

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** **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**

# ConTEXt MkIV

# global (alias: \_G)

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

|                           |                       |                          |                       |
|---------------------------|-----------------------|--------------------------|-----------------------|
| <code>set</code>          | <code>table</code>    | <code>tokens</code>      | <code>table</code>    |
| <code>setfenv</code>      | <code>function</code> | <code>tonumber</code>    | <code>function</code> |
| <code>setmetatable</code> | <code>function</code> | <code>tostring</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>structures</code>   | <code>table</code>    | <code>utf</code>         | <code>table</code>    |
| <code>table</code>        | <code>table</code>    | <code>utilities</code>   | <code>table</code>    |
| <code>tex</code>          | <code>table</code>    | <code>visualizers</code> | <code>table</code>    |
| <code>texconfig</code>    | <code>table</code>    | <code>xml</code>         | <code>table</code>    |
| <code>texio</code>        | <code>table</code>    | <code>xpcall</code>      | <code>function</code> |
| <code>toboolean</code>    | <code>function</code> | <code>zip</code>         | <code>table</code>    |
| <code>tocontext</code>    | <code>function</code> | <code>zlib</code>        | <code>table</code>    |
| <code>token</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 definemultitonecolor  
F defineprocesscolor  
F definesimplegray  
F definespotcolor  
F definetransparency  
F enable  
F filter  
F forcedmodel  
F forcesupport  
F formatcolor  
F formatgray  
F gray  
F graytohsv  
F handler  
F hsvtorgb  
F hsvtorgb  
F iccprofile  
F isblack  
N main  
S model  
F mpcolor  
U none  
F register  
D registered  
F registerspotcolor  
F rgb  
F rgbtocmyk  
F rgbtorgb  
F rgbtohsv  
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

D values

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

backends (context)

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

**kernel**            **table**

  F hyphenation  
  F kerning  
  F ligaturing  
  F mlist\_to\_hlist

**paragraphs** **table**

  T constructors  
    N attribute  
    F disable  
    F enable  
    F handler  
    T methods  
      F default  
      F oneline  
  D names  
  D numbers  
  F register  
  F set  
  T solutions  
    T splitters  
      F define  
      F disable

  F enable

  F optimize

  F setup

  F split

**vspacing**        **table**

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

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

## catcodes (context)

|                       |            |
|-----------------------|------------|
| <code>names</code>    | data table |
| <code>numbers</code>  | data table |
| <code>register</code> | function   |



characters (context)

|                      |            |                     |            |
|----------------------|------------|---------------------|------------|
| <b>activeoffset</b>  | number     | <b>is_letter</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>contextname</b>   | function   | <b>math</b>         | table      |
| <b>data</b>          | data table | <b>mathpairs</b>    | data table |
| <b>define</b>        | function   | <b>ranges</b>       | data table |
| <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>fallbacks</b>     | data table | <b>shchars</b>      | data table |
| <b>filters</b>       | data table | <b>shcodes</b>      | data table |
| <b>flush</b>         | function   | <b>specialchars</b> | data table |
| <b>fromnumber</b>    | function   | <b>synonyms</b>     | data table |
| <b>fschars</b>       | data table | <b>tex</b>          | table      |
| <b>fscodes</b>       | data table |                     |            |
| <b>getrange</b>      | function   |                     |            |
| <b>graphemes</b>     | data table |                     |            |
| <b>hangul</b>        | table      |                     |            |
|                      |            |                     |            |
| F decomposed         |            |                     |            |
| F description        |            |                     |            |
| F leadconsonant      |            |                     |            |
| T remapped           |            |                     |            |
| <b>is_character</b>  | data table | <b>tonumber</b>     | function   |
| <b>is_command</b>    | data table | <b>ucchars</b>      | data table |
|                      |            | <b>uccode</b>       | function   |
|                      |            | <b>uccodes</b>      | data table |
|                      |            | <b>unicodechar</b>  | function   |
|                      |            | <b>upper</b>        | function   |

