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 font fontloader fonts functions global graphics gzip img interactions interfaces io jit job languages layouts <a href="layouts">lfs</a> libraries <a href="layouts">lmx</a> logs lpdf lpeg ltn12 lua luatex lxml math mathematics mbox md5 metapost mime moduledata modules mplib noads node nodes number os package pagebuilders parametersets pdfscanner physics profiler publications regimes resolvers scripts set socket sorters statistics storage streams **string** structures xconfig texio thirddata tok tokens tracers trackers typesetters unicode url userdata utilities vf visualizers xml zip zlib

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

# global (alias: \_G)

| LUAVERSTON                          |          | 16              |          |
|-------------------------------------|----------|-----------------|----------|
| _LUAVERSION                         | number   | epdf            | table    |
| _MAJORVERSION                       | number   | error           | function |
| _MINORVERSION                       | number   | experiments     | table    |
| _cldo_                              | function | figures         | table    |
| arg                                 | table    | file            | table    |
| assert                              | function | floats          | table    |
| attributes                          | table    | font            | table    |
| backends                            | table    | fontloader      | table    |
| beginpage                           | function | fonts           | table    |
| bit                                 | table    | format_n        | function |
| bit32                               | table    | frozen          | boolean  |
| blobs                               | table    | functions       | table    |
| boolean                             | table    | gcinfo          | function |
| border_set                          | boolean  | getfenv         | function |
| buffers                             | table    | getmetatable    | function |
| builders                            | table    | getreadfilename | function |
| caches                              | table    | global          | table    |
| callback                            | table    | graphics        | table    |
| callbacks                           | table    | gzip            | table    |
| catcodes                            | table    | img             | table    |
| characters                          | table    | inspect         | function |
| chemistry                           | table    | interactions    | table    |
| collectgarbage                      | function | interfaces      | table    |
| commands                            | table    | io              | table    |
| containers                          | table    | ipairs          | function |
| context                             | function | jit             | table    |
| context_applyprocessor              | function | job             | table    |
| ${\tt context\_firstofoneargument}$ | function | lang            | table    |
| converters                          | table    | languages       | table    |
| coroutine                           | table    | layouts         | table    |
| ctxrunner                           | table    | lfs             | table    |
| debug                               | table    | libraries       | table    |
| delta                               | number   | lmx             | table    |
| dimen                               | function | lmxconvert      | function |
| dir                                 | table    | lmxnew          | function |
| directives                          | table    | load            | function |
| document                            | table    | loadfile        | function |
| documentdata                        | table    | loadstring      | function |
| dofile                              | function | logs            | table    |
| endpage                             | function | lp_fastpos_n    | userdata |
| environment                         | table    | lp_fastpos_p    | userdata |

| Indf            | +-610          | naniman           | table    |
|-----------------|----------------|-------------------|----------|
| lpdf            | table<br>table | regimes           |          |
| lpeg            |                | report_characters | function |
| ltn12           | table          | require           | function |
| lua             | table          | resolve_fences    | function |
| luatex          | table          | resolvers         | table    |
| lxml            | table          | scripts           | table    |
| math            | table          | select            | function |
| mathematics     | table          | set               | table    |
| mbox            | table          | setcharacteralign | function |
| md5             | table          | setfenv           | function |
| metapost        | table          | setinspector      | function |
| mime            | table          | setmetatable      | function |
| module          | function       | socket            | table    |
| moduledata      | table          | sorters           | table    |
| modules         | table          | statistics        | table    |
| mplib           | table          | status            | table    |
| newline         | function       | storage           | table    |
| newproxy        | function       | streams           | table    |
| next            | function       | string            | table    |
| noads           | table          | stripmath         | function |
| node            | table          | structures        | table    |
| nodes           | table          | swiglib           | function |
| number          | table          | table             | table    |
| optionalrequire | function       | tex               | table    |
| os              | table          | texconfig         | table    |
| outputpagestree | function       | texio             | table    |
| package         | table          | thirddata         | table    |
| pagebuilders    | table          | toboolean         | function |
| pairs           | function       | token             | table    |
| parametersets   | table          | tokens            | table    |
| pattern         | userdata       | tonumber          | function |
| pcall           | function       | tostring          | function |
| pdf             | table          | trace_characters  | boolean  |
| pdfborder       | function       | tracers           | table    |
| pdfscanner      | table          | trackers          | table    |
| physics         | table          | type              | function |
| print           | function       | typesetters       | table    |
| profiler        | table          | unicode           | table    |
| protect         | function       | unpack            | function |
| publications    | table          | url               | table    |
| rawequal        | function       | userdata          | table    |
| rawget          | function       | utf               | table    |
| rawlen          | function       | utilities         | table    |
| rawset          | function       | vf                | table    |
|                 |                |                   |          |

visualizers
xml table
xmlconvert function
xpcall function
zip table
zlib table

## attributes (context)

| colorintents    | table       | F mpoptions     |            |
|-----------------|-------------|-----------------|------------|
| N attribute     |             | U none          |            |
| D data          |             | F popset        |            |
| F enable        |             | F processcolorc | omponents  |
| F handler       |             | F pushset       |            |
| F register      |             | F register      |            |
| D registered    |             | D registered    |            |
| colors          | table       | F registerspotc | olor       |
| N attribute     |             | F rgb           |            |
| F cmyk          |             | F rgbtocmyk     |            |
| F cmyktogray    |             | F rgbtogray     |            |
| F cmyktorgb     |             | F rgbtohsv      |            |
| F colorcomponer | nts         | N selector      |            |
| B couple        |             | F setlist       |            |
| D data          |             | F setmodel      |            |
| N default       |             | D sets          |            |
| F defineinterme | ediatecolor | F spec          |            |
| F definemixcolo | or          | F spot          |            |
| F definemultito | onecolor    | F spotcolorname |            |
| F defineprocess | scolor      | F spotcolorpare | nt         |
| F definesimple  | gray        | F spotcolorvalu | е          |
| F definespotcol | lor         | B supported     |            |
| F definetranspa | arency      | F transparencyc | omponents  |
| 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
nbers

**states** table

F disabletriggering

F enabletriggering
F finalize

F initialize

F process

F selective

F stacked

F stacker

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\_step

D scopes

F setfeatures

F start

F stop

B supported

D values

#### backends (context)

F hasmatrix

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

F graycolor

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

# registrations table tables table

## bit (context)

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

## bit32 (basic lua)

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

## blobs (context)

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

## boolean (context)

tocontext function
tonumber function

## buffers (context)

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

F define

F hassomecontent

F next
F place
F reset
F save

prepend function
raw function

#### builders (context)

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

T data

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

#### caches (context)

ask boolean base string collapsecontent function configfiles function function contentstate defaults table define function direct boolean force boolean **getfirstreadablefile** function getfirstreadablefile\_TEST\_ME\_FIRST function getreadablepaths function getwritablepath function hashed function is writable function loadcontent function loaddata function strina more relocate boolean savecontent function function savedata setfirstwritablefile function setluanames function tree string treehash function function usedpaths

## 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)

## characters (context)

| activeoffset | number     |
|--------------|------------|
| adobename    | function   |
| bidi         | data table |
| blockrange   | function   |
| blocks       | data table |
| casemap      | table      |
| categories   | data table |
| category     | function   |
| categorytags | data table |
| combined     | data table |
| contextname  | function   |
| data         | data table |
| decomposed   | data table |
| define       | function   |
| description  | function   |
| descriptions | data table |
| directions   | table      |
| enccodes     | data table |
| entities     | data table |
| fallbacks    | data table |
| filters      | data table |
| fromnumber   | function   |
| fschars      | data table |
| fscodes      | data table |
| getrange     | function   |
| graphemes    | data table |
| hangul       | data table |
| initialize   | function   |
| is_character | data table |
| is_command   | data table |
| is_letter    | data table |
| is_mark      | data table |
| is_spacing   | data table |
| lcchars      | data table |
| lccode       | function   |
| lccodes      | data table |
| lettered     | function   |
| lower        | function   |
| math         | table      |
| mathpairs    | data table |
| mirrors      | table      |
|              |            |

| otfscripts           | data table |
|----------------------|------------|
| ranges               | data table |
| registerentities     | function   |
| remap_hangul_syllabe | function   |
| safechar             | function   |
| setcodes             | function   |
| shape                | function   |
| shaped               | function   |
| shchars              | data table |
| shcodes              | data table |
| showstring           | function   |
| specialchars         | data table |
| specials             | data table |
| subscripts           | table      |
| superscripts         | table      |
| synonyms             | data table |
| tex                  | table      |
|                      |            |

