

MP attributes backends bit **bit32** blobs  
boolean buffers builders caches **callback**  
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  
**lang** languages layouts **lfs** libraries lmx  
logs lpdf **lpeg** **ltn12** **lua** luatex lxml **math**  
mathematics mbox **md5** metapost **mime**  
moduledata modules mp **mplib** **newtoken** noads  
**node** nodes number **os** **package** pagebuilders  
parametersets **pdf** pdfscanner physics  
**profiler** publications regimes resolvers  
sandbox scripts set **socket** sorters  
statistics **status** storage streams **string**  
structures **table** **tex** **texconfig** **texio**  
thirddata tokens tracers trackers  
typesetters **unicode** url userdata utilities  
vf visualizers xml **zip** **zlib**

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

# global (alias: \_G)

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

|                              |          |                     |          |
|------------------------------|----------|---------------------|----------|
| <b>mbox</b>                  | table    | <b>setmetatable</b> | function |
| <b>md5</b>                   | table    | <b>socket</b>       | table    |
| <b>metapost</b>              | table    | <b>sorters</b>      | table    |
| <b>mime</b>                  | table    | <b>statistics</b>   | table    |
| <b>module</b>                | function | <b>status</b>       | table    |
| <b>moduledata</b>            | table    | <b>storage</b>      | table    |
| <b>modules</b>               | table    | <b>streams</b>      | table    |
| <b>mp</b>                    | table    | <b>string</b>       | table    |
| <b>mplib</b>                 | table    | <b>structures</b>   | table    |
| <b>newproxy</b>              | function | <b>swiglib</b>      | function |
| <b>newtoken</b>              | table    | <b>table</b>        | table    |
| <b>next</b>                  | function | <b>tex</b>          | table    |
| <b>noads</b>                 | table    | <b>texconfig</b>    | table    |
| <b>node</b>                  | table    | <b>texio</b>        | table    |
| <b>nodes</b>                 | table    | <b>thirddata</b>    | table    |
| <b>number</b>                | table    | <b>toboolean</b>    | function |
| <b>optionalrequire</b>       | function | <b>tokens</b>       | table    |
| <b>os</b>                    | table    | <b>tonumber</b>     | function |
| <b>outputpagestree</b>       | function | <b>tostring</b>     | function |
| <b>package</b>               | table    | <b>tracers</b>      | table    |
| <b>pagebuilders</b>          | table    | <b>trackers</b>     | table    |
| <b>pairs</b>                 | function | <b>type</b>         | function |
| <b>parametersets</b>         | table    | <b>typesetters</b>  | table    |
| <b>pcall</b>                 | function | <b>unicode</b>      | table    |
| <b>pdf</b>                   | table    | <b>unpack</b>       | function |
| <b>pdfscanner</b>            | table    | <b>url</b>          | table    |
| <b>physics</b>               | table    | <b>userdata</b>     | table    |
| <b>print</b>                 | function | <b>utf</b>          | table    |
| <b>profiler</b>              | table    | <b>utilities</b>    | table    |
| <b>publications</b>          | table    | <b>vf</b>           | table    |
| <b>rawequal</b>              | function | <b>visualizers</b>  | table    |
| <b>rawget</b>                | function | <b>xml</b>          | table    |
| <b>rawlen</b>                | function | <b>xpcall</b>       | function |
| <b>rawset</b>                | function | <b>zip</b>          | table    |
| <b>regimes</b>               | table    | <b>zlib</b>         | table    |
| <b>require</b>               | function |                     |          |
| <b>resolvers</b>             | table    |                     |          |
| <b>resolvestoredfunction</b> | function |                     |          |
| <b>sandbox</b>               | table    |                     |          |
| <b>scripts</b>               | table    |                     |          |
| <b>select</b>                | function |                     |          |
| <b>set</b>                   | table    |                     |          |
| <b>setfenv</b>               | function |                     |          |
| <b>setinspector</b>          | function |                     |          |

# attributes (context)

## colorintents table

- N attribute
- D data
- F enable
- F handler
- F register
- D registered

## colors table

- N attribute
- F cmyk
- F cmyktogray
- F cmyktorgb
- F colorcomponents
- B couple
- D data
- N default
- F defineintermediatecolor
- F definemultitonecolor
- F defineprocesscolor
- F definesimplegray
- F definespotcolor
- F definetransparency
- F enable
- F filter
- F forcedmodel
- F forcesupport
- F formatcolor
- F formatgray
- F getpagecolormodel
- F gray
- F graytohsv
- F handler
- F hsvtorgb
- F iccprofile
- F isblack
- N main
- S model
- D models
- F mpcolor
- F mpnamedcolor

- F mpoptions
- U none
- F popset
- F processcolorcomponents
- F pushset
- F register
- D registered
- F registerspotcolor
- F rgb
- F rgbtocmyk
- F rgbtorgb
- F rgbtohsv
- N selector
- F setlist
- F setmodel
- F setpagecolormodel
- D sets
- F spec
- F spot
- F spotcolorname
- F spotcolorparent
- F spotcolorvalue
- B supported
- F transparencycomponents
- B triggering
- F usecolors
- F value
- D values
- B weightgray

define

effects

function

table

- N attribute
- D data
- F enable
- F handler
- F register
- D registered
- D values

handlers

list

names

table

data table

data table

|                       |            |                          |
|-----------------------|------------|--------------------------|
| <b>negatives</b>      | table      | F definedlayoutcomponent |
| N attribute           |            | F enable                 |
| D data                |            | F forcesupport           |
| F enable              |            | F handler                |
| F handler             |            | B hasorder               |
| F register            |            | D listwise               |
| D registered          |            | F register               |
| F set                 |            | D registered             |
| <b>numbers</b>        | data table | F resolve_begin          |
| <b>ofnode</b>         | function   | F resolve_end            |
| <b>private</b>        | function   | F resolve_reset          |
| <b>public</b>         | function   | F resolve_step           |
| <b>restore</b>        | function   | D scopes                 |
| <b>save</b>           | function   | F setfeatures            |
| <b>showcurrent</b>    | function   | F start                  |
| <b>states</b>         | table      | F stop                   |
| F disabletriggering   |            | B supported              |
| F enabletriggering    |            | D values                 |
| F finalize            |            |                          |
| F initialize          |            |                          |
| F process             |            |                          |
| F selective           |            |                          |
| F stacked             |            |                          |
| F stacker             |            |                          |
| <b>system</b>         | function   |                          |
| <b>transparencies</b> | 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              |            |                          |
| <b>unsetvalue</b>     | number     |                          |
| <b>viewerlayers</b>   | table      |                          |
| N attribute           |            |                          |
| F cleanup             |            |                          |
| D data                |            |                          |
| F define              |            |                          |

# backends (context)

**codeinjections** table  
**current** string  
**defaults** table

T codeinjections  
F gethpos  
F getmatrix  
F getpos  
F getvpos  
F hasmatrix  
T nodeinjections  
T registrations  
D tables

**install** function  
**nodeinjections** table

F restore  
F save  
F transform

**nothing** function  
**pdf** table

T codeinjections  
F addbookmarks  
F attachmentid  
F clonefield  
F definefield  
F definefieldset  
F defineviewerlayer  
F embedfile  
F enabletags  
F exportformdata  
F getbookmarks  
F getdefaultfieldvalue  
F getfieldcategory  
F getfieldset  
F getformatoption  
F gethpos  
F getmatrix  
F getoutputfilename  
F getpos  
F getpreviewfigure  
F getvpos  
F hasmatrix

F insertrenderingwindow  
F mergebookmarks  
F mergereferences  
F mergeviewerlayers  
F prerollreference  
F presetsymbol  
F presetsymbollist  
F processrendering  
F registerdocumentcloseaction  
F registerdocumentopenaction  
F registeredsymbol  
F registerpagecloseaction  
F registerpageopenaction  
F registersymbol  
F setfieldcalculationset  
F setfigurealternative  
F setfigurecolorspace  
F setfiguremask  
F setformat  
F setformsmethod  
F setpagetransition  
F setupcanvas  
F setupidentity  
F setxmpfile  
F startlayer  
F stoplayer  
F supportedformats  
F unicodetoactualtext  
F useviewerlayer  
F validfield  
F validfieldcategory  
F validfieldset  
S comment  
T nodeinjections  
F addtags  
F annotation  
F attachfile  
F changestackedlayer  
F cmykcolor  
F comment  
F destination

- F effect
- F graycolor
- F injectbitmap
- F insertmovie
- F insertsound
- F insertswf
- F insertu3d
- F knockout
- F negative
- F overprint
- F positive
- F reference
- 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)

|                |          |
|----------------|----------|
| <b>arshift</b> | function |
| <b>band</b>    | function |
| <b>bnot</b>    | function |
| <b>bor</b>     | function |
| <b>bswap</b>   | function |
| <b>bxor</b>    | function |
| <b>lshift</b>  | function |
| <b>rol</b>     | function |
| <b>ror</b>     | function |
| <b>rshift</b>  | function |
| <b>tobit</b>   | function |
| <b>tohex</b>   | function |



## bit32 (basic lua)

|                |          |
|----------------|----------|
| <b>arshift</b> | function |
| <b>band</b>    | function |
| <b>bnot</b>    | function |
| <b>bor</b>     | function |
| <b>btest</b>   | function |
| <b>bxor</b>    | function |
| <b>extract</b> | function |
| <b>lrotate</b> | function |
| <b>lshift</b>  | function |
| <b>replace</b> | function |
| <b>rrotate</b> | function |
| <b>rshift</b>  | function |

## blobs (context)

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

## boolean (context)

**tocontext** function

**tonumber** function

## buffers (context)

|                       |          |
|-----------------------|----------|
| <b>append</b>         | function |
| <b>assign</b>         | function |
| <b>collectcontent</b> | function |
| <b>erase</b>          | function |
| <b>exists</b>         | function |
| <b>getcontent</b>     | function |
| <b>getlines</b>       | function |
| <b>loadcontent</b>    | function |
| <b>parallel</b>       | table    |
| F define              |          |
| F hassomecontent      |          |
| F next                |          |
| F place               |          |
| F reset               |          |
| F save                |          |
| <b>prepend</b>        | function |
| <b>raw</b>            | function |
| <b>undent</b>         | function |

# builders (context)

## kernel table

- F hyphenation
- F kerning
- F ligaturing
- F mlist\_to\_hlist
- T originals
  - F hyphenate
  - F kerning
  - F ligaturing

## paragraphs table

- T constructors
  - N attribute
  - F define
  - F disable
  - F enable
  - F handler
- T methods
  - F basic
  - F default
  - F hpack
  - F oneline
- D names
- D numbers
- F set
- F start
- F stop
- T expansion
  - F trace
- F kepttogether
- F registertogether
- T solutions
  - T splitters
    - F define
    - F optimize
  - T registered
    - F reset
    - F set
    - F split
    - F start
    - F stop
- F tag

## profiling table

- F add
- F distance
- F get
- F list
- F pagehandler
- F profilebox
- F set

## 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)

|   |          |
|---|----------|
| <b>ask</b>                                | boolean  |
| <b>base</b>                               | string   |
| <b>collapsecontent</b>                    | function |
| <b>configfiles</b>                        | function |
| <b>contentstate</b>                       | function |
| <b>defaults</b>                           | table    |
| <b>define</b>                             | function |
| <b>direct</b>                             | boolean  |
| <b>force</b>                              | boolean  |
| <b>getfirstreadablefile</b>               | function |
| <b>getfirstreadablefile_TEST_ME_FIRST</b> | function |
| <b>getreadablepaths</b>                   | function |
| <b>getwritablepath</b>                    | function |
| <b>hashed</b>                             | function |
| <b>is_writable</b>                        | function |
| <b>loadcontent</b>                        | function |
| <b>loaddata</b>                           | function |
| <b>more</b>                               | string   |
| <b>relocate</b>                           | boolean  |
| <b>savecontent</b>                        | function |
| <b>savedata</b>                           | function |
| <b>setfirstwritablefile</b>               | function |
| <b>setluanames</b>                        | function |
| <b>tree</b>                               | string   |
| <b>treehash</b>                           | function |
| <b>usedpaths</b>                          | function |

## callback (basic tex)

|                 |                     |
|-----------------|---------------------|
| <b>find</b>     | function            |
| <b>list</b>     | function            |
| <b>register</b> | overloaded function |

## callbacks (context)

|                 |            |
|-----------------|------------|
| <b>freeze</b>   | function   |
| <b>known</b>    | function   |
| <b>list</b>     | data table |
| <b>pop</b>      | function   |
| <b>push</b>     | function   |
| <b>register</b> | function   |
| <b>report</b>   | function   |



## catcodes (context)

**names** data table

**numbers** data table

**register** function

# characters (context)

| <b>activeoffset</b>   | <b>number</b>     | <b>lhash</b>      | <b>data table</b> |
|-----------------------|-------------------|-------------------|-------------------|
| <b>adobename</b>      | <b>function</b>   | <b>linebreaks</b> | <b>table</b>      |
| <b>bidirectional</b>  | <b>data table</b> | S ai              |                   |
| <b>blockrange</b>     | <b>function</b>   | S al              |                   |
| <b>blocks</b>         | <b>data table</b> | S b2              |                   |
| <b>casemap</b>        | <b>table</b>      | S ba              |                   |
| <b>categories</b>     | <b>data table</b> | S bb              |                   |
| <b>category</b>       | <b>function</b>   | S bk              |                   |
| <b>categorytags</b>   | <b>data table</b> | S cb              |                   |
| <b>collapsed</b>      | <b>data table</b> | S cj              |                   |
| <b>combined</b>       | <b>data table</b> | S cl              |                   |
| <b>contextname</b>    | <b>function</b>   | S cm              |                   |
| <b>csletters</b>      | <b>data table</b> | S cp              |                   |
| <b>data</b>           | <b>data table</b> | S cr              |                   |
| <b>decomposed</b>     | <b>data table</b> | S ex              |                   |
| <b>description</b>    | <b>function</b>   | S gl              |                   |
| <b>descriptions</b>   | <b>data table</b> | S h2              |                   |
| <b>detailltags</b>    | <b>data table</b> | S h3              |                   |
| <b>directions</b>     | <b>table</b>      | S hl              |                   |
| <b>encodes</b>        | <b>data table</b> | S hy              |                   |
| <b>entities</b>       | <b>data table</b> | S id              |                   |
| <b>fallbacks</b>      | <b>data table</b> | S in              |                   |
| <b>filters</b>        | <b>data table</b> | S is              |                   |
| <b>fractions</b>      | <b>table</b>      | S jl              |                   |
| <b>fromnumber</b>     | <b>function</b>   | S jt              |                   |
| <b>fschars</b>        | <b>data table</b> | S jv              |                   |
| <b>fscodes</b>        | <b>data table</b> | S lf              |                   |
| <b>getrange</b>       | <b>function</b>   | S nl              |                   |
| <b>graphemes</b>      | <b>data table</b> | S ns              |                   |
| <b>hangul</b>         | <b>data table</b> | S nu              |                   |
| <b>initialize</b>     | <b>function</b>   | S op              |                   |
| <b>is_character</b>   | <b>data table</b> | S po              |                   |
| <b>is_command</b>     | <b>data table</b> | S pr              |                   |
| <b>is_letter</b>      | <b>data table</b> | S qu              |                   |
| <b>is_mark</b>        | <b>data table</b> | S ri              |                   |
| <b>is_punctuation</b> | <b>data table</b> | S sa              |                   |
| <b>is_spacing</b>     | <b>data table</b> | S sg              |                   |
| <b>lcchars</b>        | <b>data table</b> | S sp              |                   |
| <b>lccode</b>         | <b>function</b>   | S sy              |                   |
| <b>lccodes</b>        | <b>data table</b> | S wj              |                   |
| <b>lettered</b>       | <b>function</b>   | S xx              |                   |

|                              |            |
|------------------------------|------------|
| S zw                         |            |
| <b>lower</b>                 | function   |
| <b>math</b>                  | table      |
| <b>mathpairs</b>             | data table |
| <b>mirrors</b>               | table      |
| <b>otfscripts</b>            | data table |
| <b>ranges</b>                | data table |
| <b>registerentities</b>      | function   |
| <b>remap_hangul_syllable</b> | function   |
| <b>setactivecatcodes</b>     | function   |
| <b>setlettercatcodes</b>     | function   |
| <b>shape</b>                 | function   |
| <b>shaped</b>                | function   |
| <b>shash</b>                 | data table |
| <b>shchars</b>               | data table |
| <b>shcodes</b>               | data table |
| <b>showstring</b>            | function   |
| <b>specialchars</b>          | data table |
| <b>specials</b>              | data table |
| <b>splits</b>                | table      |
| T char                       |            |
| T compat                     |            |
| <b>subscripts</b>            | table      |
| <b>superscripts</b>          | table      |
| <b>synonyms</b>              | data table |
| <b>tex</b>                   | table      |
| D accentmapping              |            |
| D commandmapping             |            |
| F defineaccents              |            |
| F safechar                   |            |
| F toutf                      |            |
| F toutfpattern               |            |
| <b>textclasses</b>           | table      |
| <b>tonumber</b>              | function   |
| <b>ucchars</b>               | data table |
| <b>uccode</b>                | function   |
| <b>uccodes</b>               | data table |
| <b>uhash</b>                 | data table |
| <b>unicodechar</b>           | function   |
| <b>upper</b>                 | function   |

## chemistry (context)

|                       |            |
|-----------------------|------------|
| <b>component</b>      | function   |
| <b>define</b>         | function   |
| <b>definitions</b>    | data table |
| <b>format</b>         | string     |
| <b>inlinechemical</b> | function   |
| <b>instance</b>       | string     |
| <b>method</b>         | string     |
| <b>molecule</b>       | function   |
| <b>moleculeparser</b> | userdata   |
| <b>start</b>          | function   |
| <b>stop</b>           | function   |
| <b>structures</b>     | number     |
| <b>undefine</b>       | function   |