## 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 | definelinkedlist              | function |
| Character               | function | definemarking                 | function |
| Characters              | function | definemultitonecolor          | function |
| MPd                     | function | defineparallel                | function |
| MPh                     | function | defineprocesscolor            | function |
| MPll                    | function | definespotcolor               | function |
| MPlr                    | function | definetransparency            | function |
| MPp                     | function | defineviewerlayer             | function |
| MPplus                  | function | defrostrandomseed             | function |
| MPpos                   | function | disableregime                 | function |
| MPrest                  | function | doanalyzeframedbox            | function |
| MPul                    | function | doif                          | function |
| MPur                    | function | doifblackelse                 | function |
| MPw                     | function | doifcommonelse                | function |
| MPx                     | function | doifdimenstringelse           | function |
| MPxy                    | function | doifdrawingblackelse          | function |
| MPy                     | function | doifelse                      | function |
| Romannumerals           | function | doifelsebuffer                | function |
| abjadnodotnumerals      | function | doifelsecurrentfonthasfeature | function |
| abjadnumerals           | function | doifelsemarking               | function |
| addff                   | function | doifelseparallel              | function |
| addfs                   | function | doifelsespaces                | function |
| addlinklistelement      | function | doifelsevisualizer            | function |
| alphabetic              | function | doiffielddcategoryelse        | function |
| applytochars            | function | doiffielddelse                | function |
| applytowords            | function | doiffielddsetelse             | function |
| assignbuffer            | function | doiffiledefinedelse           | function |
| autonextspace           | function | doiffileexistelse             | function |
| auto setups             | function | doifinputfileelse             | function |
| boolcase                | function | doifinsetelse                 | function |
| character               | function | doifleapyearelse              | function |
| characters              | function | doifnot                       | function |
| checkedconversion       | function | doifolderversionelse          | function |
| checkfilename           | function | doifoverlappingelse           | function |
| chineseallnumerals      | function | doifparentfileelse            | function |
| chinesecapnumerals      | function | doifpositionelse              | function |
| chinesenumerals         | function | doifpositionsonsamepageelse   | function |
| cleanfontname           | function | doifpositionsonthispageelse   | function |
| clonefield              | function | doifsavedfloatelse            | function |
| collecthelp             | function | doifurldefinedelse            | function |
| colorcomponents         | function | doprocесstypescriptfile       | function |
| copyposition            | function | doreadfile                    | function |
| currentdate             | function | doreshapeframedbox            | function |
| currentregime           | function | elapsedtime                   | function |
| dayname                 | function | enablecolor                   | function |
| defineattribute         | function | enablecolorintents            | function |
| definebibtexsession     | function | enableregime                  | function |
| defineconversion        | function | enabletransparency            | function |
| definefield             | function | enhancelinkedlist             | function |
| definefieldset          | function | erasebuffer                   | function |
| defineintermediatecolor | function | featureattribute              | function |

|                         |          |                        |          |
|-------------------------|----------|------------------------|----------|
| feedback                | function | mpcolor                | function |
| fetchallmarks           | function | nbfs                   | function |
| fetchonemark            | function | nextparallel           | function |
| fetchtwomarks           | function | nofdays                | function |
| firstinlist             | function | number                 | function |
| fontchar                | function | octnumber              | function |
| fontlookupgetkey        | function | octstringtonumber      | function |
| fontlookupgetkeyofindex | function | ordinal                | function |
| fontlookupinitialize    | function | percentageof           | function |
| fontlookupnoffound      | function | placeparallel          | function |
| formatcolor             | function | preparebibtexsession   | function |
| formatgray              | function | preparedfile           | function |
| freezerandomseed        | function | presetsymbolist        | function |
| getbuffer               | function | presettabulate         | function |
| getbuffercxtlua         | function | processbuffer          | function |
| getbuffermkvi           | function | processfile            | function |
| getdefaultfieldvalue    | function | rawcharacter           | function |
| getfieldcategory        | function | readfilename           | function |
| getmarking              | function | registerattachment     | function |
| getprivateattribute     | function | registerbibtexentry    | function |
| getrandomcounta         | function | registerbibtexfile     | function |
| getrandomcountb         | function | registerbuttons        | function |
| getrandomseed           | function | registercolor          | function |
| grabbuffer              | function | registercolorintent    | function |
| helpaction              | function | registerhelp           | function |
| helpreference           | function | registermaintextcolor  | function |
| hexstringtonumber       | function | registersoundclip      | function |
| hour                    | function | registertransparency   | function |
| hyphenatedlist          | function | relatemarking          | function |
| hyphenatedurl           | function | replacepospxywhd       | function |
| D characters            |          | resetfontfeature       | function |
| N lefthyphenmin         |          | resetmarking           | function |
| N righthyphenmin        |          | resetparallel          | function |
| F setcharacters         |          | resettimer             | function |
| insertattachment        | function | romannumerals          | function |
| insertcomment           | function | runbuffer              | function |
| insertfield             | function | savebuffer             | function |
| insertrenderingwindow   | function | saveparallel           | function |
| insertsoundclip         | function | second                 | function |
| isleapyear              | function | setclosedocumentaction | function |
| lastexistingfile        | function | setclosepageaction     | function |
| lchexnumber             | function | setcolormodel          | function |
| lchexnumbers            | function | setfontfeature         | function |
| leapyear                | function | setformat              | function |
| loadctxprelist          | function | setformsmethod         | function |
| loadexamodes            | function | setmarking             | function |
| locatefilepath          | function | setopendocumentaction  | function |
| logoptionfile           | function | setopenpageaction      | function |
| maxreadlevel            | function | setpagetransition      | function |
| minute                  | function | setrandomseed          | function |
| molecule                | function | setrastercolor         | function |
| month                   | function | setrealign             | function |
| monthmnm                | function | setreferencearguments  | function |
| monthname               | function | setreferenceoperation  | function |