D accentmapping F defineaccents

F toutf

textclasses
tonumber
ucchars
uccode
uccodes
unicodechar
upper

table
function
data table
function
data table
function
function

## 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 | assignbuffer               | function |
|-------------------------|----------|----------------------------|----------|
| Character               | function | attachproperty             | function |
| Characters              | function | autofinishstructurelevels  | function |
| MPc                     | function | autonextspace              | function |
| MPd                     | function | autonextstructurelevel     | function |
| MPh                     | function | autosetups                 | function |
| MPll                    | function | autostarttext              | function |
| MPlr                    | function | autostoptext               | function |
| MPls                    | function | averagecharwidth           | function |
| MPn                     | function | bcolumn                    | function |
| MPp                     | function | boolcase                   | function |
| MPpardata               | function | boxtostring                | function |
| MPplus                  | function | btxauthor                  | function |
| MPpos                   | function | btxcitevariant             | function |
| MPposset                | function | btxcollectlistentries      | function |
| MPr                     | function | btxdestination             | function |
| MPrest                  | function | btxdetail                  | function |
| MPrs                    | function | btxdoif                    | function |
| MPul                    | function | btxdoifelse                | function |
| MPur                    | function | btxdoifelselistentryplaced | function |
| MPw                     | function | btxdoifnot                 | function |
| MPx                     | function | btxfetchlistentries        | function |
| MPxy                    | function | btxfield                   | function |
| MPxywhd                 | function | btxflush                   | function |
| MPy                     | function | btxflushlistentries        | function |
| Romannumerals           | function | btxhandlecite              | function |
| abjadnodotnumerals      | function | btxhandlenocite            | function |
| abjadnumerals           | function | btxlistvariant             | function |
| addbtxentry             | function | btxreference               | function |
| addcounter              | function | btxregisterlistentry       | function |
| addlinklistelement      | function | btxresolvelistreference    | function |
| addreplacements         | function | btxsetlistmethod           | function |
| addtojavascriptpreamble | function | btxsingularorplural        | function |
| addtolist               | function | buildtextaccent            | function |
| allinputpaths           | function | character                  | function |
| alphabetic              | function | characters                 | function |
| analysefloatmethod      | function | chardescription            | function |
| analyzelist             | function | checkcharactersinfont      | function |
| applytochars            | function | checkcountersetup          | function |
| applytofirstcharacter   | function | checkedconversion          | function |
| applytowords            | function | checkedpagefloat           | function |

| checktwopassdata        | function | definefieldset          | function |
|-------------------------|----------|-------------------------|----------|
| chemicalcomponent       | function | definefilefallback      | function |
| chineseallnumerals      | function | definefilesynonym       | function |
| chinesecapnumerals      | function | definefont one          | function |
| chinesenumerals         | function | definefont two          | function |
| cleanfontname           | function | definefontfamily        | function |
| cleanupbox              | function | definefontfeature       | function |
| cleanuplayers           | function | definefontsolution      | function |
| clonefield              | function | defineinsertion         | function |
| collectfloat            | function | defineintermediatecolor | function |
| collecthelp             | function | definelabels            | function |
| colorcomponents         | function | definelanguage          | function |
| concatcommalist         | function | definelinkedlist        | function |
| consultfloat            | function | definemarking           | function |
| convertbtxdatasettoxml  | function | definemetafont          | function |
| copyposition            | function | definemultitonecolor    | function |
| cos                     | function | definenote              | function |
| cosd                    | function | defineparallel          | function |
| countervalue            | function | defineparbuilder        | function |
| counttwopassdata        | function | defineprocesscolor      | function |
| ctxfunction             | function | defineprogram           | function |
| currentcomponent        | function | definereference         | function |
| currentdate             | function | defineregister          | function |
| currentenvironment      | function | definesectionlevels     | function |
| currentproduct          | function | defineselectfont        | function |
| currentproject          | function | definesnapmethod        | function |
| currentreferencedefault | function | definespotcolor         | function |
| currentreferenceorder   | function | definestructureblock    | function |
| currentregime           | function | definestructureset      | function |
| currentsectiontolist    | function | definetransparency      | function |
| datasetvariable         | function | definetwopasslist       | function |
| dayname                 | function | defineviewerlayer       | function |
| deferredproperty        | function | defrostrandomseed       | function |
| defineattribute         | function | depthnumber             | function |
| definebreakpoint        | function | digits                  | function |
| definebreakpoints       | function | disableautofontscript   | function |
| definecatcodetable      | function | disableparbuilder       | function |
| definecharacterspacing  | function | disableregime           | function |
| definechemical          | function | disablespellchecking    | function |
| defineconversion        | function | discardfromlist         | function |
| definecounter           | function | doanalyzeframedbox      | function |
| definedviewerlayer      | function | doif                    | function |
| definefallbackfamily    | function | doifblackelse           | function |
| definefield             | function | doifcommonelse          | function |

| doifcounter                             | function | doifposition                | function |
|---|----------|-----------------------------|----------|
| doifdimenstringelse                     | function | doifpositionelse            | function |
| doifdrawingblackelse                    | function | doifpositiononpage          | function |
| doifelse                                | function | doifpositionsonsamepageelse | function |
| doifelsebuffer                          | function | doifpositionsonthispageelse | function |
| doifelsecontinuewithfile                | function | doifurldefinedelse          | function |
| doifelsecounter                         | function | doprocesstypescriptfile     | function |
| ${\tt doifelsecurrent fonthas feature}$ | function | doreshapeframedbox          | function |
| doifelseintwopassdata                   | function | dostarttextfile             | function |
| doifelsemarking                         | function | dostoptextfile              | function |
| doifelsemessage                         | function | ecolumn                     | function |
| doifelsemultipar                        | function | elapsedtime                 | function |
| doifelseparallel                        | function | enableautofontscript        | function |
| doifelsepositionsused                   | function | enablecolor                 | function |
| doifelserangeonpage                     | function | enablecolorintents          | function |
| doifelsereference                       | function | enablefontcolorschemes      | function |
| doifelsesavedfloat                      | function | enableparbuilder            | function |
| doifelsespaces                          | function | enableregime                | function |
| doifelseutfmathabove                    | function | enablespellchecking         | function |
| doifelseutfmathaccent                   | function | enabletransparency          | function |
| doifelseutfmathbelow                    | function | enhancelinkedlist           | function |
| doifelsevisualizer                      | function | enhancelist                 | function |
| doiffieldcategoryelse                   | function | enhancereference            | function |
| doiffieldelse                           | function | enhanceregister             | function |
| doiffieldsetelse                        | function | erasebuffer                 | function |
| doiffiledefinedelse                     | function | expandcurrentreference      | function |
| doiffileexistelse                       | function | exportformdata              | function |
| doiffirstcharelse                       | function | exportreferences            | function |
| doifinputfileelse                       | function | extendregister              | function |
| doifinsetelse                           | function | extensiblecode              | function |
| doifleapyearelse                        | function | feature                     | function |
| doiflisthasentry                        | function | featureattribute            | function |
| doiflisthasnumberelse                   | function | featurelist                 | function |
| doiflisthaspageelse                     | function | feedback                    | function |
| doiflisthastitleelse                    | function | fetchallmarks               | function |
| doiflocfileelse                         | function | fetchmultipar               | function |
| doifnot                                 | function | fetchmultishape             | function |
| doifnotcounter                          | function | fetchonemark                | function |
| doifnotecontent                         | function | fetchposboxes               | function |
| doifnoteonsamepageasprevious            | function | fetchtwomarks               | function |
| doifobjectreferencefoundelse            | function | figurefilename              | function |
| doifolderversionelse                    | function | figurefilepath              | function |
| doifoverlappingelse                     | function | figurefiletype              | function |
| doifparentfileelse                      | function | figurerequest               | function |

| figurestatus                | function | getfloatvariable         | function |
|-----------------------------|----------|--------------------------|----------|
| figureused                  | function | getfullsectionnumber     | function |
| figurevariable              | function | getinternallistreference | function |
| filterdefaultreference      | function | getinternalreference     | function |
| filterreference             | function | getlasttwopassdata       | function |
| finalizebox                 | function | getmarking               | function |
| findtwopassdata             | function | getmessage               | function |
| firstcountervalue           | function | getmpextensions          | function |
| firstinset                  | function | getnotestate             | function |
| flushfloat                  | function | getplaceholderchar       | function |
| flushnotes                  | function | getprivateattribute      | function |
| flushpostponedblocks        | function | getprivatechar           | function |
| flushpostponednotes         | function | getprogram               | function |
| fontchar                    | function | getrandomcounta          | function |
| fontcollectionclone         | function | getrandomcountb          | function |
| fontcollectiondefine        | function | getrandomseed            | function |
| fontcollectionprepare       | function | getreadfilename          | function |
| fontcollectionregister      | function | getsectionnumber         | function |
| fontcollectionreport        | function | getstructuredata         | function |
| fontcollectionreset         | function | getsubstring             | function |
| fontlookupgetkey            | function | gettexbuffer             | function |
| fontlookupgetkeyofindex     | function | gettwopassdata           | function |
| fontlookupinitialize        | function | gettwopassdatalist       | function |
| fontlookupnoffound          | function | geturl                   | function |
| forceendjob                 | function | grabbuffer               | function |
| forcequitjob                | function | hboxtovbox               | function |
| format                      | function | helpaction               | function |
| formatcolor                 | function | helpreference            | function |
| formatgray                  | function | hexstringtonumber        | function |
| freezerandomseed            | function | horizontalcode           | function |
| from                        | function | hour                     | function |
| getbidimode                 | function | hyphenatedlist           | function |
| getbuffer                   | function | hyphenatedurl            | function |
| getbufferctxlua             | function | D characters             |          |
| getbuffermkvi               | function | N lefthyphenmin          |          |
| getcommandline              | function | D mapping                |          |
| getctxfile                  | function | N righthyphenmin         |          |
| getcurrentprefixspec        | function | F setcharacters          |          |
| getcurrentreferencemetadata | function | immediateproperty        | function |
| getcurrentsectionlevel      | function | incrementedcounter       | function |
| getdefaultfieldvalue        | function | initializetexdirectives  | function |
| getfieldcategory            | function | initializetextrackers    | function |
| getfirstcharacter           | function | injectcurrentreference   | function |
| getfirsttwopassdata         | function | injectreference          | 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 |
| listgroupindex        | function | nbfs                       | function |
| listlabel             | function | nextcountervalue           | function |
| listlocation          | function | nextparallel               | function |
| listprefixednumber    | function | nofdays                    | function |
| listprefixedpage      | function | nofitems                   | function |
| listrealpage          | function | nofstackedfloats           | function |
| listsize              | function | notedeltapage              | function |
| listtitle             | function | notelistindex              | function |
| listuserdata          | function | notenumberpage             | function |
| loadbtxdefinitionfile | function | noteprefixednumber         | function |
| loadexamodes          | function | notesymbolpage             | function |
| loadfontgoodies       | function | notetitle                  | function |
| loadspellchecklist    | function | ntimes                     | function |
| loadtypescriptfile    | function | number                     | function |
| loadvisualizer        | function | F LuaSnippet               |          |
| locatefilepath        | function | F LuaSnippetBoundary       |          |
| locfilename           | function | F LuaSnippetComment        |          |
| lower                 | function | F LuaSnippetName           |          |
| makeactive            | function | F LuaSnippetNameBase       |          |
| manipulated           | function | F LuaSnippetNameCore       |          |
| markfonts             | function | F LuaSnippetNameLibraries  |          |
| markingnumber         | function | F LuaSnippetQuote          |          |
| markingtitle          | function | F LuaSnippetSpecial        |          |
| markregionbox         | function | F LuaSnippetString         |          |
| math_frac             | function | F MPcolor                  |          |
| mathrenderset         | function | F MetapostSnippet          |          |
| maxitemwidth          | function | F MetapostSnippetBoundary  |          |