## containers (context)

|                   |          |
|-------------------|----------|
| <b>cleannname</b> | function |
| <b>content</b>    | function |
| <b>define</b>     | function |
| <b>is_usable</b>  | function |
| <b>is_valid</b>   | function |
| <b>read</b>       | function |
| <b>usecache</b>   | boolean  |
| <b>write</b>      | function |

## converters (context)

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

## coroutine (basic lua)

|                |          |
|----------------|----------|
| <b>create</b>  | function |
| <b>resume</b>  | function |
| <b>running</b> | function |
| <b>status</b>  | function |
| <b>wrap</b>    | function |
| <b>yield</b>   | function |

## ctxrunner (context)

|                     |            |
|---------------------|------------|
| <b>load</b>         | function   |
| <b>preparedfile</b> | function   |
| <b>prepfiles</b>    | data table |
| <b>resolve</b>      | function   |



## debug (basic lua)

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

## dir (context)

|                       |          |
|-----------------------|----------|
| <b>collectpattern</b> | function |
| <b>current</b>        | function |
| <b>expandname</b>     | function |
| <b>found</b>          | function |
| <b>glob</b>           | function |
| <b>globfiles</b>      | function |
| <b>globpattern</b>    | function |
| <b>ls</b>             | function |
| <b>makedirs</b>       | function |
| <b>makedirs</b>       | function |
| <b>pop</b>            | function |
| <b>push</b>           | function |

## directives (context)

|                 |            |
|-----------------|------------|
| <b>data</b>     | data table |
| <b>default</b>  | function   |
| <b>disable</b>  | function   |
| <b>done</b>     | table      |
| <b>enable</b>   | function   |
| <b>list</b>     | function   |
| <b>name</b>     | string     |
| <b>register</b> | function   |
| <b>report</b>   | function   |
| <b>reset</b>    | function   |
| <b>show</b>     | function   |
| <b>value</b>    | function   |

# document (context)

|                           |            |
|---------------------------|------------|
| <b>arguments</b>          | data table |
| <b>files</b>              | table      |
| <b>getargument</b>        | function   |
| <b>getfilename</b>        | function   |
| <b>options</b>            | table      |
| T cmdline                 |            |
| D environments            |            |
| D modes                   |            |
| D modules                 |            |
| T ctxfile                 |            |
| D environments            |            |
| D modes                   |            |
| D modules                 |            |
| <b>setargument</b>        | function   |
| <b>setcommandline</b>     | function   |
| <b>setdefaultargument</b> | function   |
| <b>setenvironments</b>    | function   |
| <b>setfilename</b>        | function   |
| <b>setfilenames</b>       | function   |
| <b>setmodes</b>           | function   |
| <b>setmodules</b>         | function   |
| <b>variables</b>          | data table |

## environment (context)

|                               |            |                      |            |
|-------------------------------|------------|----------------------|------------|
| <b>argument</b>               | function   | <b>texfile</b>       | function   |
| <b>arguments</b>              | data table | <b>texmfos</b>       | string     |
| <b>basicengines</b>           | data table | <b>texos</b>         | string     |
| <b>currentrun</b>             | number     | <b>texroot</b>       | string     |
| <b>default_texmfcnf</b>       | string     | <b>truefilename</b>  | function   |
| <b>definefileallback</b>      | function   | <b>uselua module</b> | function   |
| <b>definefilesynonym</b>      | function   | <b>usemodules</b>    | function   |
| <b>engineflags</b>            | data table | <b>validengines</b>  | data table |
| <b>filename</b>               | string     |                      |            |
| <b>files</b>                  | table      |                      |            |
| <b>filesynonyms</b>           | data table |                      |            |
| <b>forcedruns</b>             | number     |                      |            |
| <b>getargument</b>            | function   |                      |            |
| <b>homedir</b>                | string     |                      |            |
| <b>initex</b>                 | boolean    |                      |            |
| <b>initializearguments</b>    | function   |                      |            |
| <b>initializefilenames</b>    | function   |                      |            |
| <b>inputfilebarename</b>      | string     |                      |            |
| <b>inputfilename</b>          | string     |                      |            |
| <b>inputfilesuffix</b>        | string     |                      |            |
| <b>jobfilename</b>            | string     |                      |            |
| <b>jobfilesuffix</b>          | string     |                      |            |
| <b>kindofrun</b>              | number     |                      |            |
| <b>loadexamodes</b>           | function   |                      |            |
| <b>loadluafile</b>            | function   |                      |            |
| <b>luafile</b>                | function   |                      |            |
| <b>luafilechunk</b>           | function   |                      |            |
| <b>maxnofruns</b>             | number     |                      |            |
| <b>originalarguments</b>      | data table |                      |            |
| <b>outputfilename</b>         | string     |                      |            |
| <b>ownbin</b>                 | string     |                      |            |
| <b>ownmain</b>                | string     |                      |            |
| <b>ownname</b>                | string     |                      |            |
| <b>ownpath</b>                | string     |                      |            |
| <b>prerollrun</b>             | boolean    |                      |            |
| <b>rawarguments</b>           | data table |                      |            |
| <b>reconstructcommandline</b> | function   |                      |            |
| <b>relativepath</b>           | function   |                      |            |
| <b>setargument</b>            | function   |                      |            |
| <b>splitarguments</b>         | function   |                      |            |
| <b>suffix</b>                 | string     |                      |            |

## epdf (extra tex)

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

## experiments (context)

|                 |            |
|-----------------|------------|
| <b>data</b>     | data table |
| <b>default</b>  | function   |
| <b>disable</b>  | function   |
| <b>enable</b>   | function   |
| <b>list</b>     | function   |
| <b>name</b>     | string     |
| <b>register</b> | function   |
| <b>report</b>   | function   |
| <b>reset</b>    | function   |
| <b>show</b>     | function   |
| <b>value</b>    | function   |

# figures (context)

|                         |            |                         |            |
|-------------------------|------------|-------------------------|------------|
| <b>applyratio</b>       | function   | <b>F totable</b>        |            |
| <b>badname</b>          | function   | <b>F types</b>          |            |
| <b>bases</b>            | data table | <b>F write</b>          |            |
| <b>bitmapimage</b>      | function   | <b>include</b>          | function   |
| <b>boxnumber</b>        | number     | <b>includes</b>         | data table |
| <b>cachepaths</b>       | data table | <b>initialize</b>       | function   |
| <b>check</b>            | function   | <b>loaded</b>           | data table |
| <b>checkers</b>         | data table | <b>localpaths</b>       | data table |
| <b>converters</b>       | data table | <b>magics</b>           | data table |
| <b>current</b>          | function   | <b>mergegoodies</b>     | function   |
| <b>defaultdepth</b>     | number     | <b>nofprocessed</b>     | number     |
| <b>defaultheight</b>    | number     | <b>order</b>            | data table |
| <b>defaultsearch</b>    | boolean    | <b>paths</b>            | data table |
| <b>defaultwidth</b>     | number     | <b>patterns</b>         | data table |
| <b>done</b>             | function   | <b>pop</b>              | function   |
| <b>dummy</b>            | function   | <b>preferquality</b>    | boolean    |
| <b>exists</b>           | data table | <b>programs</b>         | data table |
| <b>exists</b>           | function   | <b>push</b>             | function   |
| <b>formats</b>          | data table | <b>registerpattern</b>  | function   |
| <b>found</b>            | data table | <b>registerresource</b> | function   |
| <b>get</b>              | function   | <b>registersuffix</b>   | function   |
| <b>getrealpage</b>      | function   | <b>resources</b>        | data table |
| <b>guess</b>            | function   | <b>scale</b>            | function   |
| <b>hash</b>             | function   | <b>setlookups</b>       | function   |
| <b>identifiers</b>      | data table | <b>setorder</b>         | function   |
| <b>identify</b>         | function   | <b>setpaths</b>         | function   |
| <b>images</b>           | table      | <b>suffixes</b>         | data table |
| <b>F boxes</b>          |            | <b>used</b>             | data table |
| <b>F check</b>          |            |                         |            |
| <b>F checksize</b>      |            |                         |            |
| <b>F clone</b>          |            |                         |            |
| <b>F copy</b>           |            |                         |            |
| <b>F immediatewrite</b> |            |                         |            |
| <b>F keys</b>           |            |                         |            |
| <b>F new</b>            |            |                         |            |
| <b>F node</b>           |            |                         |            |
| <b>F ofindex</b>        |            |                         |            |
| <b>F package</b>        |            |                         |            |
| <b>F print</b>          |            |                         |            |
| <b>F scan</b>           |            |                         |            |
| <b>F serialize</b>      |            |                         |            |



## file (basic lua)

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

## floats (context)

|                         |          |
|-------------------------|----------|
| <b>analysemethod</b>    | function |
| <b>checkedpagefloat</b> | function |
| <b>collect</b>          | function |
| <b>consult</b>          | function |
| <b>flush</b>            | function |
| <b>getvariable</b>      | function |
| <b>hasstacked</b>       | function |
| <b>nofstacked</b>       | function |
| <b>pop</b>              | function |
| <b>push</b>             | function |
| <b>resave</b>           | function |
| <b>save</b>             | function |
| <b>stacked</b>          | function |

## font (basic tex)

|                 |                     |
|-----------------|---------------------|
| <b>current</b>  | function            |
| <b>define</b>   | function            |
| <b>each</b>     | function            |
| <b>fonts</b>    | table               |
| <b>frozen</b>   | function            |
| <b>getfont</b>  | overloaded function |
| <b>id</b>       | function            |
| <b>max</b>      | function            |
| <b>nextid</b>   | function            |
| <b>read_tfm</b> | function            |
| <b>read_vf</b>  | function            |
| <b>setfont</b>  | function            |

## fontloader (extra tex)

|                          |                     |
|--------------------------|---------------------|
| <b>apply_afmfile</b>     | function            |
| <b>apply_featurefile</b> | function            |
| <b>close</b>             | function            |
| <b>fields</b>            | function            |
| <b>fullinfo</b>          | function            |
| <b>info</b>              | overloaded function |
| <b>open</b>              | overloaded function |
| <b>to_table</b>          | function            |
| <b>totable</b>           | function            |

# fonts (context)

## analyzers table

- T features
  - N blwf
  - N fina
  - N half
  - N init
  - N isol
  - N medi
  - N pref
  - N pstf
  - N rphf
- D initializers
- D methods
- F setstate
- T states
  - N blwf
  - N fina
  - N half
  - N init
  - N isol
  - N mark
  - N medi
  - N pref
  - N pstf
  - N rest
  - N rphf
- B useunicodemarks

## checkers table

- F getmissing
- F missing
- F placeholder

## cid table

- F getmap
- F loadfile

## collections table

- F checkenabled
- F clonevector
- F define
- T definitions
- F found
- F prepare

- F process
- F registermain
- F report
- F reset
- T vectors

## constructors table

- F addcoreunicodes
- F aftercopyingcharacters
- F applymanipulators
- F assignmathparameters
- B autocleanup
- F beforecopyingcharacters
- D cache
- B cacheintex
- F calculatescale
- F checkedfeatures
- F checkedfilename
- F checkvirtualids
- F cleanupable
- F collectprocessors
- F currentfonthasfeature
- D designsizes
- D dontembed
- F enhanceparameters
- N factor
- F finalize
- F getfeatureaction
- F hashfeatures
- F hashinstance
- T hashmethods
  - F normal
  - F virtual
- F initializefeatures
- T keys
  - T character
    - S depth
    - S height
    - S italic
    - S width
  - T description
  - T boundingbox

|                          |                     |          |
|--------------------------|---------------------|----------|
| S depth                  | S xheight           |          |
| S height                 | T properties        |          |
| S width                  | S autoitalicamount  |          |
| T parameters             | T cidinfo           |          |
| S ascender               | S embedding         |          |
| S descender              | S encodingbytes     |          |
| S designsizes            | 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 noglyphnames      |          |
| 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 nofsharedhashes   |          |
| S stretch                | N nofsharedvectors  |          |
| S width                  | N privateoffset     |          |
| T synonyms               | F readanddefine     |          |
| S em                     | F registerfeature   |          |
| S ex                     | B resolvevirtualtoo |          |
| S extra_space            | F scale             |          |
| S extraspace             | F scaled            |          |
| S slant                  | F setfactor         |          |
| S space                  | F setname           |          |
| S space_shrink           | B sharefonts        |          |
| S space_stretch          | F trytosharefont    |          |
| S spaceshrink            | N version           |          |
| S spacestretch           | <b>current</b>      | function |
| S x_height               | <b>currentid</b>    | function |
| S units                  | <b>definers</b>     | table    |
| S vfactor                | F addlookup         |          |

- F analyze
- F applypostprocessors
- F checkedmode
- F checkedscript
- F current
- S defaultlookup
- F define
- F getspecification
- F internal
- F loadfont
- F makespecification
- T methods
  - F install
  - D variants
- F read
- F register
- F registered
- F registersplit
- F resetnullfont
- F resolve
- T resolvers
  - F file
  - F name
  - F spec

**definetypface**    function

**encodings**        table

- T agl
  - D extras
  - D names
- T synonyms
  - N Acyrillic
  - N Becyrillic
  - N Cdot
  - N Checyrillic
  - N Decyrillic
  - N Djecyrillic
  - N Dzecyrillic
  - N Dzhecyrillic
  - N Ecyrillic
  - N Edot
  - N Efcyrillic
  - N Elcyrillic
  - N Emcyrillic
  - N Encyrillic

- N Ercyrillic
- N Ereversedcyrillic
- N Escyrillic
- N Fitacyrillic
- N Gcedilla
- N Gdot
- N Gecyrillic
- N Gheupturncyrillic
- N Gjecyrillic
- N Hardsigncyrillic
- N IAcyrillic
- N IUcyrillic
- N Icyrillic
- N Idot
- N Iecyrillic
- N Iicyrillic
- N Iishortcyrillic
- N Iocyrillic
- N Izhitsacyrillic
- N Jecyrillic
- N Kacyrillic
- N Kcedilla
- N Khacyrillic
- N Kjecyrillic
- N Lcedilla
- N Ljecyrillic
- N Ncedilla
- N Njecyrillic
- N Ocyrillic
- N Odblacute
- N Ohm
- N Pecyrillic
- N Rcedilla
- N Shacyrillic
- N Shchacyrillic
- N Softsigncyrillic
- N Tcedilla
- N Tecyrillic
- N Tsecyrillic
- N Tshecyrillic
- N Ucyrillic
- N Udblacute
- N Ushortcyrillic
- N Vecyrillic

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



|                            |                                  |
|----------------------------|----------------------------------|
| N gimeldagesh              | N holam19                        |
| N gravecmb                 | N holam26                        |
| N haaltonearabic           | N holam32                        |
| N hamzaarabic              | N holamhebrew                    |
| N hamzadammaarabic         | N holamnarrowhebrew              |
| N hamzadammatanarabic      | N holamquarterhebrew             |
| N hamzafathaarabic         | N ilde                           |
| N hamzafathatanarabic      | N integralbottom                 |
| N hamzalowarabic           | N integraltop                    |
| N hamzalowkasraarabic      | N kaf                            |
| N hamzalowkasratanarabic   | N kafdagesh                      |
| N hatafpatah               | N kashidaautoarabic              |
| N hatafpatah16             | N kashidaautonosidebearingarabic |
| N hatafpatah23             | N kcedilla                       |
| N hatafpatah2f             | N lamed                          |
| N hatafpatahhebrew         | N lameddagesh                    |
| N hatafpatahnarrowhebrew   | N lamedhebrew                    |
| N hatafpatahquarterhebrew  | N lamedholam                     |
| N hatafqamats              | N lamedholamdagesh               |
| N hatafqamats1b            | N lamedholamdageshhebrew         |
| N hatafqamats28            | N laminitialarabic               |
| N hatafqamats34            | N lammeemjeeminitialarabic       |
| N hatafqamatshebrew        | N lcedilla                       |
| N hatafqamatsnarrowhebrew  | N logicalnotreversed             |
| N hatafqamatsquarterhebrew | N mahapakhhebrew                 |
| N hatafsegol               | N mem                            |
| N hatafsegol17             | N memdagesh                      |
| N hatafsegol24             | N merkhahhebrew                  |
| N hatafsegol30             | N merkhakefulahebrew             |
| N hatafsegolhebrew         | N middot                         |
| N hatafsegolnarrowhebrew   | N munahhebrew                    |
| N hatafsegolquarterhebrew  | N nbspace                        |
| N he                       | N ncedilla                       |
| N hedagesh                 | N newsheqelsign                  |
| N hehfinalalttwoarabic     | N ninearabic                     |
| N het                      | N noonhehinitialarabic           |
| N hiriq                    | N nun                            |
| N hiriq14                  | N nundagesh                      |
| N hiriq21                  | N odblacute                      |
| N hiriq2d                  | N onearabic                      |
| N hiriqhebrew              | N overscore                      |
| N hiriqnarrowhebrew        | N patah                          |
| N hiriqquarterhebrew       | N patah11                        |
| N holam                    | N patah1d                        |