|                      |          |                        |          |
|----------------------|----------|------------------------|----------|
| setupcanvas          | function | transparencycomponents | function |
| setupfontexpansion   | function | triggereffect          | function |
| setupfontprotrusion  | function | triggernegative        | function |
| setupidentity        | function | typebuffer             | function |
| setxmpfile           | function | typefile               | function |
| showchardata         | function | typestring             | function |
| showfontparameters   | function | uchexnumber            | function |
| showhyphenatedinlist | function | uchexnumbers           | function |
| splitfilename        | function | unicodechar            | function |
| splitfiletype        | function | updatefilenames        | function |
| spotcolorname        | function | usecolors              | function |
| spotcolorparent      | function | uselibrary             | function |
| spotcolorvalue       | function | usemodules             | function |
| startregime          | function | usepath                | function |
| stopregime           | function | usesubpath             | function |
| subff                | function | usesymbols             | function |
| subfs                | function | usezipfile             | function |
| synchronizemarking   | function | weekday                | function |
| testcase             | function | weekdayname            | function |
| textime              | function | writestatus            | function |
| thesanitizedfilename | function | year                   | 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)

|                |          |             |          |
|----------------|----------|-------------|----------|
| collectpattern | function | globpattern | function |
| current        | function | ls          | function |
| expandname     | function | makedirs    | function |
| glob           | function | mkdirs      | function |
| globfiles      | 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)

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

# epdf (extra tex)

|        |          |              |          |
|--------|----------|--------------|----------|
| Annot  | function | Object       | function |
| Annots | function | PDFRectangle | function |
| Array  | function | open         | function |
| Dict   | function | type         | function |

# experiments (context)

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

# figures (context)

|                      |            |                        |            |
|----------------------|------------|------------------------|------------|
| <b>bases</b>         | table      | <b>get</b>             | function   |
| B enabled            |            | <b>hash</b>            | function   |
| F find               |            | <b>identifiers</b>     | data table |
| T found              |            | <b>identify</b>        | function   |
| T list               |            | <b>include</b>         | function   |
| F locate             |            | <b>includers</b>       | data table |
| F use                |            | <b>loaded</b>          | data table |
| T used               |            | <b>localpaths</b>      | data table |
| <b>bitmapimage</b>   | function   | <b>mergegoodies</b>    | function   |
| <b>boxnumber</b>     | number     | <b>nofprocessed</b>    | number     |
| <b>cachepaths</b>    | data table | <b>order</b>           | data table |
| <b>check</b>         | function   | <b>paths</b>           | data table |
| <b>checkers</b>      | data table | <b>patterns</b>        | data table |
| <b>converters</b>    | data table | <b>pop</b>             | function   |
| <b>current</b>       | function   | <b>preferquality</b>   | boolean    |
| <b>defaultdepth</b>  | number     | <b>programs</b>        | data table |
| <b>defaultheight</b> | number     | <b>push</b>            | function   |
| <b>defaultsearch</b> | boolean    | <b>registerpattern</b> | function   |
| <b>defaultwidth</b>  | number     | <b>registersuffix</b>  | function   |
| <b>done</b>          | function   | <b>scale</b>           | function   |
| <b>dummy</b>         | function   | <b>setlookups</b>      | function   |
| <b>exists</b>        | data table | <b>setpaths</b>        | function   |
| <b>exists</b>        | function   | <b>suffixes</b>        | data table |
| <b>formats</b>       | data table | <b>tprint</b>          | function   |
| <b>found</b>         | data table | <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>needs_updating</code> | function |
| <code>copy</code>              | function | <code>readdata</code>       | function |
| <code>dirname</code>           | function | <code>removesuffix</code>   | function |
| <code>expandname</code>        | function | <code>replacesuffix</code>  | function |
| <code>extname</code>           | function | <code>robustname</code>     | function |
| <code>is_qualified_path</code> | function | <code>savechecksum</code>   | function |
| <code>is_readable</code>       | function | <code>savedata</code>       | function |
| <code>is_rootbased_path</code> | function | <code>splitname</code>      | function |
| <code>is_writable</code>       | function | <code>splitpath</code>      | function |
| <code>isreadable</code>        | function | <code>strip</code>          | function |
| <code>iswritable</code>        | function | <code>suffix</code>         | function |
| <code>join</code>              | function |                             |          |

# floats (context)

|               |          |                     |          |
|---------------|----------|---------------------|----------|
| analysemethod | function | resave              | function |
| collect       | function | save                | function |
| consult       | function | stacked             | function |
| flush         | function | thecheckedpagefloat | function |
| pop           | function | thestacked          | function |
| push          | function | thevar              | function |

