

1 attributes backends bibtex blobs  
boolean buffers builders caches  
callback callbacks catcodes characters  
chemicals commands containers context  
converters coroutine debug dir  
directives document documentdata  
environment epdf experiments figures  
file floats font fontloader fonts  
global gzip img interactions interfaces  
io job lang languages layouts lfs  
libraries lmx logs lpdf lpeg ltn12  
lua luatex lxml math mathematics md5  
metapost mime moduledata modules mplib  
noads node nodes number os package  
parametersets pdf physics profiler  
regimes resolvers scripts set socket  
sorters statistics status storage  
streams string structures table tex  
texconfig texio token tokens tracers  
trackers typesetters unicode url  
utilities visualizers xml zip zlib

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

# global (alias: \_G)

|                 |          |                   |          |
|-----------------|----------|-------------------|----------|
| 1               | table    | io                | table    |
| arg             | table    | ipairs            | function |
| assert          | function | job               | table    |
| attributes      | table    | lang              | table    |
| backends        | table    | languages         | table    |
| beginpage       | function | layouts           | table    |
| bibtex          | table    | lfs               | table    |
| blobs           | table    | libraries         | table    |
| boolean         | table    | lmx               | table    |
| buffers         | table    | load              | function |
| builders        | table    | loadfile          | function |
| caches          | table    | loadstring        | function |
| callback        | table    | logs              | table    |
| callbacks       | table    | lpdf              | table    |
| catcodes        | table    | lpeg              | table    |
| characters      | table    | ltn12             | table    |
| chemicals       | table    | lua               | table    |
| collectgarbage  | function | luatex            | table    |
| commands        | table    | lxml              | table    |
| containers      | table    | math              | table    |
| context         | function | mathematics       | table    |
| converters      | table    | md5               | table    |
| coroutine       | table    | metapost          | table    |
| debug           | table    | mime              | table    |
| dimen           | function | module            | function |
| dir             | table    | moduledata        | table    |
| directives      | table    | modules           | table    |
| document        | table    | mplib             | table    |
| documentdata    | table    | newline           | function |
| dofile          | function | newproxy          | function |
| endpage         | function | next              | function |
| environment     | table    | noads             | table    |
| epdf            | table    | node              | table    |
| error           | function | nodes             | table    |
| experiments     | table    | number            | table    |
| figures         | table    | os                | table    |
| file            | table    | outputpagestree   | function |
| floats          | table    | package           | table    |
| font            | table    | pairs             | function |
| fontloader      | table    | parametersets     | table    |
| fonts           | table    | pcall             | function |
| gcinfo          | function | pdf               | table    |
| getfenv         | function | physics           | table    |
| getmetatable    | function | print             | function |
| getreadfilename | function | profiler          | table    |
| global          | table    | protect           | function |
| gzip            | table    | rawequal          | function |
| img             | table    | rawget            | function |
| inspect         | function | rawset            | function |
| interactions    | table    | regimes           | table    |
| interfaces      | table    | report_characters | function |

|                           |                       |                               |                       |
|---------------------------|-----------------------|-------------------------------|-----------------------|
| <code>require</code>      | <code>function</code> | <code>tocontext</code>        | <code>function</code> |
| <code>resolvers</code>    | <code>table</code>    | <code>token</code>            | <code>table</code>    |
| <code>scripts</code>      | <code>table</code>    | <code>tokens</code>           | <code>table</code>    |
| <code>select</code>       | <code>function</code> | <code>tonumber</code>         | <code>function</code> |
| <code>set</code>          | <code>table</code>    | <code>tostring</code>         | <code>function</code> |
| <code>setfenv</code>      | <code>function</code> | <code>trace_characters</code> | <code>boolean</code>  |
| <code>setmetatable</code> | <code>function</code> | <code>traceback</code>        | <code>function</code> |
| <code>socket</code>       | <code>table</code>    | <code>tracers</code>          | <code>table</code>    |
| <code>sorters</code>      | <code>table</code>    | <code>trackers</code>         | <code>table</code>    |
| <code>statistics</code>   | <code>table</code>    | <code>type</code>             | <code>function</code> |
| <code>status</code>       | <code>table</code>    | <code>typesetters</code>      | <code>table</code>    |
| <code>storage</code>      | <code>table</code>    | <code>unicode</code>          | <code>table</code>    |
| <code>streams</code>      | <code>table</code>    | <code>unpack</code>           | <code>function</code> |
| <code>string</code>       | <code>table</code>    | <code>url</code>              | <code>table</code>    |
| <code>stripmath</code>    | <code>function</code> | <code>utf</code>              | <code>table</code>    |
| <code>structures</code>   | <code>table</code>    | <code>utilities</code>        | <code>table</code>    |
| <code>table</code>        | <code>table</code>    | <code>visualizers</code>      | <code>table</code>    |
| <code>tex</code>          | <code>table</code>    | <code>xml</code>              | <code>table</code>    |
| <code>texconfig</code>    | <code>table</code>    | <code>xpcall</code>           | <code>function</code> |
| <code>texio</code>        | <code>table</code>    | <code>zip</code>              | <code>table</code>    |
| <code>toboolean</code>    | <code>function</code> | <code>zlib</code>             | <code>table</code>    |

# 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 definemixcolor  
F definemultitonecolor  
F defineprocesscolor  
F definesimplegray  
F definespotcolor  
F definetransparency  
F enable  
F filter  
F forcedmodel  
F forcesupport  
F formatcolor  
F formatgray  
F gray  
F graytohsb  
F handler  
F hsbtogray  
F hsbtorgb  
F iccprofile  
F isblack  
N main  
S model  
F mpcolor  
F mpoptions  
U none  
F register  
D registered  
F registerspotcolor  
F rgb  
F rgbtocmyk  
F rgbtogray  
F rgbtohsb  
N selector  
F setmodel  
F spot

F spotcolorname  
F spotcolorparent  
F spotcolorvalue  
B supported  
F transparencycomponents  
B triggering  
F usecolors  
F value  
D values  
B weightgray

**define**            function

**effects**           table

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

**handlers**          table

**list**              data table

**names**             data table

**negatives**        table

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

**numbers**           data table

**ofnode**            function

**private**           function

**states**            table

F disabletriggering  
F enabletriggering  
F finalize  
F initialize  
F process  
F selective  
F stacked

**transparencies**   table

N attribute  
D data  
F enable  
F forcesupport  
F handler  
U none  
F register  
D registered  
B supported  
B triggering

|                     |        |               |
|---------------------|--------|---------------|
| F value             |        | B hasorder    |
| D values            |        | D listwise    |
| <b>unsetvalue</b>   | number | F register    |
| <b>viewerlayers</b> | table  | D registered  |
| N attribute         |        | D scopes      |
| D data              |        | F setfeatures |
| F define            |        | F start       |
| F enable            |        | F stop        |
| F forcesupport      |        | B supported   |
| F handler           |        | D values      |

# backends (context)

|                               |          |                         |
|-------------------------------|----------|-------------------------|
| <b>codeinjections</b>         | table    | F setpagetransition     |
| <b>current</b>                | string   | F setupcanvas           |
| <b>defaults</b>               | table    | F setupidentity         |
| T codeinjections              |          | F setxmpfile            |
| T nodeinjections              |          | F startlayer            |
| T registrations               |          | F stoplayer             |
| D tables                      |          | F supportedformats      |
| <b>install</b>                | function | F useviewerlayer        |
| <b>nodeinjections</b>         | table    | F validfield            |
| F restore                     |          | F validfieldcategory    |
| F save                        |          | F validfieldset         |
| F transform                   |          | S comment               |
| <b>nothing</b>                | function | T nodeinjections        |
| <b>pdf</b>                    | table    | F addtags               |
| T codeinjections              |          | F attachfile            |
| F addbookmarks                |          | F cmykcolor             |
| F addtransparencygroup        |          | F comment               |
| F attachmentid                |          | F destination           |
| F clonefield                  |          | F effect                |
| F definefield                 |          | F graycolor             |
| F definefieldset              |          | F injectbitmap          |
| F defineviewerlayer           |          | F insertmovie           |
| F embedfile                   |          | F insertsound           |
| F enabletags                  |          | F insertswf             |
| F finalizepage                |          | F insertu3d             |
| F finishreference             |          | F knockout              |
| F getdefaultfieldvalue        |          | F negative              |
| F getfieldcategory            |          | F overprint             |
| F getfieldset                 |          | F positive              |
| F getformatoption             |          | F reference             |
| F getoutputfilename           |          | F rgbcolor              |
| F getpreviewfigure            |          | F spotcolor             |
| F insertrenderingwindow       |          | F startlayer            |
| F mergereferences             |          | F stoplayer             |
| F mergeviewerlayers           |          | F switchlayer           |
| F prerollreference            |          | F transparency          |
| F presetsymbol                |          | F typesetfield          |
| F presetsymbollist            |          | T registrations         |
| F processrendering            |          | F cmykindexcolor        |
| F registerdocumentcloseaction |          | F cmykspotcolor         |
| F registerdocumentopenaction  |          | F getspotcolorreference |
| F registeredsymbol            |          | F grayindexcolor        |
| F registerpagecloseaction     |          | F grayspotcolor         |
| F registerpageopenaction      |          | F rgbindexcolor         |
| F registersymbol              |          | F rgbspotcolor          |
| F setfieldcalculationset      |          | F spotcolorname         |
| F setfigurealternative        |          | F transparency          |
| F setfigurecolorspace         |          | T tables                |
| F setfiguremask               |          | T vfspecials            |
| F setformat                   |          | T black                 |
| F setformsmethod              |          | T blue                  |

T green

T red

F startslant

T stopslant

**registrations** table

**tables** table

# bibtex (context)

|                            |          |                         |          |
|----------------------------|----------|-------------------------|----------|
| <b>authorref</b>           | function | <b>F flush</b>          |          |
| <b>authors</b>             | table    | <b>F nofregistered</b>  |          |
| <b>F concat</b>            |          | <b>F process</b>        |          |
| <b>F inverted</b>          |          | <b>F register</b>       |          |
| <b>F invertedshort</b>     |          | <b>F registerplaced</b> |          |
| <b>F normal</b>            |          | <b>F reset</b>          |          |
| <b>F normalshort</b>       |          | <b>F resolve</b>        |          |
| <b>F setsettings</b>       |          | <b>load</b>             | function |
| <b>F short</b>             |          | <b>new</b>              | function |
| <b>authoryearref</b>       | function | <b>singularorplural</b> | function |
| <b>authoryearsref</b>      | function | <b>statistics</b>       | table    |
| <b>convert</b>             | function | <b>N nofbytes</b>       |          |
| <b>hacks</b>               | table    | <b>N nofdefinitions</b> |          |
| <b>F add</b>               |          | <b>N nofshortcuts</b>   |          |
| <b>F doifalreadyplaced</b> |          | <b>toxml</b>            | function |
| <b>F filterall</b>         |          |                         |          |



# blobs (context)

|                   |          |              |          |
|-------------------|----------|--------------|----------|
| <b>append</b>     | function | <b>new</b>   | function |
| <b>dimensions</b> | function | <b>pack</b>  | function |
| <b>dispose</b>    | function | <b>write</b> | function |

# boolean (context)

`tocontext`    `function`  
`tonumber`    `function`

# buffers (context)

|                |          |                  |          |
|----------------|----------|------------------|----------|
| append         | function | F define         |          |
| assign         | function | F hassomecontent |          |
| collectcontent | function | F next           |          |
| erase          | function | F place          |          |
| exists         | function | F reset          |          |
| getcontent     | function | F save           |          |
| getlines       | function | raw              | function |
| parallel       | table    |                  |          |

# builders (context)

|                    |                  |                 |                    |
|--------------------|------------------|-----------------|--------------------|
| <b>kernel</b>      | <b>table</b>     |                 | F disable          |
|                    | F hyphenation    |                 | F enable           |
|                    | F kerning        |                 | F optimize         |
|                    | F ligaturing     |                 | F setup            |
|                    | F mlist_to_hlist |                 | F split            |
| <b>paragraphs</b>  | <b>table</b>     |                 | F tag              |
|                    | T constructors   | <b>vspacing</b> | <b>table</b>       |
|                    | N attribute      |                 | F analyze          |
|                    | F disable        |                 | D categories       |
|                    | F enable         |                 | F collapsevbox     |
|                    | F handler        |                 | T data             |
|                    | T methods        |                 | D map              |
|                    | F default        |                 | D skip             |
|                    | F oneline        |                 | D snapmethods      |
|                    | D names          |                 | F definesnapmethod |
|                    | D numbers        |                 | B fixed            |
|                    | F register       |                 | F pagehandler      |
|                    | F set            |                 | F setmap           |
| F kepttogether     |                  |                 | F setskip          |
| F registertogether |                  |                 | F snapbox          |
| T solutions        |                  |                 | F tocategories     |
| T splitters        |                  |                 | F tocategory       |
| F define           |                  |                 | F vboxhandler      |

## cache (context)

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

## callback (basic tex)

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

# callbacks (context)

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

# catcodes (context)

|          |            |
|----------|------------|
| names    | data table |
| numbers  | data table |
| register | function   |