|                            |                        |
|----------------------------|------------------------|
| N patah2a                  | N qubuts18             |
| N patahhebrew              | N qubuts25             |
| N patahnarrowhebrew        | N qubuts31             |
| N patahquarterhebrew       | N qubutshebrew         |
| N pe                       | N qubutsnarrowhebrew   |
| N pedagesh                 | N qubutsquarterhebrew  |
| N qamats                   | N quotelleftreversed   |
| N qamats10                 | N rafe                 |
| N qamats1a                 | N rcedilla             |
| N qamats1c                 | N reharabic            |
| N qamats27                 | N resh                 |
| N qamats29                 | N reshhatafpatah       |
| N qamats33                 | N reshhatafpatahhebrew |
| N qamatsde                 | N reshhatafsegol       |
| N qamatshebrew             | N reshhatafsegolhebrew |
| N qamatsnarrowhebrew       | N reshhebrew           |
| N qamatsqatanhebrew        | N reshhiqiq            |
| N qamatsqatannarrowhebrew  | N reshhiqiqhebrew      |
| N qamatsqatanquarterhebrew | N reshholam            |
| N qamatsqatanwidehebrew    | N reshholamhebrew      |
| N qamatsquarterhebrew      | N reshpatah            |
| N qof                      | N reshpatahhebrew      |
| N qofdagesh                | N reshqamats           |
| N qofhatafpatah            | N reshqamatshebrew     |
| N qofhatafpatahhebrew      | N reshqubuts           |
| N qofhatafsegol            | N reshqubutshebrew     |
| N qofhatafsegolhebrew      | N reshsegol            |
| N qofhebrew                | N reshsegolhebrew      |
| N qofhiriq                 | N reshsheva            |
| N qofhiriqhebrew           | N reshshevahebrew      |
| N qofholam                 | N reshtsere            |
| N qofholamhebrew           | N reviahebrew          |
| N qofpatah                 | N samekh               |
| N qofpatahhebrew           | N samekhdagesh         |
| N qofqamats                | N segol                |
| N qofqamatshebrew          | N segol13              |
| N qofqubuts                | N segol1f              |
| N qofqubutshebrew          | N segol2c              |
| N qofsegol                 | N segolhebrew          |
| N qofsegolhebrew           | N segolnarrowhebrew    |
| N qofsheva                 | N segolquarterhebrew   |
| N qofshevahebrew           | N sevenarabic          |
| N qoftsere                 | N sfthyphen            |
| N qubuts                   | N shaddaarabic         |

|                            |                              |
|----------------------------|------------------------------|
| N sheqel                   | N yerahbenyomohebrew         |
| N sheva                    | N yod                        |
| N sheva115                 | N yoddagesh                  |
| N sheva15                  | N zayin                      |
| N sheva22                  | N zayindagesh                |
| N sheva2e                  | N zdot                       |
| N shevahebrew              | N zeroarabic                 |
| N shevanarrowhebrew        | D unicodes                   |
| N shevaquarterhebrew       | D cache                      |
| N shin                     | F is_known                   |
| N shindagesh               | D known                      |
| N shindageshshindot        | F load                       |
| N shindageshsindot         | F make_unicode_vector        |
| N shinshindot              | D math                       |
| N shinsindot               | N version                    |
| N siluqhebrew              | <b>expansions</b> data table |
| N sixarabic                | <b>formats</b> data table    |
| N tav                      | <b>goodies</b> table         |
| N tavdages                 | D colorschemes               |
| N tavdagesh                | D data                       |
| N tcedilla                 | D designsizes                |
| N tchehinitialarabic       | D filenames                  |
| N tet                      | F getcompositions            |
| N tetdagesh                | T list                       |
| N tevirhebrew              | F compositions               |
| N thousandsseparatorarabic | F designsizes                |
| N threearabic              | F expansions                 |
| N tildecmb                 | F featureset                 |
| N tipehahebrew             | F filenames                  |
| N tsadi                    | F files                      |
| N tsadidagesh              | F mathematics                |
| N tsere                    | F protrusions                |
| N tsere12                  | F solutions                  |
| N tsere1e                  | F treatments                 |
| N tsere2b                  | F typefaces                  |
| N tserehebrew              | F load                       |
| N tserenarrowhebrew        | F prepare_features           |
| N tserequarterhebrew       | F register                   |
| N twoarabic                | F registerpostprocessor      |
| N udblacute                | F report                     |
| N vav                      | <b>handlers</b> table        |
| N vavdagesh                | T afm                        |
| N vavdagesh65              | B addkerns                   |
| N vavholam                 | B addligatures               |

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

|                           |                 |                       |                   |
|---------------------------|-----------------|-----------------------|-------------------|
| D lastmathids             |                 | F fromunicode16       |                   |
| D marks                   |                 | F loadfile            |                   |
| D modes                   |                 | F loadline            |                   |
| D originals               |                 | F loadlumtable        |                   |
| D parameters              |                 | F makenameparser      |                   |
| T processes               |                 | D overloads           |                   |
| D properties              |                 | F reset               |                   |
| D quads                   |                 | F tounicode           |                   |
| D resources               |                 | F tounicode16         |                   |
| T setdynamics             |                 | F tounicode16sequence |                   |
| D spaces                  |                 | <b>mp</b>             | <b>table</b>      |
| D spacings                |                 | D cache               |                   |
| D unicodes                |                 | B inline              |                   |
| D xheights                |                 | N version             |                   |
| <b>helpers</b>            | <b>table</b>    | <b>names</b>          | <b>data table</b> |
| F addprivate              |                 | <b>nulldata</b>       | <b>data table</b> |
| F dimenfactor             |                 | <b>protrusions</b>    | <b>data table</b> |
| F expandglyph             |                 | <b>readers</b>        | <b>table</b>      |
| F fontpatternhassize      |                 | F afm                 |                   |
| F getdigitwidth           |                 | F check_lua           |                   |
| F getparameters           |                 | F check_tfm           |                   |
| F getprivatenode          |                 | F dfont               |                   |
| F hasprivate              |                 | F lua                 |                   |
| F indextoslot             |                 | F opentype            |                   |
| F name                    |                 | F otf                 |                   |
| F nametoslot              |                 | F pfb                 |                   |
| F setdigitwidth           |                 | D sequence            |                   |
| F splitfontpattern        |                 | F tfm                 |                   |
| F tochar                  |                 | F ttc                 |                   |
| <b>infofont</b>           | <b>function</b> | F ttf                 |                   |
| <b>iterators</b>          | <b>table</b>    | <b>select</b>         | <b>table</b>      |
| F characters              |                 | T data                |                   |
| F descriptions            |                 | F define              |                   |
| F glyphs                  |                 | F definetypeface      |                   |
| <b>loggers</b>            | <b>table</b>    | T fallbacks           |                   |
| F add_placeholders        |                 | F filterinput         |                   |
| D category_to_placeholder |                 | T methods             |                   |
| F format                  |                 | F default             |                   |
| F onetimemessage          |                 | F features            |                   |
| F register                |                 | F file                |                   |
| F reportdefinedfonts      |                 | F goodies             |                   |
| F reportusedfeatures      |                 | F name                |                   |
| <b>mappings</b>           | <b>table</b>    | F selectfont          |                   |
| F addtounicode            |                 | F simplefonts         |                   |

- F spec
- F style
- F registerfallback
- F searchfiles

**specifiers**      table

- D contextmerged
- F contextnumber
- D contextnumbers
- D contextsetups
- F contexttostring
- F definecontext
- F mergecontext
- F presetcontext
- F registercontext
- F showcontext
- F splitcontext
- D synonyms
- D variants

**symbols**      table

- F uselibrary

**tables**      table

**tracers**      table

**treatments**      table

- F applyfixes
- D data
- S filename
- F ignoredfile
- F report
- F trace

**typefaces**      data table

# functions (context)

**dummy** function

# graphics (context)

## **backgrounds** table

F calculatemultipar

F fetchmultipar

F pair

F path

F point



## gzip (extra lua)

|               |          |
|---------------|----------|
| <b>close</b>  | function |
| <b>lines</b>  | function |
| <b>load</b>   | function |
| <b>open</b>   | function |
| <b>save</b>   | function |
| <b>suffix</b> | function |

## img (basic tex)

|                       |          |
|-----------------------|----------|
| <b>boxes</b>          | function |
| <b>check</b>          | function |
| <b>checksize</b>      | function |
| <b>clone</b>          | function |
| <b>copy</b>           | function |
| <b>immediatewrite</b> | function |
| <b>keys</b>           | function |
| <b>new</b>            | function |
| <b>node</b>           | function |
| <b>ofindex</b>        | function |
| <b>package</b>        | function |
| <b>print</b>          | function |
| <b>scan</b>           | function |
| <b>serialize</b>      | function |
| <b>totable</b>        | function |
| <b>types</b>          | function |
| <b>write</b>          | 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

**pages** table

F setpagetransition

F setupcanvas

**references** table

F setcloseddocument

F setclosepage

F setopendocument

F setopenpage

**renderings** data table

**soundclips** data table

# interfaces (context)

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

|                             |                          |
|-----------------------------|--------------------------|
| F btxaddjournal             | F btxsetentry            |
| F btxauthor                 | F btxsetregister         |
| F btxauthorfield            | F btxsetspecification    |
| F btxauthortoregister       | F btxsingularorplural    |
| F btxcollectlistentries     | F btxtoregister          |
| F btxcurrentfirstnames      | F btxusedataset          |
| F btxcurrentinitials        | F btxuservariable        |
| F btxcurrentjuniors         | F buildtextaccent        |
| F btxcurrentsurnames        | F character              |
| F btxcurrentvons            | F characters             |
| F btxdetail                 | F chardescription        |
| F btxdirect                 | F checkcountersetup      |
| F btxdoif                   | F checkedconversion      |
| F btxdoifelse               | F checkedpagefloat       |
| F btxdoifelsecombiinlist    | F checkinjector          |
| F btxdoifelsesameasprevious | F checkinterfacechain    |
| F btxdoifelseuservariable   | F checknextinjector      |
| F btxdoifnot                | F checkpreviousinjector  |
| F btxexpandedjournal        | F checktwopassdata       |
| F btxfetchlistentries       | F chemicalcomponent      |
| F btxfield                  | F chinesenumerals        |
| F btxfieldname              | F cleanfontname          |
| F btxfieldtype              | F cleanupbox             |
| F btxfirstofrange           | F cleanuplayers          |
| F btxflush                  | F clonefield             |
| F btxflushlistcombi         | F collectfloat           |
| F btxflushlistentry         | F collecthelp            |
| F btxflushmarked            | F colorcomponents        |
| F btxflushpages             | F concatcommalist        |
| F btxfoundname              | F consultfloat           |
| F btxfoundtype              | F convertbtxdatasettoxml |
| F btxhandlecite             | F converteddimen         |
| F btxhandlenocite           | F converttmpstopdf       |
| F btxlastofrange            | F copyposition           |
| F btxlistvariant            | F cos                    |
| F btxloaddefinitionfile     | F cosd                   |
| F btxloadjournallist        | F countervalue           |
| F btxloadreplacementfile    | F counttwopassdata       |
| F btxoneorrange             | F currentcomponent       |
| F btxpreparelistentries     | F currentdate            |
| F btxremapauthor            | F currentdesignsize      |
| F btxsavedataset            | F currentenvironment     |
| F btxsavejournallist        | F currentposthyphenchar  |
| F btxsetdataset             | F currentprehyphenchar   |

|                              |                                |
|------------------------------|--------------------------------|
| F currentproduct             | F defineprogram                |
| F currentproject             | F definereference              |
| F currentreferenceorder      | F defineregister               |
| F currentsectiontolist       | F definerule                   |
| F datasetvariable            | F definesectionlevels          |
| F dayname                    | F defineselectfont             |
| F decrementcounter           | F defineshift                  |
| F decrementedcounter         | F definesnapmethod             |
| F decrementsubcounter        | F definespotcolorglobal        |
| F defineaccents              | F definestructureblock         |
| F defineattribute            | F definestructureset           |
| F definebreakpoint           | F definetransparency           |
| F definebreakpoints          | F definetwopasslist            |
| F definecharacterspacing     | F definetypeface               |
| F definechemical             | F defineviewerlayer            |
| F defineconversion           | F depthnumber                  |
| F definecounter              | F digits_normal                |
| F definedlayoutcomponent     | F digits_reverse               |
| F definefallbackfamily       | F disableautofontscript        |
| F definefield                | F disabledirectives            |
| F definefieldset             | F disableexperiments           |
| F definefilefallback         | F disablejobsave               |
| F definefilesynonym          | F disableparbuilder            |
| F definefont_one             | F disableregime                |
| F definefont_two             | F disablespellchecking         |
| F definefontfamily           | F disablestatetriggering       |
| F definefontfeature          | F disablestream                |
| F definefontsolution         | F disabletrackers              |
| F definehyphenationfeatures  | F discardfromlist              |
| F defineinsertion            | F doanalyzeframedbox           |
| F defineintermediatecolor    | F doifcounter                  |
| F definelabels               | F doifelseblack                |
| F definelanguage             | F doifelsebuffer               |
| F definelinkedlist           | F doifelsecharinfont           |
| F definemarking              | F doifelsecommon               |
| F definemetafont             | F doifelsecontinnewithfile     |
| F definemultitonecolorglobal | F doifelseconverter            |
| F definenamespace            | F doifelsecounter              |
| F definenote                 | F doifelsecurrentfontasfeature |
| F defineparallel             | F doifelsedrawingblack         |
| F defineparbuilder           | F doifelsefieldcategory        |
| F defineprocesscolordummy    | F doifelsefiledefined          |
| F defineprocesscolorglobal   | F doifelsefileexist            |
| F defineprocesscolorlocal    | F doifelsefirstchar            |

|                                |                          |
|--------------------------------|--------------------------|
| F doifelsefontpresent          | F doreshapeframedbox     |
| F doifelseinelement            | F dosaveposition         |
| F doifelseinputfile            | F dosavepositionplus     |
| F doifelseinset                | F dosavepositionwhd      |
| F doifelseintwopassdata        | F dosetposition          |
| F doifelseleapyear             | F dosetpositionbox       |
| F doifelselisthasentry         | F dosetpositionplus      |
| F doifelselisthasnumber        | F dosetpositionstrut     |
| F doifelselisthaspage          | F dosetpositionwhd       |
| F doifelselisthastitle         | F dostartttextfile       |
| F doifelselocfile              | F dostoptextfile         |
| F doifelsemarking              | F elapsedtime            |
| F doifelsemessage              | F enableasciimode        |
| F doifelseobjectreferencefound | F enableautofontscript   |
| F doifelseolderversion         | F enablebackgroundalign  |
| F doifelseoverlapping          | F enablebackgroundboxes  |
| F doifelseparallel             | F enablecolor            |
| F doifelseparentfile           | F enablecolorintents     |
| F doifelsepathexist            | F enablecrlf             |
| F doifelseposition             | F enabledirectives       |
| F doifelsepositiononpage       | F enableexperiments      |
| F doifelsepositionsonsamepage  | F enablefontcolorschemas |
| F doifelsepositionsonthispage  | F enableinteraction      |
| F doifelsepositionsused        | F enableparbuilder       |
| F doifelserangeonpage          | F enableregime           |
| F doifelserreference           | F enablerules            |
| F doifelsesame                 | F enableshifts           |
| F doifelsestackedfloats        | F enablespellchecking    |
| F doifelsesynonymshown         | F enablestatetriggering  |
| F doifelsesynonymused          | F enablestream           |
| F doifelseurldefined           | F enabletrackers         |
| F doifelseutfmathabove         | F enabletransparency     |
| F doifelseutfmathaccent        | F enableutf              |
| F doifelseutfmathbelow         | F enhancelinkedlist      |
| F doifelseutfmathfiller        | F enhancelist            |
| F doifelsevisualizer           | F enhancereference       |
| F doiffieldsetelse             | F enhanceregister        |
| F doifnotcounter               | F eposcolumn             |
| F doifnotecontent              | F eposcolumnregistered   |
| F doifnoteonsamepageasprevious | F erasebuffer            |
| F doifnotsame                  | F execute                |
| F doifposition                 | F expandcurrentreference |
| F doifsame                     | F exportformdata         |
| F doprocesstypescriptfile      | F exportreferences       |

|                             |                                 |
|-----------------------------|---------------------------------|
| F extendregister            | F fontchar                      |
| F extensiblecode            | F fontcharbyindex               |
| F featureattribute          | F fontcollectionclone           |
| F featurelist               | F fontcollectiondefine          |
| F feedback                  | F fontcollectionprepare         |
| F fetchallmarks             | F fontcollectionregister        |
| F fetchmultipar             | F fontcollectionreport          |
| F fetchmultishape           | F fontcollectionreset           |
| F fetchonemark              | F fontlookupgetkey              |
| F fetchposboxes             | F fontlookupgetkeyofindex       |
| F fetchtwomarks             | F fontlookupinitialize          |
| F figure_check              | F fontlookupnoffound            |
| F figure_done               | F forceendjob                   |
| F figure_dummy              | F forcequitjob                  |
| F figure_identify           | F formatcolor                   |
| F figure_include            | F formatgray                    |
| F figure_mergegoodies       | F from                          |
| F figure_pop                | F getbidimode                   |
| F figure_push               | F getbodyfontsizes              |
| F figure_reset              | F getbuffer                     |
| F figure_scale              | F getbuffercxtlua               |
| F figurefilename            | F getbuffermkvi                 |
| F figurefilepath            | F getcheckedinterfaceparameters |
| F figurefiletype            | F getcurrentprefixspec          |
| F figurerequest             | F getcurrentreferencemetadata   |
| F figurestatus              | F getdefaultfieldvalue          |
| F figureused                | F getdocumentargument           |
| F filterdefaultreference    | F getdocumentfilename           |
| F filterreference           | F getelementtag                 |
| F finalizebox               | F getfieldcategory              |
| F findtwopassdata           | F getfile                       |
| F finishexport              | F getfirstcharacter             |
| F firstcountervalue         | F getfirsttwopassdata           |
| F firstinset                | F getfloatvariable              |
| F firstsubcountervalue      | F getfullstructurenumber        |
| F flushfloat                | F getinternallistreference      |
| F flushlabeledfloat         | F getlasttwopassdata            |
| F flushnotes                | F getmarking                    |
| F flushpageinjectionsafter  | F getmessage                    |
| F flushpageinjectionsbefore | F getmpextensions               |
| F flushpostponedblocks      | F getmprandomnumber             |
| F flushpostponednotes       | F getnotestate                  |
| F flushstream               | F getprivatechar                |
| F flushstreamcopy           | F getprogram                    |



|                              |                              |
|------------------------------|------------------------------|
| F getrandomdimen             | F insertrenderingwindow      |
| F getrandomfloat             | F installedlanguages         |
| F getrandomnumber            | F installtexdirective        |
| F getrandomseed              | F installtextracker          |
| F getreadfilename            | F jobfilename                |
| F getsomefullstructurenumber | F jobfilesuffix              |
| F getsomestructurenumber     | F languagenumber             |
| F getspecificstructuretitle  | F lastcountervalue           |
| F getstructurelevel          | F lastsubcountervalue        |
| F getstructurenumber         | F lchexnumber                |
| F getsubstring               | F lchexnumbers               |
| F gettexbuffer               | F leapyear                   |
| F gettwopassdata             | F linenumbersstageone        |
| F gettwopassdatalist         | F linenumbersstagetwo        |
| F geturl                     | F listgroupindex             |
| F getvisual                  | F listlabel                  |
| F hboxtovbox                 | F listlocation               |
| F helpaction                 | F listnamespaces             |
| F helpreference              | F listprefixednumber         |
| F hexstringtonumber          | F listprefixedpage           |
| F horizontalcode             | F listrealpage               |
| F hour                       | F listsize                   |
| F hyphenatedlist             | F listtitle                  |
| F hyphenatedurl              | F listuserdata               |
| F immediatemessage           | F loadexamodes               |
| F incrementcounter           | F loadfontgoodies            |
| F incrementedcounter         | F loadluamodule              |
| F incrementsubcounter        | F loadmapfile                |
| F initializejob              | F loadmapline                |
| F initializestream           | F loadspellchecklist         |
| F initializetexdirectives    | F loadtypescriptfile         |
| F initializetextrackers      | F loadvisualizer             |
| F injectcurrentreference     | F locatefilepath             |
| F injectcurrentreferencehtdp | F locfilename                |
| F injectreference            | F lower                      |
| F inlinechemical             | F lpdf_adddocumentcolorspace |
| F inputfilebarename          | F lpdf_adddocumenttextgstate |
| F inputfilename              | F lpdf_adddocumentpattern    |
| F inputfilerealsuffix        | F lpdf_adddocumentsshade     |
| F inputfilesuffix            | F lpdf_addpageattributes     |
| F insertattachment           | F lpdf_addpageresources      |
| F insertcomment              | F lpdf_addpagesattributes    |
| F insertfield                | F lpdf_addtocatalog          |
| F insertionnumber            | F lpdf_addtoinfo             |