## font (basic tex)

|                      |          |
|----------------------|----------|
| <code>current</code> | function |
| <code>define</code>  | function |
| <code>each</code>    | function |
| <code>fonts</code>   | table    |
| <code>frozen</code>  | function |
| <code>getfont</code> | function |

|                       |          |
|-----------------------|----------|
| <code>id</code>       | function |
| <code>max</code>      | function |
| <code>nextid</code>   | function |
| <code>read_tfm</code> | function |
| <code>read_vf</code>  | function |
| <code>setfont</code>  | function |

## fontloader (extra tex)

|                                |          |
|--------------------------------|----------|
| <code>apply_afmfile</code>     | function |
| <code>apply_featurefile</code> | function |
| <code>close</code>             | function |
| <code>fields</code>            | function |
| <code>fullinfo</code>          | function |

|                       |          |
|-----------------------|----------|
| <code>info</code>     | function |
| <code>open</code>     | function |
| <code>to_table</code> | function |
| <code>totable</code>  | function |

# fonts (context)

**analyzers**            table

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

**checkers**            table

- B delete
- F enable
- B enabled
- F missing

**cid**                    table

- F getmap
- F loadfile

**collections**        table

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

**constructors**       table

- F applymanipulators
- F assignmathparameters
- B autocleanup
- D cache
- F calculatescale
- F checkedfeatures
- F checkedfilename
- F cleanuptable
- F collectprocessors
- D designsizes
- D dontembed
- N factor
- F finalize
- F getfeatureaction
- F hashfeatures
- F hashinstance
- T hashmethods
  - F normal
  - F virtual
- F initializefeatures
- 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

**current**                function

**currentid**            function

**definers**            table

- F addlookup

- F analyze

- F applypostprocessors

- 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

- F stage\_one

- F stage\_two

**definetypeface**    function

**encodings**            table

- T agl

- D cache

- F is\_known

- D known

- F load

- F make\_unicode\_vector

- D math

- N version

**expansions**          data table

**formats**             data table

**goodies**            table

- T colorschemes

- F coloring

- T data

- F enable

- F get

- F getcompositions
- T list
  - F compositions
  - F expansions
  - F featureset
  - F files
  - F mathematics
  - F protrusions
  - F solutions
  - F typefaces
- F prepare\_features
- F register
- F report
- handlers**            table
  - T afm
    - B addkerns
    - B addligatures
    - B addtexligatures
    - 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
    - D enhancers
    - D features
    - F getalternate
    - T glists
    - F load
    - F scriptandlanguage
    - F setcontextchain
    - F setdynamics
    - F setfeatures
    - T tables
      - D baselines
      - D features
      - D languages
      - D scripts
    - N version
  - T pfb
  - T tfm
    - D features
    - F setfeatures
  - T vf
    - T combinations

- F combine
- T combiner
  - D commands
- F find
- D helpers
- D math
- D predefined
- D whatever
- hashes**            table
  - D characters
  - T dynamics
  - D identifiers
  - D parameters
  - T processes
  - D quads
  - T setdynamics
  - D xheights
- helpers**            table
  - F dimenfactor
  - F getdigitwidth
  - F getparameters
  - F nametoslot
  - F setdigitwidth
- iterators**        table
  - F characters
  - F descriptions
  - F glyphs
- loggers**            table
  - F format
  - F onetimemessage
  - F register
  - F reportdefinedfonts
  - F reportusedfeatures
- mappings**        table
  - F addtounicode
  - F loadfile
  - F loadline
  - F loadlumtable
  - F makenameparser
  - F reset
  - F tounicode16
  - F tounicode16sequence
- names**            table
  - S basename
  - B be\_clever
  - D cache
  - F cleanfilename
  - F cleanname
  - F collect
  - F collectfiles
  - F collectspec
  - T data
  - B enabled
  - F exists

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 nofllookups  
 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 contexttosting  
   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>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)

**comment**        function  
**files**         table  
    D collected  
    F context  
    B forcerun  
    F run  
    D tobesaved  
**initialize**    function  
**load**          function  
**objects**       table  
    D collected  
    F doifelse  
    F get  
    F number  
    F page  
    F save  
    F set  
    D tobesaved  
**pack**          boolean  
**passes**        table  
    F check  
    D collected  
    F count  
    F define  
    F doifinlistelse  
    F find  
    F first  
    F get  
    F getcollected  
    F getdata  
    F getfield  
    F gettobesaved  
    F last

    F list  
    F save  
    F savedata  
    F savetagged  
    D tobesaved  
**positions**    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  
    D tobesaved  
    F upperleft  
    F upperright  
    F width  
    F x  
    F xy  
    F y  
**register**      function  
**save**          function  
**variables**    table  
    D checksums  
    D collected  
    F save  
    D tobesaved  
**version**      number