F MetapostSnippetComment F hold F MetapostSnippetConstructor F btxchecklistentry F MetapostSnippetName F btxcitevariantparameter F MetapostSnippetNameMetafun F btxdirectlink F MetapostSnippetNamePlain F btxdomarkcitation F MetapostSnippetNamePrimitive F btxhandlelistentry F MetapostSnippetQuote F btxlistparameter F htxlistvariantnarameter F MetapostSnippetSpecial F MetapostSnippetString F callfunctiononce F char F NC F NR F chardef F ParsedXmlSnippetCdata F color F ParsedXmlSnippetComment F colordefage F ParsedXmlSnippetDoctype F colordefagt F ParsedXmlSnippetElement F colordefalc F ParsedXmlSnippetInstruction F colordefalt F ParsedXmlSnippetKey F colordeffac F ParsedXmlSnippetValue F colordeffgt F colordefflc F TexSnippet F TexSnippetBoundary F colordefflt F TexSnippetComment F colordefrac F TexSnippetGroup F colordefrat F colordefrlc F TexSnippetName F colordefrlt F TexSnippetSpecial F XmlSnippet F concat F XmlSnippetBoundary F constructcs F XmlSnippetCdata F constructcsonly F XmlSnippetComment F convertnumber F XmlSnippetEntity F ctxreport F XmlSnippetEqual F darkblue F XmlSnippetKey F darkgreen F XmlSnippetName F darkred F XmlSnippetString F definefontsynonym F flush T delayed F \_\_flushdirect F digitsdigit F \_\_flushlines F digitsfinalcomma F addaskedblankskip F digitsfinalperiod F addpredefinedblankskip F digitshighspace F digitsintermediatecomma F applyprocessor F beginhbox F digitsintermediateperiod F beginvbox F digitsminus F bf F digitsnegative F bgroup F digitsplus F blank F digitspositive

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

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

F stopregistersection

F sprint

F stopregisterseewords F LuaSnippetSpecial F stoptabulate F LuaSnippetString F MetapostSnippetBoundary F stoptext F MetapostSnippetComment F stoptitle F stopyboxregister F MetapostSnippetConstructor F stopxtitle F MetapostSnippetName F storenode F MetapostSnippetNameMetafun F synonymentry F MetapostSnippetNamePlain F tabulaterow F MetapostSnippetNamePrimitive F tabulaterowhold F MetapostSnippetQuote 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 XmlSnippetBoundary F unitsNstop F units0 F XmlSnippetCdata F unitsP F XmlSnippetComment F unitsPS F XmlSnippetEntity F unitsPU F XmlSnippetEqual F unitsPUS F XmlSnippetKey F units0 F XmlSnippetName F unitsS F XmlSnippetString F unitsU F ctxreport F unitsUS F viafile F unprotect F vrule F xmlcdataafter F unregisterfunction F usemodule F xmlcdatabefore F utfchar F xmlcdataobeyedline T verbatim F xmlcdataobeyedspace F LuaSnippetBoundary F xmlprocessbuffer F xmlsetup F LuaSnippetComment function F LuaSnippetName numbers F LuaSnippetNameBase F LuaSnippet F LuaSnippetNameCore F LuaSnippetBoundary F LuaSnippetNameLibraries F LuaSnippetComment

F LuaSnippetName

F LuaSnippetQuote

F LuaSnippetNameBase F flushlines F LuaSnippetNameCore F addaskedblankskip F LuaSnippetNameLibraries F addpredefinedblankskip F LuaSnippetQuote F applyprocessor F LuaSnippetSpecial F beginhbox F LuaSnippetString F beginvbox F MPcolor F bf F MetapostSnippet F baroup F MetapostSnippetBoundary F blank F hold F MetapostSnippetComment F MetapostSnippetConstructor F btxchecklistentry F MetapostSnippetName F btxcitevariantparameter F MetapostSnippetNameMetafun F btxdirectlink F MetapostSnippetNamePlain F btxdomarkcitation F MetapostSnippetNamePrimitive F btxhandlelistentry F MetapostSnippetQuote F btxlistparameter F MetapostSnippetSpecial F btxlistvariantparameter F MetapostSnippetString F callfunctiononce F char F NC F NR F chardef F ParsedXmlSnippetCdata F color F ParsedXmlSnippetComment F colordefagc F ParsedXmlSnippetDoctype F colordefagt F ParsedXmlSnippetElement F colordefalc F ParsedXmlSnippetInstruction F colordefalt F ParsedXmlSnippetKey F colordeffac F ParsedXmlSnippetValue F colordeffqt F TexSnippet F colordefflc F colordefflt F TexSnippetBoundary F TexSnippetComment F colordefrac F TexSnippetGroup F colordefrqt F TexSnippetName F colordefrlc F TexSnippetSpecial F colordefrlt F XmlSnippet F concat F XmlSnippetBoundary F constructcs F XmlSnippetCdata F constructcsonly F XmlSnippetComment F convertnumber F XmlSnippetEntity F ctxreport F darkblue F XmlSnippetEqual F XmlSnippetKey F darkgreen F XmlSnippetName F darkred F definefontsynonym F XmlSnippetString F flush T delayed F flushdirect F digitsdigit

F digitsfinalcomma F endybox F digitsfinalperiod F environment F digitshighspace F expandreferencearguments F digitsintermediatecomma F expandreferenceoperation F digitsintermediateperiod F finalizeautostructurelevel F digitsminus F finishjob F digitsnegative F firstofoneargument F diaitsplus F firstoftwoarguments F digitspositive F fixedblankskip F digitspower F flexibleblankskip F digitspowerminus F flushblankhandling F digitspowerplus F flushboxregister F digitsseparatorspace F flushnode F digitssignspace F fntsetdefname F digitsspace F fntsetnopsize F digitszeropadding F fntsetsomename F direct F fntsetsomesize T formatted F directsetup F dodirectfullreference F fprint T generics F dodisplayverbatimbeginline F dodisplayverbatimemptyline S starttabulate F dodisplayverbatiminitialize S stoptabulate F dodisplayverbatimnewline F getlogger F dodisplayverbatimstart F getreferencestructureprefix F dodisplayverbatimstop F getvalue F dofastdefinetypeface F glyph F dofinishsomereference F gobbleoneargument F dofromfiledescription F goto F dofromfileliteral F hrule F dofromurldescription F input F dofromurlliteral T knownfunctions F doinlineverbatimbeginline F lateluafunction F doinlineverbatimemptyline F letvaluerelax F doinlineverbatimnewline F loadfile F doinlineverbatimstart F loadfoundtypescriptfile F doinlineverbatimstop F luasetup F donestedtypingstart F m F makelinenumber F donestedtypingstop F dostarttext T metafun F doverbatimspace F color T delayed F egroup F emptyreference F start F enablemode F stop F endhbox T nested

F markingcommand F settabulatelastentry F markingseparator F settracing F newbox F setupsystem F newcount F setupwithargument F newdimen F setvalue F newindexer F setvboxregister F newmuskip F setxvalue F newskip F space F newtexthandler F sprint F newtoks F startLuaSnippet F startMetapostSnippet F newverbosehandler F nointerlineskip F startParsedXmlSnippet F normalatop F startTexSnippet F normalover F startXmlSnippet F overstrike F startblankhandling F startcolumns F par F pdfliteral F startcomponentindeed F startenvironmentindeed F popcatcodes F startfontclass F poplogger F printlines F starthboxregister F processfilemany F startproductindeed F processfilenone F startprojectindeed F processfileonce F startreadingfile F startregisterentries F protect T puretext F startregisterentry F pushcatcodes F startregisteroutput F pushlogger F startregisterpages F registerentry F startregistersection F startregisterseewords F registerfunction F registeronepage F starttabulate F registerpagerange F starttext F registerseeword F starttitle F reservefunction F startyboxregister F rlap 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 stophboxregister F utfchar F stopproductindeed T verbatim F stopprojectindeed F LuaSnippetBoundary F stopreadingfile F LuaSnippetComment F stopregisterentries F LuaSnippetName F stopregisterentry F LuaSnippetNameBase F stopregisteroutput F LuaSnippetNameCore F stopregisterpages F LuaSnippetNameLibraries F stopregistersection F LuaSnippetQuote F LuaSnippetSpecial F stopregisterseewords F stoptabulate F LuaSnippetString F stoptext F MetapostSnippetBoundary F stoptitle F MetapostSnippetComment F stopvboxregister F MetapostSnippetConstructor F stopxtitle F MetapostSnippetName F storenode F MetapostSnippetNameMetafun F synonymentry F MetapostSnippetNamePlain F tabulaterow F MetapostSnippetNamePrimitive F tabulaterowbold F MetapostSnippetQuote F tabulaterowtyp F MetapostSnippetSpecial F tabulaterowtype F MetapostSnippetString F template F ParsedXmlSnippetCdata F ParsedXmlSnippetComment T templates F ParsedXmlSnippetDoctype F texsetup 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 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 vrule F unprotect F xmlcdataafter F unregisterfunction F usemodule F xmlcdatabefore