# characters (context)

|                      |            |                              |            |
|----------------------|------------|------------------------------|------------|
| <b>activeoffset</b>  | number     | <b>is_mark</b>               | data table |
| <b>adobename</b>     | function   | <b>is_spacing</b>            | data table |
| <b>bidirectional</b> | data table | <b>lcchars</b>               | data table |
| <b>blocks</b>        | data table | <b>lccode</b>                | function   |
| <b>casemap</b>       | table      | <b>lccodes</b>               | data table |
| <b>categories</b>    | data table | <b>lettered</b>              | function   |
| <b>category</b>      | function   | <b>lower</b>                 | function   |
| <b>categorytags</b>  | data table | <b>makeactive</b>            | function   |
| <b>combined</b>      | data table | <b>math</b>                  | table      |
| <b>contextname</b>   | function   | <b>mathpairs</b>             | data table |
| <b>data</b>          | data table | <b>ranges</b>                | data table |
| <b>decomposed</b>    | data table | <b>registerentities</b>      | function   |
| <b>define</b>        | function   | <b>remap_hangul_syllable</b> | function   |
| <b>description</b>   | function   | <b>remapentity</b>           | function   |
| <b>descriptions</b>  | data table | <b>setcodes</b>              | function   |
| <b>directions</b>    | data table | <b>shape</b>                 | function   |
| <b>encodes</b>       | data table | <b>shaped</b>                | function   |
| <b>entities</b>      | data table | <b>shchars</b>               | data table |
| <b>fallbacks</b>     | data table | <b>shcodes</b>               | data table |
| <b>filters</b>       | data table | <b>specialchars</b>          | data table |
| <b>flush</b>         | function   | <b>specials</b>              | data table |
| <b>fromnumber</b>    | function   | <b>subscripts</b>            | table      |
| <b>fschars</b>       | data table | <b>superscripts</b>          | table      |
| <b>fscodes</b>       | data table | <b>synonyms</b>              | data table |
| <b>getrange</b>      | function   | <b>tex</b>                   | table      |
| <b>graphemes</b>     | data table |                              |            |
| <b>hangul</b>        | table      |                              |            |
|                      |            | D accentmapping              |            |
|                      |            | F defineaccents              |            |
|                      |            | F toutf                      |            |
|                      |            | <b>tonumber</b>              | function   |
|                      |            | <b>ucchars</b>               | data table |
|                      |            | <b>uccode</b>                | function   |
|                      |            | <b>uccodes</b>               | data table |
|                      |            | <b>unicodechar</b>           | function   |
|                      |            | <b>upper</b>                 | function   |
| <b>initialize</b>    | function   |                              |            |
| <b>is_character</b>  | data table |                              |            |
| <b>is_command</b>    | data table |                              |            |
| <b>is_letter</b>     | data table |                              |            |

## chemicals (context)

|                  |          |                       |          |
|------------------|----------|-----------------------|----------|
| <b>component</b> | function | <b>moleculeparser</b> | userdata |
| <b>define</b>    | function | <b>start</b>          | function |
| <b>format</b>    | string   | <b>stop</b>           | function |
| <b>inline</b>    | function | <b>structures</b>     | number   |
| <b>instance</b>  | string   | <b>undefine</b>       | function |
| <b>molecule</b>  | function |                       |          |

# commands (context)

|                           |          |                              |          |
|---------------------------|----------|------------------------------|----------|
| Alphabetic                | function | collecthelp                  | function |
| Character                 | function | colorcomponents              | function |
| Characters                | function | consultfloat                 | function |
| MPd                       | function | copyfileto                   | function |
| MPh                       | function | copyposition                 | function |
| MPll                      | function | counttwopassdata             | function |
| MPlr                      | function | currentcomponent             | function |
| MPp                       | function | currentdate                  | function |
| MPplus                    | function | currentenvironment           | function |
| MPpos                     | function | currentproduct               | function |
| MPrest                    | function | currentproject               | function |
| MPul                      | function | currentregime                | function |
| MPur                      | function | dayname                      | function |
| MPw                       | function | defineattribute              | function |
| MPx                       | function | definebibtexsession          | function |
| MPxy                      | function | defineconversion             | function |
| MPy                       | function | definefield                  | function |
| Romannumerals             | function | definefieldset               | function |
| abjadnodotnumerals        | function | definefilefallback           | function |
| abjadnumerals             | function | definefilesynonym            | function |
| addff                     | function | definefont_one               | function |
| addfs                     | function | definefont_two               | function |
| addlinklistelement        | function | definefontcollection         | function |
| addstructurecounter       | function | defineintermediatecolor      | function |
| allinputpaths             | function | definelinkedlist             | function |
| alphabetic                | function | definemarking                | function |
| analysefloatmethod        | function | definemultitonecolor         | function |
| applytochars              | function | defineparallel               | function |
| applytowords              | function | defineprocesscolor           | function |
| assignbuffer              | function | definespotcolor              | function |
| autofinishstructurelevels | function | definestructureblock         | function |
| autonextspace             | function | definestructurecounter       | function |
| autonextstructurelevel    | function | definestructureset           | function |
| autosetups                | function | definetransparency           | function |
| autostarttext             | function | definetwopasslist            | function |
| autostoptext              | function | defineviewerlayer            | function |
| boolcase                  | function | defrostrandomseed            | function |
| character                 | function | digits                       | function |
| characters                | function | disableregime                | function |
| checkcharactersinfont     | function | doanalyzeframedbox           | function |
| checkedconversion         | function | doif                         | function |
| checkedpagefloat          | function | doifblackelse                | function |
| checktwopassdata          | function | doifcommonelse               | function |
| chineseallnumerals        | function | doifdimenstringelse          | function |
| chinesecapnumerals        | function | doifdrawingblackelse         | function |
| chinesenumerals           | function | doifelse                     | function |
| cleanfontname             | function | doifelsebuffer               | function |
| clonefield                | function | doifelsecurrentfontasfeature | function |
| clonefontcollection_one   | function | doifelseintwopassdata        | function |
| clonefontcollection_two   | function | doifelsemarking              | function |
| collectfloat              | function | doifelseparallel             | function |

|                             |          |                             |          |
|-----------------------------|----------|-----------------------------|----------|
| doifelsesavedfloat          | function | forcequitjob                | function |
| doifelsespaces              | function | format                      | function |
| doifelsestructurecounter    | function | formatcolor                 | function |
| doifelsevisualizer          | function | formatgray                  | function |
| doiffielddcategoryelse      | function | freezerandomseed            | function |
| doiffielddelse              | function | getbuffer                   | function |
| doiffielddsetelse           | function | getbufferctxlua             | function |
| doiffiledefinedelse         | function | getbuffermkvi               | function |
| doiffileexistelse           | function | getdefaultfieldvalue        | function |
| doiffirstcharelse           | function | getfieldcategory            | function |
| doifinputfileelse           | function | getfirstcharacter           | function |
| doifinsetelse               | function | getfirsttwopassdata         | function |
| doifleapyearelse            | function | getfloatvariable            | function |
| doiflocfileelse             | function | getlasttwopassdata          | function |
| doifnot                     | function | getmarking                  | function |
| doifnotstructurecounter     | function | getprivateattribute         | function |
| doifolderversionelse        | function | getprivatechar              | function |
| doifoverlappingelse         | function | getrandomcounta             | function |
| doifparentfileelse          | function | getrandomcountb             | function |
| doifpositionelse            | function | getrandomseed               | function |
| doifpositionsonsamepageelse | function | getreadfilename             | function |
| doifpositionsonthispageelse | function | gettexbuffer                | function |
| doifstructurecounter        | function | gettwopassdata              | function |
| doifurldefinedelse          | function | gettwopassdatalist          | function |
| doprocstypescriptfile       | function | geturl                      | function |
| doreshapeframedbox          | function | grabbuffer                  | function |
| dostarttextfile             | function | helpaction                  | function |
| dostoptextfile              | function | helpreference               | function |
| elapsedtime                 | function | hexstringtonumber           | function |
| enablecolor                 | function | hour                        | function |
| enablecolorintents          | function | hyphenatedlist              | function |
| enablefontcolorschemas      | function | hyphenatedurl               | function |
| enableregime                | function | D characters                |          |
| enabletransparency          | function | N lefthyphenmin             |          |
| enhancelinkedlist           | function | D mapping                   |          |
| erasebuffer                 | function | N righthyphenmin            |          |
| featureattribute            | function | F setcharacters             |          |
| feedback                    | function | incrementedstructurecounter | function |
| fetchallmarks               | function | insertattachment            | function |
| fetchonemark                | function | insertcomment               | function |
| fetchtwomarks               | function | insertfield                 | function |
| filterreference             | function | insertrenderingwindow       | function |
| findtwopassdata             | function | insertsoundclip             | function |
| firstinlist                 | function | isleapyear                  | function |
| firststructurecounter       | function | languagenumber              | function |
| flushfloat                  | function | laststructurecounter        | function |
| flushpostponedblocks        | function | lchexnumber                 | function |
| fontchar                    | function | lchexnumbers                | function |
| fontcollectionmessage       | function | leapyear                    | function |
| fontlookupgetkey            | function | loadctxpreplist             | function |
| fontlookupgetkeyofindex     | function | loadexamodes                | function |
| fontlookupinitialize        | function | loadfontgoodies             | function |
| fontlookupnoffound          | function | loadvisualizer              | function |
| forceendjob                 | function | locatefilepath              | function |

|                            |          |                            |          |
|----------------------------|----------|----------------------------|----------|
| locfilename                | function | registerhelp               | function |
| maxitemwidth               | function | registeritemgroup          | function |
| minute                     | function | registermaintextcolor      | function |
| molecule                   | function | registerpostponedblock     | function |
| month                      | function | registersoundclip          | function |
| monthmnm                   | function | registerstructureprocessor | function |
| monthname                  | function | registertransparency       | function |
| mpcolor                    | function | registerunit               | function |
| mpoptions                  | function | relatemarking              | function |
| namedstructureuservariable | function | removemissingcharacters    | function |
| namedstructurevariable     | function | replacemissingcharacters   | function |
| nbfs                       | function | replacepospxywhd           | function |
| nextparallel               | function | resavefloat                | function |
| nextstructurecounter       | function | resetfontcollection        | function |
| nofdays                    | function | resetfontfeature           | function |
| nofitems                   | function | resetmarking               | function |
| nofstackedfloats           | function | resetmathitalics           | function |
| number                     | function | resetnullfont              | function |
| octnumber                  | function | resetparallel              | function |
| octstringtonumber          | function | resetstructurecounter      | function |
| ordinal                    | function | resetstructureprocessor    | function |
| overloadbookmark           | function | resettimer                 | function |
| pdfrotation                | function | restartstructurecounter    | function |
| percentageof               | function | restorecurrentattributes   | function |
| placeparallel              | function | restorestructurecounter    | function |
| popfloat                   | function | romannumerals              | function |
| popitaliccorrection        | function | runbuffer                  | function |
| prepareMPvariable          | function | savebuffer                 | function |
| preparebibtexsession       | function | savecurrentattributes      | function |
| preparedfile               | function | savefloat                  | function |
| preparefontcollection      | function | saveparallel               | function |
| presetsymbolist            | function | savestructureblock         | function |
| presettabulate             | function | savestructurecounter       | function |
| prevstructurecounter       | function | savetaggedtwopassdata      | function |
| processbuffer              | function | savetwopassdata            | function |
| processedfile              | function | second                     | function |
| processedfiles             | function | selectstructureblock       | function |
| processfile                | function | setclosedocumentaction     | function |
| processfilemany            | function | setclosepageaction         | function |
| processfilenone            | function | setcolormodel              | function |
| processfileonce            | function | setfontfeature             | function |
| pushfloat                  | function | setfontofid                | function |
| pushitaliccorrection       | function | setformat                  | function |
| rawcharacter               | function | setformsmethod             | function |
| rawdate                    | function | setmarking                 | function |
| referencepagestate         | function | setmathalphabet            | function |
| referencerealpage          | function | setmathalternate           | function |
| registerattachment         | function | setmathattribute           | function |
| registerbibtexentry        | function | setmathitalics             | function |
| registerbibtexfile         | function | setmathstyle               | function |
| registerbookmark           | function | setopendocumentaction      | function |
| registerbuttons            | function | setopenpageaction          | function |
| registercolor              | function | setownstructurecounter     | function |
| registercolorintent        | function | setpagetransition          | function |

|                           |          |                            |          |
|---------------------------|----------|----------------------------|----------|
| setrandomseed             | function | structuretitle             | function |
| setrastercolor            | function | structureuservariable      | function |
| setrealign                | function | structurevariable          | function |
| setreferencearguments     | function | subff                      | function |
| setreferenceoperation     | function | subfs                      | function |
| setstructureblockstate    | function | synchronizemarking         | function |
| setstructurecounter       | function | taggedmathfunction         | function |
| settagcombination         | function | testcase                   | function |
| settagdescription         | function | textime                    | function |
| settagdescriptionsymbol   | function | transparencycomponents     | function |
| settagfigure              | function | triggereffect              | function |
| settaghighlight           | function | triggernegative            | function |
| settagitemgroup           | function | truefilename               | function |
| settagproperty            | function | typebuffer                 | function |
| settagsorting             | function | typefile                   | function |
| settagsynonym             | function | typestring                 | function |
| settagtablecell           | function | uchexnumber                | function |
| settagtabulatecell        | function | uchexnumbers               | function |
| setupbookmarks            | function | unicodechar                | function |
| setupcanvas               | function | unit                       | function |
| setupexport               | function | updatefilenames            | function |
| setupfontexpansion        | function | useMPlibrary               | function |
| setupfontprotrusion       | function | useanyfile                 | function |
| setupidentity             | function | useclfile                  | function |
| setupitaliccorrection     | function | usecolors                  | function |
| setxmpfile                | function | usecomponent               | function |
| showchardata              | function | useenvironment             | function |
| showfontparameters        | function | usefile                    | function |
| showhyphenatedinlist      | function | uselibrary                 | function |
| showstructurecounter      | function | useluafile                 | function |
| splitfilename             | function | usemodules                 | function |
| spotcolorname             | function | usepath                    | function |
| spotcolorparent           | function | useproduct                 | function |
| spotcolorvalue            | function | useproject                 | function |
| startcomponent            | function | usesubpath                 | function |
| startenvironment          | function | usesymbols                 | function |
| startproduct              | function | usetexfile                 | function |
| startproject              | function | useurl                     | function |
| startregime               | function | usexmlfile                 | function |
| starttag                  | function | usezipfile                 | function |
| starttext                 | function | utfchar                    | function |
| stopcomponent             | function | weekday                    | function |
| stopenvironment           | function | weekdayname                | function |
| stopproduct               | function | widthofstring              | function |
| stopproject               | function | writestatus                | function |
| stopregime                | function | x_table_cleanup            | function |
| stoptag                   | function | x_table_construct          | function |
| stoptext                  | function | x_table_create             | function |
| structureautocatcodedget  | function | x_table_flush              | function |
| structurecatcodedget      | function | x_table_init_construct     | function |
| structurecountersubs      | function | x_table_init_reflow_height | function |
| structurecountervalue     | function | x_table_init_reflow_width  | function |
| structuregivencatcodedget | function | x_table_next_row           | function |
| structurenumber           | function | x_table_reflow_height      | function |

|  |          |                                       |          |
|--|----------|---------------------------------------|----------|
| <code>x_table_reflow_width</code>      | function | <code>x_table_set_reflow_width</code> | function |
| <code>x_table_set_construct</code>     | function | <code>year</code>                     | function |
| <code>x_table_set_reflow_height</code> | function |                                       |          |