# lang (basic tex)

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

# languages (context)

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

# layouts (context)

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



## lfs (extra lua)

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

# libraries (context)

`basiclua` data table  
`basictex` data table  
`builtin` data table

`extralua` data table  
`extratex` data table  
`globals` 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)

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

# lpdf (context)

|                        |            |                           |          |
|------------------------|------------|---------------------------|----------|
| action                 | function   | injectxmpinfo             | function |
| adddocumentcolorspace  | function   | insertxmpinfo             | function |
| adddocumenttextgstate  | function   | javascript                | function |
| adddocumentpattern     | function   | launch                    | function |
| adddocumentshade       | function   | layerreference            | function |
| addtocatalog           | function   | limited                   | function |
| addtoinfo              | function   | linearshade               | function |
| addtonames             | function   | link                      | function |
| addtopageattributes    | function   | null                      | function |
| addtopageresources     | function   | number                    | function |
| addtopagesattributes   | function   | object                    | 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   | referenceobject           | function |
| collectedresources     | function   | registerannotation        | function |
| color                  | function   | registerdocumentfinalizer | function |
| colorspace             | function   | registerpagefinalizer     | function |
| colorspec              | function   | reserveannotation         | function |
| colorvalue             | function   | reserveobject             | function |
| colorvalues            | function   | rgbcode                   | function |
| constant               | function   | rotationcm                | function |
| deferredobject         | 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 |
| formats                | data table | transparencycode          | function |
| graycode               | function   | transparencyvalue         | function |
| id                     | function   | unicode                   | function |
| immediateobject        | function   | verbose                   | function |

## lpeg (basic lua)

|                     |          |                        |            |
|---------------------|----------|------------------------|------------|
| <b>C</b>            | function | <b>counter</b>         | function   |
| <b>Carg</b>         | function | <b>endstripper</b>     | function   |
| <b>Cb</b>           | function | <b>firstofsplit</b>    | function   |
| <b>Cc</b>           | function | <b>frontstripper</b>   | function   |
| <b>Cf</b>           | function | <b>is_lpeg</b>         | function   |
| <b>Cg</b>           | function | <b>keeper</b>          | function   |
| <b>Cmt</b>          | function | <b>locale</b>          | function   |
| <b>Cp</b>           | function | <b>match</b>           | function   |
| <b>Cs</b>           | function | <b>oneof</b>           | function   |
| <b>Ct</b>           | function | <b>patterns</b>        | data table |
| <b>P</b>            | function | <b>print</b>           | function   |
| <b>R</b>            | function | <b>replacer</b>        | function   |
| <b>S</b>            | function | <b>secondofsplit</b>   | function   |
| <b>UP</b>           | function | <b>span</b>            | function   |
| <b>UR</b>           | function | <b>split</b>           | function   |
| <b>US</b>           | function | <b>splitat</b>         | function   |
| <b>V</b>            | function | <b>splitter</b>        | function   |
| <b>anywhere</b>     | function | <b>stripper</b>        | function   |
| <b>balancer</b>     | function | <b>texlinesplitter</b> | function   |
| <b>checkedsplit</b> | function | <b>type</b>            | function   |
| <b>count</b>        | function | <b>version</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>name</b>        | <b>table</b>    |
| bytedata           | data table      | numbers            | data table      |
| bytdone            | table           | registercode       | function        |
| delay              | function        | registeredcodes    | function        |
| finalize           | function        | registerfinalizer  | function        |
| firstbytecode      | number          | registername       | function        |
| flush              | function        | <b>setbytecode</b> | <b>function</b> |
| <b>getbytecode</b> | <b>function</b> | <b>setluaname</b>  | <b>function</b> |
| <b>getluaname</b>  | <b>function</b> | <b>startupfile</b> | <b>string</b>   |
| lastbytecode       | number          | <b>version</b>     | <b>string</b>   |
| messages           | data table      |                    |                 |



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

|                        |            |                    |          |
|------------------------|------------|--------------------|----------|
| addfallbacks           | function   | privatebase        | number   |
| alphabets              | data table | remapalphabets     | function |
| big                    | function   | scaleparameters    | function |
| checkaccentbaseheight  | function   | setalternate       | function |
| checkprivateparameters | function   | syncboth           | function |
| classes                | data table | syncname           | function |
| define                 | function   | syncstyle          | function |
| dimensions             | function   | toname             | function |
| extrabase              | number     | tostyle            | function |
| extras                 | table      | utfmathclass       | function |
| F add                  |            | utfmathcommand     | function |
| F copy                 |            | utfmathfiller      | function |
| families               | data table | utfmathstretch     | function |
| initializeparameters   | function   | xml                | table    |
| makefont               | function   | D entities         |          |
| overloadparameters     | function   | F registerentities |          |