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|---------------------------|------------------------------|
| F lpdf_addtonames         | F mptexget                   |
| F lpdf_collectedresources | F mptexreset                 |
| F lpdf_color              | F mptexset                   |
| F luascript               | F mptexsetfrombuffer         |
| F luathread               | F namedstructureuservariable |
| F lxmldid                 | F namedstructurevariable     |
| F markcontent             | F nbfs                       |
| F markingnumber           | F nextcountervalue           |
| F markingtitle            | F nextparallel               |
| F markinjector            | F nextsubcountervalue        |
| F markregionbox           | F nofdays                    |
| F markregionboxcorrected  | F nofstackedfloats           |
| F markregionboxtagged     | F notedeltapage              |
| F markvisualfonts         | F notelistindex              |
| F mathfraction            | F notenumberpage             |
| F mathrenderset           | F noteprefixednumber         |
| F metapostescaped         | F notesymbolpage             |
| F metapostformatted       | F notetitle                  |
| F metapostgraphformat     | F ntimes                     |
| F minute                  | F number                     |
| F mixcleanup              | F numbers                    |
| F mixfinalize             | F objectnumber               |
| F mixflushlist            | F objectpage                 |
| F mixflushrest            | F octnumber                  |
| F mixgetsplit             | F octstringtonumber          |
| F mixsetsplit             | F operatingsystem            |
| F mixstate                | F ordinal                    |
| F molecule                | F outputfilename             |
| F month                   | F overloadbookmark           |
| F monthmnem               | F overloaderror              |
| F monthname               | F pagestatereallpage         |
| F mpcolor                 | F parpos                     |
| F mpflushliteral          | F pdfrotation                |
| F mpflushreset            | F pdfstartmatrix             |
| F mpgettext               | F pdfstartmirroring          |
| F mpgraphic               | F pdfstartrotation           |
| F mpoptions               | F pdfstartscaling            |
| F mprunset                | F pdfstopmatrix              |
| F mpruntab                | F pdfstopmirroring           |
| F mprunvar                | F pdfstoprotation            |
| F mpsetclippath           | F pdfstopscaling             |
| F mpsetoutercolor         | F percentageof               |
| F mpsetsxxy               | F pgfxcolorspec              |
| F mpsettext               | F pickupbuffer               |

|                           |                                |
|---------------------------|--------------------------------|
| F pickupmarkedcontent     | F rawcharacter                 |
| F pickuppunctuation       | F rawcountervalue              |
| F placeparallel           | F rawdate                      |
| F popfloat                | F rawsubcountervalue           |
| F pophyphenation          | F referencepagedetail          |
| F popitaliccorrection     | F referencepagestate           |
| F poplist                 | F referencerealpage            |
| F poppath                 | F registerattachment           |
| F poprandomseed           | F registerbackendsymbol        |
| F popreferenceprefix      | F registerbodyfontsize         |
| F popregime               | F registerbookmark             |
| F popsectionblock         | F registerbuttons              |
| F postponeotes            | F registercolorintent          |
| F prefixedconverted       | F registeredviewerlayer        |
| F presetsymbollist        | F registerfigurepattern        |
| F presettabulate          | F registerfiguresuffix         |
| F prevcountervalue        | F registerhelp                 |
| F previoussubcountervalue | F registerhyphenationexception |
| F processbodyfontsizes    | F registerhyphenationpattern   |
| F processbuffer           | F registeritemgroup            |
| F processcolorcomponents  | F registerlanguagefeatures     |
| F processedfile           | F registerlinenumbering        |
| F processedfiles          | F registermaintextcolor        |
| F processfile             | F registermpyfile              |
| F processfilemany         | F registernamedlua             |
| F processfilenone         | F registernamespace            |
| F processfileonce         | F registerpostponedblock       |
| F processjob              | F registerrendering            |
| F processlist             | F registersection              |
| F processregister         | F registershownsynonym         |
| F processsplit            | F registerstructureprocessor   |
| F processsynonyms         | F registersynonym              |
| F profilebox              | F registerunit                 |
| F purefontname            | F registerusedsynonym          |
| F pushfloat               | F registeruserdata             |
| F pushhyphenation         | F relatemarking                |
| F pushitaliccorrection    | F renderingvar                 |
| F pushlist                | F replacefeature               |
| F pushpath                | F replacepospxywhd             |
| F pushrandomseed          | F reportstructure              |
| F pushreferenceprefix     | F resavefloat                  |
| F pushregime              | F resetcharacteralign          |
| F pushsectionblock        | F resetcounter                 |
| F pushstream              | F reseteffect                  |

|                            |                              |
|----------------------------|------------------------------|
| F resetfeature             | F savepageinjections         |
| F resetfontfeature         | F saveparallel               |
| F resetfontsolution        | F savespecificfloat          |
| F resetinjector            | F savestructureblock         |
| F resetitaliccorrection    | F savetaggedtwopassdata      |
| F resetmapfiles            | F savetwopassdata            |
| F resetmarking             | F savevariable               |
| F resetmathattributes      | F second                     |
| F resetmathitalics         | F selectstructureblock       |
| F resetnullfont            | F setactivecatcodes          |
| F resetparallel            | F setbreakpoints             |
| F resetpath                | F setcharacteralign          |
| F resetprevdepth           | F setcharactercasing         |
| F resetreference           | F setcharactercleaning       |
| F resetscript              | F setcharacterkerning        |
| F resetshownsynonyms       | F setcharacterspacing        |
| F resetstructureprocessor  | F setcharacterstripping      |
| F resetsubcounter          | F setcloseddocumentaction    |
| F resettimer               | F setclosepageaction         |
| F resettrackers            | F setcolormodel              |
| F resetusedsynonyms        | F setcounter                 |
| F restartcounter           | F setdataset                 |
| F restartsubcounter        | F setdigitsmanipulation      |
| F restorecounter           | F setdirection               |
| F restorecurrentattributes | F setdocumentargument        |
| F restorenote              | F setdocumentcommandline     |
| F reuserandomseed          | F setdocumentctxfile         |
| F revivefeature            | F setdocumentdefaultargument |
| F romannumerals            | F setdocumentenvironments    |
| F rounded                  | F setdocumentfilename        |
| F runbuffer                | F setdocumentfilenames       |
| F runcontextjob            | F setdocumentmodes           |
| F safechar                 | F setdocumentmodules         |
| F savebuffer               | F seteffect                  |
| F savecounter              | F setelementuserproperties   |
| F savecurrentattributes    | F setfigurelookuporder       |
| F savedlistnumber          | F setfigurepaths             |
| F savedlistprefixednumber  | F setfirstline               |
| F savedlisttitle           | F setfontfeature             |
| F savefloat                | F setfontofid                |
| F savemargindata           | F setfontsolution            |
| F savenote                 | F setformat                  |
| F saveobject               | F setformsmethod             |
| F savepagedata             | F sethyphenatedurlcharacters |

|                            |                           |
|----------------------------|---------------------------|
| F sethyphenationfeatures   | F setrealspaces           |
| F sethyphenationmethod     | F setreferencearguments   |
| F setinitial               | F setreferenceattribute   |
| F setinjector              | F setreferenceoperation   |
| F setinnerreferencemethod  | F setregionbox            |
| F setinsertionlocation     | F setregionboxtagged      |
| F setinterfaceconstant     | F setregistermethod       |
| F setinterfaceelement      | F setreplacements         |
| F setinterfacemessage      | F setscript               |
| F setinterfacemessages     | F setsectionblock         |
| F setinterfacevariable     | F setsectionentry         |
| F setinternalreference     | F setstructureblockstate  |
| F setitaliccorrection      | F setstructurelevel       |
| F setjavascriptpreamble    | F setstructurenumber      |
| F setjobcomment            | F setsubcounter           |
| F setlanguageexceptions    | F settagaspect            |
| F setlanguagesynonym       | F settagcombination       |
| F setlettercatcodes        | F settagdescription       |
| F setmarking               | F settagdescriptionsymbol |
| F setmathalphabet          | F settagfigure            |
| F setmathalternate         | F settaggedmetadata       |
| F setmathattribute         | F settaghighlight         |
| F setmathdirection         | F settagitem              |
| F setmathitalics           | F settagitemgroup         |
| F setmathstyle             | F settaglist              |
| F setmpextensions          | F settagproperty          |
| F setnegative              | F settagproperty_b        |
| F setnextinternalreference | F settagproperty_n        |
| F setnextreferenceorder    | F settagregister          |
| F setnotestate             | F settagsorting           |
| F setnotesymbolpage        | F settagssynonym          |
| F setobject                | F settagtablecell         |
| F setopendocumentaction    | F settagtabulatecell      |
| F setopenpageaction        | F setupbookmarks          |
| F setowncounter            | F setupcanvas             |
| F setownsubcounter         | F setupcharacterspacing   |
| F setpagecolormodel        | F setupexport             |
| F setpagestate             | F setupfontexpansion      |
| F setpagestaterealpageno   | F setupfontprotrusion     |
| F setpagetransition        | F setupidentity           |
| F setparbuilder            | F setupinsertion          |
| F setprofile               | F setupitaliccorrection   |
| F setrandomseed            | F setuplinenumbering      |
| F setrealign               | F setuserinterface        |

|                         |                             |
|-------------------------|-----------------------------|
| F setvalidinterfacekeys | F stopchemical              |
| F setvisual             | F stopcolorset              |
| F setvisualfont         | F stopcomponent             |
| F setvisuallayer        | F stopenvironment           |
| F setxmpfile            | F stopfontsolution          |
| F showassignerror       | F stopparbuilder            |
| F showattributes        | F stopproduct               |
| F showcounter           | F stopproject               |
| F showdebuginfo         | F stopregime                |
| F showdirectives        | F stopsectionlevel          |
| F showdiscretionaries   | F stopstream                |
| F showexperiments       | F stoptag                   |
| F showhyphenatedinlist  | F stoptext                  |
| F showhyphenationtrace  | F stopviewerlayer           |
| F showinjector          | F storejavascriptcode       |
| F showjustification     | F storejavascriptpreamble   |
| F showlogcategories     | F storenote                 |
| F showmessage           | F storeregister             |
| F showtrackers          | F strdp                     |
| F sin                   | F strhd                     |
| F sind                  | F strht                     |
| F splitfilename         | F strip                     |
| F spotcolorname         | F structureautocatcodedget  |
| F spotcolorparent       | F structurecatcodedget      |
| F spotcolorvalue        | F structuregivencatcodedget |
| F startactualtext       | F structurenumber           |
| F startchemical         | F structuretitle            |
| F startcolorset         | F structureuservariable     |
| F startcomponent        | F structurevariable         |
| F startenvironment      | F strwd                     |
| F startfontsolution     | F subcountervalue           |
| F startparbuilder       | F subcountervalues          |
| F startproduct          | F subsubcountervalues       |
| F startproject          | F subtractfeature           |
| F startregime           | F synchronizemarking        |
| F startsectionlevel     | F synchronizestream         |
| F startstream           | F synonymmeaning            |
| F starttag              | F synonymname               |
| F starttag_c            | F systemlog                 |
| F starttag_d            | F tagmfunctionlab           |
| F starttag_u            | F tagmfunctiontxt           |
| F starttext             | F tan                       |
| F startviewerlayer      | F tand                      |
| F stopactualtext        | F texdefinition_one         |

|                          |                                     |
|--------------------------|-------------------------------------|
| F texdefinition_two      | F usexmlfile                        |
| F textime                | F usexmlfileonce                    |
| F thefirstcharacter      | F usezipfile                        |
| F theremainingcharacters | F utfchar                           |
| F tochar                 | F utfmathclass                      |
| F transparencycomponents | F utfmathcommand                    |
| F truefilename           | F utfmathcommandabove               |
| F type                   | F utfmathcommandbelow               |
| F typebuffer             | F utfmathcommandfiller              |
| F typefile               | F utfmathfiller                     |
| F uchar                  | F utfmathstretch                    |
| F uchexnumber            | F vboxlisttohbox                    |
| F uchexnumbers           | F verbose                           |
| F undefinechemical       | F vspacing                          |
| F unicodechar            | F vspacingcollapse                  |
| F unihex                 | F vspacingcollapseonly              |
| F unit_normal            | F vspacingdefine                    |
| F unit_reverse           | F vspacingsetamount                 |
| F unloadlanguage         | F vspacingsnap                      |
| F upper                  | F way                               |
| F useMPLibrary           | F weekday                           |
| F useanyfile             | F weekdayname                       |
| F useanyfileonce         | F writestatus                       |
| F usecldfilename         | F x_table_c                         |
| F usecldfilenameonce     | F x_table_cleanup                   |
| F usecolors              | F x_table_construct                 |
| F usecomponent           | F x_table_create                    |
| F useenvironment         | F x_table_finish_row                |
| F usefigurebase          | F x_table_flush                     |
| F usefile                | F x_table_init_construct            |
| F usejavascriptpreamble  | F x_table_init_reflow_height        |
| F usejavascriptscripts   | F x_table_init_reflow_height_option |
| F useluafile             | F x_table_init_reflow_width         |
| F useluafileonce         | F x_table_init_reflow_width_option  |
| F useluamodule           | F x_table_next_row                  |
| F usemodules             | F x_table_next_row_option           |
| F usepath                | F x_table_r                         |
| F useproduct             | F x_table_reflow_height             |
| F useproject             | F x_table_reflow_width              |
| F usesubpath             | F x_table_set_construct             |
| F usesymbols             | F x_table_set_reflow_height         |
| F usetexfile             | F x_table_set_reflow_width          |
| F usetexfileonce         | F xmllafterdocumentsetup            |
| F useurl                 | F xmllaftersetup                    |

|                          |                           |
|--------------------------|---------------------------|
| F xmlall                 | F xmlflushlinewise        |
| F xmlappenddocumentsetup | F xmlflushspacewise       |
| F xmlappendsetup         | F xmlfunction             |
| F xmlapplyselectors      | F xmlgetindex             |
| F xmlatt                 | F xmlinclude              |
| F xmlattdef              | F xmlincludeoptions       |
| F xmlattribute           | F xmlinclusion            |
| F xmlattributedef        | F xmlinclusions           |
| F xmlbadinclusions       | F xmlindex                |
| F xmlbeforedocumentsetup | F xmlinfo                 |
| F xmlbeforesetup         | F xmlinlineverbatim       |
| F xmlchainatt            | F xmlinstalldirective     |
| F xmlchainattdef         | F xmllast                 |
| F xmlchecknamespace      | F xmlload                 |
| F xmlcommand             | F xmlloadbuffer           |
| F xmlconcat              | F xmlloadadda             |
| F xmlconcatrange         | F xmlloadaddirectives     |
| F xmlcontext             | F xmlloadregistered       |
| F xmlcount               | F xmlmain                 |
| F xmldelete              | F xmlmatch                |
| F xmldirect              | F xmlname                 |
| F xmldirectives          | F xmlnamespace            |
| F xmldirectivesafter     | F xmlnonospace            |
| F xmldirectivesbefore    | F xmlpos                  |
| F xmldisplayverbatim     | F xmlprependdocumentsetup |
| F xmldoif                | F xmlprependsetup         |
| F xmldoifelse            | F xmlraw                  |
| F xmldoifelseempty       | F xmlrefatt               |
| F xmldoifelseselfempty   | F xmlregisterns           |
| F xmldoifelsetext        | F xmlremapname            |
| F xmldoifempty           | F xmlremapnamespace       |
| F xmldoifnot             | F xmlremovedocumentsetup  |
| F xmldoifnotempty        | F xmlremovesetup          |
| F xmldoifnotselfempty    | F xmlresetdocumentsetups  |
| F xmldoifnottext         | F xmlresetinjectors       |
| F xmldoifselfempty       | F xmlsave                 |
| F xmldoiftext            | F xmlsetcommandtonone     |
| F xmlelement             | F xmlsetcommandtotext     |
| F xmlfilter              | F xmlsetentity            |
| F xmlfilterlist          | F xmlsetinjectors         |
| F xmlfirst               | F xmlsetsetup             |
| F xmlflush               | F xmlsnippet              |
| F xmlflushcontext        | F xmlstartraw             |
| F xmlflushdocumentsetups | F xmlstarttiming          |