## containers (context)

|                        |          |
|------------------------|----------|
| <code>cleanname</code> | function |
| <code>content</code>   | function |
| <code>define</code>    | function |
| <code>is_usable</code> | function |

|                       |          |
|-----------------------|----------|
| <code>is_valid</code> | function |
| <code>read</code>     | function |
| <code>usecache</code> | boolean  |
| <code>write</code>    | function |



## converters (context)

|                    |          |                   |            |
|--------------------|----------|-------------------|------------|
| Alphabetic         | function | leapyear          | function   |
| Character          | function | maxchrs           | function   |
| Characters         | function | minute            | function   |
| Romannumerals      | function | month             | function   |
| abjadnodotnumerals | function | nofdays           | function   |
| abjadnumerals      | function | number            | function   |
| alphabetic         | function | octnumber         | function   |
| character          | function | octstringtonumber | function   |
| characters         | function | ordinal           | function   |
| chineseallnumerals | function | rawcharacter      | function   |
| chinesecapnumerals | function | romannumerals     | function   |
| chinesenumerals    | function | second            | function   |
| chr                | function | sequences         | data table |
| chrs               | function | textime           | function   |
| convert            | function | toabjad           | function   |
| define             | function | tochinese         | function   |
| hexstringtonumber  | function | toroman           | function   |
| hour               | function | uchexnumber       | function   |
| isleapyear         | function | uchexnumbers      | function   |
| lchexnumber        | function | weekday           | function   |
| lchexnumbers       | function | year              | function   |

## coroutine (basic lua)

|                         |          |                      |          |
|-------------------------|----------|----------------------|----------|
| <code>coco</code>       | boolean  | <code>running</code> | function |
| <code>create</code>     | function | <code>status</code>  | function |
| <code>cstacksize</code> | function | <code>wrap</code>    | function |
| <code>resume</code>     | function | <code>yield</code>   | 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>setfenv</b>      | function |
| <b>sethook</b>      | function |
| <b>setlocal</b>     | function |
| <b>setmetatable</b> | function |
| <b>setupvalue</b>   | function |
| <b>traceback</b>    | function |

## dir (context)

|                             |          |
|-----------------------------|----------|
| <code>collectpattern</code> | function |
| <code>current</code>        | function |
| <code>expandname</code>     | function |
| <code>glob</code>           | function |
| <code>globfiles</code>      | function |
| <code>globpattern</code>    | function |

|                       |          |
|-----------------------|----------|
| <code>ls</code>       | function |
| <code>makedirs</code> | function |
| <code>mkdirs</code>   | function |
| <code>pop</code>      | function |
| <code>push</code>     | function |

# directives (context)

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

# document (context)

|             |            |                    |          |
|-------------|------------|--------------------|----------|
| arguments   | data table | setargument        | function |
| files       | table      | setdefaultargument | function |
| getargument | function   | setfilename        | function |
| getfilename | function   |                    |          |

## environment (context)

|                     |            |                        |            |
|---------------------|------------|------------------------|------------|
| argument            | function   | luafile                | function   |
| arguments           | data table | luafilechunk           | function   |
| engineflags         | data table | originalarguments      | data table |
| files               | table      | outputfilename         | string     |
| filesynonyms        | data table | ownbin                 | string     |
| homedir             | string     | ownname                | string     |
| initex              | boolean    | ownpath                | string     |
| initializearguments | function   | rawarguments           | data table |
| inputfilebarename   | string     | reconstructcommandline | function   |
| inputfilename       | string     | setargument            | function   |
| inputfilesuffix     | string     | splitarguments         | function   |
| jobfilename         | string     | texfile                | function   |
| jobfilesuffix       | string     | texmfos                | string     |
| loadedluacode       | function   | texos                  | string     |
| loadluafile         | function   | texroot                | string     |

# epdf (extra tex)

|               |          |                     |          |
|---------------|----------|---------------------|----------|
| <b>Annot</b>  | function | <b>Object</b>       | function |
| <b>Annots</b> | function | <b>PDFRectangle</b> | function |
| <b>Array</b>  | function | <b>open</b>         | function |
| <b>Dict</b>   | function | <b>type</b>         | function |



# experiments (context)

|         |            |          |          |
|---------|------------|----------|----------|
| data    | data table | name     | string   |
| disable | function   | register | function |
| enable  | function   | report   | function |
| list    | function   | show     | function |

# figures (context)

|                      |            |                         |            |
|----------------------|------------|-------------------------|------------|
| <b>applyratio</b>    | function   | <b>hash</b>             | function   |
| <b>bases</b>         | table      | <b>identifiers</b>      | data table |
| B enabled            |            | <b>identify</b>         | function   |
| F find               |            | <b>include</b>          | function   |
| T found              |            | <b>includers</b>        | data table |
| T list               |            | <b>initialize</b>       | function   |
| F locate             |            | <b>loaded</b>           | data table |
| F use                |            | <b>localpaths</b>       | data table |
| T used               |            | <b>mergegoodies</b>     | function   |
| <b>bitmapimage</b>   | function   | <b>nofprocessed</b>     | number     |
| <b>boxnumber</b>     | number     | <b>order</b>            | data table |
| <b>cachepaths</b>    | data table | <b>paths</b>            | data table |
| <b>check</b>         | function   | <b>patterns</b>         | data table |
| <b>checkers</b>      | data table | <b>pop</b>              | function   |
| <b>converters</b>    | data table | <b>preferquality</b>    | boolean    |
| <b>current</b>       | function   | <b>programs</b>         | data table |
| <b>defaultdepth</b>  | number     | <b>push</b>             | function   |
| <b>defaultheight</b> | number     | <b>registerpattern</b>  | function   |
| <b>defaultsearch</b> | boolean    | <b>registerresource</b> | function   |
| <b>defaultwidth</b>  | number     | <b>registersuffix</b>   | function   |
| <b>done</b>          | function   | <b>resources</b>        | data table |
| <b>dummy</b>         | function   | <b>scale</b>            | function   |
| <b>exists</b>        | data table | <b>setlookups</b>       | function   |
| <b>exists</b>        | function   | <b>setpaths</b>         | function   |
| <b>formats</b>       | data table | <b>suffixes</b>         | data table |
| <b>found</b>         | data table | <b>tprint</b>           | function   |
| <b>get</b>           | function   | <b>used</b>             | data table |

## file (basic lua)

|                                |          |                             |          |
|--------------------------------|----------|-----------------------------|----------|
| <code>addsuffix</code>         | function | <code>joinpath</code>       | function |
| <code>basename</code>          | function | <code>loadchecksum</code>   | function |
| <code>checksum</code>          | function | <code>nameonly</code>       | function |
| <code>collapsepath</code>      | function | <code>nametotable</code>    | function |
| <code>copy</code>              | function | <code>needs Updating</code> | function |
| <code>dirname</code>           | function | <code>readdata</code>       | function |
| <code>expandname</code>        | function | <code>removesuffix</code>   | function |
| <code>extname</code>           | function | <code>replacesuffix</code>  | function |
| <code>is_qualified_path</code> | function | <code>robustname</code>     | function |
| <code>is_readable</code>       | function | <code>savechecksum</code>   | function |
| <code>is_rootbased_path</code> | function | <code>savedata</code>       | function |
| <code>is_writable</code>       | function | <code>splitname</code>      | function |
| <code>isreadable</code>        | function | <code>splitpath</code>      | function |
| <code>iswritable</code>        | function | <code>strip</code>          | function |
| <code>join</code>              | function | <code>suffix</code>         | function |

# floats (context)

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

## font (basic tex)

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

## fontloader (extra tex)

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

# fonts (context)

## **analyzers**            table

- D initializers
- D methods
- F setstate
- B useunicodemarks

## **checkers**            table

- F missing

## **cid**                    table

- F getmap
- F loadfile

## **collections**        table

- F clone\_one
- F clone\_two
- F define
- T definitions
- F message
- F prepare
- F process
- F reset
- T vectors

## **constructors**        table

- F applymanipulators
- F assignmathparameters
- B autocleanup
- D cache
- F calculatyscale
- F checkedfeatures
- F checkedfilename
- F cleanuptable
- F collectprocessors
- 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 height

- S width

- T parameters

- S ascender

- S descender

- S designsize

- T expansion

- S auto

- S shrink

- S step

- S stretch

- S extendfactor

- S factor

- S hfactor

- S mathsize

- T protrusion

- S auto

- S quad

- S scaledpoints

- S scriptpercentage

- S scriptscriptpercentage

- S size

- S slantfactor

- S slantperpoint

- T spacing

- S extra

- S shrink

- S stretch

- S width

- T synonyms

- S em

- S ex

- S extra\_space

- S extraspace

- S slant

- S space

- S space\_shrink

- S space\_stretch

- S spaceshrink

- S spacestretch

- S x\_height

- S units

- S vfactor

- S xheight

- T properties

- S autoitalicamount

- T cidinfo

- S embedding

- S encodingbytes

- S filename

- S finalized

|                       |          |
|-----------------------|----------|
| S fontname            |          |
| S format              |          |
| S fullname            |          |
| S hasitalics          |          |
| S hasmath             |          |
| S mathitalics         |          |
| S mode                |          |
| S name                |          |
| S noglyphnames        |          |
| S nostackmath         |          |
| S psname              |          |
| S textitalics         |          |
| S virtualized         |          |
| D loadedfonts         |          |
| T mathactions         |          |
| S namemode            |          |
| F newfeatures         |          |
| N privateoffset       |          |
| F readanddefine       |          |
| F registerfeature     |          |
| B resolvevirtualtoo   |          |
| F scale               |          |
| F scaled              |          |
| F setfactor           |          |
| F setname             |          |
| N version             |          |
| <b>current</b>        | function |
| <b>currentid</b>      | function |
| <b>definers</b>       | table    |
| F addlookup           |          |
| F analyze             |          |
| F applypostprocessors |          |
| F checkedmode         |          |
| F checkedscript       |          |
| F current             |          |
| S defaultlookup       |          |
| F define              |          |
| F getspecification    |          |
| 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                |          |
| <b>definetypeface</b> | function |

|                         |            |
|-------------------------|------------|
| <b>encodings</b>        | table      |
| T agl                   |            |
| D cache                 |            |
| F is_known              |            |
| D known                 |            |
| F load                  |            |
| F make_unicode_vector   |            |
| D math                  |            |
| N version               |            |
| <b>expansions</b>       | data table |
| <b>formats</b>          | data table |
| <b>goodies</b>          | table      |
| T colorschemes          |            |
| F coloring              |            |
| T data                  |            |
| F enable                |            |
| F getcompositions       |            |
| T list                  |            |
| F compositions          |            |
| F expansions            |            |
| F featureset            |            |
| F files                 |            |
| F mathematics           |            |
| F protrusions           |            |
| F solutions             |            |
| F typefaces             |            |
| F load                  |            |
| F prepare_features      |            |
| F register              |            |
| F registerpostprocessor |            |
| F report                |            |
| <b>handlers</b>         | table      |
| T afm                   |            |
| B addkerns              |            |
| B addligatures          |            |
| B addtextligatures      |            |
| B autoprefixed          |            |
| D cache                 |            |
| D features              |            |
| F load                  |            |
| F setfeatures           |            |
| B syncspace             |            |
| N version               |            |
| T otf                   |            |
| F addfeature            |            |
| D cache                 |            |
| T chainhandlers         |            |
| F normal                |            |
| F verbose               |            |
| F collectlookups        |            |
| F dataset               |            |
| S defaultbasealternate  |            |
| S defaultnodealternate  |            |
| D enhancers             |            |



|                        |                           |
|------------------------|---------------------------|
| D features             | F descriptions            |
| F getalternate         | F glyphs                  |
| T glists               | <b>loggers</b> table      |
| F load                 | T category_to_placeholder |
| F scriptandlanguage    | S ll                      |
| F setcontextchain      | S lm                      |
| F setdynamics          | S lo                      |
| F setfeatures          | S lt                      |
| T tables               | S lu                      |
| D baselines            | S mc                      |
| D features             | S me                      |
| D languages            | S mn                      |
| D scripts              | S nd                      |
| N version              | S nl                      |
| T pfb                  | S no                      |
| T tfm                  | S pc                      |
| D features             | S pd                      |
| F setfeatures          | S pe                      |
| T vf                   | S pf                      |
| T combinations         | S pi                      |
| F combine              | S po                      |
| T combiner             | S ps                      |
| D commands             | S sc                      |
| F find                 | S sk                      |
| D helpers              | S sm                      |
| D math                 | S so                      |
| D predefined           | F format                  |
| D whatever             | F onetimemessage          |
| <b>hashes</b> table    | F register                |
| D characters           | F reportdefinedfonts      |
| D csnames              | F reportusedfeatures      |
| D descriptions         | <b>mappings</b> table     |
| T dynamics             | F addtounicode            |
| D identifiers          | F fromunicode16           |
| D italics              | F loadfile                |
| D marks                | F loadline                |
| D parameters           | F loadlumtable            |
| T processes            | F makenameparser          |
| D properties           | F reset                   |
| D quads                | F tounicode16             |
| D resources            | F tounicode16sequence     |
| T setdynamics          | <b>names</b> table        |
| D xheights             | S basename                |
| <b>helpers</b> table   | B be_clever               |
| F addprivate           | D cache                   |
| F dimenfactor          | F cleanfilename           |
| F getdigitwidth        | F cleanname               |
| F getparameters        | F collect                 |
| F getprivatenode       | F collectfiles            |
| F hasprivate           | F collectspec             |
| F nametoslot           | T data                    |
| F setdigitwidth        | B enabled                 |
| <b>iterators</b> table | F exists                  |
| F characters           | T filters                 |

F afm  
 F dfont  
 T list  
 T names  
 F otf  
 T paths  
 F pfb  
 F ttc  
 F ttf  
 S fontconfigfile  
 F getfilename  
 F getlookupkey  
 F getlookups  
 F getpaths  
 F identify  
 F is\_permitted  
 F list  
 F load  
 B loaded  
 F lookup  
 F noflookups  
 S osfontdirvariable  
 F readdata  
 F register  
 F registered  
 F resolve  
 F resolvedspecification  
 F resolvespec  
 B saved  
 F specification  
 D specifications  
 F splitspec  
 N version

F writedata  
**protrusions** data table  
**readers** table  
 F afm  
 F check\_lua  
 F check\_tfm  
 F dfont  
 F lua  
 F opentype  
 F otf  
 F pfb  
 D sequence  
 F tfm  
 F ttc  
 F ttf  
**specifiers** table  
 D contextmerged  
 F contextnumber  
 D contextnumbers  
 D contextsetups  
 F contexttostring  
 F mergecontext  
 F presetcontext  
 F registercontext  
 F showcontext  
 F splitcontext  
 D synonyms  
 D variants  
**symbols** table  
 F uselibrary  
**tables** table  
**tracers** table  
**typefaces** data table