# 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>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 converttmpstopdf    |          |
| N nofconverted        |          |
| <b>multipass</b>      | boolean  |
| <b>n</b>              | number   |
| <b>optimize</b>       | boolean  |
| <b>parse</b>          | function |
| <b>pdfliterals</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 |
| <b>uselibrary</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)

|        |          |          |          |
|--------|----------|----------|----------|
| fields | function | pen_info | function |
| new    | function | version  | function |



# noads (context)

| handlers   | table | process          | function |
|------------|-------|------------------|----------|
|            |       | processors       | table    |
| F check    |       | T collapse       |          |
| F collapse |       | F mlist_to_hlist |          |
| F relocate |       | T relocate       |          |
| F resize   |       | T resize         |          |
| F respace  |       | T respace        |          |
| F tags     |       |                  |          |

## 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 setmark                      |            |
| <b>aligned</b>                | function   | F setpair                      |            |
| <b>astable</b>                | function   | <b>installattributehandler</b> | function   |
| <b>before</b>                 | function   | <b>is_display_math</b>         | function   |
| <b>builders</b>               | table      | <b>is_mirrored</b>             | data table |
| F buildpage_filter            |            | <b>is_rotated</b>              | data table |
| F vpack_filter                |            | <b>kerncodes</b>               | data table |
| <b>codes</b>                  | data table | <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>pool</b>                    | table      |
| F checkglyphs                 |            | F baselineskip                 |            |
| F cleanuppage                 |            | F cleanup                      |            |
| F export                      |            | F disc                         |            |
| F finalize                    |            | F glue                         |            |
| F graphicvadjust              |            | F gluespec                     |            |
| F migrate                     |            | F glyph                        |            |
| F protectglyphs               |            | F kern                         |            |
| F stripping                   |            | F latelua                      |            |
| F unprotectglyphs             |            | F leftmarginkern               |            |
| <b>has_attribute</b>          | function   | F leftskip                     |            |
| <b>idstoring</b>              | function   | F lineskip                     |            |
| <b>ignorablefields</b>        | data table | F noad                         |            |
| <b>injections</b>             | table      | F pdfannotation                |            |
| F handler                     |            | F pdfdestination               |            |
| F setcursive                  |            | F pdfdirect                    |            |
| F setkern                     |            | F pdfliteral                   |            |

|                         |          |                     |            |
|-------------------------|----------|---------------------|------------|
| F penalty               |          | show                | function   |
| F register              |          | showboxes           | function   |
| F rightmarginkern       |          | showcodes           | function   |
| F rightskip             |          | showlist            | function   |
| F rule                  |          | showsimplelist      | function   |
| F shrink                |          | 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 | texmdir_is_equal    | data table |
| references              | table    | texmdir_is_is       | data table |
| N attribute             |          | texmdir_is_opposite | data table |
| T done                  |          | texmdir_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          |            |
| setattributes           | function | F start             |            |
| setunsetattributes      | function | T steppers          |            |
| shifts                  | table    | F check             |            |
| D data                  |          | F codes             |            |
| F define                |          | F features          |            |
| F enable                |          | F glyphs            |            |
| F handler               |          | F message           |            |

|            |                 |            |
|------------|-----------------|------------|
| F messages | unsetattribute  | function   |
| F nofsteps | unsetattributes | function   |
| F register | visualizebox    | function   |
| F reset    | whatcodes       | data table |
| F start    | whatsitcodes    | data table |
| F stop     | writable_spec   | function   |
| F stop     |                 |            |

## number (context)

|               |            |                |          |
|---------------|------------|----------------|----------|
|               | function   |                |          |
| basepoints    | function   | todidots       | function |
| bit           | function   | todimen        | function |
| bits          | function   | toevenhex      | function |
| clearbit      | function   | toinches       | function |
| dimenfactors  | data table | tomillimeters  | function |
| hasbit        | function   | tonewciceros   | function |
| maxdimen      | number     | tonewdidots    | function |
| percent       | function   | tonumberf      | function |
| points        | function   | tonumberg      | function |
| setbit        | function   | topicas        | function |
| tobasepoints  | function   | topoints       | function |
| tobitstring   | function   | toscaled       | function |
| tocentimeters | function   | toscaledpoints | function |
| tociceros     | 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>mapfile</code>        | <code>function</code> |
| <code>mapline</code>        | <code>function</code> |
| <code>maxobjnum</code>      | <code>function</code> |
| <code>obj</code>            | <code>function</code> |
| <code>objtype</code>        | <code>function</code> |
| <code>pageattributes</code> | <code>string</code>   |
| <code>pageref</code>        | <code>function</code> |

|                              |                       |
|------------------------------|-----------------------|
| <code>pageresources</code>   | <code>string</code>   |
| <code>pagesattributes</code> | <code>string</code>   |
| <code>pdfmapfile</code>      | <code>function</code> |
| <code>pdfmapline</code>      | <code>function</code> |
| <code>print</code>           | <code>function</code> |
| <code>refobj</code>          | <code>function</code> |
| <code>registerannot</code>   | <code>function</code> |
| <code>reserveobj</code>      | <code>function</code> |