| F xmlcdataobeyedline         |          | prevcountervalue           | function |
|------------------------------|----------|----------------------------|----------|
| F xmlcdataobeyedspace        |          | processbuffer              | function |
| F xmlprocessbuffer           |          | processcolorcomponents     | function |
| F xmlsetup                   |          | processedfile              | function |
| objectnumber                 | function | processedfiles             | function |
| objectpage                   | function | processfile                | function |
| octnumber                    | function | processfilemany            | function |
| octstringtonumber            | function | processfilenone            | function |
| ordinal                      | function | processfileonce            | function |
| overloadbookmark             | function | processlist                | function |
| page_injections_flush_after  | function | processregister            | function |
| page_injections_flush_before | function | processsplit               | function |
| page_injections_save         | function | processsynonyms            | function |
| pagestaterealpage            | function | purefontname               | function |
| parpos                       | function | pushfloat                  | function |
| pdfrotation                  | function | pushitaliccorrection       | function |
| pdfstartmatrix               | function | pushlist                   | function |
| pdfstartmirroring            | function | pushreferenceprefix        | function |
| pdfstartrotation             | function | pushregime                 | function |
| pdfstartscaling              | function | pushsectionblock           | function |
| pdfstopmatrix                | function | rawcharacter               | function |
| pdfstopmirroring             | function | rawcountervalue            | function |
| pdfstoprotation              | function | rawdate                    | function |
| pdfstopscaling               | function | referencepagestate         | function |
| percentageof                 | function | referencerealpage          | function |
| pgfxcolorspec                | function | registerattachment         | function |
| placeparallel                | function | registerbookmark           | function |
| popfloat                     | function | registerbuttons            | function |
| popitaliccorrection          | function | registercatcodetable       | function |
| poplist                      | function | registercolor              | function |
| popreferenceprefix           | function | registercolorintent        | function |
| popregime                    | function | registeredviewerlayer      | function |
| popsectionblock              | function | registerhelp               | function |
| pos                          | function | registeritemgroup          | function |
| posplus                      | function | registerlanguagefeatures   | function |
| posstrut                     | function | registerlinenumbering      | function |
| postponenotes                | function | registermaintextcolor      | function |
| poswhd                       | function | registernamespace          | function |
| posxy                        | function | registerpostponedblock     | function |
| prefixedconverted            | function | registerrendering          | function |
| prepareMPvariable            | function | registersection            | function |
| preparedfile                 | function | registersoundclip          | function |
| presetsymbollist             | function | registerstructureprocessor | function |
| presettabulate               | function | registersynonym            | function |

| registertransparency     | function | savestructureblock      | function |
|--------------------------|----------|-------------------------|----------|
| registerunit             | function | savetaggedtwopassdata   | function |
| registerusedsynonym      | function | savetwopassdata         | function |
| registeruserdata         | function | savevariable            | function |
| relatemarking            | function | second                  | function |
| remapentity              | function | selectstructureblock    | function |
| removemissingcharacters  | function | setbreakpoints          | function |
| renderingvar             | function | setbtxdataset           | function |
| replacemissingcharacters | function | setbtxentry             | function |
| replacepospxywhd         | function | setcharacteralign       | function |
| reportstructure          | function | setcharactercasing      | function |
| resavefloat              | function | setcharactercleaning    | function |
| resetcharacteralign      | function | setcharactercodes       | function |
| resetcounter             | function | setcharacterkerning     | function |
| resetfontfeature         | function | setcharacterspacing     | function |
| resetfontsolution        | function | setcharacterstripping   | function |
| resetmarking             | function | setclosedocumentaction  | function |
| resetmathattributes      | function | setclosepageaction      | function |
| resetmathitalics         | function | setcolormodel           | function |
| resetnullfont            | function | setcounter              | function |
| resetparallel            | function | setdataset              | function |
| resetprevdepth           | function | setdigitsmanipulation   | function |
| resetreference           | function | setdirection            | function |
| resetstructureprocessor  | function | setdocumentenvironments | function |
| resettimer               | function | setdocumentfilenames    | function |
| restartcounter           | function | setdocumentmodes        | function |
| restorecounter           | function | setdocumentmodules      | function |
| restorecurrentattributes | function | setfigurelookuporder    | function |
| restorenote              | function | setfirstline            | function |
| romannumerals            | function | setfontfeature          | function |
| runbuffer                | function | setfontofid             | function |
| safechar                 | function | setfontsolution         | function |
| savebuffer               | function | setformat               | function |
| savecounter              | function | setformsmethod          | function |
| savecurrentattributes    | function | setinitial              | function |
| savedlistnumber          | function | setinsertionlocation    | function |
| savedlistprefixednumber  | function | setinterfaceconstant    | function |
| savedlisttitle           | function | setinterfaceelement     | function |
| savefloat                | function | setinterfacemessage     | function |
| savemargindata           | function | setinterfacemessages    | function |
| savenote                 | function | setinterfacevariable    | function |
| saveobject               | function | setinternalreference    | function |
| savepagedata             | function | setjobcomment           | function |
| saveparallel             | function | setlanguageexceptions   | function |

| setlanguagesynonym       | function | settagtabulatecell         | function |
|--------------------------|----------|----------------------------|----------|
| setlayer                 | function | setupbookmarks             | function |
| setmarking               | function | setupcanvas                | function |
| setmathalphabet          | function | setupcharacterspacing      | function |
| setmathalternate         | function | setupexport                | function |
| setmathattribute         | function | setupfontexpansion         | function |
| setmathdirection         | function | setupfontprotrusion        | function |
| setmathitalics           | function | setupidentity              | function |
| setmathstyle             | function | setupinsertion             | function |
| setnextinternalreference | function | setupitaliccorrection      | function |
| setnextreferenceorder    | function | setuplinenumbering         | function |
| setnotestate             | function | setvisual                  | function |
| setnotesymbolpage        | function | setxmpfile                 | function |
| setobject                | function | showassignerror            | function |
| setopendocumentaction    | function | showattributes             | function |
| setopenpageaction        | function | showbtxdatasetcompleteness | function |
| setowncounter            | function | showbtxdatasetfields       | function |
| setpagestate             | function | showcallbacks              | function |
| setpagestaterealpageno   | function | showchardata               | function |
| setpagetransition        | function | showcounter                | function |
| setparbuilder            | function | showfontparameters         | function |
| setpos                   | function | showhyphenatedinlist       | function |
| setrandomseed            | function | showjustification          | function |
| setrealign               | function | showmessage                | function |
| setreferencearguments    | function | sin                        | function |
| setreferenceattribute    | function | sind                       | function |
| setreferenceoperation    | function | splitfilename              | function |
| setregistermethod        | function | spotcolorname              | function |
| setreplacements          | function | spotcolorparent            | function |
| setsectionblock          | function | spotcolorvalue             | function |
| setsectionentry          | function | startchemical              | function |
| setsectionlevel          | function | startcolorset              | function |
| setsectionnumber         | function | startcomponent             | function |
| setstructureblockstate   | function | startenvironment           | function |
| settagcombination        | function | startfontsolution          | function |
| settagdescription        | function | startparbuilder            | function |
| settagdescriptionsymbol  | function | startproduct               | function |
| settagfigure             | function | startproject               | function |
| settaghighlight          | function | startregime                | function |
| settagitemgroup          | function | startsectionlevel          | function |
| settagproperty           | function | starttag                   | function |
| settagsorting            | function | starttext                  | function |
| settagsynonym            | function | startviewerlayer           | function |
| settagtablecell          | function | stopchemical               | function |

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

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

#### containers (context)

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

## converters (context)

| Alphabetic         | function   |
|--------------------|------------|
| Character          | function   |
| Characters         | function   |
| Romannumerals      | function   |
| abjadnodotnumerals | function   |
| abjadnumerals      | function   |
| alphabetic         | function   |
| character          | function   |
| characters         | function   |
| chineseallnumerals | function   |
| chinesecapnumerals | function   |
| chinesenumerals    | function   |
| chr                | function   |
| chrs               | function   |
| convert            | function   |
| define             | function   |
| hexstringtonumber  | function   |
| hour               | function   |
| isleapyear         | function   |
| leapyear           | function   |
| maxchrs            | function   |
| minute             | function   |
| month              | function   |
| nofdays            | function   |
| number             | function   |
| numbers<br>        | function   |
| octstringtonumber  | function   |
| ordinal            | function   |
| rawcharacter       | function   |
| romannumerals      | function   |
| second             | function   |
| sequences<br>      | data table |
| textime<br>        | function   |
| toabjad            | function   |
| tochinese          | function   |
| toroman            | function   |
| verbose            | table      |
| D data             |            |

weekday function year function

F translate

# 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 string

texroot truefilename validengines string function data table

### epdf (extra tex)

Array function
Dict function
Object function
PDFRectangle function
open function
type function

#### experiments (context)

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

#### figures (context)

applyratio function bases data table function bitmapimage boxnumber number cachepaths data table check function checkers data table data table converters function current defaultdepth number defaultheight number defaultsearch boolean defaultwidth number function done dummy function existers data table exists function formats data table found data table function get auess function hash function identifiers data table function identify include function includers data table initialize function loaded data table localpaths data table magics data table mergegoodies function nofprocessed number order data table paths data table patterns data table function pop preferquality boolean programs data table push function registerpattern function registerresource function

registersuffix resources scale setlookups setorder setpaths suffixes

used

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

#### font (basic tex)

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

getfont overloaded function

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

## fontloader (extra tex)

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

## fonts (context)

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

| S descender              | S encodingbyt    | es       |
|--------------------------|------------------|----------|
| S designsize             | S filename       |          |
| T expansion              | S finalized      |          |
| S auto                   | S fontname       |          |
| S shrink                 | S format         |          |
| S step                   | S fullname       |          |
| S stretch                | S hasitalics     |          |
| S extendfactor           | S hasmath        |          |
| S factor                 | S mathitalics    |          |
| S hfactor                | S mode           |          |
| S mathsize               | S name           |          |
| T protrusion             | S noglyphname    | S        |
| S auto                   | S nostackmath    |          |
| S quad                   | S psname         |          |
| S scaledpoints           | S textitalics    |          |
| S scriptpercentage       | S virtualized    |          |
| S scriptscriptpercentage | D loadedfonts    |          |
| S size                   | S namemode       |          |
| S slantfactor            | F newfeatures    |          |
| S slantperpoint          | F newhandler     |          |
| T spacing                | N noffontsloaded |          |
| S extra                  | N nofsharedfonts |          |
| S shrink                 | N nofsharedhashe | s        |
| S stretch                | N nofsharedvecto | rs       |
| S width                  | N privateoffset  |          |
| T synonyms               | F readanddefine  |          |
| S em                     | F registerfeatur | e        |
| S ex                     | B resolvevirtual | too      |
| 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 trytosharefont |          |
| S spaceshrink            | N version        |          |
| S spacestretch           | current          | function |
| S x_height               | currentid        | function |
| S units                  | definers         | table    |
| S vfactor                | F addlookup      |          |
| S xheight                | F analyze        |          |
| T properties             | F applypostproce | ssors    |
| S autoitalicamount       | F checkedmode    |          |
| T cidinfo                | F checkedscript  |          |
| S embedding              | F current        |          |
|                          |                  |          |