## gzip (extra lua)

**close**   function  
**lines**   function  
**open**    function

## img (basic tex)

|                            |                       |
|----------------------------|-----------------------|
| <code>boxes</code>         | <code>function</code> |
| <code>checksize</code>     | <code>function</code> |
| <code>clone</code>         | <code>function</code> |
| <code>copy</code>          | <code>function</code> |
| <code>immediatwrite</code> | <code>function</code> |
| <code>keys</code>          | <code>function</code> |
| <code>new</code>           | <code>function</code> |
| <code>node</code>          | <code>function</code> |

|                        |                       |
|------------------------|-----------------------|
| <code>ofindex</code>   | <code>function</code> |
| <code>package</code>   | <code>function</code> |
| <code>print</code>     | <code>function</code> |
| <code>scan</code>      | <code>function</code> |
| <code>serialize</code> | <code>function</code> |
| <code>totable</code>   | <code>function</code> |
| <code>types</code>     | <code>function</code> |
| <code>write</code>     | <code>function</code> |

# interactions (context)

## **attachments** table

F insert  
F register

## **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** table

## **pages** table

F setpagetransition

F setupcanvas

## **references** table

F setcloseddocument

F setclosepage

F setopendocument

F setopenpage

## **renderings** table

F register

F rendering

F var

## **soundclips** table

F insert

F register

# interfaces (context)

|                             |            |                         |            |
|-----------------------------|------------|-------------------------|------------|
| <b>addvalidkeys</b>         | function   | <b>F define</b>         |            |
| <b>cachedsetups</b>         | data table | <b>F list</b>           |            |
| <b>cachesetup</b>           | function   | <b>setconstant</b>      | function   |
| <b>complete</b>             | data table | <b>setelement</b>       | function   |
| <b>constants</b>            | data table | <b>setformat</b>        | function   |
| <b>definecommand</b>        | function   | <b>setmessage</b>       | function   |
| <b>doifelsemessage</b>      | function   | <b>setmessages</b>      | function   |
| <b>elements</b>             | data table | <b>settranslation</b>   | function   |
| <b>formats</b>              | data table | <b>setuserinterface</b> | function   |
| <b>getcheckedparameters</b> | function   | <b>setvalidkeys</b>     | function   |
| <b>getmessage</b>           | function   | <b>setvariable</b>      | function   |
| <b>hashedsetups</b>         | data table | <b>showmessage</b>      | function   |
| <b>interfacedcommand</b>    | function   | <b>syntax</b>           | data table |
| <b>interfaces</b>           | table      | <b>tolist</b>           | function   |
| <b>invalidkey</b>           | function   | <b>translations</b>     | data table |
| <b>is_command</b>           | function   | <b>variables</b>        | data table |
| <b>namespaces</b>           | table      |                         |            |

## io (basic lua)

|                 |          |                |                     |
|-----------------|----------|----------------|---------------------|
| ask             | function | out            | table               |
| bytes           | function | F inhibit      |                     |
| characters      | function | D modes        |                     |
| checkopeners    | function | F permit       |                     |
| close           | function | output         | function            |
| exists          | function | pathseparator  | string              |
| fileseparator   | string   | popen          | overloaded function |
| finalizeopeners | function | read           | function            |
| flush           | function | readnumber     | function            |
| inp             | table    | readstring     | function            |
| F inhibit       |          | registeropener | function            |
| D modes         |          | savedata       | function            |
| F permit        |          | size           | function            |
| input           | function | stderr         | userdata            |
| lines           | function | stdin          | userdata            |
| loaddata        | function | stdout         | userdata            |
| noflines        | function | tmpfile        | function            |
| open            | function | type           | function            |
| open_ro         | function | write          | function            |

# job (context)

|                    |          |
|--------------------|----------|
| <b>comment</b>     | function |
| <b>disablesave</b> | function |
| <b>files</b>       | table    |
| D collected        |          |
| F context          |          |
| B forcerun         |          |
| F run              |          |
| D tobesaved        |          |
| <b>initialize</b>  | function |
| <b>load</b>        | function |
| <b>loadother</b>   | function |
| <b>objects</b>     | table    |
| D collected        |          |
| F doifelse         |          |
| F get              |          |
| F number           |          |
| F page             |          |
| F save             |          |
| F set              |          |
| D tobesaved        |          |
| <b>pack</b>        | boolean  |
| <b>passes</b>      | table    |
| F check            |          |
| D collected        |          |
| F count            |          |
| F define           |          |
| F find             |          |
| F first            |          |
| F get              |          |
| F getcollected     |          |
| F getdata          |          |
| F getfield         |          |
| F gettobesaved     |          |
| F inlist           |          |
| F last             |          |
| F list             |          |
| F save             |          |
| F savetagged       |          |
| D tobesaved        |          |

|                  |          |
|------------------|----------|
| <b>positions</b> | table    |
| D collected      |          |
| F copy           |          |
| F depth          |          |
| F extra          |          |
| F height         |          |
| F lowerleft      |          |
| F lowerright     |          |
| F onsamepage     |          |
| F overlapping    |          |
| F page           |          |
| F position       |          |
| F replace        |          |
| F setall         |          |
| F setdim         |          |
| F setraw         |          |
| D tobesaved      |          |
| F upperleft      |          |
| F upperright     |          |
| F v              |          |
| F width          |          |
| F x              |          |
| F xy             |          |
| F y              |          |
| <b>register</b>  | function |
| <b>save</b>      | function |
| <b>structure</b> | table    |
| D collected      |          |
| T tobesaved      |          |
| T branches       |          |
| S name           |          |
| S type           |          |
| <b>variables</b> | table    |
| D checksums      |          |
| D collected      |          |
| F save           |          |
| D tobesaved      |          |
| <b>version</b>   | number   |



# lang (basic tex)

|                                |          |
|--------------------------------|----------|
| <code>clean</code>             | function |
| <code>clear_hyphenation</code> | function |
| <code>clear_patterns</code>    | function |
| <code>exceptions</code>        | function |
| <code>hyphenate</code>         | function |
| <code>hyphenation</code>       | function |
| <code>id</code>                | function |

|                               |          |
|-------------------------------|----------|
| <code>new</code>              | function |
| <code>patterns</code>         | function |
| <code>postexhyphenchar</code> | function |
| <code>posthyphenchar</code>   | function |
| <code>preexhyphenchar</code>  | function |
| <code>prehyphenchar</code>    | function |

# languages (context)

|                      |            |                       |            |
|----------------------|------------|-----------------------|------------|
| <b>associate</b>     | function   | <b>numbers</b>        | data table |
| <b>associated</b>    | data table | <b>posthyphenchar</b> | function   |
| <b>association</b>   | function   | <b>prehyphenchar</b>  | function   |
| <b>counters</b>      | data table | <b>registered</b>     | data table |
| <b>current</b>       | function   | <b>righthyphenmin</b> | function   |
| <b>data</b>          | data table | <b>setdirty</b>       | function   |
| <b>define</b>        | function   | <b>synonym</b>        | function   |
| <b>exceptions</b>    | function   | <b>version</b>        | number     |
| <b>getnumber</b>     | function   | <b>words</b>          | table      |
| <b>hyphenate</b>     | function   |                       |            |
| <b>installed</b>     | function   | F check               |            |
| <b>labels</b>        | table      | T data                |            |
| F define             |            | F disable             |            |
| F split              |            | F enable              |            |
| <b>lefthyphenmin</b> | function   | T enablers            |            |
| <b>loadable</b>      | function   | B enables             |            |
| <b>loadwords</b>     | function   | F found               |            |
| <b>logger</b>        | table      | F load                |            |
| F report             |            | T methods             |            |
|                      |            | N threshold           |            |

# layouts (context)

```
status  table
      F isleftpage
      F leftorrightpagection
```

## lfs (extra lua)

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

# libraries (context)

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

## lmx (context)

|                      |          |                      |            |
|----------------------|----------|----------------------|------------|
| <b>convert</b>       | function | <b>pv</b>            | function   |
| <b>escape</b>        | function | <b>reset</b>         | function   |
| <b>get</b>           | function | <b>result</b>        | function   |
| <b>htmfile</b>       | function | <b>set</b>           | function   |
| <b>include</b>       | function | <b>show</b>          | function   |
| <b>lmxfile</b>       | function | <b>showdebuginfo</b> | function   |
| <b>loadedfile</b>    | function | <b>showerror</b>     | function   |
| <b>make</b>          | function | <b>tv</b>            | function   |
| <b>new</b>           | function | <b>type</b>          | function   |
| <b>overloaderror</b> | function | <b>urlescape</b>     | function   |
| <b>popupfile</b>     | function | <b>variable</b>      | function   |
| <b>print</b>         | function | <b>variables</b>     | data table |

# logs (context)

|                        |          |                          |          |
|------------------------|----------|--------------------------|----------|
| <b>application</b>     | function | <b>setmessenger</b>      | function |
| <b>categories</b>      | function | <b>setprogram</b>        | function |
| <b>direct</b>          | function | <b>settarget</b>         | function |
| <b>disable</b>         | function | <b>settranslations</b>   | function |
| <b>enable</b>          | function | <b>show</b>              | function |
| <b>extendbanner</b>    | function | <b>show_close</b>        | function |
| <b>flush</b>           | function | <b>show_load</b>         | function |
| <b>help</b>            | function | <b>show_open</b>         | function |
| <b>messenger</b>       | function | <b>simple</b>            | function |
| <b>new</b>             | function | <b>simpleline</b>        | function |
| <b>newline</b>         | function | <b>simplelines</b>       | function |
| <b>poptarget</b>       | function | <b>start_page_number</b> | function |
| <b>pushtarget</b>      | function | <b>status</b>            | function |
| <b>report</b>          | function | <b>stop_page_number</b>  | function |
| <b>report_job_stat</b> | function | <b>subdirect</b>         | function |
| <b>reportbanner</b>    | function | <b>subreport</b>         | function |
| <b>reporter</b>        | function | <b>system</b>            | function |
| <b>reportline</b>      | function | <b>texerrormessage</b>   | function |
| <b>reportlines</b>     | function | <b>writer</b>            | function |
| <b>setformats</b>      | function |                          |          |

# lpdf (context)

|                        |            |                           |          |
|------------------------|------------|---------------------------|----------|
| action                 | function   | id                        | function |
| adddocumentcolorspace  | function   | injectxmpinfo             | function |
| adddocumenttextgstate  | function   | insertxmpinfo             | function |
| adddocumentpattern     | function   | javascript                | function |
| adddocumentshade       | function   | launch                    | function |
| addtocatalog           | function   | layerreference            | function |
| addtoinfo              | function   | limited                   | function |
| addtonames             | function   | linearshade               | function |
| addtopageattributes    | function   | link                      | function |
| addtopageresources     | function   | null                      | function |
| addtopagesattributes   | function   | number                    | function |
| addxmpinfo             | function   | pagedestination           | function |
| array                  | function   | pagereference             | function |
| boolean                | function   | pdfcolor                  | function |
| checkedkey             | function   | pdftimestamp              | function |
| checkedvalue           | function   | protectresources          | boolean  |
| circularshade          | function   | reference                 | function |
| cmykcode               | function   | registerannotation        | function |
| collectedresources     | function   | registerdocumentfinalizer | function |
| color                  | function   | registerpagefinalizer     | function |
| colorspace             | function   | reserveannotation         | function |
| colorspec              | function   | reserveobject             | function |
| colorvalue             | function   | rgbcode                   | function |
| colorvalues            | function   | rotationcm                | function |
| constant               | function   | shareobject               | function |
| delayedobject          | function   | shareobjectreference      | function |
| dictionary             | function   | spotcode                  | function |
| epdf                   | table      | stream                    | function |
| F load                 |            | string                    | function |
| finalizeddocument      | function   | timestamp                 | function |
| finalizepage           | function   | toeight                   | function |
| finishtransparencycode | function   | tosixteen                 | function |
| flushobject            | function   | transparency              | function |
| flushstreamfileobject  | function   | transparencycode          | function |
| flushstreamobject      | function   | transparencyvalue         | function |
| formats                | data table | unicode                   | function |
| graycode               | function   | verbose                   | function |



# lpeg (basic lua)

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

# ltn12 (extra lua)

|                  |         |                     |
|------------------|---------|---------------------|
| <b>BLOCKSIZE</b> | number  | F simplify          |
| <b>filter</b>    | table   | F table             |
|                  | F chain | <b>source</b> table |
|                  | F cycle | F cat               |
| <b>pump</b>      | table   | F chain             |
|                  | F all   | F empty             |
|                  | F step  | F error             |
| <b>sink</b>      | table   | F file              |
|                  | F chain | F rewind            |
|                  | F error | F simplify          |
|                  | F file  | F string            |
|                  | F null  |                     |

## lua (basic tex)

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

# luatex (context)

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

# lxml (context)

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

## math (basic lua)

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

# mathematics (context)

|                               |            |                           |          |
|-------------------------------|------------|---------------------------|----------|
| <b>addfallbacks</b>           | function   | <b>overloadparameters</b> | function |
| <b>alphabets</b>              | data table | <b>privatebase</b>        | number   |
| <b>big</b>                    | function   | <b>remapalphabets</b>     | function |
| <b>boldmap</b>                | table      | <b>renderings</b>         | table    |
| <b>categories</b>             | table      | D mappings                |          |
| D functions                   |            | D numbers                 |          |
| <b>checkaccentbaseheight</b>  | function   | D sets                    |          |
| <b>checkprivateparameters</b> | function   | <b>renderset</b>          | function |
| <b>classes</b>                | data table | <b>resetitalics</b>       | function |
| <b>codes</b>                  | data table | <b>scaleparameters</b>    | function |
| <b>define</b>                 | function   | <b>setalternate</b>       | function |
| <b>dimensions</b>             | function   | <b>setitalics</b>         | function |
| <b>extrabase</b>              | number     | <b>syncboth</b>           | function |
| <b>extras</b>                 | table      | <b>syncname</b>           | function |
| F add                         |            | <b>syncstyle</b>          | function |
| F copy                        |            | <b>toname</b>             | function |
| <b>families</b>               | data table | <b>tostyle</b>            | function |
| <b>gaps</b>                   | table      | <b>utfmathclass</b>       | function |
| <b>getboth</b>                | function   | <b>utfmathcommand</b>     | function |
| <b>getstyle</b>               | function   | <b>utfmathfiller</b>      | function |
| <b>initializeparameters</b>   | function   | <b>utfmathstretch</b>     | function |
| <b>makefont</b>               | function   |                           |          |

