             |       |  |
| F check     |          |   | overlappin             | a     |  |
| D collected |          |   | р                      |       |  |
| F count     |          |   | page                   |       |  |
| F define    |          |   | paragraph              |       |  |
| F find      |          |   | parindent              |       |  |
| F first     |          |   | position               |       |  |
| F get       |          |   | r                      |       |  |
| -           |          |   |                        |       |  |

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

#### variables

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 function expand table expanders table frequencies F averagecharwidth F getdata qetdata function function getnumber hyphenate function hyphenators table T dictionaries D featuresets F handler F popmethod F pushmethod F setmethod T traditional F definefeatures F gettrace F hyphenate F injecthyphens F installmethod F lasttrace F loadpatterns F registerexception F registerpattern installed function labels table F define

F split
lefthyphenmin

loadable

loadwords

logger F report numbers postexhyphenchar posthyphenchar preexhyphenchar prehyphenchar registered replacements

data table function function function function data table

F add F handler

righthyphenmin
serializediscretionary
setexceptions
setsynonym
unload
version
visualizediscretionaries
words

function function function function number function table

F check
T data
F disable
F enable
T enablers
B enables
F found
F load
T methods
N threshold

function

function

function table

## layouts (context)

#### **status** table

F isleftpage

F leftorrightpagection

### lfs (extra lua)

attributes overloaded function chdir overloaded function

currentdir function

lock function

mkdirs function

unlock function

### libraries (context)

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

#### lmx (context)

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

F td

F th

include function
inherited table

S color-background-four

S color-background-one

S color-background-three

S color-background-two

S title

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

S color-background-blue

S color-background-body

S color-background-green

S color-background-main

S color-background-purple

S color-background-yellow

S title-default

### logs (context)

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

F export

F help

F info

F lines

F version

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

simplelines function start page number function 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   |
| Cc              | 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

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 xmltexhandler 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 fallbacks table F apply F install

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

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)

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

function settext showlog boolean svformat function table tex

F get F reset F set

boolean texerrors function textextsdata 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 dataset function datasets table F load format function get table F boolean F number F numeric F string function n numeric function pair function path function print function quadruple function quoted function size function

function

triplet

### mplib (extra tex)

fields function
finder function
finders table

F file

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

new overloaded function

pen\_info function
preprocessed function
version function

### 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 |

| function |
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### nodes (context)

|  |  | •  |                                  |
|--|--|--|----------------------------------|
| accentcodes  | data table                                   | free_spec  | function                         |
| aligned  | function                                     | getattr  | function                         |
| append   | function                                     | getattribute                                     | function                         |
| astable  | function                                     | getbox   | function                         |
| basepoints   | function                                     | getchar  | function                         |
| builders   | table  | getfield   | function                         |
| F buildpage_filter   |  | getfont  | function                         |
| F vpack_filter   |  | getid  | function                         |
| codes  | data table                                   | getleader<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                                |                                  |
| first_glyph<br>firstcharacter                                | function<br>function                         | F unprotectglyphs has_attribute                  | function                         |
|  |  |  | function<br>function             |
| firstcharacter   | function                                     | has_attribute                                    |                                  |
| firstcharacter<br>firstcharinbox                             | function<br>function                         | has_attribute<br>has_field                       | function                         |
| firstcharacter<br>firstcharinbox<br>firstglyph               | function<br>function<br>function             | has_attribute<br>has_field<br>has_glyph          | function<br>function             |
| firstcharacter<br>firstcharinbox<br>firstglyph<br>flush_list | function<br>function<br>function<br>function | has_attribute<br>has_field<br>has_glyph<br>hpack | function<br>function<br>function |

| injections              | table      | listcodes        |
|-------------------------|------------|------------------|
| F getligaindex          |            | listtoutf        |
| F handler               |            | load             |
| F installnewkern        |            | locate           |
| F keepcounts            |            | margincodes      |
| Freset                  |            | markers          |
| F resetcounts           |            | F get            |
| F setcursive            |            | mathcodes        |
| F setkern               |            | maxboxwidth      |
| F setligaindex          |            | mlist to hlist   |
| F setmark               |            | new              |
| F setpair               |            | noadcodes        |
| insert after            | function   | nodecodes        |
| insert before           | function   | nopts            |
| insert list after       | function   | nuts             |
| installattributehandler | function   | F append         |
| is direct               | function   | F concat         |
| is display math         | function   | F copy           |
| is mirrored             | data table | F copy_list      |
| is node                 | function   | F 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        |