F xmlstopraw  
F xmlstoptiming  
F xmlstrip  
F xmlstripanywhere  
F xmlstripnolines  
F xmlstripped  
F xmlstrippednolines  
F xmltag  
F xmltexentity  
F xmltext  
F xmltobuffer  
F xmltobufferverbose  
F xmltofile  
F xmltoparameters  
F xmlverbatim  
F xmlwithindex  
F year

|                         |            |
|-------------------------|------------|
| <b>setconstant</b>      | function   |
| <b>setcount</b>         | function   |
| <b>setdimen</b>         | function   |
| <b>setelement</b>       | function   |
| <b>setformat</b>        | function   |
| <b>setmacro</b>         | function   |
| <b>setmessage</b>       | function   |
| <b>setmessages</b>      | function   |
| <b>settranslation</b>   | function   |
| <b>setuserinterface</b> | function   |
| <b>setvalidkeys</b>     | function   |
| <b>setvariable</b>      | function   |
| <b>showmessage</b>      | function   |
| <b>storedscanners</b>   | data table |
| <b>strings</b>          | table      |
| <b>syntax</b>           | data table |
| <b>tolist</b>           | function   |
| <b>translations</b>     | data table |
| <b>variables</b>        | data table |
| <b>writestatus</b>      | function   |

## io (basic lua)

|                      |                     |
|----------------------|---------------------|
| <b>ask</b>           | function            |
| <b>bytes</b>         | function            |
| <b>characters</b>    | function            |
| <b>close</b>         | function            |
| <b>exists</b>        | function            |
| <b>fileseparator</b> | string              |
| <b>flush</b>         | function            |
| <b>input</b>         | overloaded function |
| <b>lines</b>         | overloaded function |
| <b>loadchunk</b>     | function            |
| <b>loaddata</b>      | function            |
| <b>loadlines</b>     | function            |
| <b>noflines</b>      | function            |
| <b>open</b>          | overloaded function |
| <b>output</b>        | overloaded function |
| <b>pathseparator</b> | string              |
| <b>popen</b>         | overloaded function |
| <b>read</b>          | function            |
| <b>readall</b>       | function            |
| <b>readnumber</b>    | function            |
| <b>readstring</b>    | function            |
| <b>savedata</b>      | function            |
| <b>size</b>          | function            |
| <b>stderr</b>        | userdata            |
| <b>stdin</b>         | userdata            |
| <b>stdout</b>        | userdata            |
| <b>tmpfile</b>       | function            |
| <b>type</b>          | function            |
| <b>write</b>         | function            |

## jit (context)

|                    |          |
|--------------------|----------|
| <b>arch</b>        | string   |
| <b>attach</b>      | function |
| <b>flush</b>       | function |
| <b>off</b>         | function |
| <b>on</b>          | function |
| <b>opt</b>         | table    |
| F start            |          |
| <b>os</b>          | string   |
| <b>status</b>      | function |
| <b>util</b>        | table    |
| F funcbc           |          |
| F funcinfo         |          |
| F funck            |          |
| F funcuvname       |          |
| F ircalladdr       |          |
| F traceexitstub    |          |
| F traceinfo        |          |
| F traceir          |          |
| F tracek           |          |
| F tracemc          |          |
| F tracesnap        |          |
| <b>version</b>     | string   |
| <b>version_num</b> | number   |

# job (context)

|                          |          |                  |       |
|--------------------------|----------|------------------|-------|
| <b>comment</b>           | function | F find           |       |
| <b>datasets</b>          | table    | F first          |       |
| D collected              |          | F get            |       |
| F extend                 |          | F getcollected   |       |
| F getdata                |          | F getdata        |       |
| F setdata                |          | F getfield       |       |
| D tobesaved              |          | F gettobesaved   |       |
| <b>disablesave</b>       | function | F inlist         |       |
| <b>fileobjreferences</b> | table    | F last           |       |
| D collected              |          | F list           |       |
| D tobesaved              |          | F save           |       |
| <b>files</b>             | 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              |       |
| <b>initialize</b>        | function | D collected      |       |
| <b>load</b>              | function | F column         |       |
| <b>loadother</b>         | function | F copy           |       |
| <b>objects</b>           | 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      |       |
| <b>pack</b>              | boolean  | F hangindent     |       |
| <b>packversion</b>       | number   | F height         |       |
| <b>pagestates</b>        | table    | F hsize          |       |
| D collected              |          | F leftskip       |       |
| F extend                 |          | F lowerleft      |       |
| F realpage               |          | F lowerright     |       |
| F setstate               |          | F markregionbox  |       |
| D tobesaved              |          | F n              |       |
| <b>passes</b>            | table    | F onsamepage     |       |
| F check                  |          | F overlapping    |       |
| D collected              |          | F p              |       |
| F count                  |          | F page           |       |
| F define                 |          | F paragraph      |       |

|                  |          |
|------------------|----------|
| F parindent      |          |
| F position       |          |
| F r              |          |
| F region         |          |
| F replace        |          |
| F rightskip      |          |
| F set            |          |
| F setall         |          |
| F setdim         |          |
| F setregionbox   |          |
| D tobesaved      |          |
| F upperleft      |          |
| F upperright     |          |
| S used           |          |
| F width          |          |
| F x              |          |
| F xy             |          |
| F y              |          |
| <b>register</b>  | function |
| <b>save</b>      | function |
| <b>structure</b> | table    |
| D collected      |          |
| T components     |          |
| T tobesaved      |          |
| T branches       |          |
| S name           |          |
| S type           |          |
| <b>variables</b> | table    |
| D checksums      |          |
| D collected      |          |
| F getchecksum    |          |
| F makechecksum   |          |
| F restore        |          |
| F save           |          |
| F setchecksum    |          |
| D tobesaved      |          |
| <b>version</b>   | number   |

## lang (basic tex)

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

# languages (context)

|                             |            |                                 |            |
|-----------------------------|------------|---------------------------------|------------|
| <b>associate</b>            | function   | <b>installed</b>                | function   |
| <b>associated</b>           | data table | <b>labels</b>                   | table      |
| <b>association</b>          | function   | <b>define</b>                   |            |
| <b>counters</b>             | data table | <b>split</b>                    |            |
| <b>current</b>              | function   | <b>lefthyphenmin</b>            | function   |
| <b>data</b>                 | data table | <b>loadable</b>                 | function   |
| <b>define</b>               | function   | <b>loadwords</b>                | function   |
| <b>expand</b>               | function   | <b>logger</b>                   | table      |
| <b>expanders</b>            | table      | <b>report</b>                   |            |
| <b>frequencies</b>          | table      | <b>numbers</b>                  | data table |
| <b>averagecharwidth</b>     |            | <b>postexhyphenchar</b>         | function   |
| <b>getdata</b>              | function   | <b>posthyphenchar</b>           | function   |
| <b>getnumber</b>            | function   | <b>preexhyphenchar</b>          | function   |
| <b>hyphenate</b>            | function   | <b>prehyphenchar</b>            | function   |
| <b>hyphenators</b>          | table      | <b>registered</b>               | data table |
| <b>dictionaries</b>         |            | <b>replacements</b>             | table      |
| <b>featuresets</b>          |            | <b>add</b>                      |            |
| <b>handler</b>              |            | <b>handler</b>                  |            |
| <b>methods</b>              |            | <b>set</b>                      |            |
| <b>expanded</b>             |            | <b>rightthyphenmin</b>          | function   |
| <b>none</b>                 |            | <b>serializediscretionary</b>   | function   |
| <b>original</b>             |            | <b>setexceptions</b>            | function   |
| <b>tex</b>                  |            | <b>setsynonym</b>               | function   |
| <b>traditional</b>          |            | <b>showdiscretionaries</b>      | function   |
| <b>optimize</b>             |            | <b>unload</b>                   | function   |
| <b>popmethod</b>            |            | <b>version</b>                  | number     |
| <b>pushmethod</b>           |            | <b>visualizediscretionaries</b> | function   |
| <b>setmethod</b>            |            | <b>words</b>                    | table      |
| <b>setup</b>                |            | <b>check</b>                    |            |
| <b>showhyphenationtrace</b> |            | <b>data</b>                     |            |
| <b>traditional</b>          |            | <b>disable</b>                  |            |
| <b>definefeatures</b>       |            | <b>enable</b>                   |            |
| <b>gettrace</b>             |            | <b>enablers</b>                 |            |
| <b>hyphenate</b>            |            | <b>enables</b>                  |            |
| <b>injecthyphens</b>        |            | <b>found</b>                    |            |
| <b>installmethod</b>        |            | <b>load</b>                     |            |
| <b>lasttrace</b>            |            | <b>methods</b>                  |            |
| <b>loadpatterns</b>         |            | <b>threshold</b>                |            |
| <b>registerexception</b>    |            |                                 |            |
| <b>registerpattern</b>      |            |                                 |            |

# layouts (context)

**status** table

F isleftpage

F leftorrightpagection



## lfs (extra lua)

|                          |                     |
|--------------------------|---------------------|
| <b>attributes</b>        | overloaded function |
| <b>chdir</b>             | overloaded function |
| <b>currentdir</b>        | function            |
| <b>dir</b>               | overloaded function |
| <b>isdir</b>             | overloaded function |
| <b>isfile</b>            | overloaded function |
| <b>lock</b>              | function            |
| <b>lock_dir</b>          | overloaded function |
| <b>mkdir</b>             | overloaded function |
| <b>mkdirs</b>            | function            |
| <b>readlink</b>          | overloaded function |
| <b>rmdir</b>             | overloaded function |
| <b>setmode</b>           | overloaded function |
| <b>shortname</b>         | overloaded function |
| <b>symlinkattributes</b> | overloaded function |
| <b>touch</b>             | overloaded function |
| <b>unlock</b>            | function            |

## libraries (context)

|                  |            |
|------------------|------------|
| <b>basiclua</b>  | data table |
| <b>basictex</b>  | data table |
| <b>builtin</b>   | data table |
| <b>extralua</b>  | data table |
| <b>extratex</b>  | data table |
| <b>functions</b> | data table |
| <b>globals</b>   | data table |

# lmx (context)

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

F a

F td

F th

**include** function  
**inherited** table

S color-background-four

S color-background-one

S color-background-three

S color-background-two

S title

**initialize** function  
**inject** function  
**lmxfile** function  
**loadedfile** function  
**make** function  
**new** function  
**overloaderror** function  
**popupfile** function  
**print** function  
**pv** function  
**report** function  
**reset** function  
**result** function  
**set** function  
**show** function  
**showdebuginfo** function  
**showerror** function

**stripcss** function  
**tv** function  
**type** function  
**urlescape** function  
**variable** function  
**variables** table

S color-background-blue

S color-background-body

S color-background-green

S color-background-main

S color-background-purple

S color-background-yellow

S title-default

# logs (context)

|                        |          |
|------------------------|----------|
| <b>application</b>     | function |
| <b>categories</b>      | function |
| <b>direct</b>          | function |
| <b>disable</b>         | function |
| <b>enable</b>          | function |
| <b>exporters</b>       | table    |
| <b>extendbanner</b>    | function |
| <b>flush</b>           | function |
| <b>help</b>            | function |
| <b>messenger</b>       | function |
| <b>new</b>             | function |
| <b>newline</b>         | function |
| <b>poptarget</b>       | function |
| <b>pushtarget</b>      | function |
| <b>report</b>          | function |
| <b>reportbanner</b>    | function |
| <b>reporter</b>        | function |
| <b>reporters</b>       | table    |
| F banner               |          |
| F export               |          |
| F help                 |          |
| F info                 |          |
| F lines                |          |
| F version              |          |
| <b>reportline</b>      | function |
| <b>reportlines</b>     | function |
| <b>setformats</b>      | function |
| <b>setformatters</b>   | function |
| <b>setlogfile</b>      | function |
| <b>setmessenger</b>    | function |
| <b>setprocessor</b>    | function |
| <b>setprogram</b>      | function |
| <b>settarget</b>       | function |
| <b>settimedlog</b>     | function |
| <b>settranslations</b> | function |
| <b>show</b>            | function |
| <b>show_close</b>      | function |
| <b>show_load</b>       | function |
| <b>show_open</b>       | function |
| <b>simple</b>          | function |
| <b>simpleline</b>      | function |

|                          |          |
|--------------------------|----------|
| <b>simplelines</b>       | function |
| <b>start_page_number</b> | function |
| <b>status</b>            | function |
| <b>stop_page_number</b>  | function |
| <b>subdirect</b>         | function |
| <b>subreport</b>         | function |
| <b>system</b>            | function |
| <b>texerrormessage</b>   | function |
| <b>writer</b>            | function |

# lpdf (context)

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

|                           |          |
|---------------------------|----------|
| <b>stream</b>             | function |
| <b>string</b>             | function |
| <b>timestamp</b>          | function |
| <b>toeight</b>            | function |
| <b>topdfdoc</b>           | function |
| <b>tosixteen</b>          | function |
| <b>transform</b>          | function |
| <b>transparency</b>       | function |
| <b>transparencycode</b>   | function |
| <b>transparencygroups</b> | table    |
| <b>B none</b>             |          |
| <b>transparencyvalue</b>  | function |
| <b>unicode</b>            | function |
| <b>verbose</b>            | function |

## lpeg (basic lua)

|                        |            |                              |          |
|------------------------|------------|------------------------------|----------|
| <b>B</b>               | function   | <b>setmaxstack</b>           | function |
| <b>C</b>               | function   | <b>split</b>                 | function |
| <b>Carg</b>            | function   | <b>splitat</b>               | function |
| <b>Cb</b>              | function   | <b>splitter</b>              | function |
| <b>Cc</b>              | function   | <b>stripper</b>              | function |
| <b>Cf</b>              | function   | <b>times</b>                 | function |
| <b>Cg</b>              | function   | <b>tsplitat</b>              | function |
| <b>Cmt</b>             | function   | <b>tsplitter</b>             | function |
| <b>Cp</b>              | function   | <b>type</b>                  | function |
| <b>Cs</b>              | function   | <b>utfchartabletopattern</b> | function |
| <b>Ct</b>              | function   | <b>version</b>               | function |
| <b>P</b>               | function   |                              |          |
| <b>R</b>               | function   |                              |          |
| <b>S</b>               | function   |                              |          |
| <b>UP</b>              | function   |                              |          |
| <b>UR</b>              | function   |                              |          |
| <b>US</b>              | function   |                              |          |
| <b>V</b>               | function   |                              |          |
| <b>afterprefix</b>     | function   |                              |          |
| <b>anywhere</b>        | function   |                              |          |
| <b>append</b>          | function   |                              |          |
| <b>balancer</b>        | function   |                              |          |
| <b>beforesuffix</b>    | function   |                              |          |
| <b>checkedsplit</b>    | function   |                              |          |
| <b>counter</b>         | function   |                              |          |
| <b>endstripper</b>     | function   |                              |          |
| <b>finder</b>          | function   |                              |          |
| <b>firstofsplit</b>    | function   |                              |          |
| <b>frontstripper</b>   | function   |                              |          |
| <b>instringchecker</b> | function   |                              |          |
| <b>is_lpeg</b>         | function   |                              |          |
| <b>keeper</b>          | function   |                              |          |
| <b>locale</b>          | function   |                              |          |
| <b>match</b>           | function   |                              |          |
| <b>oneof</b>           | function   |                              |          |
| <b>patterns</b>        | data table |                              |          |
| <b>pcode</b>           | function   |                              |          |
| <b>print</b>           | function   |                              |          |
| <b>ptree</b>           | function   |                              |          |
| <b>replacer</b>        | function   |                              |          |
| <b>secondofsplit</b>   | 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)

|                            |            |
|----------------------------|------------|
| <b>bytecode</b>            | table      |
| <b>bytedata</b>            | data table |
| <b>bytedone</b>            | table      |
| <b>collectgarbage</b>      | function   |
| <b>delay</b>               | function   |
| <b>finalize</b>            | function   |
| <b>firstbytecode</b>       | number     |
| <b>flush</b>               | function   |
| <b>flushdelayed</b>        | function   |
| <b>get_functions_table</b> | function   |
| <b>getbytecode</b>         | function   |
| <b>getluaname</b>          | function   |
| <b>lastbytecode</b>        | number     |
| <b>mask</b>                | string     |
| <b>messages</b>            | data table |
| <b>name</b>                | table      |
| <b>numbers</b>             | data table |
| <b>registercode</b>        | function   |
| <b>registeredcodes</b>     | function   |
| <b>registerfinalizer</b>   | function   |
| <b>registername</b>        | function   |
| <b>setbytecode</b>         | function   |
| <b>setluaname</b>          | function   |
| <b>startupfile</b>         | string     |
| <b>version</b>             | string     |

# luatex (context)

|                             |          |
|-----------------------------|----------|
| <b>cleanuptempfiles</b>     | function |
| <b>registerstartactions</b> | function |
| <b>registerstopactions</b>  | function |
| <b>registertempfile</b>     | function |
| <b>starttime</b>            | number   |