# md5 (extra lua)

|         |          |         |          |
|---------|----------|---------|----------|
| HEX     | function | exor    | function |
| crypt   | function | hex     | function |
| dec     | function | sum     | function |
| decrypt | function | sumhexa | function |



# metapost (context)

|                           |          |
|---------------------------|----------|
| <b>analyzeplugins</b>     | function |
| <b>checkformat</b>        | function |
| <b>checktexts</b>         | function |
| <b>colorinitializer</b>   | function |
| <b>convert</b>            | function |
| <b>defaultformat</b>      | string   |
| <b>directrun</b>          | function |
| <b>edefsxsy</b>           | function |
| <b>escaped</b>            | function |
| <b>exectime</b>           | table    |
| <b>filterclippath</b>     | function |
| <b>finder</b>             | function |
| <b>flush</b>              | function |
| <b>flushers</b>           | table    |
| T pdf                     |          |
| F comment                 |          |
| F flushfigure             |          |
| F startfigure             |          |
| F stopfigure              |          |
| F textfigure              |          |
| <b>flushliteral</b>       | function |
| <b>flushnormalpath</b>    | function |
| <b>flushreset</b>         | function |
| <b>format</b>             | function |
| <b>formatnumber</b>       | function |
| <b>getclippath</b>        | function |
| <b>gettext</b>            | function |
| <b>graphic</b>            | function |
| <b>graphic_base_pass</b>  | function |
| <b>graphic_extra_pass</b> | function |
| <b>intermediate</b>       | table    |
| T actions                 |          |
| F makempy                 |          |
| B needed                  |          |
| <b>lastlog</b>            | string   |
| <b>load</b>               | function |

|                       |          |
|-----------------------|----------|
| <b>makempy</b>        | table    |
| N nofconverted        |          |
| F processgraphics     |          |
| <b>metafun</b>        | table    |
| F interpolate         |          |
| F topath              |          |
| <b>method</b>         | number   |
| <b>mptopdf</b>        | table    |
| F convertmpstopdf     |          |
| N nofconverted        |          |
| <b>multipass</b>      | boolean  |
| <b>n</b>              | number   |
| <b>optimize</b>       | boolean  |
| <b>parse</b>          | function |
| <b>pdf literals</b>   | function |
| <b>pluginactions</b>  | function |
| <b>process</b>        | function |
| <b>processplugins</b> | function |
| <b>reducetogray</b>   | boolean  |
| <b>reporterror</b>    | function |
| <b>reset</b>          | function |
| <b>resetlastlog</b>   | function |
| <b>resetplugins</b>   | function |
| <b>resettexttexts</b> | function |
| <b>setoutercolor</b>  | function |
| <b>settext</b>        | function |
| <b>showlog</b>        | boolean  |
| <b>tex</b>            | table    |
| F get                 |          |
| F reset               |          |
| F set                 |          |
| <b>texerrors</b>      | boolean  |
| <b>texttextsdata</b>  | function |
| <b>theclippath</b>    | function |
| <b>totable</b>        | function |
| <b>unload</b>         | function |

## 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

# mplib (extra tex)

|               |          |                 |          |
|---------------|----------|-----------------|----------|
| <b>fields</b> | function | <b>pen_info</b> | function |
| <b>new</b>    | function | <b>version</b>  | function |

# noads (context)

handlers      table

- F check
- F collapse
- F families
- F italics
- F relocate
- F render
- F resize
- F respace
- F tags
- F unscript

F variants

process      function  
processors   table

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

## node (basic tex)

|                              |                       |                                   |                       |
|------------------------------|-----------------------|-----------------------------------|-----------------------|
| <code>copy</code>            | <code>function</code> | <code>ligaturing</code>           | <code>function</code> |
| <code>copy_list</code>       | <code>function</code> | <code>mlist_to_hlist</code>       | <code>function</code> |
| <code>count</code>           | <code>function</code> | <code>new</code>                  | <code>function</code> |
| <code>current_attr</code>    | <code>function</code> | <code>next</code>                 | <code>function</code> |
| <code>dimensions</code>      | <code>function</code> | <code>prev</code>                 | <code>function</code> |
| <code>do_ligature_n</code>   | <code>function</code> | <code>protect_glyphs</code>       | <code>function</code> |
| <code>family_font</code>     | <code>function</code> | <code>protrusion_skippable</code> | <code>function</code> |
| <code>fields</code>          | <code>function</code> | <code>remove</code>               | <code>function</code> |
| <code>first_character</code> | <code>function</code> | <code>set_attribute</code>        | <code>function</code> |
| <code>first_glyph</code>     | <code>function</code> | <code>slide</code>                | <code>function</code> |
| <code>flush_list</code>      | <code>function</code> | <code>subtype</code>              | <code>function</code> |
| <code>free</code>            | <code>function</code> | <code>tail</code>                 | <code>function</code> |
| <code>has_attribute</code>   | <code>function</code> | <code>traverse</code>             | <code>function</code> |
| <code>has_field</code>       | <code>function</code> | <code>traverse_id</code>          | <code>function</code> |
| <code>hpack</code>           | <code>function</code> | <code>type</code>                 | <code>function</code> |
| <code>id</code>              | <code>function</code> | <code>types</code>                | <code>function</code> |
| <code>insert_after</code>    | <code>function</code> | <code>unprotect_glyphs</code>     | <code>function</code> |
| <code>insert_before</code>   | <code>function</code> | <code>unset_attribute</code>      | <code>function</code> |
| <code>is_node</code>         | <code>function</code> | <code>usedlist</code>             | <code>function</code> |
| <code>kerning</code>         | <code>function</code> | <code>vpack</code>                | <code>function</code> |
| <code>last_node</code>       | <code>function</code> | <code>whatsits</code>             | <code>function</code> |
| <code>length</code>          | <code>function</code> | <code>write</code>                | <code>function</code> |

# nodes (context)

|                               |            |                                |            |
|-------------------------------|------------|--------------------------------|------------|
| <b>after</b>                  | function   | F setkern                      |            |
| <b>aligned</b>                | function   | F setmark                      |            |
| <b>astable</b>                | function   | F setpair                      |            |
| <b>before</b>                 | function   | <b>installattributehandler</b> | function   |
| <b>builders</b>               | table      | <b>is_display_math</b>         | function   |
| F buildpage_filter            |            | <b>is_mirrored</b>             | data table |
| F vpack_filter                |            | <b>is_rotated</b>              | data table |
| <b>codes</b>                  | data table | <b>kerncodes</b>               | data table |
| <b>concat</b>                 | function   | <b>leftmarginwidth</b>         | function   |
| <b>count</b>                  | function   | <b>lines</b>                   | table      |
| <b>delete</b>                 | function   | T boxed                        |            |
| <b>destinations</b>           | table      | F register                     |            |
| N attribute                   |            | F setup                        |            |
| T done                        |            | F stage_one                    |            |
| F handler                     |            | F stage_two                    |            |
| T stack                       |            | F stage_zero                   |            |
| <b>dimensionfields</b>        | data table | D data                         |            |
| <b>dir_is_pop</b>             | data table | F finalize                     |            |
| <b>dir_negation</b>           | data table | F number                       |            |
| <b>fasthpack</b>              | function   | N scratchbox                   |            |
| <b>fields</b>                 | function   | <b>link</b>                    | function   |
| <b>fillcodes</b>              | data table | <b>list</b>                    | function   |
| <b>firstcharacter</b>         | function   | <b>listablefields</b>          | data table |
| <b>firstcharinbox</b>         | function   | <b>listcodes</b>               | data table |
| <b>firstglyph</b>             | function   | <b>listtoutf</b>               | function   |
| <b>getattribute</b>           | function   | <b>load</b>                    | function   |
| <b>gluecodes</b>              | data table | <b>locate</b>                  | function   |
| <b>glyphcodes</b>             | data table | <b>mathcodes</b>               | data table |
| <b>glyphdir_is_equal</b>      | data table | <b>noadcodes</b>               | data table |
| <b>glyphdir_is_opposite</b>   | data table | <b>nodecodes</b>               | data table |
| <b>glyphdir_is_orthogonal</b> | data table | <b>packlist</b>                | function   |
| <b>handlers</b>               | table      | <b>pardir_is_equal</b>         | data table |
| F accessibility               |            | <b>pardir_is_opposite</b>      | data table |
| F backgrounds                 |            | <b>pardir_is_parallel</b>      | data table |
| F characters                  |            | <b>partextdir_is_equal</b>     | data table |
| F checkforleaks               |            | <b>penaltycodes</b>            | data table |
| F checkglyphs                 |            | <b>pool</b>                    | table      |
| F cleanuppage                 |            | F baselineskip                 |            |
| F export                      |            | F cleanup                      |            |
| F finalize                    |            | F disc                         |            |
| F graphicvadjust              |            | F fontkern                     |            |
| F migrate                     |            | F glue                         |            |
| F protectglyphs               |            | F gluespec                     |            |
| F stripping                   |            | F glyph                        |            |
| F unprotectglyphs             |            | F kern                         |            |
| <b>has_attribute</b>          | function   | F latelua                      |            |
| <b>idtoString</b>             | function   | F leftmarginkern               |            |
| <b>ignorablefields</b>        | data table | F leftskip                     |            |
| <b>injections</b>             | table      | F lineskip                     |            |
| F handler                     |            | F noad                         |            |
| F setcursive                  |            | F pdfannotation                |            |

|                         |          |                     |            |
|-------------------------|----------|---------------------|------------|
| F pdfdestination        |          | setattributes       | function   |
| F pdfdirect             |          | setunsetattributes  | function   |
| F pdfliteral            |          | shifts              | table      |
| F pdfrestore            |          | D data              |            |
| F pdfsave               |          | F define            |            |
| F pdfsetmatrix          |          | F enable            |            |
| F penalty               |          | F handler           |            |
| F register              |          | show                | function   |
| F rightmarginkern       |          | showboxes           | function   |
| F rightskip             |          | showcodes           | function   |
| F rule                  |          | showlist            | function   |
| F shrink                |          | showsimplelist      | function   |
| F special               |          | skipcodes           | data table |
| F stretch               |          | somepenalty         | function   |
| F temp                  |          | somespace           | function   |
| F textdir               |          | stripping           | table      |
| F usage                 |          | F enable            |            |
| T userids               |          | T glyphs            |            |
| N margins.inline        |          | striprange          | function   |
| N splitters.one         |          | tasks               | table      |
| N splitters.two         |          | F actions           |            |
| F userlist              |          | F appendaction      |            |
| F usernumber            |          | F disableaction     |            |
| F userstring            |          | F disablegroup      |            |
| F usertokens            |          | F enableaction      |            |
| F zeroglue              |          | F enablegroup       |            |
| print                   | function | F freeze            |            |
| processors              | table    | F freezegroup       |            |
| B enabled               |          | F new               |            |
| F hpack_filter          |          | F prependaction     |            |
| F post_linebreak_filter |          | F removeaction      |            |
| F pre_linebreak_filter  |          | F restart           |            |
| F tracer                |          | F showactions       |            |
| processwords            | function | F table             |            |
| reference               | function | textdir_is_equal    | data table |
| references              | table    | textdir_is_is       | data table |
| N attribute             |          | textdir_is_opposite | data table |
| T done                  |          | textdir_is_parallel | data table |
| F handler               |          | tonodes             | function   |
| T stack                 |          | tosequence          | function   |
| remove                  | function | totable             | function   |
| repackhlist             | function | toutf               | function   |
| replace                 | function | tracers             | table      |
| report                  | function | T characters        |            |
| rightmarginwidth        | function | F collect           |            |
| rules                   | table    | F equal             |            |
| D data                  |          | F indices           |            |
| F define                |          | F start             |            |
| F enable                |          | F string            |            |
| F handler               |          | F unicodes          |            |
| save                    | function | T colors            |            |
| serialize               | function | F reset             |            |
| serializebox            | function | F set               |            |
| setattribute            | function | F fontchar          |            |

|            |                 |            |
|------------|-----------------|------------|
| F start    | F reset         |            |
| T steppers | F start         |            |
| F check    | F stop          |            |
| F codes    | F stop          |            |
| F features | unsetattribute  | function   |
| F glyphs   | unsetattributes | function   |
| F message  | visualizebox    | function   |
| F messages | whatcodes       | data table |
| F nofsteps | whatsitcodes    | data table |
| F register | writable_spec   | function   |



## number (context)

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

## os (basic lua)

|                           |                     |                        |                     |
|---------------------------|---------------------|------------------------|---------------------|
| <code>__getenv__</code>   | function            | <code>rename</code>    | function            |
| <code>__setenv__</code>   | function            | <code>resolvers</code> | table               |
| <code>binsuffix</code>    | string              | <code>resultof</code>  | function            |
| <code>clock</code>        | function            | <code>runtime</code>   | function            |
| <code>date</code>         | function            | <code>selfdir</code>   | string              |
| <code>difftime</code>     | function            | <code>setenv</code>    | overloaded function |
| <code>env</code>          | data table          | <code>setlocale</code> | overloaded function |
| <code>exec</code>         | overloaded function | <code>sleep</code>     | function            |
| <code>execute</code>      | overloaded function | <code>spawn</code>     | overloaded function |
| <code>exit</code>         | function            | <code>time</code>      | function            |
| <code>getenv</code>       | overloaded function | <code>times</code>     | function            |
| <code>gettimeofday</code> | function            | <code>timezone</code>  | function            |
| <code>launch</code>       | function            | <code>tmpdir</code>    | function            |
| <code>libsuffix</code>    | string              | <code>tmpname</code>   | function            |
| <code>name</code>         | string              | <code>type</code>      | string              |
| <code>platform</code>     | string              | <code>uname</code>     | function            |
| <code>remove</code>       | function            | <code>uuid</code>      | function            |

## package (basic lua)

|                              |          |                               |          |
|------------------------------|----------|-------------------------------|----------|
| <code>appendtolibpath</code> | function | <code>loaders</code>          | table    |
| <code>clibpaths</code>       | function | <code>loadlib</code>          | function |
| <code>config</code>          | string   | <code>path</code>             | string   |
| <code>cpath</code>           | string   | <code>preload</code>          | table    |
| <code>libpaths</code>        | function | <code>prependtolibpath</code> | function |
| <code>loaded</code>          | table    | <code>seeall</code>           | function |