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

F getprop F pdfliteral F getskip F pdfrestore F getsubtype F pdfsave F pdfsetmatrix F has attribute 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 locate F userlist F mlist\_to\_hlist F usernumber F nestedtracedslide F userstring F usertokens F new 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 somepenalty

F pdfdirect

| F somespace         |            | F enable                |          |
|---------------------|------------|-------------------------|----------|
| F tail              |            | F handler               |          |
| F takebox           |            | F register              |          |
| F tonode            |            | D registered            |          |
| F tonodes           |            | D values                |          |
| F tonut             |            | F processor             |          |
| F tosequence        |            | points                  | function |
| F tostring          |            | pool                    | table    |
| F tracedslide       |            | F baselineskip          |          |
| F traverse          |            | F cleanup               |          |
| F traverse_id       |            | F glyph                 |          |
| T typesetters       |            | F kern                  |          |
| F fast_hpack        |            | F latelua               |          |
| F hpack             |            | F lateluafunction       |          |
| F tohpack           |            | F lineskip              |          |
| F tohpackfast       |            | F pdfdirect             |          |
| F tonodes           |            | F pdfliteral            |          |
| F tovpack           |            | F pdfrestore            |          |
| F tovpackfast       |            | F pdfsave               |          |
| F vpack             |            | F pdfsetmatrix          |          |
| F unprotect_glyphs  |            | F register              |          |
| F unset_attribute   |            | F rule                  |          |
| F unsetattribute    |            | F special               |          |
| F unsetattributes   |            | F usage                 |          |
| F untracedslide     |            | 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 attach             |            | snapshots            | table      |
|----------------------|------------|----------------------|------------|
| T data               |            | •<br>F getparameters |            |
| 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   |

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

F register

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

function function

function string

tmpdir

tmpname today

type

uname
uuid function
validdate function
weekday function
where function
which function

# package (basic lua)

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

## pagebuilders (context)

#### injections table

F flushafter

F flushbefore

F save

#### mixedcolumns table

F cleanup

F finalize

F getlist

F getrest

F getsplit

F setsplit

#### pdf (basic tex)

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

overloaded function

settrailer

# pdfscanner (context)

scan function

# physics (context)

units table
 D tables

## profiler (extra lua)

pause function
resume function
start function
stop function

#### publications (context)

addtexentry function S journal analyze function S note anywhere function S number table casters S pages S subtitle F author F keyword S title F pagenumber S type citevariants table Surl Fauthor S volume F authornum S vear T optional F authoryear F authoryears T required F category T sets F default T author T doi F entry T isbn F index F kev T volume F num T virtual T book F page F serial S category F short T extra F tag T fields S address F type S author F year data table collected S day components table S doi S edition F author function concatstate S editor converttoxml function S file currentspecification table S isbn S month S author T categories S note T article S number S category S pages T extra S publisher T fields S series S author S subtitle S doi S title S editor S type S file S url S issn S volume

| S year         | S note         |
|----------------|----------------|
| T optional     | S number       |
| T required     | S organization |
| T sets         | S pages        |
| T author       | S publisher    |
| T doi          | S series       |
| T edition      | S subtitle     |
| T virtual      | S title        |
| T booklet      | S type         |
| S category     | S url          |
| T extra        | S volume       |
| T fields       | S year         |
| S address      | T optional     |
| S author       | T required     |
| S doi          | T sets         |
| S file         | T author       |
| S howpublished | T doi          |
| S isbn         | T edition      |
| S month        | T virtual      |
| S note         | T demo-a       |
| S subtitle     | S category     |
| S title        | T extra        |
| S type         | T fields       |
| S url          | S author       |
| S year         | S doi          |
| T optional     | S file         |
| T required     | S institution  |
| T sets         | S note         |
| T author       | S organization |
| T doi          | S subtitle     |
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| defaultsuffixes              | table      | installinputlinehandler | function   |
| dowithfilesandreport         | function   | instance                | table      |
| dowithfilesintree            | function   | D data                  |            |
| dowithpath                   | function   | B diskcache             |            |
| dowithvariable               | function   | D environment           |            |
| env                          | function   | D expansions            |            |
| executers                    | table      | D fakepaths             |            |
| expandbraces                 | function   | D files                 |            |
| expandedpathfromlist         | function   | B force_suffixes        |            |
| expandedpathlist             | function   | D found                 |            |
| expandedpathlistfromvariable | function   | D foundintrees          |            |
| expandpath                   | function   | D hashed                |            |
| expandpathfromvariable       | function   | D hashes                |            |
| expansion                    | function   | D lists                 |            |
| extendtexmfvariable          | function   | B loaderror             |            |
| filtered_from_content        | function   | D order                 |            |
| find_file                    | function   | D pathlists             |            |
| find_files                   | function   | T pathstack             |            |
| findbinfile                  | function   | B remember              |            |
| findctxfile                  | function   | B renewcache            |            |
| finders                      | data table | B renewtree             |            |
| findfile                     | function   | B savelists             |            |
| findfiles                    | function   | D setups                |            |
| findgivenfile                | function   | D specification         |            |
| findgivenfiles               | function   | D variables             | £          |
| findpath                     | function   | jobpath                 | function   |