| C d-f1+1l         |            | C                       |
|-------------------|------------|-------------------------|
| S defaultlookup   |            | F mathematics           |
| F define          |            | F protrusions           |
| F getspecificat   | ion        | F solutions             |
| F internal        |            | F treatments            |
| F loadfont        |            | F typefaces             |
| F makespecifica   | tion       | F load                  |
| T methods         |            | F prepare_features      |
| F install         |            | F register              |
| D variants        |            | F registerpostprocessor |
| F read            |            | F report                |
| F register        |            | <b>handlers</b> table   |
| F registered      |            | T afm                   |
| F registersplit   |            | B addkerns              |
| F resetnullfont   |            | B addligatures          |
| F resolve         |            | B addtexligatures       |
| T resolvers       |            | B autoprefixed          |
| F file            |            | D cache                 |
| F name            |            | D features              |
| F spec            |            | T helpdata              |
| definetypeface    | function   | D bothkerned            |
| encodings         | table      | D leftkerned            |
| T agl             |            | D ligatures             |
| D cache           |            | D rightkerned           |
| F is_known        |            | D texligatures          |
| D known           |            | F load                  |
| F load            |            | F setfeatures           |
| F make_unicode_   | vector     | B syncspace             |
| D math            |            | N version               |
| N version         |            | T otf                   |
| expansions        | data table | F addfeature            |
| formats           | data table | D cache                 |
| goodies           | table      | T chainhandlers         |
| D colorschemes    |            | F normal                |
| D data            |            | F verbose               |
| D designsizes     |            | F collectlookups        |
| D filenames       |            | F dataset               |
| F getcompositions |            | S defaultbasealternate  |
| T list            |            | S defaultnodealternate  |
| F compositions    |            | D enhancers             |
| F designsizes     |            | D features              |
| F expansions      |            | F fileformat            |
| F featureset      |            | F getalternate          |
| F filenames       |            | T glists                |
| F files           |            | T handlers              |
|                   |            |                         |

| 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 parameters    |       |
| F gsub_multiple                                     | T processes     |       |
| F gsub_reversecontextchain                          | D properties    |       |
| F gsub_single                                       | D quads         |       |
| F load  | D resources     |       |
| F scriptandlanguage                                 | T setdynamics   |       |
| F setcontextchain                                   | D spaces        |       |
| F setdynamics                                       | D spacings      |       |
| F setfeatures                                       | D unicodes      |       |
| T statistics  | D xheights      |       |
| D usedfeatures                                      | helpers         | table |
| T tables  | F addprivate    |       |
| D baselines   | F dimenfactor   |       |
| D features  | F expandglyph   |       |
| D languages   | F fontpatternha | ssize |
| D scripts   | F getdigitwidth |       |
| N version   | F getparameters |       |
| T pfb   | F getprivatenod | е     |
| T tfm   | F hasprivate    |       |
| D features  | F name          |       |
| F setfeatures                                       | F nametoslot    |       |
| T vf  | F setdigitwidth |       |
| T combinations                                      | F splitfontpatt | ern   |
| F combine   | iterators       | table |
| T combiner  | F characters    |       |
| D commands  | F descriptions  |       |
| F find  | F glyphs        |       |
| D helpers   | loggers         | table |
|   |                 |       |

| F add_placeholde T category_to_pl S ll S lm S lo S lt S lu  |            | nulldata protrusions readers F afm F check_lua F check_tfm F dfont   | data table<br>data table<br>table |
|---|------------|--|-----------------------------------|
| S mc S me S mn S nd S nl S no S pc  |            | F lua F opentype F otf F pfb D sequence F tfm F ttc  |                                   |
| S pd S pe S pf S pi S po S ps S sc S sk S sm S so F format F onetimemessage F register F reportdefinedf   |            | F ttf  select  T data F definetypeface T fallbacks F filterinput T methods F default F features F file F goodies F name F selectfont F simplefonts                         | table                             |
| F reportusedfeat mappings  F addtounicode F fromunicode16 F loadfile F loadline F loadlumtable F makenameparser F reset F tounicode16 F tounicode16sec mp  D cache B inline | table      | F spec F style F registerfalls: F searchfiles  Specifiers D contextmerged F contextnumber: D contextsetups F contexttostrin F definecontext F mergecontext F presetcontext | table<br>s                        |
| N version names   | data table | F showcontext F splitcontext   |                                   |

D synonyms

D variants

symbols table

F uselibrary

tables table
tracers table
treatments table

F applyfixes

D data

S filename

F ignoredfile

F report

F trace

typefaces data table

## functions (context)

**dummy** function

## graphics (context)

#### backgrounds table

F calculatemultipar

F fetchmultipar

F pair

F path

F point

## gzip (extra lua)

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

# img (basic tex)

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

#### interactions (context)

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

#### interfaces (context)

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

F define F list

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

#### io (basic lua)

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

T paranoid

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

T paranoid

open overloaded function

output function
pathseparator string

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

### jit (context)

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

F start

os string
status function
util table

F funcbc

F funcinfo

F funck

F funcuvname

F ircalladdr

F traceexitstub

F traceinfo

F traceir

F tracek

F tracemc

F tracesnap

version string
version\_num number

# job (context)

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

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

structure

#### register function save function table

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

#### variables table

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

#### version number

# lang (basic tex)

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

#### languages (context)

associate function associated data table association function counters data table function current data data table define function table frequencies F averagecharwidth F getdata getnumber function hyphenate function installed function labels table F define F split lefthyphenmin function loadable function loadwords function table logger F report numbers data table posthyphenchar function function prehyphenchar data table registered replacements table F add F handler F set righthyphenmin function setexceptions function function setsynonym unload function version number table words

F check
T data
F disable
F enable
T enablers
B enables

F load T methods N threshold

F found

## layouts (context)

#### **status** table

F isleftpage

F leftorrightpagection

#### lfs (extra lua)

attributes function chdir function currentdir function dir function

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

#### libraries (context)

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

#### lmx (context)

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

Fa

F td F th

include function
inherited table

S color-background-four

S color-background-one

S color-background-three

S color-background-two

S title

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

S color-background-blue

S color-background-body

S color-background-green

S color-background-main

S color-background-purple

S color-background-yellow

S title-default

#### logs (context)

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

> F banner F export

F help

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 function show open simple function simpleline function

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

# lpdf (context)

| action                   | function   | gethpos                   | function   |
|--------------------------|------------|---------------------------|------------|
| adddocumentcolorspace    | function   | qetmatrix                 | function   |
| adddocumentextgstate     | function   | getpos                    | function   |
| adddocumentpattern       | function   | getvpos                   | function   |
| adddocumentshade         | function   | graycode                  | function   |
| addtocatalog             | function   | hasmatrix                 | function   |
| addtoinfo                | function   | id                        | function   |
| addtonames               | function   | injectxmpinfo             | function   |
| addtopageattributes      | function   | insertxmpinfo             | function   |
| addtopageresources       | function   | layerreference            | function   |
| addtopagesattributes     | function   | limited                   | function   |
| addxmpinfo               | function   | linearshade               | function   |
| annotationspecification  | function   | nametree                  | function   |
| array .                  | function   | null                      | function   |
| boolean                  | function   | number                    | function   |
| border                   | function   | pagedestinations          | data table |
| checkedkey               | function   | pagereference             | function   |
| checkedvalue             | function   | pagereferences            | data table |
| circularshade            | function   | pdfcolor                  | function   |
| cmykcode                 | function   | pdftimestamp              | function   |
| collectedresources       | function   | protectresources          | boolean    |
| color                    | function   | rectangle                 | function   |
| colorspace               | function   | reference                 | function   |
| colorspaceconstants      | data table | registerannotation        | function   |
| colorspec                | function   | registerdestination       | function   |
| colorvalue               | function   | registerdocumentfinalizer | function   |
| colorvalues              | function   | registerpagefinalizer     | function   |
| constant                 | function   | reserveobject             | function   |
| delayedobject            | function   | rgbcode                   | function   |
| destinationspecification | function   | rotationcm                | function   |
| dictionary               | function   | shareobject               | function   |
| epdf                     | table      | shareobjectreference      | function   |
| F expand                 |            | spotcode                  | function   |
| Fload                    |            | stream                    | function   |
| finalizedocument         | function   | string                    | function   |
| finalizepage             | function   | timestamp                 | function   |
| finishtransparencycode   | function   | toeight                   | function   |
| flushobject              | function   | tosixteen                 | function   |
| flushstreamfileobject    | function   | transform                 | function   |
| flushstreamobject        | function   | transparency              | function   |
| formats                  | data table | 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 |
| ${\tt utfchartabletopattern}$ | function |
| version                       | function |

## ltn12 (extra lua)

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

F string

#### lua (basic tex)

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

#### luatex (context)

cleanuptempfiles function
registerstartactions function
registerstopactions
registertempfile function
starttime number