## 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>hashers</b>                 | data table |
| <b>automount</b>                    | function   | <b>homedir</b>                 | string     |
| <b>automounted</b>                  | table      | <b>installinputfilehandler</b> | function   |
| <b>booleanvariable</b>              | function   | <b>installinputlinehandler</b> | function   |
| <b>cacheversion</b>                 | string     | <b>instance</b>                | table      |
| <b>checkedvariable</b>              | function   | D data                         |            |
| <b>cleanpath</b>                    | function   | B diskcache                    |            |
| <b>cleanpathlist</b>                | function   | D environment                  |            |
| <b>concatinators</b>                | data table | D expansions                   |            |
| <b>configbanner</b>                 | string     | D fakepaths                    |            |
| <b>criticalvars</b>                 | data table | D files                        |            |
| <b>dangerous</b>                    | data table | B force_suffixes               |            |
| <b>datastate</b>                    | function   | D found                        |            |
| <b>defaultsuffixes</b>              | table      | D foundintrees                 |            |
| <b>dowithfilesandreport</b>         | function   | D hashed                       |            |
| <b>dowithfilesintree</b>            | function   | D hashes                       |            |
| <b>dowithpath</b>                   | function   | D lists                        |            |
| <b>dowithvariable</b>               | function   | B loadererror                  |            |
| <b>env</b>                          | function   | D order                        |            |
| <b>executers</b>                    | table      | B remember                     |            |
| F check                             |            | B renewcache                   |            |
| F execute                           |            | B savelists                    |            |
| F finalize                          |            | D setups                       |            |
| F register                          |            | D specification                |            |
| <b>expandbraces</b>                 | function   | D variables                    |            |
| <b>expandedpathfromlist</b>         | function   | <b>joinpath</b>                | function   |
| <b>expandedpathlist</b>             | function   | <b>load</b>                    | function   |
| <b>expandedpathlistfromvariable</b> | function   | <b>loadbinfile</b>             | function   |
| <b>expandpath</b>                   | function   | <b>loaders</b>                 | data table |
| <b>expandpathfromvariable</b>       | function   | <b>loadlualib</b>              | function   |
| <b>expansion</b>                    | function   | <b>loadtexfile</b>             | function   |
| <b>extendtexmfvariable</b>          | function   | <b>locateformat</b>            | function   |
| <b>find_file</b>                    | function   | <b>locators</b>                | data table |
| <b>find_files</b>                   | function   | <b>luacnfname</b>              | string     |
| <b>findbinfile</b>                  | function   | <b>luacnfspec</b>              | string     |
| <b>findctxfile</b>                  | function   | <b>luacnfstate</b>             | string     |
| <b>finders</b>                      | data table | <b>macros</b>                  | table      |
| <b>findfile</b>                     | function   | F convertfile                  |            |
| <b>findfiles</b>                    | function   | F preprocessed                 |            |
| <b>findgivenfile</b>                | function   | F processmkvi                  |            |
| <b>findgivenfiles</b>               | function   | F version                      |            |
| <b>findpath</b>                     | function   | <b>maxreadlevel</b>            | number     |
| <b>findtexfile</b>                  | function   | <b>methodhandler</b>           | function   |
| <b>findwildcardfile</b>             | function   | <b>newinstance</b>             | function   |
| <b>findwildcardfiles</b>            | function   | <b>openbinfile</b>             | function   |
| <b>formatofsuffix</b>               | function   | <b>openers</b>                 | data table |
| <b>formatofvariable</b>             | function   | <b>openfile</b>                | function   |
| <b>formats</b>                      | data table | <b>opentexfile</b>             | function   |
| <b>generators</b>                   | data table | <b>ownpath</b>                 | string     |
| <b>getenv</b>                       | function   | <b>prefixes</b>                | data table |