| jobs                 | table      | registerfilehash       | function   |
|----------------------|------------|------------------------|------------|
| F currentcomponent   | tabte      | 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             | 10010      |
| locateformat         | function   | F md5                  |            |
| locators             | data table | F none                 |            |
| luacnfname           | string     | F strip                |            |
| luacnfspec           | string     | F cleanname            |            |
| luacnfstate          | string     | F fetchstring          |            |
| macros               | table      | F fetchtable           |            |
| F convertfile        |            | F install              |            |
| F decodecomment      |            | setdynamic             | function   |
| F enablecomment      |            | setenv                 | function   |
| F encodecomment      |            | setinstance            | function   |
| F preprocessed       |            | showpath               | function   |
| F processmk          |            | simplescanfiles        | function   |
| F processmkvi        |            | splitconfigurationpath | function   |
| F version            |            | splitexpansions        | function   |
| maxreadlevel         | number     | splitmethod            | function   |
| methodhandler        | function   | splitpath              | function   |
| newinstance          | function   | stackpath              | function   |
| openbinfile          | function   | suffixes               | data table |
| openers              | data table | suffixmap              | data table |
| openfile             | function   | suffixofformat         | function   |
| opentexfile          | function   | texdatablob            | function   |
| ownpath              | string     | toppath                | function   |
| poppath              | function   | unexpandedpath         | function   |
| prefixes             | data table | unexpandedpathlist     | function   |
| prependhash          | function   | unresolve              | function   |
| pushpath             | function   | updaterelations        | function   |
| registerextrapath    | function   | updatescript           | function   |
| registerfile         | function   | usertypes              | data table |
|                      |            |                        |            |

| usezipfile               | function |
|--------------------------|----------|
| validatedpath            | function |
| variable                 | function |
| variableofformat         | function |
| variableofformatorsuffix | function |
| wildcardpattern          | function |

## sandbox (context)

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

#### scripts (context)

table

autofontfeature

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

## set (context)

contains function
create function
tolist function
tonumber function
totable function

#### socket (extra lua)

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

| S recei   | ved              | sinkt          | table                |
|-----------|------------------|----------------|----------------------|
| S recei   | .ved-from-mta    | F close-       | when-done            |
| S refer   | rences           | F defaul       | t                    |
| S refer   | rer              | F http-chunked |                      |
| S remot   | re-mta           | F keep-open    |                      |
| S reply   | v-to             | skip           | function             |
| S repor   | ting-mta         | sleep          | function             |
| S reser   | rt-bcc           | smtp           | table                |
| S reser   | rt-cc            | S DOMAIN       |                      |
| S reser   | t-date           | N PORT         |                      |
| S reser   | t-from           | S SERVER       |                      |
| S reser   | t-message-id     | N TIMEOU       | Γ                    |
| S reser   | t-reply-to       | S ZONE         |                      |
| S reser   | t-sender         | F message      | e                    |
| S reser   | t-to             | F open         |                      |
| S retry   | r-after          | F send         |                      |
| S retur   | n-path           | source         | function             |
| S sende   |                  | sourcet        | table                |
| S serve   |                  | F by-len       |                      |
|           | remote-recipient | F default      |                      |
| S statu   |                  | F http-chunked |                      |
| S subje   | ect              | F until-       |                      |
| S te      |                  | tcp            | function             |
| S to      |                  | tcp6           | function             |
| S trail   |                  | tp             | table                |
|           | fer-encoding     | N TIMEOU       |                      |
| S upgra   |                  | F connec       |                      |
| S user-   | agent            | try            | function             |
| S vary    |                  | udp            | function<br>function |
| S via     |                  | udp6<br>url    | table                |
| S warni   | retry-until      | F absolu       |                      |
|           | nuthenticate     | F build        | Le                   |
| S x-mai   |                  | F build_       | nath                 |
| http      | table            | F escape       | Jacii                |
| N PORT    |                  | F parse        |                      |
| N TIMEOU  | Г                | F parse_       | nath                 |
| S USERAGI |                  | F unesca       |                      |
| F open    |                  |                |                      |
| F request | t                |                |                      |
| newtry    | function         |                |                      |
| protect   | function         |                |                      |
| select    | function         |                |                      |
| sink      | function         |                |                      |
|           |                  |                |                      |