## lxml (context)

| addindex          | function          | getid            | function |
|-------------------|-------------------|------------------|----------|
| all               | function          | getindex         | function |
| applyfunction     | function          | id               | function |
| att               | function          | idsplitter       | userdata |
| attribute         | function          | include          | function |
| chainattribute    | function          | index            | function |
| checkindex        | function          | info             | function |
| collected         | function          | inlineverbatim   | function |
| command           | function          | installsetup     | function |
| concat            | function          | last             | function |
| concatrange       | function          | load             | function |
| content           | function          | loadbuffer       | function |
| context           | function          | loaddata         | function |
| convert           | function          | loaded           | table    |
| count             | function          | loadregistered   | function |
| delete            | function          | main             | function |
| direct            | function          | match            | function |
| directives        | table             | name             | function |
| F after           |                   | namespace        | function |
| F before          |                   | nonspace         | function |
| F handle          |                   | pos              | function |
| F load            |                   | position         | function |
| F setup           |                   | raw              | function |
| displayverbatim   | function          | rawroot          | function |
| doif              | function          | register         | function |
| doifelse          | function          | registerentity   | function |
| doifelsetext      | function          | removesetup      | function |
| doifnot           | function          | resetcdata       | function |
| doifnottext       | function          | resetsetups      | function |
| doiftext          | function          | resolvedentity   | function |
| element           | function          | root             | function |
| elements          | function          | serialize        | function |
| entities          | data table        | setaction        | function |
| filter            | function          | setcdata         | function |
| filterlist        | function          | setcommandtonone | function |
| first             | function          | setcommandtotext | function |
| flush             | function          | setsetup<br>     | function |
| flushlinewise     | function          | snippet          | function |
| flushsetups       | function          | sorters          | table    |
| flushspacewise    | function function | F add            |          |
| <del>get_id</del> | + unction         | F compare        |          |

F flush
F reset
F show

F sort

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

## 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 |
| ехр            | 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 |
| big                    | function   |
| boldmap                | table      |
| categories             | table      |
| D functions            |            |
| checkaccentbaseheight  | function   |
| checkprivateparameters | function   |
| classes                | data table |
| codes                  | data table |
| define                 | function   |
| dimensions             | function   |
| extensiblecode         | function   |
| extensibles            | data table |
| extrabase              | number     |
| extras                 | table      |
| E add                  |            |

setalternate function setitalics function svncboth function function syncname function syncstyle toname function tostyle function function tweakaftercopyingfont tweakbeforecopyingfont function table tweaks utfmathaccent function utfmathclass function utfmathcommand function utfmathfiller function utfmathstretch function

F add F copy

fallbacks table

F apply
F install

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

 ${\bf D}\ {\bf mappings}$ 

D numbers

D sets

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

runscript function scripterror function function setextensions setoutercolor function settext function settextexts function showlog boolean svformat function table tex