# lxml (context)

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

|                         |            |
|-------------------------|------------|
| <b>setaction</b>        | function   |
| <b>setcdata</b>         | function   |
| <b>setcommandtonone</b> | function   |
| <b>setcommandtotext</b> | function   |
| <b>setsetup</b>         | function   |
| <b>snippet</b>          | function   |
| <b>sorters</b>          | table      |
| F add                   |            |
| F compare               |            |
| F flush                 |            |
| F reset                 |            |
| F show                  |            |
| F sort                  |            |
| <b>splitid</b>          | function   |
| <b>startraw</b>         | function   |
| <b>stopraw</b>          | function   |
| <b>store</b>            | function   |
| <b>strip</b>            | function   |
| <b>stripped</b>         | function   |
| <b>tag</b>              | function   |
| <b>text</b>             | function   |
| <b>tobuffer</b>         | function   |
| <b>tofile</b>           | function   |
| <b>toparameters</b>     | function   |
| <b>toverbatim</b>       | function   |
| <b>verbatim</b>         | function   |
| <b>withindex</b>        | function   |
| <b>xmltexhandler</b>    | data table |

## math (basic lua)

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

# mathematics (context)

|                               |            |                               |            |
|-------------------------------|------------|-------------------------------|------------|
| <b>addfallbacks</b>           | function   | <b>renderset</b>              | function   |
| <b>alphabets</b>              | data table | <b>resetattributes</b>        | function   |
| <b>alternatives</b>           | data table | <b>resetitalics</b>           | function   |
| <b>big</b>                    | function   | <b>scaleparameters</b>        | function   |
| <b>boldmap</b>                | data table | <b>setalternate</b>           | function   |
| <b>categories</b>             | table      | <b>setitalics</b>             | function   |
| D functions                   |            | <b>sets</b>                   | data table |
| <b>charactersets</b>          | data table | <b>styles</b>                 | data table |
| <b>checkaccentbaseheight</b>  | function   | <b>syncboth</b>               | function   |
| <b>checkprivateparameters</b> | function   | <b>syncname</b>               | function   |
| <b>classes</b>                | data table | <b>syncstyle</b>              | function   |
| <b>codes</b>                  | data table | <b>toname</b>                 | function   |
| <b>define</b>                 | function   | <b>tostyle</b>                | function   |
| <b>dimensions</b>             | function   | <b>tweakaftercopyingfont</b>  | function   |
| <b>extensiblecode</b>         | function   | <b>tweakbeforecopyingfont</b> | function   |
| <b>extensibles</b>            | data table | <b>tweaks</b>                 | table      |
| <b>extrabase</b>              | number     | <b>utfmathaccent</b>          | function   |
| <b>extras</b>                 | table      | <b>utfmathclass</b>           | function   |
| F add                         |            | <b>utfmathcommand</b>         | function   |
| F copy                        |            | <b>utfmathfiller</b>          | function   |
| <b>fallbacks</b>              | table      | <b>utfmathstretch</b>         | function   |
| F apply                       |            |                               |            |
| F install                     |            |                               |            |
| <b>fallbackstyleattr</b>      | function   |                               |            |
| <b>families</b>               | data table |                               |            |
| <b>gaps</b>                   | data table |                               |            |
| <b>getboth</b>                | function   |                               |            |
| <b>getstyle</b>               | function   |                               |            |
| <b>horizontalcode</b>         | function   |                               |            |
| <b>initializeparameters</b>   | function   |                               |            |
| <b>injectfallbacks</b>        | function   |                               |            |
| <b>makefont</b>               | function   |                               |            |
| <b>mapremap</b>               | data table |                               |            |
| <b>overloaddimensions</b>     | function   |                               |            |
| <b>overloadparameters</b>     | function   |                               |            |
| <b>privatebase</b>            | number     |                               |            |
| <b>remapalphabets</b>         | function   |                               |            |
| <b>renderings</b>             | table      |                               |            |
| D mappings                    |            |                               |            |
| D numbers                     |            |                               |            |
| D sets                        |            |                               |            |

## mbox (context)

|                      |          |
|----------------------|----------|
| <b>parse</b>         | function |
| <b>parse_from</b>    | function |
| <b>parse_header</b>  | function |
| <b>parse_headers</b> | function |
| <b>parse_message</b> | function |
| <b>split_headers</b> | function |
| <b>split_mbox</b>    | function |
| <b>split_message</b> | function |

## md5 (extra lua)

|                |          |
|----------------|----------|
| HEX            | function |
| <b>crypt</b>   | function |
| <b>dec</b>     | function |
| <b>decrypt</b> | function |
| <b>exor</b>    | function |
| <b>hex</b>     | function |
| <b>sum</b>     | function |
| <b>sumhexa</b> | function |



# metapost (context)

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

|                      |          |
|----------------------|----------|
| <b>setoutercolor</b> | function |
| <b>settext</b>       | function |
| <b>showlog</b>       | boolean  |
| <b>svformat</b>      | function |
| <b>tex</b>           | table    |
| F get                |          |
| F reset              |          |
| F set                |          |
| F setfrombuffer      |          |
| <b>texerrors</b>     | boolean  |
| <b>textextsdata</b>  | function |
| <b>theclippath</b>   | function |
| <b>totable</b>       | function |
| <b>unload</b>        | function |
| <b>untagvariable</b> | function |
| <b>variables</b>     | table    |

## mime (extra lua)

**b64** function

**decode** function

**decodet** table

F base64

F quoted-printable

**dot** function

**encode** function

**encodet** table

F base64

F quoted-printable

**eol** function

**normalize** function

**qp** function

**qpwrp** function

**stuff** function

**unb64** function

**unqp** function

**wrap** function

**wrapt** table

F base64

F default

F quoted-printable

F text

**wrp** function

## mp (context)

|                             |          |                            |          |
|-----------------------------|----------|----------------------------|----------|
| <b>BackSpace</b>            | function | <b>OverlayDepth</b>        | function |
| <b>BaselineSkip</b>         | function | <b>OverlayHeight</b>       | function |
| <b>BodyFontSize</b>         | function | <b>OverlayLineWidth</b>    | function |
| <b>BottomDistance</b>       | function | <b>OverlayOffset</b>       | function |
| <b>BottomHeight</b>         | function | <b>OverlayWidth</b>        | function |
| <b>BottomSpace</b>          | function | <b>PageDepth</b>           | function |
| <b>CurrentColumn</b>        | function | <b>PageFraction</b>        | function |
| <b>CurrentHeight</b>        | function | <b>PageNumber</b>          | function |
| <b>CurrentWidth</b>         | function | <b>PageOffset</b>          | function |
| <b>CutSpace</b>             | function | <b>PaperBleed</b>          | function |
| <b>EmWidth</b>              | function | <b>PaperHeight</b>         | function |
| <b>ExHeight</b>             | function | <b>PaperWidth</b>          | function |
| <b>FooterDistance</b>       | function | <b>PrintPaperHeight</b>    | function |
| <b>FooterHeight</b>         | function | <b>PrintPaperWidth</b>     | function |
| <b>HSize</b>                | function | <b>RealPageNumber</b>      | function |
| <b>HeaderDistance</b>       | function | <b>RightEdgeDistance</b>   | function |
| <b>HeaderHeight</b>         | function | <b>RightEdgeWidth</b>      | function |
| <b>InPageBody</b>           | function | <b>RightMarginDistance</b> | function |
| <b>InnerEdgeDistance</b>    | function | <b>RightMarginWidth</b>    | function |
| <b>InnerEdgeWidth</b>       | function | <b>SpineWidth</b>          | function |
| <b>InnerMarginDistance</b>  | function | <b>StrutDepth</b>          | function |
| <b>InnerMarginWidth</b>     | function | <b>StrutHeight</b>         | function |
| <b>LastPageNumber</b>       | function | <b>TextHeight</b>          | function |
| <b>LayoutColumnDistance</b> | function | <b>TextWidth</b>           | function |
| <b>LayoutColumnWidth</b>    | function | <b>TopDistance</b>         | function |
| <b>LayoutColumns</b>        | function | <b>TopHeight</b>           | function |
| <b>LeftEdgeDistance</b>     | function | <b>TopSkip</b>             | function |
| <b>LeftEdgeWidth</b>        | function | <b>TopSpace</b>            | function |
| <b>LeftMarginDistance</b>   | function | <b>VSize</b>               | function |
| <b>LeftMarginWidth</b>      | function | <b>_f_</b>                 | function |
| <b>LineHeight</b>           | function | <b>boolean</b>             | function |
| <b>MakeupHeight</b>         | function | <b>dataset</b>             | function |
| <b>MakeupWidth</b>          | function | <b>datasets</b>            | table    |
| <b>NOfColumns</b>           | function | <b>F load</b>              |          |
| <b>NOfPages</b>             | function | <b>defaultcolormodel</b>   | function |
| <b>OnOddPage</b>            | function | <b>format</b>              | function |
| <b>OnRightPage</b>          | function | <b>formatted</b>           | function |
| <b>OuterEdgeDistance</b>    | function | <b>get</b>                 | table    |
| <b>OuterEdgeWidth</b>       | function | <b>F boolean</b>           |          |
| <b>OuterMarginDistance</b>  | function | <b>F number</b>            |          |
| <b>OuterMarginWidth</b>     | function | <b>F numeric</b>           |          |

|                      |          |
|----------------------|----------|
| F string             |          |
| <b>graphformat</b>   | function |
| <b>n</b>             | function |
| <b>numeric</b>       | function |
| <b>pair</b>          | function |
| <b>path</b>          | function |
| <b>print</b>         | function |
| <b>quadruple</b>     | function |
| <b>quoted</b>        | function |
| <b>size</b>          | function |
| <b>triplet</b>       | function |
| <b>tt_dimensions</b> | function |
| <b>tt_initialize</b> | function |

## mplib (extra tex)

|                     |                     |
|---------------------|---------------------|
| <b>fields</b>       | function            |
| <b>finder</b>       | function            |
| <b>finders</b>      | table               |
| F file              |                     |
| <b>get_boolean</b>  | function            |
| <b>get_number</b>   | function            |
| <b>get_numeric</b>  | function            |
| <b>get_string</b>   | function            |
| <b>new</b>          | overloaded function |
| <b>pen_info</b>     | function            |
| <b>preprocessed</b> | function            |
| <b>version</b>      | function            |

## newtoken (basic tex)

|                     |          |
|---------------------|----------|
| <b>create</b>       | function |
| <b>get_next</b>     | function |
| <b>is_token</b>     | function |
| <b>scan_code</b>    | function |
| <b>scan_dimen</b>   | function |
| <b>scan_glue</b>    | function |
| <b>scan_int</b>     | function |
| <b>scan_keyword</b> | function |
| <b>scan_string</b>  | function |
| <b>scan_token</b>   | function |
| <b>scan_toks</b>    | function |
| <b>scan_word</b>    | function |
| <b>set_macro</b>    | function |
| <b>type</b>         | 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

**process**        function

**processors**   table

- T collapse
- F mlist\_to\_hlist
- T relocate
- T render
- T resize
- T unscript



## node (basic tex)

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

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

# nodes (context)

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

|                                |            |                       |            |
|--------------------------------|------------|-----------------------|------------|
| <b>injections</b>              | table      | <b>listablefields</b> | data table |
| F copy                         |            | <b>listcodes</b>      | data table |
| F getligaindex                 |            | <b>listtoutf</b>      | function   |
| F handler                      |            | <b>load</b>           | function   |
| F installnewkern               |            | <b>locate</b>         | function   |
| F keepcounts                   |            | <b>margincodes</b>    | data table |
| F reset                        |            | <b>markers</b>        | table      |
| F resetcounts                  |            | F get                 |            |
| F setcursive                   |            | <b>mathcodes</b>      | data table |
| F setkern                      |            | <b>maxboxwidth</b>    | function   |
| F setligaindex                 |            | <b>mlist_to_hlist</b> | function   |
| F setmark                      |            | <b>new</b>            | function   |
| F setpair                      |            | <b>noadcodes</b>      | data table |
| <b>insert_after</b>            | function   | <b>nodecodes</b>      | data table |
| <b>insert_before</b>           | function   | <b>nopts</b>          | function   |
| <b>insert_list_after</b>       | function   | <b>nuts</b>           | table      |
| <b>installattributehandler</b> | function   | F append              |            |
| <b>is_direct</b>               | function   | F concat              |            |
| <b>is_display_math</b>         | function   | F copy                |            |
| <b>is_mirrored</b>             | data table | F copy_list           |            |
| <b>is_node</b>                 | function   | F copy_properties     |            |
| <b>is_nut</b>                  | function   | F count               |            |
| <b>is_rotated</b>              | data table | F current_attr        |            |
| <b>kerncodes</b>               | data table | F delete              |            |
| <b>kerning</b>                 | function   | F dimensions          |            |
| <b>keys</b>                    | table      | F do_ligature_n       |            |
| T whatsit                      |            | F end_of_math         |            |
| <b>last_node</b>               | function   | F fasthpack           |            |
| <b>leftmarginwidth</b>         | function   | F first_glyph         |            |
| <b>ligaturing</b>              | function   | F firstcharacter      |            |
| <b>lines</b>                   | table      | F firstcharinbox      |            |
| T boxed                        |            | F firstglyph          |            |
| F register                     |            | F flush_list          |            |
| F setup                        |            | F flush_node          |            |
| F stage_one                    |            | F free                |            |
| F stage_two                    |            | F getattr             |            |
| F stage_zero                   |            | F getattribute        |            |
| D data                         |            | F getbox              |            |
| F finalize                     |            | F getchar             |            |
| F number                       |            | F getfield            |            |
| N scratchbox                   |            | F getfont             |            |
| <b>link</b>                    | function   | F getid               |            |
| <b>linked</b>                  | function   | F getleader           |            |
| <b>list</b>                    | function   | F getlist             |            |

|                     |                        |
|---------------------|------------------------|
| F getnext           | F pdfdestination       |
| F getprev           | F pdfdirect            |
| F getprop           | F pdfliteral           |
| F getskip           | F pdfrestore           |
| F getsubtype        | F pdfsave              |
| F has_attribute     | F pdfsetmatrix         |
| F has_field         | F penalty              |
| F has_glyph         | F register             |
| F hpack             | F rightmarginkern      |
| F insert_after      | F rightskip            |
| F insert_before     | F rule                 |
| F insert_list_after | F shrink               |
| F is_direct         | F special              |
| F is_display_math   | F stretch              |
| F is_node           | F temp                 |
| F 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 locate            | F userlist             |
| F mlist_to_hlist    | F usernumber           |
| F nestedtracedslide | F userstring           |
| F new               | F usertokens           |
| T pool              | F vlist                |
| F baselineskip      | F zeroglue             |
| F cleanup           | F prepend              |
| F disc              | F protect_glyphs       |
| F fontkern          | F protrusion_skippable |
| F glue              | F reference            |
| F gluespec          | F remove               |
| F glyph             | F repackhlist          |
| F hlist             | F replace              |
| F kern              | F rightmarginwidth     |
| F latelua           | F set_attribute        |
| F lateluafunction   | F setattr              |
| F leftmarginkern    | F setattrtribute       |
| F leftskip          | F setattrtributes      |
| F lineskip          | F setbox               |
| F negatedglue       | F setfield             |
| F noad              | F setprop              |
| F pdfannotation     | F setunsetattributes   |

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

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

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



## number (context)

|                       |            |
|-----------------------|------------|
|                       | function   |
| <b>basepoints</b>     | function   |
| <b>bit</b>            | function   |
| <b>bits</b>           | function   |
| <b>clearbit</b>       | function   |
| <b>dimenfactors</b>   | data table |
| <b>formatted</b>      | function   |
| <b>hasbit</b>         | function   |
| <b>maxdimen</b>       | number     |
| <b>nopts</b>          | function   |
| <b>percent</b>        | function   |
| <b>points</b>         | function   |
| <b>pts</b>            | function   |
| <b>setbit</b>         | function   |
| <b>signed</b>         | function   |
| <b>sparseexponent</b> | function   |
| <b>splitdimen</b>     | function   |
| <b>tobasepoints</b>   | function   |
| <b>tobitstring</b>    | function   |
| <b>tocentimeters</b>  | function   |
| <b>toxiceros</b>      | function   |
| <b>to didots</b>      | function   |
| <b>todimen</b>        | function   |
| <b>toevenhex</b>      | function   |
| <b>toinches</b>       | function   |
| <b>tomillimeters</b>  | function   |
| <b>tonewciceros</b>   | function   |
| <b>tonewdidots</b>    | function   |
| <b>tonumberf</b>      | function   |
| <b>tonumberg</b>      | function   |
| <b>topicsas</b>       | function   |
| <b>topoints</b>       | function   |
| <b>toscaled</b>       | function   |
| <b>toscaledpoints</b> | function   |
| <b>toset</b>          | function   |
| <b>valid</b>          | function   |

## os (basic lua)

|                     |                     |                      |          |
|---------------------|---------------------|----------------------|----------|
| <b>__getenv__</b>   | function            | <b>type</b>          | string   |
| <b>__setenv__</b>   | function            | <b>uname</b>         | function |
| <b>binsuffix</b>    | string              | <b>uuid</b>          | function |
| <b>binsuffixes</b>  | table               | <b>validdatetime</b> | function |
| <b>clock</b>        | function            | <b>weekday</b>       | function |
| <b>converttime</b>  | function            | <b>where</b>         | function |
| <b>date</b>         | function            | <b>which</b>         | function |
| <b>difftime</b>     | function            |                      |          |
| <b>env</b>          | data table          |                      |          |
| <b>exec</b>         | overloaded function |                      |          |
| <b>execute</b>      | overloaded function |                      |          |
| <b>exit</b>         | function            |                      |          |
| <b>fulltime</b>     | function            |                      |          |
| <b>getenv</b>       | overloaded function |                      |          |
| <b>gettimeofday</b> | function            |                      |          |
| <b>isleapyear</b>   | function            |                      |          |
| <b>launch</b>       | function            |                      |          |
| <b>libsuffix</b>    | string              |                      |          |
| <b>localtime</b>    | function            |                      |          |
| <b>name</b>         | string              |                      |          |
| <b>newline</b>      | string              |                      |          |
| <b>nofdays</b>      | function            |                      |          |
| <b>now</b>          | function            |                      |          |
| <b>platform</b>     | string              |                      |          |
| <b>remove</b>       | overloaded function |                      |          |
| <b>rename</b>       | overloaded function |                      |          |
| <b>resolvers</b>    | table               |                      |          |
| F bits              |                     |                      |          |
| <b>resultof</b>     | function            |                      |          |
| <b>runtime</b>      | function            |                      |          |
| <b>selfdir</b>      | string              |                      |          |
| <b>setenv</b>       | overloaded function |                      |          |
| <b>setlocale</b>    | overloaded function |                      |          |
| <b>sleep</b>        | function            |                      |          |
| <b>spawn</b>        | overloaded function |                      |          |
| <b>time</b>         | function            |                      |          |
| <b>times</b>        | function            |                      |          |
| <b>timezone</b>     | function            |                      |          |
| <b>tmpdir</b>       | function            |                      |          |
| <b>tmpname</b>      | function            |                      |          |
| <b>today</b>        | function            |                      |          |