#### sorters (context)

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

## statistics (context)

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

## status (basic tex)

list function

### storage (context)

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

## streams (context)

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

# string (basic lua)

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

| tformat       | function |
|---------------|----------|
| toHEX         | function |
| toboolean     | function |
| tobytes       | function |
| tocontext     | function |
| todec         | function |
| todimen       | function |
| tohex         | function |
| tonodes       | function |
| topattern     | function |
| totable       | function |
| toutf         | function |
| tracedchar    | function |
| tracedchars   | table    |
| unquote       | function |
| unquoted      | function |
| upper         | function |
| utfcharacters | function |
| utfvalues     | function |
| valid         | function |

### structures (context)

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

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

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

| F splitreference                   | F userdata            |       |
|------------------------------------|-----------------------|-------|
| F synchronizepage                  | sections              | table |
| T testrunners                      | F autodepth           |       |
| Finner                             | F cct                 |       |
| F special                          | D collected           |       |
| F special operation                | F current             |       |
| F special operation with 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            |       |
| <b>registers</b> 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                           | T sectionblockdata    |       |
| F filter                           | T bodypart            |       |
| F filtercollected                  | S bookmark            |       |
| F finalize                         | F set                 |       |
| F flush                            | F setblock            |       |
| F get                              | F setchecker          |       |
| F prepare                          | F setentry            |       |
| F process                          | F setlevel            |       |
| F setmethod                        | F setnumber           |       |
| F sort                             | F structuredata       |       |
| F store                            | F title               |       |
| D tobesaved                        | D tobesaved           |       |
| F unique                           | F typesetnumber       |       |

F userdata F setdescriptionsymbol B verbose F setfigure sets table F sethighlight F define F setitemgroup F get F setlist F setproperty F getall D setlist F setregister specials table F setsorting D collected F setsynonym F retrieve F settablecell F store F settabulatecell D tobesaved F setuserproperties table synonyms 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 table tags 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

#### table (basic lua)

| 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 |
| сору            | 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         | function | sub                  | function |
| foreachi        | function | swapped              | function |
| fromhash        | function | tocontext            | function |
| getmetatablekey | function | tocsv                | function |
| getn            | function | tofile               | function |
| has_one_entry   | function | tohandle             | function |
| identical       | function | tohash               | function |
| imerge          | function | toxml                | function |
| imerged         | function | twowaymapper         | function |
| insert          | function | unique               | function |
| is_empty        | function | unnest               | function |
| keys            | function | unpack               | function |
| load            | function | values               | function |
| loweredkeys     | function |                      |          |
| maxn            | function |                      |          |
| merge           | function |                      |          |
| merged          | function |                      |          |
| mirrored        | function |                      |          |
| pack            | function |                      |          |
| prepend         | function |                      |          |
| print           | function |                      |          |
| remove          | function |                      |          |
| reverse         | function |                      |          |
| reversed        | function |                      |          |
| save            | function |                      |          |
|                 |          |                      |          |