## pdf (basic tex)

|                             |                       |                              |                       |
|-----------------------------|-----------------------|------------------------------|-----------------------|
| <code>immediateobj</code>   | <code>function</code> | <code>pageresources</code>   | <code>string</code>   |
| <code>mapfile</code>        | <code>function</code> | <code>pagesattributes</code> | <code>string</code>   |
| <code>mapline</code>        | <code>function</code> | <code>pdfmapfile</code>      | <code>function</code> |
| <code>maxobjnum</code>      | <code>function</code> | <code>pdfmapline</code>      | <code>function</code> |
| <code>obj</code>            | <code>function</code> | <code>print</code>           | <code>function</code> |
| <code>objtype</code>        | <code>function</code> | <code>refobj</code>          | <code>function</code> |
| <code>pageattributes</code> | <code>string</code>   | <code>registerannot</code>   | <code>function</code> |
| <code>pageref</code>        | <code>function</code> | <code>reserveobj</code>      | <code>function</code> |

# physics (context)

|       |           |   |           |
|-------|-----------|---|-----------|
| units | table     | S | Hz        |
| T     | tables    | S | W         |
| T     | shortcuts | S | b         |
| T     | operators | S | g         |
| S     | *         | S | h         |
| S     | .         | S | hz        |
| S     | /         | S | l         |
| S     | :         | S | lx        |
| T     | prefixes  | S | m         |
| S     | E         | S | n         |
| S     | G         | S | s         |
| S     | M         | S | t         |
| S     | P         | S | v         |
| S     | T         | S | °C        |
| S     | Y         | S |           |
| S     | Z         | T | units     |
| S     | a         | T | operators |
| S     | c         | S | OutOf     |
| S     | d         | S | Per       |
| S     | da        | S | Solidus   |
| S     | f         | S | Times     |
| S     | h         | T | packaged  |
| S     | k         | S | Micron    |
| S     | m         | S | mmHg      |
| S     | n         | T | prefixes  |
| S     | p         | S | Atto      |
| S     | u         | S | Centi     |
| S     | y         | S | Deca      |
| S     | z         | S | Deci      |
| T     | suffixes  | S | Exa       |
| S     | +1        | S | Exbi      |
| S     | +2        | S | Femto     |
| S     | +3        | S | Gibi      |
| S     | -1        | S | Giga      |
| S     | -2        | S | Hecto     |
| S     | -3        | S | Kibi      |
| S     | 1         | S | Kilo      |
| S     | 2         | S | Mebi      |
| S     | 3         | S | Mega      |
| S     | ^+1       | S | Micro     |
| S     | ^+2       | S | Milli     |
| S     | ^+3       | S | Nano      |
| S     | ^-1       | S | Pebi      |
| S     | ^-2       | S | Peta      |
| S     | ^-3       | S | Pico      |
| S     | ^1        | S | Root      |
| S     | ^2        | S | Tebi      |
| S     | ^3        | S | Tera      |
| T     | units     | S | Yobi      |
| S     | A         | S | Yocto     |
| S     | B         | S | Yotta     |

|                      |                 |
|----------------------|-----------------|
| S Zebi               | S Fahrenheit    |
| S Zepto              | S Farad         |
| S Zetta              | S Foot          |
| T suffixes           | S Gal           |
| S Cubic              | S Gauss         |
| S ICubic             | S Gon           |
| S ILinear            | S Grad          |
| S ISquare            | S Gram          |
| S Inverse            | S Gray          |
| S Linear             | S Hectare       |
| S Square             | S Henry         |
| T symbols            | S Hertz         |
| S %                  | S Hg            |
| S ArcMinute          | S Hour          |
| S ArcSecond          | S Inch          |
| S Degree             | S Joule         |
| S Degrees            | S Katal         |
| S Percent            | S Kelvin        |
| S Per mille          | S Knot          |
| S Promille           | S Liter         |
| S °                  | S Litre         |
| S                    | S Lumen         |
| S                    | S Lux           |
| T units              | S Maxwell       |
| S AMU                | S Meter         |
| S Ampere             | S Metre         |
| S Angstrom           | S Metric Ton    |
| S Astronomical Unit  | S Minute        |
| S Atm                | S Mol           |
| S Atmosphere         | S Mole          |
| S Atomic Mass Unit   | S Nautical Mile |
| S Bar                | S Neper         |
| S Barn               | S Newton        |
| S Baud               | S Oersted       |
| S Bel                | S Ohm           |
| S Bequerel           | S Pascal        |
| S Bit                | S Phot          |
| S Byte               | S Poise         |
| S Cal                | S Radian        |
| S Calorie            | S Rev           |
| S Candela            | S Revolution    |
| S Celsius            | S Second        |
| S Coulomb            | S Siemens       |
| S Dalton             | S Sievert       |
| S Day                | S Steradian     |
| S Degree Celsius     | S Stilb         |
| S Degree Fahrenheit  | S Stokes        |
| S Degrees Celsius    | S Tesla         |
| S Degrees Fahrenheit | S Tonne         |
| S Dyne               | S Volt          |
| S Electron Volt      | S Watt          |
| S Erg                | S Weber         |
| S Erlang             | S eV            |

# profiler (extra lua)

**pause**    function  
**resume**   function

**start**    function  
**stop**     function

# regimes (context)

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



# resolvers (context)

|                                     |            |                                |            |
|-------------------------------------|------------|--------------------------------|------------|
| <b>allprefixes</b>                  | function   | <b>getownpath</b>              | function   |
| <b>appendhash</b>                   | function   | <b>getreadfilename</b>         | function   |
| <b>automount</b>                    | function   | <b>hashers</b>                 | data table |
| <b>automounted</b>                  | table      | <b>homedir</b>                 | string     |
| <b>booleanvariable</b>              | function   | <b>installinputfilehandler</b> | function   |
| <b>cacheversion</b>                 | string     | <b>installinputlinehandler</b> | function   |
| <b>checkedvariable</b>              | function   | <b>instance</b>                | table      |
| <b>cleanpath</b>                    | function   | D data                         |            |
| <b>cleanpathlist</b>                | function   | B diskcache                    |            |
| <b>concatinators</b>                | data table | D environment                  |            |
| <b>configbanner</b>                 | string     | D expansions                   |            |
| <b>criticalvars</b>                 | data table | D fakepaths                    |            |
| <b>dangerous</b>                    | data table | D files                        |            |
| <b>datastate</b>                    | function   | B force_suffixes               |            |
| <b>defaultsuffixes</b>              | table      | D found                        |            |
| <b>dowithfilesandreport</b>         | function   | D foundintrees                 |            |
| <b>dowithfilesintree</b>            | function   | D hashed                       |            |
| <b>dowithpath</b>                   | function   | D hashes                       |            |
| <b>dowithvariable</b>               | function   | D lists                        |            |
| <b>env</b>                          | function   | B loadererror                  |            |
| <b>executers</b>                    | table      | D order                        |            |
| F check                             |            | B remember                     |            |
| F execute                           |            | B renewcache                   |            |
| F finalize                          |            | B renewtree                    |            |
| F register                          |            | B savelists                    |            |
| <b>expandbraces</b>                 | function   | D setups                       |            |
| <b>expandedpathfromlist</b>         | function   | D specification                |            |
| <b>expandedpathlist</b>             | function   | D variables                    |            |
| <b>expandedpathlistfromvariable</b> | function   | <b>jobs</b>                    | table      |
| <b>expandpath</b>                   | function   | F currentcomponent             |            |
| <b>expandpathfromvariable</b>       | function   | F currentenvironment           |            |
| <b>expansion</b>                    | function   | F currentproduct               |            |
| <b>extendtexmfvariable</b>          | function   | F currentproject               |            |
| <b>find_file</b>                    | function   | F justacomponent               |            |
| <b>find_files</b>                   | function   | D processors                   |            |
| <b>findbinfile</b>                  | function   | F productcomponent             |            |
| <b>findctxfile</b>                  | function   | F usefile                      |            |
| <b>finders</b>                      | data table | <b>joinpath</b>                | function   |
| <b>findfile</b>                     | function   | <b>load</b>                    | function   |
| <b>findfiles</b>                    | function   | <b>loadbinfile</b>             | function   |
| <b>findgivenfile</b>                | function   | <b>loaders</b>                 | data table |
| <b>findgivenfiles</b>               | function   | <b>loadlualib</b>              | function   |
| <b>findpath</b>                     | function   | <b>loadtexfile</b>             | function   |
| <b>findtexfile</b>                  | function   | <b>loadtime</b>                | function   |
| <b>findwildcardfile</b>             | function   | <b>locateformat</b>            | function   |
| <b>findwildcardfiles</b>            | function   | <b>locators</b>                | data table |
| <b>formatofsuffix</b>               | function   | <b>luacnfname</b>              | string     |
| <b>formatofvariable</b>             | function   | <b>luacnfspec</b>              | string     |
| <b>formats</b>                      | data table | <b>luacnfstate</b>             | string     |
| <b>generators</b>                   | data table | <b>macros</b>                  | table      |
| <b>getenv</b>                       | function   | F convertfile                  |            |

|                   |            |                          |            |
|-------------------|------------|--------------------------|------------|
| F decodecomment   |            | schemes                  | table      |
| F enablecomment   |            | T cleaners               |            |
| F encodecomment   |            | F md5                    |            |
| F preprocessed    |            | F none                   |            |
| F processmkvi     |            | F strip                  |            |
| F version         |            | F cleanname              |            |
| maxreadlevel      | number     | F install                |            |
| methodhandler     | function   | N threshold              |            |
| newinstance       | function   | setenv                   | function   |
| openbinfile       | function   | setinstance              | function   |
| openers           | data table | settrace                 | function   |
| openfile          | function   | showpath                 | function   |
| opentextfile      | function   | simplescanfiles          | function   |
| ownpath           | string     | splitconfigurationpath   | function   |
| prefixes          | data table | splitexpansions          | function   |
| prependhash       | function   | splitmethod              | function   |
| registerextrapath | function   | splitpath                | function   |
| registerfile      | function   | suffixes                 | data table |
| registerfilehash  | function   | suffixmap                | data table |
| registerintrees   | function   | suffixofformat           | function   |
| registermethod    | function   | texdatablob              | function   |
| registerzipfile   | function   | unexpandedpath           | function   |
| relations         | data table | unexpandedpathlist       | function   |
| renew             | function   | unresolve                | function   |
| repath            | function   | updaterelations          | function   |
| reset             | function   | updatescript             | function   |
| resetextrapath    | function   | usezipfile               | function   |
| resetresolve      | function   | validatedpath            | function   |
| resolve           | function   | variable                 | function   |
| savers            | data table | variableofformat         | function   |
| scandata          | function   | variableofformatorsuffix | function   |
| scanfiles         | function   | wildcardpattern          | function   |

# scripts (context)

|                  |            |                  |            |
|------------------|------------|------------------|------------|
| categorytonumber | data table | numbertocategory | data table |
| colors           | data table | numbertodataset  | data table |
| handlers         | data table | preprocess       | function   |
| hash             | table      | reset            | function   |
| installdataset   | function   | set              | function   |
| installmethod    | function   |                  |            |

# set (context)

|          |          |          |          |
|----------|----------|----------|----------|
| contains | function | tonumber | function |
| create   | function | totable  | function |
| tolist   | function |          |          |

# socket (extra lua)

|                  |                   |  |                        |
|------------------|-------------------|--|------------------------|
| <b>BLOCKSIZE</b> | number            |  | F keep-open            |
| <b>_DEBUG</b>    | boolean           |  | <b>skip</b> function   |
| <b>bind</b>      | function          |  | <b>sleep</b> function  |
| <b>choose</b>    | function          |  | <b>smtp</b> table      |
| <b>connect</b>   | function          |  | S DOMAIN               |
| <b>dns</b>       | table             |  | N PORT                 |
|                  | F gethostname     |  | S SERVER               |
|                  | F tohostname      |  | N TIMEOUT              |
|                  | F toip            |  | S ZONE                 |
| <b>ftp</b>       | table             |  | F message              |
|                  | S PASSWORD        |  | F open                 |
|                  | N PORT            |  | F send                 |
|                  | N TIMEOUT         |  | <b>source</b> function |
|                  | S USER            |  | <b>sourcet</b> table   |
|                  | F command         |  | F by-length            |
|                  | F get             |  | F default              |
|                  | F open            |  | F http-chunked         |
|                  | F put             |  | F until-closed         |
| <b>gettime</b>   | function          |  | <b>tcp</b> function    |
| <b>http</b>      | table             |  | <b>tp</b> table        |
|                  | N PORT            |  | N TIMEOUT              |
|                  | N TIMEOUT         |  | F connect              |
|                  | S USERAGENT       |  | <b>try</b> function    |
|                  | F open            |  | <b>udp</b> function    |
|                  | F request         |  | <b>url</b> table       |
| <b>newtry</b>    | function          |  | F absolute             |
| <b>protect</b>   | function          |  | F build                |
| <b>select</b>    | function          |  | F build_path           |
| <b>sink</b>      | function          |  | F escape               |
| <b>sinkt</b>     | table             |  | F parse                |
|                  | F close-when-done |  | F parse_path           |
|                  | F default         |  | F unescape             |
|                  | F http-chunked    |  |                        |

# sorters (context)

|                     |       |                     |            |
|---------------------|-------|---------------------|------------|
| <b>comparers</b>    | table | <b>definitions</b>  | data table |
| F basic             |       | <b>firstofsplit</b> | function   |
| <b>constants</b>    | table | <b>setlanguage</b>  | function   |
| S defaultdigits     |       | <b>sort</b>         | function   |
| S defaultlanguage   |       | <b>splitters</b>    | table      |
| S defaultmethod     |       | F utf               |            |
| N digitmaximum      |       | <b>strip</b>        | function   |
| N digitsoffset      |       | <b>tracers</b>      | data table |
| N ignoredoffset     |       | <b>update</b>       | function   |
| N replacementoffset |       |                     |            |

## statistics (context)

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

status (basic tex)

list function



# storage (context)

|            |          |            |            |
|------------|----------|------------|------------|
| allocate   | function | min        | number     |
| data       | table    | nofmodules | number     |
| evaluators | table    | noftables  | number     |
| mark       | function | register   | function   |
| marked     | function | shared     | data table |
| max        | number   |            |            |