## package (basic lua)

|                      |          |
|----------------------|----------|
| <b>config</b>        | string   |
| <b>cpath</b>         | string   |
| <b>extralibpath</b>  | function |
| <b>extralibpaths</b> | function |
| <b>extralupath</b>   | function |
| <b>extralupaths</b>  | function |
| <b>helpers</b>       | table    |
| <b>libpaths</b>      | function |
| <b>loaded</b>        | table    |
| <b>loaders</b>       | table    |
| <b>loadlib</b>       | function |
| <b>luapaths</b>      | function |
| <b>path</b>          | string   |
| <b>preload</b>       | table    |
| <b>searchpath</b>    | function |
| <b>seeall</b>        | 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)

|                           |                     |
|---------------------------|---------------------|
| <b>getcatalog</b>         | function            |
| <b>gethpos</b>            | function            |
| <b>getinfo</b>            | function            |
| <b>getmatrix</b>          | function            |
| <b>getnames</b>           | function            |
| <b>getpageattributes</b>  | function            |
| <b>getpageresources</b>   | function            |
| <b>getpagesattributes</b> | function            |
| <b>getpos</b>             | function            |
| <b>gettrailer</b>         | function            |
| <b>getvpos</b>            | function            |
| <b>hasmatrix</b>          | function            |
| <b>immediateobj</b>       | function            |
| <b>mapfile</b>            | function            |
| <b>mapline</b>            | function            |
| <b>maxobjnum</b>          | function            |
| <b>obj</b>                | function            |
| <b>objtype</b>            | function            |
| <b>pageref</b>            | function            |
| <b>print</b>              | function            |
| <b>refobj</b>             | function            |
| <b>registerannot</b>      | overloaded function |
| <b>reserveobj</b>         | function            |
| <b>setcatalog</b>         | overloaded function |
| <b>setinfo</b>            | overloaded function |
| <b>setnames</b>           | overloaded function |
| <b>setpageattributes</b>  | overloaded function |
| <b>setpageresources</b>   | overloaded function |
| <b>setpagesattributes</b> | overloaded function |
| <b>settrailer</b>         | overloaded function |

# pdfscanner (context)

**scan** function

# physics (context)

**units** table

F registerunit

D tables

## profiler (extra lua)

**pause**    function  
**resume**   function  
**start**    function  
**stop**     function



# publications (context)

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

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

|                            |          |                           |          |
|----------------------------|----------|---------------------------|----------|
| F fetchentries             |          | <b>okay</b>               | function |
| F filterall                |          | <b>oneorange</b>          | function |
| F flushcombi               |          | <b>parenttag</b>          | function |
| F flushentry               |          | <b>permitted</b>          | function |
| T methods                  |          | <b>refman_to_btx</b>      | function |
| F dataset                  |          | <b>resolvedname</b>       | function |
| F force                    |          | <b>save</b>               | function |
| F global                   |          | <b>search</b>             | function |
| F local                    |          | <b>setcategory</b>        | function |
| F nofreeregistered         |          | <b>setspecification</b>   | function |
| F prepareentries           |          | <b>singularorplural</b>   | function |
| F register                 |          | <b>sortedentries</b>      | function |
| F sameasprevious           |          | <b>sortmethods</b>        | table    |
| T sorters                  |          | T authoryear              |          |
| F cite                     |          | T sequence                |          |
| F dataset                  |          | <b>specifications</b>     | table    |
| F default                  |          | T default                 |          |
| F index                    |          | S author                  |          |
| F list                     |          | S comment                 |          |
| F reference                |          | S copyright               |          |
| F short                    |          | S name                    |          |
| F used                     |          | S version                 |          |
| F uservariable             |          | D virtual                 |          |
| <b>listvariants</b>        | table    | <b>splitauthor</b>        | function |
| F default                  |          | <b>splitoneauthor</b>     | function |
| F index                    |          | <b>statistics</b>         | table    |
| F num                      |          | N nofbytes                |          |
| F page                     |          | N nofdatasets             |          |
| F short                    |          | N nofdefinitions          |          |
| F tag                      |          | N nofshortcuts            |          |
| <b>load</b>                | function | <b>tables</b>             | table    |
| <b>loadbibdata</b>         | function | D implicits               |          |
| <b>loaddefinitionfile</b>  | function | D origins                 |          |
| <b>loaders</b>             | table    | D privates                |          |
| F bbl                      |          | D sets                    |          |
| F bib                      |          | D specials                |          |
| F buffer                   |          | D types                   |          |
| F endnote                  |          | D virtuals                |          |
| F lua                      |          | <b>tags</b>               | function |
| F refman                   |          | <b>tracers</b>            | table    |
| F registercleaner          |          | F showdatasetauthors      |          |
| F xml                      |          | F showdatasetcompleteness |          |
| <b>loadreplacementfile</b> | function | F showdatasetfields       |          |
| <b>new</b>                 | function | F showentry               |          |

|                     |          |
|---------------------|----------|
| F showfields        |          |
| F showhashedauthors |          |
| F showtables        |          |
| F showvariants      |          |
| <b>typesetters</b>  | table    |
| F author            |          |
| F string            |          |
| <b>usedataset</b>   | function |
| <b>usedentries</b>  | function |
| <b>writers</b>      | table    |
| F author            |          |
| F keyword           |          |
| F pagenumber        |          |
| F range             |          |

## regimes (context)

|                   |          |
|-------------------|----------|
| <b>cleanup</b>    | function |
| <b>disable</b>    | function |
| <b>enable</b>     | function |
| <b>fromregime</b> | function |
| <b>pop</b>        | function |
| <b>process</b>    | function |
| <b>push</b>       | function |
| <b>toregime</b>   | function |
| <b>translate</b>  | function |

# resolvers (context)

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

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

|                                 |            |
|---------------------------------|------------|
| <b>updatescript</b>             | function   |
| <b>uselibrary</b>               | function   |
| <b>usertypes</b>                | data table |
| <b>usezipfile</b>               | function   |
| <b>validatedpath</b>            | function   |
| <b>variable</b>                 | function   |
| <b>variableofformat</b>         | function   |
| <b>variableofformatorsuffix</b> | function   |
| <b>wildcardpattern</b>          | function   |



## sandbox (context)

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

# scripts (context)

**autofontfeature**    table

- F disable
- F enable
- F handler

**categorytonumber**   data table

**colors**                data table

**decomposehangul**    function

**defaults**             table

- N inter\_char\_half\_shrink\_factor
- N inter\_char\_half\_stretch\_factor
- N inter\_char\_hangul\_penalty
- N inter\_char\_quarter\_shrink\_factor
- N inter\_char\_quarter\_stretch\_factor
- N inter\_char\_shrink\_factor
- N inter\_char\_stretch\_factor
- N inter\_word\_stretch\_factor

**handlers**             data table

**hash**                  table

**injectors**            data table

**installdataset**      function

**installmethod**      function

**numbertocategory**   data table

**numbertodataset**    data table

**numbertohandler**    data table

**reset**                function

**set**                   function

**splitters**            data table

## set (context)

**contains** function

**create** function

**tolist** function

**tonumber** function

**totable** function

# socket (extra lua)

|                       |          |                             |
|-----------------------|----------|-----------------------------|
| <b>BLOCKSIZE</b>      | number   | S connection                |
| <b>_DEBUG</b>         | boolean  | S content-description       |
| <b>_SETSIZE</b>       | number   | S content-disposition       |
| <b>bind</b>           | function | S content-encoding          |
| <b>choose</b>         | function | S content-id                |
| <b>connect</b>        | function | S content-language          |
| <b>connect4</b>       | function | S content-length            |
| <b>connect6</b>       | function | S content-location          |
| <b>dns</b>            | 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           |
| <b>ftp</b>            | 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                      |
| F open                |          | S host                      |
| F put                 |          | S if-match                  |
| <b>gettime</b>        | function | S if-modified-since         |
| <b>headers</b>        | table    | S if-none-match             |
| T canonic             |          | S if-range                  |
| 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 accept-ranges       |          | S last-modified             |
| S action              |          | S location                  |
| S age                 |          | S max-forwards              |
| S allow               |          | S message-id                |
| S alternate-recipient |          | S mime-version              |
| S arrival-date        |          | S original-envelope-id      |
| 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 received  
 S received-from-mta  
 S references  
 S referer  
 S remote-mta  
 S reply-to  
 S reporting-mta  
 S resent-bcc  
 S resent-cc  
 S resent-date  
 S resent-from  
 S resent-message-id  
 S resent-reply-to  
 S resent-sender  
 S resent-to  
 S retry-after  
 S return-path  
 S sender  
 S server  
 S smtp-remote-recipient  
 S status  
 S subject  
 S te  
 S to  
 S trailer  
 S transfer-encoding  
 S upgrade  
 S user-agent  
 S vary  
 S via  
 S warning  
 S will-retry-until  
 S www-authenticate  
 S x-mailer

## http table

N PORT  
 N TIMEOUT  
 S USERAGENT  
 F open  
 F request

**newtry** function  
**protect** function  
**select** function  
**sink** function

## sinkt table

F close-when-done  
 F default  
 F http-chunked  
 F keep-open

## skip function

## sleep function

## smtp table

S DOMAIN  
 N PORT  
 S SERVER  
 N TIMEOUT  
 S ZONE  
 F message  
 F open  
 F send

## source function

## sourcet table

F by-length  
 F default  
 F http-chunked  
 F until-closed

## tcp function

## tcp6 function

## tp table

N TIMEOUT  
 F connect

## try function

## udp function

## udp6 function

## url table

F absolute  
 F build  
 F build\_path  
 F escape  
 F parse  
 F parse\_path  
 F unescape

# sorters (context)

**basicsorter**      function

**comparers**        table

    F basic

**constants**        table

    S defaultdigits

    S defaultlanguage

    S defaultmethod

    N digitmaximum

    N digitoffset

    N ignoredoffset

    N replacementoffset

    T validmethods

        B ch

        B mc

        B mm

        B pc

        B pm

        B uc

        B zc

        B zm

**definitions**      data table

**firstofsplit**     function

**setlanguage**     function

**sort**             function

**splitters**        table

    F utf

**strip**            function

**tracers**          data table

**update**           function

## statistics (context)

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

status (basic tex)

**list** function



## storage (context)

|                        |            |
|------------------------|------------|
| <b>allocate</b>        | function   |
| <b>data</b>            | table      |
| <b>mark</b>            | function   |
| <b>marked</b>          | function   |
| <b>max</b>             | number     |
| <b>min</b>             | number     |
| <b>nofmodules</b>      | number     |
| <b>noftables</b>       | number     |
| <b>register</b>        | function   |
| <b>shared</b>          | data table |
| <b>storedfunctions</b> | data table |
| <b>strip</b>           | boolean    |
| <b>tofmodules</b>      | number     |
| <b>toftables</b>       | number     |

## streams (context)

|                    |          |
|--------------------|----------|
| <b>collect</b>     | function |
| <b>disable</b>     | function |
| <b>enable</b>      | function |
| <b>flush</b>       | function |
| <b>initialize</b>  | function |
| <b>push</b>        | function |
| <b>start</b>       | function |
| <b>stop</b>        | function |
| <b>synchronize</b> | function |

## string (basic lua)

|                        |          |                      |          |
|------------------------|----------|----------------------|----------|
| <b>autodouble</b>      | function | <b>sub</b>           | function |
| <b>autosingle</b>      | function | <b>tformat</b>       | function |
| <b>booleanstring</b>   | function | <b>toHEX</b>         | function |
| <b>byte</b>            | function | <b>toboollean</b>    | function |
| <b>bytepairs</b>       | function | <b>tobytes</b>       | function |
| <b>bytes</b>           | function | <b>tocontext</b>     | function |
| <b>char</b>            | function | <b>todec</b>         | function |
| <b>characterpairs</b>  | function | <b>todimen</b>       | function |
| <b>characters</b>      | function | <b>tohex</b>         | function |
| <b>checkedsplit</b>    | function | <b>tonodes</b>       | function |
| <b>collapsespaces</b>  | function | <b>topattern</b>     | function |
| <b>count</b>           | function | <b>totable</b>       | function |
| <b>dump</b>            | function | <b>toutf</b>         | function |
| <b>escapedpattern</b>  | function | <b>tracedchar</b>    | function |
| <b>explode</b>         | function | <b>tracedchars</b>   | table    |
| <b>find</b>            | function | <b>unquote</b>       | function |
| <b>format</b>          | function | <b>unquoted</b>      | function |
| <b>formatter</b>       | function | <b>upper</b>         | function |
| <b>formatters</b>      | function | <b>utfcharacters</b> | function |
| <b>fullstrip</b>       | function | <b>utfvalues</b>     | function |
| <b>gmatch</b>          | function | <b>valid</b>         | function |
| <b>gsub</b>            | function |                      |          |
| <b>is_boolean</b>      | function |                      |          |
| <b>is_empty</b>        | function |                      |          |
| <b>itself</b>          | function |                      |          |
| <b>len</b>             | function |                      |          |
| <b>limit</b>           | function |                      |          |
| <b>longtostring</b>    | function |                      |          |
| <b>lower</b>           | function |                      |          |
| <b>match</b>           | function |                      |          |
| <b>nspaces</b>         | table    |                      |          |
| <b>optionalquoted</b>  | function |                      |          |
| <b>quote</b>           | function |                      |          |
| <b>quoted</b>          | function |                      |          |
| <b>rep</b>             | function |                      |          |
| <b>replacenewlines</b> | function |                      |          |
| <b>reverse</b>         | function |                      |          |
| <b>split</b>           | function |                      |          |
| <b>splitlines</b>      | function |                      |          |
| <b>splitup</b>         | function |                      |          |
| <b>strip</b>           | function |                      |          |

# structures (context)

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

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

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

- F setreferencerealpage
- D specials
- F splitcomponent
- F splitprefix
- F splitreference
- F synchronizepage
- T testrunners
  - F inner
  - F special
  - F special operation
  - F special operation with arguments
- T testspecials
  - F deltapage
  - F i
  - F internal
  - F page
  - F realpage
  - F section
  - F userpage
- D tobereferred
- D tobesaved
- D tracedpages
- T urls
  - T data
  - F define
  - F found
  - F get
- D usedinternals
- D usedviews
- F valid

**registers**

- F analyze
- D collected
- F compare
- F define
- F enhance
- F extend
- F filter
- F filtercollected
- F finalize
- F flush
- F get
- F prepare
- F process

table

- F setmethod
- F sort
- F store
- D tobesaved
- F unique
- F userdata

**sections**

- F autodepth
- F cct
- D collected
- F current
- F currentblock
- F currentid
- F currentlevel
- F currentsectionindex
- F depthnumber
- F finddata
- F findnumber
- F fullnumber
- F getcurrentlevel
- F getlevel
- F getnumber
- F internalreference
- D levelmap
- D levels
- F load
- F matchingtilldepth
- F numberatdepth
- F numbers
- F popblock
- F prefixedconverted
- F pushblock
- F register
- D registered
- F reportstructure
- F save
- T sectionblockdata
  - T bodypart
    - S bookmark
- F set
- F setblock
- F setchecker
- F setentry
- F setlevel

table

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



## table (basic lua)

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

## tex (basic tex)

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

|                       |            |
|-----------------------|------------|
| <b>setnest</b>        | function   |
| <b>setsfcode</b>      | function   |
| <b>setskip</b>        | function   |
| <b>settoks</b>        | function   |
| <b>setuccode</b>      | function   |
| <b>sfcode</b>         | table      |
| <b>shipout</b>        | function   |
| <b>show_context</b>   | function   |
| <b>skip</b>           | table      |
| <b>sp</b>             | function   |
| <b>sprint</b>         | function   |
| <b>systemmodes</b>    | data table |
| <b>takebox</b>        | function   |
| <b>texcatcodes</b>    | number     |
| <b>toks</b>           | table      |
| <b>tpacatcodes</b>    | number     |
| <b>tpbcacodes</b>     | number     |
| <b>tprint</b>         | function   |
| <b>trackers</b>       | data table |
| <b>txtcatcodes</b>    | number     |
| <b>type</b>           | function   |
| <b>uccode</b>         | table      |
| <b>uniform_rand</b>   | function   |
| <b>uniformdeviate</b> | function   |
| <b>uprint</b>         | function   |
| <b>vrbcacodes</b>     | number     |
| <b>write</b>          | function   |

## texconfig (basic tex)

|                        |                     |
|------------------------|---------------------|
| <b>error_line</b>      | number              |
| <b>expand_depth</b>    | number              |
| <b>formatname</b>      | string              |
| <b>half_error_line</b> | number              |
| <b>hash_extra</b>      | number              |
| <b>init</b>            | overloaded function |
| <b>kpse_init</b>       | boolean             |
| <b>max_in_open</b>     | number              |
| <b>max_print_line</b>  | number              |
| <b>max_strings</b>     | number              |
| <b>nest_size</b>       | number              |
| <b>param_size</b>      | number              |
| <b>save_size</b>       | number              |
| <b>shell_escape</b>    | string              |
| <b>stack_size</b>      | overloaded number   |