# tex (basic tex)

| attribute                 | table                | isdefined                              | 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               |  | function             |
| ctxcatcodes               | number               | lua_math_random<br>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               |
| •                         | function             |  | function             |
| error                     | function             | normal_rand<br>notcatcodes             | number               |
| extraprimitives<br>finish |                      | number                                 |                      |
| fontidentifier            | function<br>function |  | function<br>function |
| fontname                  | function             | pdffontname                            | function             |
|                           | function             | pdffontobjnum                          | function             |
| fprint                    |                      | pdffontsize                            |                      |
| get                       | function             | pdfpageref                             | function             |
| getattribute              | function             | pdfxformname                           | function             |
| getbox                    | function             | primitives                             | function             |
| getcatcode                | function             | print                                  | function             |
| getcount                  | function             | printlist                              | function             |
| getdelcode                | function             | prtcatcodes                            | number               |
| getdimen                  | function             | romannumeral                           | function             |
| getlccode                 | function             | round                                  | function             |
| getlist                   | function             | run                                    | function             |
| getmath                   | function             | scale                                  | function             |
| getmathcode               | function             | set                                    | function             |
| getnest                   | function             | set_experimental_code                  | function             |
| getsfcode                 | function             | setattribute                           | function             |
| getskip                   | function             | setbox                                 | function             |
| gettoks                   | function             | setcatcode                             | function             |
| getuccode                 | function             | setcount                               | function             |
| hashtokens                | function             | setdelcode                             | function             |
| ifs                       | data table           | setdimen                               | function             |
| inicatcodes               | number               | setlccode                              | function             |
| init_rand                 | function             | setlist                                | function             |
| iscount                   | function             | setmath                                | function             |

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

### texconfig (basic tex)

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

## texio (basic tex)

write function
write\_nl function

## token (basic tex)

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

### tokens (context)

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

table table

vbox

vtop

#### tracers (context)

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

T context
T internals
T scratch

name function
primitive function
printerror function
showlines function
strings table

S undefined

toks function
type function

#### trackers (context)

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

# typesetters (context)

| alignments       | table  | F installhandler      |      |
|------------------|--------|-----------------------|------|
| F handler        |        | F processmath         |      |
| F set            |        | F set                 |      |
| breakpoints      | table  | F setcolor            |      |
| F define         |        | F setmath             |      |
| F handler        |        | F tomode              |      |
| D mapping        |        | <b>firstlines</b> t   | able |
| T methods        |        | T actions             |      |
| T numbers        |        | F default             |      |
| F set            |        | F line                |      |
| F setreplacemen  | t      | F word                |      |
| cases            | table  | F handler             |      |
| T actions        |        | F set                 |      |
| F handler        |        | <b>initials</b> t     | able |
| F register       |        | T actions             |      |
| F set            |        | F default             |      |
| characteralign   | table  | F handler             |      |
| F handler        |        | F set                 |      |
| F resetcharacte  | ralign | <b>injectors</b> t    | able |
| F setcharactera  | lign   | F check               |      |
| characters       | table  | T list                |      |
| F handler        |        | F mark                |      |
| F replacenbsp    |        | F reset               |      |
| F replacenbspace | es     | F set                 |      |
| checkers         | table  | F show                |      |
| F handler        |        | <b>italics</b> t      | able |
| F reset          |        | F forcevariant        |      |
| F set            |        | F handler             |      |
| cleaners         | table  | F reset               |      |
| F handler        |        | F set                 |      |
| F set            |        | <b>kerns</b> t        | able |
| digits           | table  | D factors             |      |
| T actions        |        | F handler             |      |
| F handler        |        | F keepligature        |      |
| F set            |        | B keeptogether        |      |
| directions       | table  | D mapping             |      |
| F getfences      |        | F set                 |      |
| F getglobal      |        | <b>manipulators</b> t | able |
| F getmethod      |        | F apply               |      |
| F handler        |        | F applyspecificati    | on   |
| T handlers       |        | T methods             |      |
|                  |        |                       |      |