## streams (context)

|                         |          |
|-------------------------|----------|
| <code>collect</code>    | function |
| <code>disable</code>    | function |
| <code>enable</code>     | function |
| <code>flush</code>      | function |
| <code>initialize</code> | function |

|                          |          |
|--------------------------|----------|
| <code>push</code>        | function |
| <code>start</code>       | function |
| <code>stop</code>        | function |
| <code>synchronize</code> | function |

## string (basic lua)

|                       |          |                      |          |
|-----------------------|----------|----------------------|----------|
| <b>byte</b>           | function | <b>match</b>         | function |
| <b>bytepairs</b>      | function | <b>quote</b>         | function |
| <b>bytes</b>          | function | <b>quoted</b>        | function |
| <b>char</b>           | function | <b>rep</b>           | function |
| <b>characterpairs</b> | function | <b>reverse</b>       | function |
| <b>characters</b>     | function | <b>split</b>         | function |
| <b>checkedsplit</b>   | function | <b>splitlines</b>    | function |
| <b>count</b>          | function | <b>splitup</b>       | function |
| <b>dump</b>           | function | <b>strip</b>         | function |
| <b>escapedpattern</b> | function | <b>sub</b>           | function |
| <b>explode</b>        | function | <b>toboolean</b>     | function |
| <b>find</b>           | function | <b>tocontext</b>     | function |
| <b>format</b>         | function | <b>todimen</b>       | function |
| <b>gfind</b>          | function | <b>topattern</b>     | function |
| <b>gmatch</b>         | function | <b>toutf</b>         | function |
| <b>gsub</b>           | function | <b>unquote</b>       | function |
| <b>is_boolean</b>     | function | <b>unquoted</b>      | function |
| <b>is_empty</b>       | function | <b>upper</b>         | function |
| <b>len</b>            | function | <b>utfcharacters</b> | function |
| <b>limit</b>          | function | <b>utfsplitlines</b> | function |
| <b>lower</b>          | function | <b>utfvalues</b>     | function |

# structures (context)

|                   |          |                             |          |
|-------------------|----------|-----------------------------|----------|
| <b>atlocation</b> | function | F value                     |          |
| <b>blocks</b>     | table    | <b>currentsectionnumber</b> | function |
| D collected       |          | <b>descriptions</b>         | table    |
| F define          |          | <b>documents</b>            | table    |
| F print           |          | T data                      |          |
| F save            |          | S block                     |          |
| F select          |          | T blocks                    |          |
| F setstate        |          | T checkers                  |          |
| D states          |          | N depth                     |          |
| D tobesaved       |          | T forced                    |          |
| <b>bookmarks</b>  | table    | T numbers                   |          |
| F finalize        |          | T ownnumbers                |          |
| F flatten         |          | T status                    |          |
| S method          |          | F initialize                |          |
| F overload        |          | F preset                    |          |
| F place           |          | F reset                     |          |
| F register        |          | <b>floats</b>               | table    |
| F setup           |          | <b>formulas</b>             | table    |
| <b>counters</b>   | table    | F current                   |          |
| F add             |          | F simplify                  |          |
| F analyze         |          | F store                     |          |
| F check           |          | <b>helpers</b>              | table    |
| D collected       |          | F analyze                   |          |
| F compact         |          | F formulanumber             |          |
| F converted       |          | F merged                    |          |
| F current         |          | F page                      |          |
| D data            |          | F prefix                    |          |
| F define          |          | F prefixlastpage            |          |
| F first           |          | F prefixpage                |          |
| F get             |          | F simplify                  |          |
| F last            |          | F title                     |          |
| F next            |          | F touserdata                |          |
| F prev            |          | <b>itemgroups</b>           | table    |
| F previous        |          | F maxwidth                  |          |
| F raw             |          | F nofitems                  |          |
| F record          |          | F register                  |          |
| F reset           |          | <b>lists</b>                | table    |
| F restart         |          | F analyze                   |          |
| F restore         |          | D cached                    |          |
| F save            |          | D collected                 |          |
| F set             |          | F doifstoredelse            |          |
| F setlevel        |          | F enhance                   |          |
| F setoffset       |          | T enhancers                 |          |
| F setown          |          | F filter                    |          |
| F setstate        |          | F filtercollected           |          |
| F setvalue        |          | F formulanumber             |          |
| F show            |          | D internals                 |          |
| T specials        |          | F label                     |          |
| F userpage        |          | F location                  |          |
| F subs            |          | F number                    |          |
| D tobesaved       |          | D ordered                   |          |

|                            |              |                        |              |
|----------------------------|--------------|------------------------|--------------|
| F page                     |              | F listindex            |              |
| F popnesting               |              | F number               |              |
| F prefix                   |              | F ordered              |              |
| F prefixednumber           |              | F postpone             |              |
| F prefixedpage             |              | F resetpostponed       |              |
| F process                  |              | F restore              |              |
| F push                     |              | F save                 |              |
| D pushed                   |              | F setstate             |              |
| F pushnesting              |              | F setsymbolpage        |              |
| F realpage                 |              | D states               |              |
| T result                   |              | F store                |              |
| F savednumber              |              | F title                |              |
| F savedprefixednumber      |              | <b>pages</b>           | <b>table</b> |
| F savedtitle               |              | F analyze              |              |
| F sectionnumber            |              | D collected            |              |
| F size                     |              | F is_odd               |              |
| F title                    |              | F number               |              |
| D tobesaved                |              | F save                 |              |
| F userdata                 |              | D tobesaved            |              |
| F uservalue                |              | <b>references</b>      | <b>table</b> |
| <b>marks</b>               | <b>table</b> | F analyze              |              |
| D data                     |              | F checkedfile          |              |
| F define                   |              | F checkedfileorurl     |              |
| F exists                   |              | F checkedprogram       |              |
| F fetch                    |              | F checkedrealpage      |              |
| F fetchallmarks            |              | F checkedurl           |              |
| F fetched                  |              | D collected            |              |
| F fetchonemark             |              | U componentsplitter    |              |
| F fetchtwomarks            |              | F currentmetadata      |              |
| F get                      |              | F currentorder         |              |
| F number                   |              | D currentset           |              |
| F relate                   |              | F define               |              |
| F reset                    |              | D defined              |              |
| F set                      |              | D derived              |              |
| F show                     |              | F doifelse             |              |
| F synchronize              |              | F enableinteraction    |              |
| F title                    |              | F enhance              |              |
| T tracers                  |              | D executers            |              |
| F showtable                |              | F expandcurrent        |              |
| <b>notes</b>               | <b>table</b> | F export               |              |
| F checkpagechange          |              | T files                |              |
| F define                   |              | T data                 |              |
| F deltapage                |              | F define               |              |
| F doifcontent              |              | F get                  |              |
| F doifonsamepageasprevious |              | F filter               |              |
| F flush                    |              | D filters              |              |
| F flushpostponed           |              | F from                 |              |
| F get                      |              | F get                  |              |
| F getn                     |              | F getcurrentmetadata   |              |
| F getnumberpage            |              | F getcurrentprefixspec |              |
| F getstate                 |              | F getinnermethod       |              |
| F getsymbolpage            |              | F getinternalreference |              |
| F internal                 |              | D handlers             |              |
| F internalid               |              | F identify             |              |

- F import
- F inject
- F injectcurrentset
- D internals
- F load
- F loadpresets
- F mark
- D pages
- U prefixsplitter
- T productdata
  - T componentreferences
  - T components
  - T productreferences
- T programs
  - T data
  - F define
  - F get
- F realpageofpage
- U referencesplitter
- D referred
- F referredpage
- F registerfinalizer
- F registerinitializer
- F registerpage
- F reportproblems
- F reset
- T resolvers
  - F reference
  - F section
- D runners
- F set
- F setandgetattribute
- F setcomponent
- F setinnermethod
- F setinternalreference
- F setnextinternal
- F setnextorder
- D specials
- F splitcomponent
- F splitprefix
- F splitreference
- 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
- T urls
  - T data
  - F define
  - F get
  - F whatfrom
- registers** table
  - F analyze
  - F analyzed
  - D collected
  - F compare
  - F define
  - F enhance
  - F extend
  - F filter
  - F filtercollected
  - F finalize
  - F flush
  - F prepare
  - F process
  - F sort
  - F store
  - D tobesaved
  - F unique
  - F userdata
- sections** table
  - F autodepth
  - F cct
  - T collected
  - F current
  - F currentblock
  - F currentid
  - F currentlevel
  - F defineautolevels
  - 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 prepare              |              |
| F save            |              | F process              |              |
| F set             |              | F register             |              |
| F setblock        |              | F registerused         |              |
| F setchecker      |              | F sort                 |              |
| F setlevel        |              | F synonym              |              |
| F setnumber       |              | D tobesaved            |              |
| F somelevel       |              | <b>tags</b>            | <b>table</b> |
| F startautolevel  |              | T data                 |              |
| F stopautolevel   |              | F detailedtag          |              |
| F structuredata   |              | F getid                |              |
| F title           |              | F handler              |              |
| D tobesaved       |              | D labels               |              |
| F typesetnumber   |              | F last                 |              |
| F userdata        |              | F lastinchain          |              |
| B verbose         |              | T metadata             |              |
| F way             |              | D properties           |              |
| <b>sets</b>       | <b>table</b> | F registerdata         |              |
| F define          |              | F registermetadata     |              |
| F get             |              | F restart              |              |
| F getall          |              | F setattributehash     |              |
| D setlist         |              | F setcombination       |              |
| <b>specials</b>   | <b>table</b> | F setdescription       |              |
| D collected       |              | F setdescriptionsymbol |              |
| F retrieve        |              | F setfigure            |              |
| F store           |              | F sethighlight         |              |
| D tobesaved       |              | F setitemgroup         |              |
| <b>synonyms</b>   | <b>table</b> | F setproperty          |              |
| F analyzed        |              | F setsorting           |              |
| D collected       |              | F setsynonym           |              |
| F compare         |              | F settablecell         |              |
| F define          |              | F settabulatecell      |              |
| F filter          |              | F start                |              |
| F finalize        |              | F stop                 |              |
| F flush           |              | D taglist              |              |
| F meaning         |              | T userdata             |              |

## table (basic lua)

|                 |                 |                      |                 |
|-----------------|-----------------|----------------------|-----------------|
| append          | function        | print                | function        |
| are_equal       | function        | <b>remove</b>        | <b>function</b> |
| compact         | function        | reversed             | function        |
| <b>concat</b>   | <b>function</b> | sequenced            | function        |
| contains        | function        | serialize            | function        |
| copy            | function        | setmetatablecall     | function        |
| count           | function        | setmetatableindex    | function        |
| derive          | function        | setmetatablekey      | function        |
| fastcopy        | function        | setmetatablenewindex | function        |
| flattened       | function        | <b>setn</b>          | <b>function</b> |
| <b>foreach</b>  | <b>function</b> | <b>sort</b>          | <b>function</b> |
| <b>foreachi</b> | <b>function</b> | sortedhash           | function        |
| fromhash        | function        | sortedhashkeys       | function        |
| getmetatablekey | function        | sortedkeys           | function        |
| <b>getn</b>     | <b>function</b> | sortedpairs          | function        |
| has_one_entry   | function        | strip                | function        |
| identical       | function        | sub                  | function        |
| imerge          | function        | swapped              | function        |
| imerged         | function        | tocontext            | function        |
| <b>insert</b>   | <b>function</b> | tofile               | function        |
| is_empty        | function        | tohandle             | function        |
| keys            | function        | tohash               | function        |
| loweredkeys     | function        | toxml                | function        |
| <b>maxn</b>     | <b>function</b> | unique               | function        |
| merge           | function        | unnest               | function        |
| merged          | function        | unpack               | function        |
| prepend         | function        |                      |                 |



## tex (basic tex)

|                         |            |                        |            |
|-------------------------|------------|------------------------|------------|
| <b>attribute</b>        | table      | <b>pdffontname</b>     | function   |
| <b>badness</b>          | function   | <b>pdffontobjnum</b>   | function   |
| <b>box</b>              | table      | <b>pdffontsize</b>     | function   |
| <b>catcode</b>          | table      | <b>pdfpageref</b>      | function   |
| <b>conditionals</b>     | data table | <b>pdfxformname</b>    | function   |
| <b>constants</b>        | data table | <b>primitives</b>      | function   |
| <b>count</b>            | table      | <b>print</b>           | function   |
| <b>ctxcatcodes</b>      | number     | <b>printlist</b>       | function   |
| <b>definefont</b>       | function   | <b>prtcatcodes</b>     | number     |
| <b>delcode</b>          | table      | <b>romannumeral</b>    | function   |
| <b>dimen</b>            | table      | <b>round</b>           | function   |
| <b>dummyscatcodes</b>   | number     | <b>run</b>             | function   |
| <b>enableprimitives</b> | function   | <b>scale</b>           | function   |
| <b>error</b>            | function   | <b>scratchcatcodes</b> | number     |
| <b>extraprimitives</b>  | function   | <b>set</b>             | function   |
| <b>finish</b>           | function   | <b>setAttribute</b>    | function   |
| <b>fontidentifier</b>   | function   | <b>setbox</b>          | function   |
| <b>fontname</b>         | function   | <b>setcatcode</b>      | function   |
| <b>fprint</b>           | function   | <b>setcount</b>        | function   |
| <b>get</b>              | function   | <b>setdelcode</b>      | function   |
| <b>getAttribute</b>     | function   | <b>setdimen</b>        | function   |
| <b>getbox</b>           | function   | <b>setfalse</b>        | function   |
| <b>getcatcode</b>       | function   | <b>setlccode</b>       | function   |
| <b>getcount</b>         | function   | <b>setlist</b>         | function   |
| <b>getdelcode</b>       | function   | <b>setmath</b>         | function   |
| <b>getdimen</b>         | function   | <b>setmathcode</b>     | function   |
| <b>getlccode</b>        | function   | <b>setnest</b>         | function   |
| <b>getlist</b>          | function   | <b>setsfcode</b>       | function   |
| <b>getmath</b>          | function   | <b>setskip</b>         | function   |
| <b>getmathcode</b>      | function   | <b>settoks</b>         | function   |
| <b>getnest</b>          | function   | <b>settrue</b>         | function   |
| <b>getsfcode</b>        | function   | <b>setuccode</b>       | function   |
| <b>getskip</b>          | function   | <b>sfcode</b>          | table      |
| <b>gettoks</b>          | function   | <b>shipout</b>         | function   |
| <b>getuccode</b>        | function   | <b>skip</b>            | table      |
| <b>hashtokens</b>       | function   | <b>sp</b>              | function   |
| <b>ifs</b>              | data table | <b>sprint</b>          | function   |
| <b>iscount</b>          | function   | <b>systemmodes</b>     | data table |
| <b>isdimen</b>          | function   | <b>texcatcodes</b>     | number     |
| <b>isskip</b>           | function   | <b>toks</b>            | table      |
| <b>istoken</b>          | function   | <b>tpacatcodes</b>     | number     |
| <b>lccode</b>           | table      | <b>tpbcatcodes</b>     | number     |
| <b>linebreak</b>        | function   | <b>tprint</b>          | function   |
| <b>lists</b>            | table      | <b>txtcatcodes</b>     | number     |
| <b>luacatcodes</b>      | number     | <b>type</b>            | function   |
| <b>mathcode</b>         | table      | <b>uccode</b>          | table      |
| <b>modes</b>            | data table | <b>uniformdeviate</b>  | function   |
| <b>nest</b>             | table      | <b>uprint</b>          | function   |
| <b>nilcatcodes</b>      | number     | <b>vrbcacodes</b>      | number     |
| <b>notcatcodes</b>      | number     | <b>write</b>           | function   |
| <b>number</b>           | function   |                        |            |