## texio (basic tex)

`write`      function

`write_nl`   function

# tokens (context)

**astable** function  
**bgroup** userdata  
**bits** table

N active  
N alignment  
N begingroup  
N character  
N close  
N comment  
N endgroup  
N endofline  
N escape  
N ignore  
N invalid  
N letter  
N mathshift  
N open  
N other  
N parameter  
N space  
N subscript  
N superscript  
N whitespace

**collectors** table

T data  
F defaultwords  
F dowithwords  
F flush  
F install  
F register  
T registered  
F show  
F test

**compile** function  
**converters** table

S toboolean  
S todimen  
S toglue  
S tonumber  
S tostring

**egroup** userdata

**getters** table

F box  
F count  
F dimen  
F token

**hbox** userdata

**istoken** function

**letter** function

**letters** function

**other** function

**pickup** function

**printlist** function

**scanners** table

F boolean  
F code  
F conditional  
F count  
F dimen  
F dimension  
F glue  
F integer  
F keyword  
F list  
F lxmlid  
F number  
F scanclose  
F scanopen  
F skip  
F string  
F token  
F tokens  
F toks  
F word

**scantable** function  
**setters** table

F box  
F count  
F dimen  
F macro

**shortcuts** table

T bits

|                   |                |
|-------------------|----------------|
| N active          | F lxmlid       |
| N alignment       | F number       |
| N begingroup      | F scanclose    |
| N character       | F scanopen     |
| N close           | F skip         |
| N comment         | F string       |
| N endgroup        | F token        |
| N endofline       | F tokens       |
| N escape          | F toks         |
| N ignore          | F word         |
| N invalid         | F scannumber   |
| N letter          | F scanopen     |
| N mathshift       | F scanstring   |
| N open            | F scanword     |
| N other           | F toboolean    |
| N parameter       | F todimen      |
| N space           | T tokens       |
| N subscript       | F astable      |
| N superscript     | U bgroup       |
| N whitespace      | T collectors   |
| N close           | F defaultwords |
| F inspect         | F dowithwords  |
| N open            | F flush        |
| F report          | F install      |
| F scanboolean     | F register     |
| F scanclose       | F show         |
| F scancode        | F test         |
| F scanconditional | F compile      |
| F scandimen       | T converters   |
| F scandimension   | S toboolean    |
| F scaninteger     | S todimen      |
| F scankeyword     | S toglue       |
| F scanlist        | S tonumber     |
| T scanners        | S toString     |
| F boolean         | U egroup       |
| F code            | T getters      |
| F conditional     | F box          |
| F count           | F count        |
| F dimen           | F dimen        |
| F dimension       | F token        |
| F glue            | U hbox         |
| F integer         | F istoken      |
| F keyword         | F letter       |
| F list            | F letters      |

F other  
F pickup  
F printlist  
F scantable  
T setters  
  F box  
  F count  
  F dimen  
  F macro  
T shortcuts  
  N close  
  F inspect  
  N open  
  F report  
  F scanboolean  
  F scanclose  
  F scancode  
  F scanconditional  
  F scandimen  
  F scandimension  
  F scaninteger  
  F scankeyword  
  F scanlist  
  F scannumber  
  F scanopen  
  F scanstring  
  F scanword  
  F toboolean  
  F todimen  
  F tonumber  
  F tostring  
U vbox  
U vtop  
F tonumber  
F tostring  
**vbox**           userdata  
**vtop**           userdata



# tracers (context)

|                  |          |
|------------------|----------|
| <b>count</b>     | function |
| <b>cs</b>        | function |
| <b>dimen</b>     | function |
| <b>knownlist</b> | function |
| <b>lists</b>     | table    |

T context

T internals

T scratch

|                  |          |
|------------------|----------|
| <b>name</b>      | function |
| <b>primitive</b> | function |
| <b>prnterror</b> | function |
| <b>showlines</b> | function |
| <b>strings</b>   | table    |

S undefined

|             |          |
|-------------|----------|
| <b>toks</b> | function |
| <b>type</b> | function |

## trackers (context)

|                       |            |
|-----------------------|------------|
| <b>data</b>           | data table |
| <b>default</b>        | function   |
| <b>disable</b>        | function   |
| <b>dumphashtofile</b> | function   |
| <b>enable</b>         | function   |
| <b>list</b>           | function   |
| <b>name</b>           | string     |
| <b>register</b>       | function   |
| <b>report</b>         | function   |
| <b>reset</b>          | function   |
| <b>savehash</b>       | function   |
| <b>show</b>           | function   |
| <b>value</b>          | function   |

# typesetters (context)

|                       |       |                      |                  |
|-----------------------|-------|----------------------|------------------|
| <b>alignments</b>     | table |                      | F installhandler |
| F handler             |       |                      | F processmath    |
| F set                 |       |                      | F set            |
| <b>breakpoints</b>    | table |                      | F setcolor       |
| F define              |       |                      | F setmath        |
| F handler             |       |                      | F tomode         |
| D mapping             |       | <b>firstlines</b>    | table            |
| T methods             |       | T actions            |                  |
| T numbers             |       | F default            |                  |
| F set                 |       | F line               |                  |
| F setreplacement      |       | F word               |                  |
| <b>cases</b>          | table | F handler            |                  |
| T actions             |       | F set                |                  |
| F handler             |       | <b>initials</b>      | table            |
| F register            |       | T actions            |                  |
| F set                 |       | F default            |                  |
| <b>characteralign</b> | table | F handler            |                  |
| F handler             |       | F set                |                  |
| F resetcharacteralign |       | <b>injectors</b>     | table            |
| F setcharacteralign   |       | F check              |                  |
| <b>characters</b>     | table | T list               |                  |
| F handler             |       | F mark               |                  |
| F replacensp          |       | F reset              |                  |
| F replacenspaces      |       | F set                |                  |
| <b>checkers</b>       | table | F show               |                  |
| F handler             |       | <b>italics</b>       | table            |
| F reset               |       | F forcevariant       |                  |
| F set                 |       | F handler            |                  |
| <b>cleaners</b>       | table | F reset              |                  |
| F handler             |       | F set                |                  |
| F set                 |       | <b>kerns</b>         | table            |
| <b>digits</b>         | table | D factors            |                  |
| T actions             |       | F handler            |                  |
| F handler             |       | F keeppligature      |                  |
| F set                 |       | B keepetogether      |                  |
| <b>directions</b>     | table | D mapping            |                  |
| F getfences           |       | F set                |                  |
| F getglobal           |       | <b>manipulators</b>  | table            |
| F getmethod           |       | F apply              |                  |
| F handler             |       | F applyspecification |                  |
| T handlers            |       | T methods            |                  |

|                      |                 |                            |
|----------------------|-----------------|----------------------------|
| F Word               |                 | F construct                |
| F Words              |                 | F create                   |
| F abbreviatedjournal |                 | F finish_row               |
| F expandedjournal    |                 | F flush                    |
| F lowercase          |                 | F initialize_construct     |
| F stripperperiod     |                 | F initialize_reflow_height |
| F uppercase          |                 | F initialize_reflow_width  |
| T patterns           |                 | F next_row                 |
| U list               |                 | F reflow_height            |
| U pair               |                 | F reflow_width             |
| F splitspecification |                 | F set_construct            |
| <b>margins</b>       | <b>table</b>    | F set_reflow_height        |
| F finalhandler       |                 | F set_reflow_width         |
| F globalhandler      |                 |                            |
| F ha                 |                 |                            |
| F localhandler       |                 |                            |
| F save               |                 |                            |
| <b>marksuspects</b>  | <b>function</b> |                            |
| <b>processors</b>    | <b>table</b>    |                            |
| F apply              |                 |                            |
| F register           |                 |                            |
| F reset              |                 |                            |
| F split              |                 |                            |
| F startapply         |                 |                            |
| F stopapply          |                 |                            |
| F stripped           |                 |                            |
| F toString           |                 |                            |
| <b>showsuspects</b>  | <b>function</b> |                            |
| <b>spacings</b>      | <b>table</b>    |                            |
| F define             |                 |                            |
| F handler            |                 |                            |
| D mapping            |                 |                            |
| T numbers            |                 |                            |
| T frenchpunctuation  |                 |                            |
| T characters         |                 |                            |
| S name               |                 |                            |
| N number             |                 |                            |
| F reset              |                 |                            |
| F set                |                 |                            |
| F setup              |                 |                            |
| <b>wrappers</b>      | <b>table</b>    |                            |
| F handler            |                 |                            |
| <b>xtables</b>       | <b>table</b>    |                            |
| F cleanup            |                 |                            |

# unicode (extra lua)

## ascii table

F byte  
F char  
F dump  
F find  
F format  
F gfind  
F gmatch  
F gsub  
F len  
F lower  
F match  
F rep  
F reverse  
F sub  
F upper

## grapheme table

F byte  
F char  
F dump  
F find  
F format  
F gfind  
F gmatch  
F gsub  
F len  
F lower  
F match  
F rep  
F reverse  
F sub  
F upper

## latin1 table

F byte  
F char  
F dump  
F find  
F format  
F gfind  
F gmatch  
F gsub

F len  
F lower  
F match  
F rep  
F reverse  
F sub  
F upper

## utf8 table

F byte  
F char  
F characters  
F chrln  
F count  
F dump  
F filetype  
F find  
F format  
F gfind  
F gmatch  
F gsub  
F is\_valid  
F len  
F length  
F lower  
F magic  
F match  
F remapper  
F rep  
F replacer  
F reverse  
F split  
F splitlines  
F sub  
F substituter  
F tocodes  
F toeight  
F toentities  
F tostring  
F totable  
F upper  
F ustring

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

## url (context)

|                    |          |
|--------------------|----------|
| <b>addscheme</b>   | function |
| <b>barepath</b>    | function |
| <b>construct</b>   | function |
| <b>escape</b>      | function |
| <b>filename</b>    | function |
| <b>hashed</b>      | function |
| <b>hasscheme</b>   | function |
| <b>query</b>       | function |
| <b>split</b>       | function |
| <b>toquery</b>     | function |
| <b>unescapeget</b> | function |

# utilities (context)

## debugger table

- F disable
- F enable
- F savestats
- F showstats
- F showtraceback

## formatters table

- F formatcolumns
- F list
- F stripzeros

## garbagecollector table

- F check
- N criterium
- B enabled

## lua table

- B alwaysstripcode
- F compile
- F loadedluacode
- F loadstripped
- N nofstrippedbytes
- N nofstrippedchunks
- B stripcode
- T strippedchunks
- F strippedloadstring
- T suffixes
  - S lua
  - S luc
  - S lui
  - S luj
  - S luv
  - S tma
  - S tmc
  - S tua
  - S tuc

## packers table

- F hashed
- F new
- F pack
- F simplehashed
- F strip
- F unpack

N version

## parsers table

- F add\_settings\_to\_array
- F arguments\_to\_table
- F array\_to\_string
- F csvsplitter
- F getparameters
- F groupedsplitat
- F hash\_to\_string
- F iterator
- F keq\_to\_hash
- F listitem
- F make\_settings\_to\_hash\_pattern
- F mergehashes
- F options\_to\_array
- F options\_to\_hash
- T patterns
  - U settings\_to\_array
  - U settings\_to\_hash\_a
  - U settings\_to\_hash\_b
  - U settings\_to\_hash\_c
  - U unittotex
- F process\_stripped\_settings
- F rfc4180splitter
- F runtime
- F settings\_to\_array
- F settings\_to\_array\_with\_repeat
- F settings\_to\_hash
- F settings\_to\_hash\_strict
- F settings\_to\_hash\_tolerant
- F settings\_to\_set
- F simple\_hash\_to\_string
- F splitmethod
- F splitthousands
- F stepper
- F stripped\_settings\_to\_array
- F unittotex
- F unittoxml

## report function

## sequencers table

- F appendaction



|                     |              |                       |              |
|---------------------|--------------|-----------------------|--------------|
| F appendgroup       |              | U prune               |              |
| F compile           |              | U prune and collapse  |              |
| F disableaction     |              | U prune and no empty  |              |
| F disablegroup      |              | U retain              |              |
| F enableaction      |              | U retain and collapse |              |
| F enablegroup       |              | U retain and no empty |              |
| D functions         |              | F striplines          |              |
| F localize          |              | F striplong           |              |
| F new               |              | F tabtospace          |              |
| F nodeprocessor     |              | T tracers             |              |
| F prependaction     |              | <b>tables</b>         | <b>table</b> |
| F prependgroup      |              | F accesstable         |              |
| F removeaction      |              | F definedtable        |              |
| F replaceaction     |              | F definetable         |              |
| F setkind           |              | F encapsulate         |              |
| F tostring          |              | F insertaftervalue    |              |
| <b>setters</b>      | <b>table</b> | F insertbeforevalue   |              |
| F disable           |              | F migratetable        |              |
| F enable            |              | F removevalue         |              |
| F initialize        |              | F replacevalue        |              |
| F list              |              | <b>templates</b>      | <b>table</b> |
| F new               |              | F load                |              |
| F register          |              | F replace             |              |
| F report            |              | F replacer            |              |
| F reset             |              | F resolve             |              |
| F show              |              |                       |              |
| <b>stacker</b>      | <b>table</b> |                       |              |
| F new               |              |                       |              |
| <b>storage</b>      | <b>table</b> |                       |              |
| F allocate          |              |                       |              |
| F checked           |              |                       |              |
| F mark              |              |                       |              |
| F marked            |              |                       |              |
| F setinitializer    |              |                       |              |
| F sparse            |              |                       |              |
| <b>strings</b>      | <b>table</b> |                       |              |
| F collapsecrlf      |              |                       |              |
| T formatters        |              |                       |              |
| F add               |              |                       |              |
| F new               |              |                       |              |
| F newrepeater       |              |                       |              |
| F nice              |              |                       |              |
| T striplinepatterns |              |                       |              |
| U collapse          |              |                       |              |

## vf (context)

|                |          |
|----------------|----------|
| <b>char</b>    | function |
| <b>down</b>    | function |
| <b>fontid</b>  | function |
| <b>image</b>   | function |
| <b>node</b>    | function |
| <b>nop</b>     | function |
| <b>pop</b>     | function |
| <b>push</b>    | function |
| <b>right</b>   | function |
| <b>rule</b>    | function |
| <b>special</b> | function |

## visualizers (context)

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

## xml (context)

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

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

|                           |          |                            |          |
|---------------------------|----------|----------------------------|----------|
| <b>makestandalone</b>     | function | <b>setcomment</b>          | function |
| <b>match</b>              | function | <b>sethandlersfunction</b> | function |
| <b>name</b>               | function | <b>setinjectors</b>        | function |
| <b>newhandlers</b>        | function | <b>setProperty</b>         | function |
| <b>nodesettostring</b>    | function | <b>settings</b>            | function |
| <b>originalload</b>       | function | <b>specialhandler</b>      | table    |
| <b>package</b>            | function | <b>sprint</b>              | function |
| <b>parent</b>             | function | <b>string</b>              | function |
| <b>parsedentitylpeg</b>   | userdata | <b>strip</b>               | function |
| <b>pihandlers</b>         | table    | <b>strip_whitespace</b>    | function |
| F injector                |          | <b>stripelement</b>        | function |
| <b>placeholders</b>       | table    | <b>stripleadingspaces</b>  | function |
| F unknown_any_entity      |          | <b>table</b>               | function |
| F unknown_dec_entity      |          | <b>text</b>                | function |
| F unknown_hex_entity      |          | <b>textonly</b>            | function |
| <b>position</b>           | function | <b>texttocdata</b>         | function |
| <b>privatecodes</b>       | table    | <b>tocdata</b>             | function |
| <b>privatetoken</b>       | function | <b>toelement</b>           | function |
| <b>process</b>            | function | <b>tostring</b>            | function |
| <b>process_attributes</b> | function | <b>totable</b>             | function |
| <b>process_elements</b>   | function | <b>toxml</b>               | function |
| <b>processattributes</b>  | function | <b>tprint</b>              | function |
| <b>profiled</b>           | table    | <b>traverse</b>            | function |
| <b>raw</b>                | function | <b>unescaped</b>           | function |
| <b>registerentity</b>     | function | <b>unprivatized</b>        | function |
| <b>registers</b>          | function | <b>withelement</b>         | function |
| <b>reindex</b>            | function | <b>withelements</b>        | function |
| <b>remap_name</b>         | function | <b>wrap</b>                | function |
| <b>remap_namespace</b>    | function | <b>xmlns</b>               | table    |
| <b>remap_tag</b>          | function |                            |          |
| <b>remapname</b>          | function |                            |          |
| <b>remapnamespace</b>     | function |                            |          |
| <b>remaptag</b>           | function |                            |          |
| <b>renamespace</b>        | function |                            |          |
| <b>replace</b>            | function |                            |          |
| <b>replace_element</b>    | function |                            |          |
| <b>resetinjectors</b>     | function |                            |          |
| <b>resolvens</b>          | function |                            |          |
| <b>root</b>               | function |                            |          |
| <b>save</b>               | function |                            |          |
| <b>selection</b>          | function |                            |          |
| <b>separate</b>           | function |                            |          |
| <b>serialize</b>          | function |                            |          |
| <b>setcdata</b>           | function |                            |          |

## zip (extra lua)

|                        |                     |
|------------------------|---------------------|
| <b>archives</b>        | table               |
| <b>close</b>           | function            |
| <b>closearchive</b>    | function            |
| <b>open</b>            | overloaded function |
| <b>openarchive</b>     | function            |
| <b>openfile</b>        | function            |
| <b>registeredfiles</b> | table               |
| <b>type</b>            | function            |

## zlib (extra lua)

|                      |          |
|----------------------|----------|
| <b>adler32</b>       | function |
| <b>compress</b>      | function |
| <b>compressobj</b>   | function |
| <b>crc32</b>         | function |
| <b>decompress</b>    | function |
| <b>decompressobj</b> | function |
| <b>version</b>       | function |