F get
F reset
F set

boolean texerrors function textextsdata theclippath function totable function unload function function untagvariable number urx number ury 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
```

## mplib (extra tex)

| fields<br>finders | function<br>table |
|-------------------|-------------------|
|                   | table             |
| F file            |                   |
| get_boolean       | function          |
| get_number        | function          |
| get_numeric       | function          |
| get_string        | function          |
| new               | function          |
| pen_info          | function          |
| preprocessed      | function          |
| version           | function          |

### noads (context)

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

T unscript

## node (basic tex)

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

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

### nodes (context)

|  |  | •  |                                  |
|--|--|--|----------------------------------|
| accentcodes  | data table                                   | free_spec  | function                         |
| aligned  | function                                     | getattr  | function                         |
| append   | function                                     | getattribute                                     | function                         |
| astable  | 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      | markers          |
|-------------------------|------------|------------------|
| F handler               |            | F get            |
| F installnewkern        |            | mathcodes        |
| F setcursive            |            | mlist_to_hlist   |
| F setkern               |            | new              |
| F setmark               |            | noadcodes        |
| F setpair               |            | nodecodes        |
| insert_after            | function   | nopts            |
| insert_before           | function   | nuts             |
| insert_list_after       | function   | F append         |
| installattributehandler | function   | F concat         |
| is_direct               | function   | F copy           |
| is_display_math         | function   | F copy_list      |
| is_mirrored             | data table | F count          |
| is_node                 | function   | F current_attr   |
| is_nut                  | function   | F delete         |
| is_rotated              | data table | F dimensions     |
| kerncodes               | data table | F do_ligature_n  |
| kerning                 | function   | F end_of_math    |
| keys                    | table      | F fasthpack      |
| T whatsit               |            | F first_glyph    |
| last_node               | function   | F firstcharacter |
| leftmarginwidth         | function   | F firstcharinbox |
| ligaturing              | function   | F firstglyph     |
| lines                   | table      | F flush_list     |
| T boxed                 |            | F flush_node     |
| F register              |            | F free           |
| F setup                 |            | F getattr        |
| F stage_one             |            | F getattribute   |
| F stage_two             |            | F getbox         |
| F stage_zero            |            | F getchar        |
| D data                  |            | F getfield       |
| F finalize              |            | F getfont        |
| F number                |            | F getid          |
| N scratchbox            |            | F getleader      |
| link                    | function   | F getlist        |
| linked                  | function   | F getnext        |
| list                    | function   | F getprev        |
| listablefields          | data table | F getprop        |
| listcodes               | data table | F getskip        |
| listtoutf               | function   | F getsubtype     |
| load                    | function   | F has_attribute  |
| locate                  | function   | F has_field      |
| margincodes             | data table | F has_glyph      |

data table function function data table data table

function table

table

F rightmarginkern F hpack F insert\_after F rightskip F insert\_before F rule F shrink F insert list after F is direct F special F is display math F stretch F is\_node F temp F is nut F textdir F kerning F usage F last node T userids F leftmarginwidth N margins.inline F ligaturing N property F link N splitters.one F linked N splitters.two F userlist F locate F mlist\_to\_hlist F usernumber F nestedtracedslide F userstring F new F usertokens F vlist T pool F baselineskip F zeroglue F cleanup F prepend F disc F protect\_glyphs F fontkern F protrusion\_skippable F glue F reference F gluespec F remove F 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 sethox F negatedglue F setfield F noad F setprop F pdfannotation F setunsetattributes F pdfdestination F slide F pdfdirect F somepenalty F pdfliteral F somespace F pdfrestore F tail F pdfsave F takebox F pdfsetmatrix F tonode F penalty F tonodes F register F tonut

| 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 pdfliteral            |          |
| F tonodes           |            | F pdfsetmatrix          |          |
| F tovpack           |            | F register              |          |
| F tovpackfast       |            | F rule                  |          |
| F vpack             |            | F special               |          |
| F unprotect_glyphs  |            | F usage                 |          |
| F unset_attribute   |            | T userids               |          |
| F unsetattribute    |            | N margins.inline        |          |
| F unsetattributes   |            | N property              |          |
| F untracedslide     |            | N splitters.one         |          |
| F usedlist          |            | N splitters.two         |          |
| F vianodes          |            | F usernumber            |          |
| F vianuts           |            | prepend                 | function |
| F vpack             |            | print                   | function |
| F writable_spec     |            | processors              | table    |
| F write             |            | B enabled               |          |
| packlist            | function   | F hpack_filter          |          |
| pardir_is_equal     | data table | F post_linebreak_filter |          |
| pardir_is_opposite  | data table | F pre_linebreak_filter  |          |
| pardir_is_parallel  | data table | F tracer                |          |
| partextdir_is_equal | data table | processwords            | function |
| penaltycodes        | data table | properties              | table    |
| plugindata          | table      | T actions               |          |
| F finalizer         |            | F delayed               |          |
| F initializer       |            | F fdelayed              |          |
| S name              |            | F immediate             |          |
| T namespace         |            | F attach                |          |
| N attribute         |            | T data                  |          |
| D data              |            | F delayed               |          |
| F enable            |            | protect_glyphs          | function |
| F handler           |            | protrusion_skippable    | function |
| F register          |            | pts                     | function |
| D registered        |            | reference               | function |
| D values            |            | references              | table    |
| F processor         | £          | N attribute             |          |
| points              | function   | T done                  |          |

| 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 restart           |            |
| setattr            | function   | F setaction         |            |
| setattribute       | function   | F showactions       |            |
| setattributes      | function   | F table             |            |
| setbox             | function   | textdir_is_equal    | data table |
| setfield           | function   | textdir_is_is       | data table |
| setunsetattributes | function   | textdir_is_opposite | data table |
| shifts             | table      | textdir_is_parallel | data table |
| D data             |            | tobasepoints        | function   |
| F define           |            | tocentimeters       | function   |
| F enable           |            | tociceros           | function   |
| F handler          |            | todidots            | function   |
| show               | function   | todimen             | function   |
| showboxes          | function   | toinches            | function   |
| showcodes          | function   | tomillimeters       | function   |
| showlist           | function   | tonewciceros        | function   |
| showsimplelist     | function   | tonewdidots         | function   |
| skipcodes          | data table | tonode              | function   |
| slide              | function   | tonodes             | function   |
| snapshots          | table      | tonut               | function   |
| F getparameters    |            | topicas             | function   |
| F getsamples       |            | topoints            | function   |
| F resetsamples     |            | toscaledpoints      | function   |
| F takesample       |            | tosequence          | function   |
| somepenalty        | function   | tostring            | function   |
| somespace          | function   | totable             | function   |
| stripping          | table      | totree              | function   |
| T glyphs           |            | toutf               | function   |
| F set              |            | tracers             | table      |

table typesetters T characters F collect F hpack F equal F tohpack F tohpackfast F indices F start F tonodes F string F tovpack F unicodes F tovpackfast T colors F vpack unprotect glyphs function F reset F set unset attribute function unsetattribute function F setlist unsetattributes function F fontchar usedlist function T frequencies vianodes function F register vianuts function T pool visualizebox function T nodes visualizers table F rule T nuts F hox F rule F handler F markfonts F resetproperties F rule F setfont F setlist F setlaver F setproperties F setvisual function vpack F start data table T steppers whatcodes whatsitcodes data table F check F codes writable spec function write function F features F font F glyphs F message F messages F nofsteps F register F reset F start F stop F stop T transparencies F reset F set F setlist traverse function traverse id function

#### number (context)

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

## os (basic lua)

| getenv       | function           |          |
|--------------|--------------------|----------|
| setenv       | function           |          |
| binsuffix    | string             |          |
| binsuffixes  | table              |          |
| clock        | function           |          |
| converttime  | function           |          |
| date         | function           |          |
| difftime     | function           |          |
| env          | data table         |          |
| exec         | overloaded         | function |
| execute      | overloaded         | function |
| exit         | function           |          |
| fulltime     | function           |          |
| getenv       | overloaded         | function |
| gettimeofday | function           |          |
| isleapyear   | function           |          |
| launch       | function           |          |
| libsuffix    | string             |          |
| localtime    | function           |          |
| name         | string             |          |
| nofdays      | function           |          |
| now          | function           |          |
| platform     | string             |          |
| remove       | function           |          |
| rename       | function           |          |
| resolvers    | table              |          |
| F bits       |                    |          |
| resultof     | function           |          |
| runtime      | function           |          |
| selfdir      | string             |          |
| setenv       | ${\tt overloaded}$ | function |
| setlocale    | overloaded         | function |
| sleep        | function           |          |
| spawn        | overloaded         | function |
| time         | function           |          |
| times        | function           |          |
| timezone     | function           |          |
| tmpdir       | function           |          |
| tmpname      | function           |          |
| today        | function           |          |

string

| uname     | function |
|-----------|----------|
| 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   | F setmethod      |          |
|---------------------|------------|------------------|----------|
| analyze             | function   | T sorters        |          |
| authors             | table      | F author         |          |
| F concat            |            | F dataset        |          |
| F inverted          |            | F reference      |          |
| F invertedshort     |            | F short          |          |
| F normal            |            | listvariants     | table    |
| F normalshort       |            | F default        |          |
| F preparedsort      |            | F num            |          |
| F setsettings       |            | F short          |          |
| F short             |            | load             | function |
| F sorted            |            | loadbibdata      | function |
| F splitstring       |            | loaders          | table    |
| citeconcat          | function   | F bib            |          |
| citevariants        | table      | F endnote        |          |
| F author            |            | F lua            |          |
| F authornum         |            | F refman         |          |
| F authoryear        |            | F xml            |          |
| F authoryears       |            | markasupdated    | function |
| F default           |            | new              | function |
| F num               |            | refman_to_btx    | function |
| F page              |            | singularorplural | function |
| F serial            |            | statistics       | table    |
| F short             |            | N nofbytes       |          |
| collected           | data table | N nofdatasets    |          |
| converttoxml        | function   | N nofdefinitions |          |
| datasets            | table      | N nofshortcuts   |          |
| endnotes_to_btx     | function   | tracers          | table    |
| enhance             | function   | T categories     |          |
| getindex            | function   | T article        |          |
| listconcat          | function   | T optional       |          |
| lists               | table      | T required       |          |
| F collectentries    |            | T book           |          |
| F doifalreadyplaced | i          | T optional       |          |
| F fetchentries      |            | T required       |          |
| F filterall         |            | T booklet        |          |
| F flushentries      |            | T optional       |          |
| F nofregistered     |            | T required       |          |
| F register          |            | T inbook         |          |
| F registerplaced    |            | T optional       |          |
| F resolve           |            | T required       |          |
|                     |            |                  |          |

T incollection T optional

T required

T inproceedings

T optional

T required

T manual

T optional

T required

T mastersthesis

T optional

T required

T misc

T optional

T required

T phdthesis

T optional

T required

T proceedings

T optional

T required

T techreport

T optional

T required

T unpublished

T optional

T required

T citevariants

T fields

T listvariants

F showdatasetcompleteness

F showdatasetfields

#### regimes (context)

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

#### resolvers (context)

**finders** 

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

D specification

data table

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

variableofformatorsuffix function wildcardpattern

function

#### scripts (context)

table

autofontfeature

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

#### set (context)

contains function
create function
tolist function
tonumber function
totable function

#### socket (extra lua)

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

| S recei     | ived                        | sinkt          | table                |  |
|-------------|-----------------------------|----------------|----------------------|--|
| S recei     | ived-from-mta               | F close-v      | vhen-done            |  |
| S refe      | rences                      | F default      | F default            |  |
| S refe      | rer                         | F http-ch      | nunked               |  |
| S remot     | te-mta                      | F keep-op      | oen                  |  |
| S reply     | y-to                        | skip           | function             |  |
| S repor     | rting-mta                   | sleep          | function             |  |
| S reser     | nt-bcc                      | smtp           | table                |  |
| S reser     | nt-cc                       | S DOMAIN       |                      |  |
| S reser     | nt-date                     | N PORT         |                      |  |
| S reser     | nt-from                     | S SERVER       |                      |  |
| S reser     | nt-message-id               | N TIMEOUT      | Г                    |  |
| S reser     | nt-reply-to                 | S ZONE         |                      |  |
| S reser     | nt-sender                   | F message      | 2                    |  |
| S reser     | nt-to                       | F open         |                      |  |
| S retry     | y-after                     | F send         |                      |  |
| S retu      |                             | source         | function             |  |
| S sende     |                             | sourcet        | table                |  |
| S serve     |                             | F by-leng      |                      |  |
|             | -remote-recipient           | F default      |                      |  |
| S status    |                             | F http-chunked |                      |  |
| S subj€     | ect                         | F until-closed |                      |  |
| S te        |                             | tcp            | function             |  |
| S to        |                             | tcp6           | function             |  |
| S trail     |                             | tp             | table                |  |
|             | sfer-encoding               | N TIMEOUT      |                      |  |
| S upgra     |                             | F connect      |                      |  |
| S user-     | -agent                      | try            | function             |  |
| S vary      |                             | udp<br>udp6    | function<br>function |  |
| S via       | ·                           | url            | table                |  |
| S warni     |                             | F absolut      |                      |  |
|             | retry-until<br>authenticate | F build        | .e                   |  |
| S x-mai     |                             | F build p      | nath                 |  |
| http        | table                       | F escape       | , a cii              |  |
| N PORT      | cab to                      | F parse        |                      |  |
| N TIMEOU    | Т                           | F parse_p      | nath                 |  |
| S USERAGENT |                             | F unescap      |                      |  |
| F open      |                             |                |                      |  |
| F reques    | t                           |                |                      |  |
| newtry      | function                    |                |                      |  |
| protect     | function                    |                |                      |  |
| select      | function                    |                |                      |  |
| sink        | function                    |                |                      |  |
|             |                             |                |                      |  |

#### sorters (context)

basicsorter function
comparers table

F basic

constants table

S defaultdigits

S defaultlanguage

S defaultmethod

N digitsmaximum

N digitsoffset

N ignoredoffset

N replacementoffset

definitions
firstofsplit
setlanguage
sort
splitters
function
function
splitters
table

Futf

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

| toboolean     | function |
|---------------|----------|
| tocontext     | function |
| todimen       | 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 setlevel           |          |
|----------------|----------|----------------------|----------|
| blocks         | table    | F setoffset          |          |
| D collected    |          | F setown             |          |
| F define       |          | F setstate           |          |
| F print        |          | F setvalue           |          |
| F save         |          | T specials           |          |
| F select       |          | F userpage           |          |
| F setstate     |          | F subs               |          |
| D states       |          | D tobesaved          |          |
| D tobesaved    |          | F value              |          |
| bookmarks      | table    | currentsectionnumber | function |
| F finalize     |          | descriptions         | table    |
| F flatten      |          | documents            | table    |
| S method       |          | D data               |          |
| F overload     |          | F initialize         |          |
| F place        |          | F preset             |          |
| F register     |          | F reset              |          |
| F setup        |          | floats               | table    |
| counters       | table    | formulas             | table    |
| F add          |          | F current            |          |
| F analyze      |          | F simplify           |          |
| F check        |          | F store              |          |
| D collected    |          | helpers              | table    |
| F compact      |          | F analyze            |          |
| F converted    |          | F formulanumber      |          |
| F currentvalue |          | F merged             |          |
| D data         |          | F page               |          |
| F define       |          | F prefix             |          |
| F first        |          | F prefixlastpage     |          |
| F get          |          | F prefixpage         |          |
| F last         |          | F simplify           |          |
| F next         |          | F title              |          |
| F prev         |          | F touserdata         |          |
| F previous     |          | inserts              | table    |
| F raw          |          | D data               |          |
| F record       |          | F define             |          |
| F reset        |          | F getdata            |          |
| F restart      |          | F getlocation        |          |
| F restore      |          | F getname            |          |
| F save         |          | F getnumber          |          |
| F set          |          | F setlocation        |          |

| F setup           |       | F uservalue             |       |
|-------------------|-------|-------------------------|-------|
| D stored          |       | marks                   | table |
| itemgroups        | table | D data                  |       |
| F maxwidth        |       | F define                |       |
| F nofitems        |       | F exists                |       |
| F register        |       | F fetch                 |       |
| lists             | table | F fetchallmarks         |       |
| F addto           |       | F fetched               |       |
| F analyze         |       | F fetchonemark          |       |
| B autoreorder     |       | F fetchtwomarks         |       |
| D cached          |       | F get                   |       |
| D collected       |       | F number                |       |
| F discard         |       | F relate                |       |
| F enhance         |       | F reset                 |       |
| T enhancers       |       | F set                   |       |
| F filter          |       | F show                  |       |
| F filtercollected |       | F synchronize           |       |
| F formulanumber   |       | F title                 |       |
| F groupindex      |       | T tracers               |       |
| F hasnumberdata   |       | F showtable             |       |
| F haspagedata     |       | notes                   | table |
| F hastitledata    |       | F checkpagechange       |       |
| F iscached        |       | F define                |       |
| F label           |       | F doifonsamepageasprevi | ous   |
| F location        |       | 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        |       |
| T result          |       | F restore               |       |
| D sectionblocks   |       | F save                  |       |
| F sectionnumber   |       | F setstate              |       |
| F size            |       | F setsymbolpage         |       |
| F title           |       | D states                |       |
| D tobesaved       |       | F store                 |       |
| F userdata        |       | pages                   | table |

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

| F internal        |          | F findnumber        |
|-------------------|----------|---------------------|
| F page            |          | F fullnumber        |
| F realpage        |          | F getcurrentlevel   |
| F section         |          | F getlevel          |
| F userpage        |          | F getnumber         |
| D tobereferred    |          | F internalreference |
| D tobesaved       |          | D levelmap          |
| T urls            |          | D levels            |
| T data            |          | F load              |
| F define          |          | F matchingtilldepth |
| F get             |          | F numberatdepth     |
| D usedinternals   |          | F numbers           |
| D usedviews       |          | F popblock          |
| F valid           |          | F prefixedconverted |
| F whatfrom        |          | F pushblock         |
| registers         | table    | F register          |
| F analyze         |          | D registered        |
| D collected       |          | F reportstructure   |
| F compare         |          | F save              |
| F define          |          | T sectionblockdata  |
| F enhance         |          | T bodypart          |
| F extend          |          | S bookmark          |
| F filter          |          | F set               |
| F filtercollected |          | F setblock          |
| F finalize        |          | F setchecker        |
| F flush           |          | F setentry          |
| F prepare         |          | F setlevel          |
| F process         |          | F setnumber         |
| F setmethod       |          | F structuredata     |
| F sort            |          | F title             |
| F store           |          | D tobesaved         |
| D tobesaved       |          | F typesetnumber     |
| F unique          |          | F userdata          |
| F userdata        |          | B verbose           |
| sections          | table se | <b>ts</b> table     |
| F autodepth       |          | F define            |
| F cct             |          | F get               |
| D collected       |          | F getall            |
| F current         |          | D setlist           |
| F currentblock    | sp       | <b>ecials</b> table |
| F currentid       |          | D collected         |
| F currentlevel    |          | F retrieve          |
| F depthnumber     |          | F store             |
|                   |          |                     |

D tobesaved

F finddata

table synonyms D taglist F analyzed T userdata D collected F compare 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 T data F detailedtag F getid F handler D labels F last F lastinchain T metadata D properties F registerdata F registermetadata F restart F setattributehash F setcombination F setdescription F setdescriptionsymbol F setfigure F sethighlight F setitemgroup F setproperty F setsorting F setsynonym F settablecell F settabulatecell F start

F stop

## table (basic lua)

| allkeys         | function            |
|-----------------|---------------------|
| append          | function            |
| are_equal       | $ \hbox{function} $ |
| autokey         | function            |
| compact         | $ \hbox{function} $ |
| concat          | $ \hbox{function} $ |
| contains        | function            |
| сору            | function            |
| count           | function            |
| derive          | function            |
| deserialize     | function            |
| drop            | function            |
| fastcopy        | $ \hbox{function} $ |
| fastserialize   | function            |
| flattened       | $ \hbox{function} $ |
| foreach         | function            |
| foreachi        | $ \hbox{function} $ |
| fromhash        | function            |
| getmetatablekey | $ \hbox{function} $ |
| getn            | function            |
| has_one_entry   | function            |
| identical       | $ \hbox{function} $ |
| imerge          | function            |
| imerged         | function            |
| insert          | function            |
| is_empty        | function            |
| keys            | function            |
| load            | 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            |
| sequenced       | function            |

| serialize            | function |
|----------------------|----------|
| setmetatablecall     | function |
| setmetatableindex    | function |
| setmetatablekey      | function |
| setmetatablenewindex | function |
| sort                 | function |
| sorted               | function |
| sortedhash           | function |
| sortedhashkeys       | function |
| sortedhashonly       | function |
| sortedindexonly      | function |
| sortedkeys           | function |
| sortedpairs          | function |
| strip                | function |
| sub                  | function |
| swapped              | function |
| tocontext            | function |
| tocsv                | function |
| tofile               | function |
| tohandle             | function |
| tohash               | function |
| toxml                | function |
| twowaymapper         | function |
| unique               | function |
| unnest               | function |
| unpack               | function |
| values               | function |

# tex (basic tex)

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

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

#### texconfig (basic tex)

error\_line number expand depth number formatname string half\_error\_line number number hash extra init overloaded function 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 stack size number

## 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
vbox
              table
```