## texconfig (basic tex)

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

## texio (basic tex)

```
write      function  
write_nl  function
```

# token (basic tex)

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

# tokens (context)

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

# tracers (context)

|             |          |             |          |
|-------------|----------|-------------|----------|
| count       | function | name        | function |
| cs          | function | primitive   | function |
| dimen       | function | printerror  | function |
| knownlist   | function | showlines   | function |
| lists       | table    | strings     | table    |
| T context   |          | S undefined |          |
| T internals |          | toks        | function |
| T scratch   |          | type        | function |

# trackers (context)

|                |            |          |          |
|----------------|------------|----------|----------|
| data           | data table | name     | string   |
| disable        | function   | register | function |
| dumphashtofile | function   | report   | function |
| enable         | function   | savehash | function |
| list           | function   | show     | function |

# typesetters (context)

**alignments** table

F handler

F set

**breakpoints** table

N attribute

F enable

F handler

D mapping

T methods

F set

F setreplacement

**cases** table

T actions

F handler

F set

**characters** table

F handler

**cleaners** table

F handler

F set

**digits** table

T actions

N attribute

F handler

F set

**directions** table

F handler

F process

F set

**hpack** function

**italics** table

F forcevariant

F handler

F reset

F set

**kerns** table

D factors

F handler

B keepligature

B keeptogether

D mapping

F set

**margins** table

F finalhandler

F globalhandler

F ha

F localhandler

F save

**paragraphs** table

N attribute

T droppers

F freeze

F set

F handler

F set

**processors** table

F apply

F register

F reset

F split

F startapply

F stopapply

F stripped

F tostring

**spacings** table

N attribute

F handler

D mapping

F set

F setup

**tonodes** function

**vpack** function

**xtables** table

F cleanup

F construct

F create

F flush

F initialize\_construct

F initialize\_reflow\_height

F initialize\_reflow\_width

F next\_row

F reflow\_height

F reflow\_width

F set\_construct

F set\_reflow\_height

F set\_reflow\_width



# unicode (extra lua)

|                 |                 |                         |                 |
|-----------------|-----------------|-------------------------|-----------------|
| <b>ascii</b>    | <b>table</b>    |                         |                 |
| F byte          |                 | F gmatch                |                 |
| F char          |                 | F gsub                  |                 |
| F dump          |                 | F len                   |                 |
| F find          |                 | F lower                 |                 |
| F format        |                 | F match                 |                 |
| F gfind         |                 | F rep                   |                 |
| F gmatch        |                 | F reverse               |                 |
| F gsub          |                 | F sub                   |                 |
| F len           |                 | F upper                 |                 |
| F lower         |                 | <b>ustring</b>          | <b>function</b> |
| F match         |                 | <b>utf16_to_utf8</b>    | <b>function</b> |
| F rep           |                 | <b>utf16_to_utf8_be</b> | <b>function</b> |
| F reverse       |                 | <b>utf16_to_utf8_le</b> | <b>function</b> |
| F sub           |                 | <b>utf32_to_utf8</b>    | <b>function</b> |
| F upper         |                 | <b>utf32_to_utf8_be</b> | <b>function</b> |
| <b>filetype</b> | <b>function</b> | <b>utf32_to_utf8_le</b> | <b>function</b> |
| <b>grapheme</b> | <b>table</b>    | <b>utf8</b>             | <b>table</b>    |
| F byte          |                 | F byte                  |                 |
| F char          |                 | F char                  |                 |
| F dump          |                 | F dump                  |                 |
| F find          |                 | F find                  |                 |
| F format        |                 | F format                |                 |
| F gfind         |                 | F gfind                 |                 |
| F gmatch        |                 | F gmatch                |                 |
| F gsub          |                 | F gsub                  |                 |
| F len           |                 | F len                   |                 |
| F lower         |                 | F lower                 |                 |
| F match         |                 | F match                 |                 |
| F rep           |                 | F rep                   |                 |
| F reverse       |                 | F reverse               |                 |
| F sub           |                 | F string                |                 |
| F upper         |                 | F sub                   |                 |
| <b>latin1</b>   | <b>table</b>    | F toentities            |                 |
| F byte          |                 | F upper                 |                 |
| F char          |                 | <b>utf8_to_utf16</b>    | <b>function</b> |
| F dump          |                 | <b>utf8_to_utf8</b>     | <b>function</b> |
| F find          |                 | <b>utfcodes</b>         | <b>function</b> |
| F format        |                 | <b>utfname</b>          | <b>table</b>    |
| F gfind         |                 | <b>utftype</b>          | <b>function</b> |
|                 |                 | <b>xstring</b>          | <b>function</b> |

# url (context)

|                        |          |                        |          |
|------------------------|----------|------------------------|----------|
| <code>addscheme</code> | function | <code>hasscheme</code> | function |
| <code>construct</code> | function | <code>query</code>     | function |
| <code>filename</code>  | function | <code>split</code>     | function |
| <code>hashed</code>    | function |                        |          |

# utilities (context)

|                                 |          |                     |                 |
|---------------------------------|----------|---------------------|-----------------|
| <b>debugger</b>                 | table    |                     | F appendgroup   |
| F disable                       |          |                     | F autocompile   |
| F enable                        |          |                     | F compile       |
| F savestats                     |          |                     | F disableaction |
| F showstats                     |          |                     | F disablegroup  |
| <b>formatters</b>               | table    |                     | F enableaction  |
| F formatcolumns                 |          |                     | F enablegroup   |
| F list                          |          |                     | D functions     |
| F stripzeros                    |          |                     | F localize      |
| <b>garbagecollector</b>         | table    |                     | F nodeprocessor |
| F check                         |          |                     | F prependaction |
| N criterium                     |          |                     | F prependgroup  |
| B enabled                       |          |                     | F removeaction  |
| <b>lua</b>                      | table    |                     | F reset         |
| F compile                       |          |                     | F setkind       |
| <b>packers</b>                  | table    |                     | F tostring      |
| F hashed                        |          | <b>setters</b>      | table           |
| F new                           |          | F disable           |                 |
| F pack                          |          | F enable            |                 |
| F simplehashed                  |          | F initialize        |                 |
| F strip                         |          | F list              |                 |
| F unpack                        |          | F new               |                 |
| N version                       |          | F register          |                 |
| <b>parsers</b>                  | table    | F reset             |                 |
| F add_settings_to_array         |          | F show              |                 |
| F arguments_to_table            |          | <b>storage</b>      | table           |
| F array_to_string               |          | F allocate          |                 |
| F getparameters                 |          | F checked           |                 |
| F hash_to_string                |          | F mark              |                 |
| F listitem                      |          | F marked            |                 |
| F make_settings_to_hash_pattern |          | F setinitializer    |                 |
| T patterns                      |          | F sparse            |                 |
| U settings_to_array             |          | <b>strings</b>      | table           |
| U settings_to_hash_a            |          | F collapseCrLf      |                 |
| U settings_to_hash_b            |          | F newrepeater       |                 |
| U settings_to_hash_c            |          | F striplong         |                 |
| F settings_to_array             |          | F tabtospace        |                 |
| F settings_to_hash              |          | <b>tables</b>       | table           |
| F settings_to_hash_strict       |          | F accesstable       |                 |
| F settings_to_hash_tolerant     |          | F definetable       |                 |
| F settings_to_set               |          | F encapsulate       |                 |
| F simple_hash_to_string         |          | F insertaftervalue  |                 |
| <b>report</b>                   | function | F insertbeforevalue |                 |
| <b>sequencers</b>               | table    | F migratetable      |                 |
| F appendaction                  |          | F removevalue       |                 |

## visualizers (context)

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

## xml (context)

|                           |          |                    |            |
|---------------------------|----------|--------------------|------------|
| <b>addentitiesdoctype</b> | function | <b>entities</b>    | data table |
| <b>after</b>              | function | <b>erase</b>       | function   |
| <b>all</b>                | function | <b>escaped</b>     | function   |
| <b>applylpath</b>         | function | <b>expressions</b> | table      |
| <b>assign</b>             | function | F boolean          |            |
| <b>attribute</b>          | function | F child            |            |
| <b>before</b>             | function | F contains         |            |
| <b>body</b>               | function | F count            |            |
| <b>builtinentities</b>    | table    | F error            |            |
| B amp                     |          | F find             |            |
| B apos                    |          | F lower            |            |
| B gt                      |          | F name             |            |
| B lt                      |          | F number           |            |
| B quot                    |          | F oneof            |            |
| <b>cdata</b>              | function | F print            |            |
| <b>cdatatotext</b>        | function | F quit             |            |
| <b>checkbom</b>           | function | F tag              |            |
| <b>checkerror</b>         | function | F text             |            |
| <b>checknamespace</b>     | function | F undefined        |            |
| <b>checkns</b>            | function | F upper            |            |
| <b>cleansed</b>           | function | <b>fillin</b>      | function   |
| <b>collect</b>            | function | <b>filter</b>      | function   |
| <b>collect_elements</b>   | function | <b>finalizers</b>  | table      |
| <b>collect_tags</b>       | function | T tex              |            |
| <b>collect_texts</b>      | function | F all              |            |
| <b>collected</b>          | function | F attribute        |            |
| <b>collecttexts</b>       | function | F bibtexconcat     |            |
| <b>content</b>            | function | F bibtexshort      |            |
| <b>convert</b>            | function | F chainattribute   |            |
| <b>copy</b>               | function | F command          |            |
| <b>count</b>              | function | F concat           |            |
| <b>cprint</b>             | function | F concatrange      |            |
| <b>css</b>                | table    | F context          |            |
| F colorspecification      |          | F count            |            |
| F fontspecification       |          | F ctxtext          |            |
| F padding                 |          | F default          |            |
| <b>defaulthandlers</b>    | table    | F first            |            |
| D file                    |          | F function         |            |
| D parsedxml               |          | F index            |            |
| D string                  |          | F last             |            |
| D tex                     |          | F lettered         |            |
| D texline                 |          | F lower            |            |
| D texspace                |          | F match            |            |
| D verbose                 |          | F name             |            |
| <b>defaultprotocol</b>    | string   | F position         |            |
| <b>delete</b>             | function | F reverse          |            |
| <b>delete_element</b>     | function | F stripped         |            |
| <b>each</b>               | function | F tag              |            |
| <b>each_element</b>       | function | F tags             |            |
| <b>elements</b>           | function | F text             |            |
| <b>empty</b>              | function | F upper            |            |

|                       |          |                      |          |
|-----------------------|----------|----------------------|----------|
| T xml                 |          | makestandalone       | function |
| F all                 |          | match                | function |
| F att                 |          | name                 | function |
| F attribute           |          | newhandlers          | function |
| F attributes          |          | nodesettostring      | function |
| F cdata               |          | originalload         | function |
| F chainattribute      |          | package              | function |
| F count               |          | parent               | function |
| F default             |          | parsedentitylpeg     | userdata |
| F elements            |          | pihandlers           | table    |
| F empty               |          | placeholders         | table    |
| F first               |          | F unknown_any_entity |          |
| F function            |          | F unknown_dec_entity |          |
| F index               |          | F unknown_hex_entity |          |
| F last                |          | position             | function |
| F match               |          | privatecodes         | table    |
| F name                |          | privatetoken         | function |
| F position            |          | process              | function |
| F reverse             |          | process_attributes   | function |
| F table               |          | process_elements     | function |
| F tag                 |          | processattributes    | function |
| F tags                |          | profiled             | table    |
| F text                |          | raw                  | function |
| F texts               |          | registerentity       | function |
| first                 | function | registers            | function |
| found                 | function | remap_name           | function |
| functions             | table    | remap_namespace      | function |
| getbuffer             | function | remap_tag            | function |
| gethandlers           | function | remapname            | function |
| gethandlersfunction   | function | remapnamespace       | function |
| include               | function | remaptag             | function |
| index                 | function | renamespace          | function |
| inheritedconvert      | function | replace              | function |
| inject                | function | replace_element      | function |
| inject_element        | function | resolvens            | function |
| inject_element_after  | function | root                 | function |
| inject_element_before | function | save                 | function |
| injectafter           | function | selection            | function |
| injectbefore          | function | serialize            | function |
| insert                | function | setcdata             | function |
| insert_element        | function | sethandlersfunction  | function |
| insert_element_after  | function | setproperty          | function |
| insert_element_before | function | settings             | function |
| insertafter           | function | specialhandler       | table    |
| insertbefore          | function | sprint               | function |
| insertcomment         | function | string               | function |
| inspect               | function | strip                | function |
| is_valid              | function | strip_whitespace     | function |
| last                  | function | stripelement         | function |
| load                  | function | stripleadingspaces   | function |
| lpath                 | function | table                | function |
| lpathcached           | function | text                 | function |
| lpathcalls            | function | textonly             | function |
| lshow                 | function | tocdata              | function |

|           |          |              |          |
|-----------|----------|--------------|----------|
| toelement | function | unprivatized | function |
| tostring  | function | withelement  | function |
| toxml     | function | withelements | function |
| tprint    | function | wrap         | function |
| traverse  | function | xmlns        | table    |
| unescaped | function |              |          |

## zip (extra lua)

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



# zlib (extra lua)

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