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

F set
F setup
wrappers

F handler **xtables** 

F cleanup

table

table

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

F set\_reflow\_width

## unicode (extra lua)

| ascii                    | table | F    | len               |
|--------------------------|-------|------|-------------------|
| F byte                   |       |      | lower             |
| F char                   |       |      | match             |
| F dump                   |       |      | rep               |
| F find                   |       |      | reverse           |
| F forma                  | t     | F    | sub               |
| F gfind                  |       | F    | upper             |
| F gmato                  | h     | utf8 | table             |
| F gsub                   |       | F    | byte              |
| F len                    |       | F    | char              |
| F lower                  |       | F    | characters        |
| F match                  |       | F    | chrlen            |
| F rep                    |       | F    | count             |
| F rever                  | se    | F    | dump              |
| F sub                    |       | F    | filetype          |
| F upper                  |       | F    | find              |
| grapheme                 | table | F    | format            |
| F byte                   |       | F    | gfind             |
| F char                   |       | F    | gmatch            |
| F dump                   |       | F    | gsub              |
| F find                   |       | F    | is_valid          |
| F forma                  | t     | F    | len               |
| F gfind                  |       | F    | length            |
| F gmatc                  | h     |      | lower             |
| F gsub                   |       |      | magic             |
| F len                    |       |      | match             |
| F lower                  |       |      | remapper          |
| F match                  |       |      | rep               |
| F rep                    |       |      | replacer          |
| F rever                  | se    |      | reverse           |
| F sub                    |       |      | split             |
| F upper<br><b>latin1</b> | table |      | splitlines<br>sub |
| F byte                   | table |      | subtituter        |
| F char                   |       |      | tocodes           |
| F dump                   |       |      | toeight           |
| F find                   |       |      | toentities        |
| F forma                  | +     |      | tostring          |
| F gfind                  |       |      | totable           |
| F gmato                  |       |      | upper             |
| F gsub                   |       |      | ustring           |
| 3,                       |       | ·    | 3                 |

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

# url (context)

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

# utilities (context)

| debugger           | table | N version            | 1                       |
|--------------------|-------|----------------------|-------------------------|
| F disable          |       | parsers              | table                   |
| F enable           |       | F add_set            | tings_to_array          |
| F savestats        |       | F argumen            | nts_to_table            |
| F showstats        |       | F array_t            | co_string               |
| F showtraceback    |       | F csvspli            | itter                   |
| formatters         | table | F getpara            | ameters                 |
| F formatcolumns    |       | F grouped            | isplitat                |
| F list             |       | F hash_to            | o_string                |
| F stripzeros       |       | F iterato            | or                      |
| garbagecollector   | table | F keq_to_            | hash                    |
| F check            |       | F listite            | em                      |
| N criterium        |       | F make_se            | ettings_to_hash_pattern |
| B enabled          |       | F mergeha            | ashes                   |
| lua                | table | F options            | _to_hash                |
| B alwaysstripcode  |       | T pattern            | ns                      |
| F compile          |       | U settings_to_array  |                         |
| F loadedluacode    |       | U setti              | ngs_to_hash_a           |
| F loadstripped     |       | U settings_to_hash_b |                         |
| N nofstrippedbytes |       | U settings_to_hash_c |                         |
| N nofstrippedchunk | s     | U unitt              | otex                    |
| B stripcode        |       | F process            | s_stripped_settings     |
| T strippedchunks   |       | F rfc4180            | )splitter               |
| F strippedloadstri | ng    | F runtime            |                         |
| T suffixes         |       | F setting            | gs_to_array             |
| S lua              |       | F setting            | s_to_array_with_repeat  |
| S luc              |       | F setting            | gs_to_hash              |
| S lui              |       | F setting            | gs_to_hash_strict       |
| S luj              |       | F setting            | gs_to_hash_tolerant     |
| S luv              |       | F setting            | js_to_set               |
| S tma              |       | F simple_            | _hash_to_string         |
| S tmc              |       | F splitme            | ethod                   |
| S tua              |       | F splitth            | nousands                |
| S tuc              |       | F steppe             | -                       |
| packers            | table | F strippe            | ed_settings_to_array    |
| F hashed           |       | F unitto             |                         |
| F new              |       | F unitto             |                         |
| F pack             |       | report               | function                |
| F simplehashed     |       | sequencer            |                         |
| F strip            |       | F appenda            |                         |
| F unpack           |       | F appendo            | group                   |

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 table setters F disable F enable F initialize F list F new F register F report F reset F show stacker table F new storage table F allocate F checked F mark F marked F setinitializer F sparse strings table F collapsecrlf T formatters F add F new F newrepeater F nice T striplinepatterns U collapse

U prune

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

### vf (context)

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

## visualizers (context)

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

## xml (context)

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

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

Т

| match                | function |
|----------------------|----------|
| name                 | function |
| newhandlers          | function |
| nodesettostring      | function |
| originalload         | function |
| package              | function |
| parent               | function |
| parsedentitylpeg     | userdata |
| pihandlers           | table    |
| placeholders         | table    |
| F unknown_any_entity |          |

F unknown\_any\_entity
F unknown\_dec\_entity
F unknown\_hex\_entity

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

settings

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

table

function

xmlns

### zip (extra lua)

archivestableclosefunctionclosearchivefunction

openarchive function
openfile function
registeredfiles table
type function

#### zlib (extra lua)

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