table

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                  |       | firstlines       | table |
| T methods                  |       | T actions        |       |
| T numbers                  |       | F default        |       |
| F set                      |       | F line           |       |
| F setreplacement           |       | F word           |       |
| cases                      | table | F handler        |       |
| T actions                  |       | F set            |       |
| F handler                  |       | initials         | table |
| F register                 |       | T actions        |       |
| F set                      |       | F default        |       |
| characteralign             | table | F handler        |       |
| F handler                  |       | F set            |       |
| F resetcharacter           | align | italics          | table |
| F setcharacteral           | ign   | F forcevariant   |       |
| characters                 | table | F handler        |       |
| F handler                  |       | F reset          |       |
| F replacenbsp              |       | F set            |       |
| F replacenbspace           | S     | kerns            | table |
| checkers                   | table | D factors        |       |
| F handler                  |       | F handler        |       |
| F reset                    |       | F keepligature   |       |
| F set                      |       | B keeptogether   |       |
| cleaners                   | table | D mapping        |       |
| F handler                  |       | F set            |       |
| F set                      |       | margins          | table |
| digits                     | table | F finalhandler   |       |
| T actions                  |       | F globalhandler  |       |
| F handler                  |       | F ha             |       |
| F set                      |       | F localhandler   |       |
| directions                 | table | F save           |       |
|                            |       | processors       | table |
| F getfences                |       |                  |       |
| F getfences<br>F getglobal |       | F apply          |       |
|                            |       | -                |       |
| F getglobal                |       | F apply          |       |

```
F startapply
F stopapply
F stripped
```

# F tostring spacings

table

F define

F handler

D mapping

T numbers

T frenchpunctuation

T characters

S name

N number

F reset

F set

F setup

#### xtables

table

F cleanup

F construct

F create

F flush

F initialize\_construct

F initialize\_reflow\_height

F initialize\_reflow\_width

F next\_row

F reflow\_height

F reflow\_width

F set\_construct

F set\_reflow\_height

F set\_reflow\_width

## unicode (extra lua)

| ascii                    | table | F    | len               |
|--------------------------|-------|------|-------------------|
| F byte                   |       |      | lower             |
| F char                   |       |      | match             |
| F dump                   |       |      | rep               |
| F find                   |       |      | reverse           |
| F 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
- F utf16\_to\_utf8\_be
- F utf16\_to\_utf8\_le
- F utf32\_to\_utf8
- F utf32\_to\_utf8\_be
- F utf32\_to\_utf8\_le
- F utf8\_to\_utf16
- F utf8\_to\_utf16\_be
- F utf8\_to\_utf16\_le
- F utf8\_to\_utf8
- F values
- F xstring

# url (context)

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

## utilities (context)

| debugger           | table | N version       |                  |
|--------------------|-------|-----------------|------------------|
| F disable          |       | parsers         | table            |
| F enable           |       | F add_settings_ | to_array         |
| F savestats        |       | F arguments_to_ | table            |
| F showstats        |       | F array_to_stri | ng               |
| F showtraceback    |       | F csvsplitter   |                  |
| formatters         | table | F getparameters |                  |
| F formatcolumns    |       | F hash_to_strin | g                |
| F list             |       | F iterator      |                  |
| F stripzeros       |       | F keq_to_hash   |                  |
| garbagecollector   | table | F listitem      |                  |
| F check            |       | F make_settings | _to_hash_pattern |
| N criterium        |       | F manipulated   |                  |
| B enabled          |       | U manipulation  |                  |
| lua                | table | T manipulators  |                  |
| B alwaysstripcode  |       | F lowercase     |                  |
| F compile          |       | F stripperiod   |                  |
| F loadedluacode    |       | F uppercase     |                  |
| F loadstripped     |       | F mergehashes   |                  |
| N nofstrippedbytes | ;     | F options_to_ha | sh               |
| N nofstrippedchunk | KS.   | T patterns      |                  |
| B stripcode        |       | U settings_to_  | _array           |
| T strippedchunks   |       | U settings_to_  | _hash_a          |
| F strippedloadstri | .ng   | U settings_to_  | _hash_b          |
| T suffixes         |       | U settings_to_  | _hash_c          |
| S lua              |       | U unittotex     |                  |
| S luc              |       | F process_strip | ped_settings     |
| S lui              |       | F rfc4180splitt | er               |
| S luj              |       | F runtime       |                  |
| S luv              |       | F settings_to_a | rray             |
| S tma              |       | F settings_to_a | rray_with_repeat |
| S tmc              |       | F settings_to_h | ash              |
| S tua              |       | F settings_to_h | ash_strict       |
| S tuc              |       | F settings_to_h | ash_tolerant     |
| packers            | table | F settings_to_s | et               |
| F hashed           |       | F simple_hash_t | _                |
| F new              |       | F splitthousand | S                |
| F pack             |       | F stepper       |                  |
| F simplehashed     |       | F stripped_sett | ings_to_array    |
| F strip            |       | F unittotex     |                  |
| F unpack           |       | F unittoxml     |                  |

| report                 | function | Т    | striplinepatterns |       |
|------------------------|----------|------|-------------------|-------|
| sequencers             | table    |      | U prune           |       |
| F appendaction         |          |      | U prune and colla | pse   |
| F appendgroup          |          |      | U prune and no em | pty   |
| F compile              |          |      | U retain          |       |
| F disableaction        |          |      | U retain and coll | apse  |
| F disablegroup         |          |      | U retain and no e | mpty  |
| F enableaction         |          | F    | striplines        |       |
| F enablegroup          |          | F    | striplong         |       |
| D functions            |          | F    | tabtospace        |       |
| F localize             |          |      | tracers           |       |
| F new                  |          | tabl | es                | table |
| F nodeprocessor        |          |      | accesstable       |       |
| F prependaction        |          |      | definedtable      |       |
| F prependgroup         |          |      | definetable       |       |
| F removeaction         |          |      | encapsulate       |       |
| F setkind              |          |      | insertaftervalue  |       |
| F tostring             | 4-11-    |      | insertbeforevalue |       |
| setters                | table    |      | migratetable      |       |
| F disable              |          |      | removevalue       | 4-bl- |
| F enable               |          |      | lates             | table |
| F initialize           |          |      | load              |       |
| F list                 |          |      | replace           |       |
| F new                  |          |      | replacer          |       |
| F register<br>F report |          | г    | resorve           |       |
| 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                 |          |      |                   |       |
|                        |          |      |                   |       |

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

## xml (context)

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

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