|                          |            |                                 |            |
|--------------------------|------------|---------------------------------|------------|
| <b>prependhash</b>       | function   | <b>setenv</b>                   | function   |
| <b>registerextrapath</b> | function   | <b>setinstance</b>              | function   |
| <b>registerfile</b>      | function   | <b>settrace</b>                 | function   |
| <b>registerfilehash</b>  | function   | <b>showpath</b>                 | function   |
| <b>registerintrees</b>   | function   | <b>splitconfigurationpath</b>   | function   |
| <b>registermethod</b>    | function   | <b>splitexpansions</b>          | function   |
| <b>registerzipfile</b>   | function   | <b>splitmethod</b>              | function   |
| <b>relations</b>         | data table | <b>splitpath</b>                | function   |
| <b>repath</b>            | function   | <b>suffixes</b>                 | data table |
| <b>reset</b>             | function   | <b>suffixmap</b>                | data table |
| <b>resetextrapath</b>    | function   | <b>suffixofformat</b>           | function   |
| <b>resetresolve</b>      | function   | <b>texdatablob</b>              | function   |
| <b>resolve</b>           | function   | <b>unexpandedpath</b>           | function   |
| <b>savers</b>            | data table | <b>unexpandedpathlist</b>       | function   |
| <b>scanfiles</b>         | function   | <b>unresolve</b>                | function   |
| <b>schemes</b>           | table      | <b>updaterelations</b>          | function   |
| T cleaners               |            | <b>updatescript</b>             | function   |
| F md5                    |            | <b>usezipfile</b>               | function   |
| F none                   |            | <b>validatedpath</b>            | function   |
| F strip                  |            | <b>variable</b>                 | function   |
| F cleanname              |            | <b>variableofformat</b>         | function   |
| F install                |            | <b>variableofformatorsuffix</b> | function   |
| N threshold              |            | <b>wildcardpattern</b>          | function   |

# scripts (context)

|                  |            |                  |            |
|------------------|------------|------------------|------------|
| categorytonumber | data table | installmethod    | function   |
| cjk              | table      | numbertocategory | data table |
| colors           | data table | numbertodataset  | data table |
| handlers         | data table | preprocess       | function   |
| hash             | table      | reset            | function   |
| installdataset   | function   | set              | 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>elapsedindeed</code>  | function |
| <code>elapsedseconds</code> | function |
| <code>elapsedtime</code>    | function |
| <code>enable</code>         | boolean  |
| <code>formatruntime</code>  | function |
| <code>hastiming</code>      | function |
| <code>memused</code>        | function |
| <code>register</code>       | function |
| <code>reportstorage</code>  | function |

|                            |          |
|----------------------------|----------|
| <code>resettiming</code>   | function |
| <code>runtime</code>       | function |
| <code>savefmtstatus</code> | function |
| <code>show</code>          | function |
| <code>showjobstat</code>   | function |
| <code>starttiming</code>   | function |
| <code>stoptiming</code>    | function |
| <code>threshold</code>     | number   |
| <code>timed</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)

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

# structures (context)

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

- F page
- F popnesting
- F prefix
- F prefixednumber
- F prefixedpage
- F process
- F push
- D pushed
- F pushnesting
- F realpage
- T result
- F savednumber
- F savedprefixednumber
- F savedtitle
- F sectionnumber
- F size
- F title
- D tobesaved
- F userdata
- F uservalue

**marks** table

- D data
- F define
- F exists
- F fetch
- F fetchallmarks
- F fetched
- F fetchonemark
- F fetchtwomarks
- F get
- F number
- F relate
- F reset
- F set
- F show
- F synchronize
- F title
- T tracers
  - F showtable

**notes** table

- F checkpagechange
- F define
- F deltapage
- F doifcontent
- F doifonsamepageasprevious
- F flush
- F flushpostponed
- F get
- F getn
- F getnumberpage
- F getstate
- F getsymbolpage
- F internal
- F internalid

- F listindex
- F number
- F ordered
- F postpone
- F resetpostponed
- F restore
- F save
- F setstate
- F setsymbolpage
- D states
- F store
- F title

**pages** table

- F analyze
- D collected
- F is\_odd
- F number
- F save
- D tobesaved

**processors** table

- F apply
- F ignore
- F register
- F reset
- F split
- F sprint

**references** table

- F analyze
- F checkedfile
- F checkedfileorurl
- F checkedprogram
- F checkedurl
- D collected
- F currentmetadata
- F currentorder
- D currentset
- F define
- D defined
- D derived
- F doifelse
- F enableinteraction
- F enhance
- D executers
- F expandcurrent
- F export
- D exporters
- T files
  - T data
  - F define
  - F get
- F filter
- D filters
- F from
- F get



- F getcurrentmetadata
- F getcurrentprefixspec
- F getinnermethod
- F getinternalreference
- D handlers
- F identify
- F import
- D imported
- F inject
- F injectcurrentset
- D internals
- F load
- F mark
- D pages
- T programs
  - T data
  - F define
  - F get
- F realpage
- F realpageofpage
- D referred
- F referredpage
- F registerfinalizer
- F registerinitializer
- F registerpage
- F reportproblems
- F reset
- T resolvers
  - F description
  - F float
  - F formula
  - F note
  - F reference
  - F section
- D runners
- F sectionnumber
- F sectionpage
- F sectiontitle
- F set
- F setandgetattribute
- F setinnermethod
- F setinternalreference
- F setnextinternal
- F setnextorder
- D specials
- F split
- T testrunners
  - F inner
  - F special
  - F special operation
  - F special operation with arguments
- T testspecials
  - F i
  - F internal

- F page
- F realpage
- 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 findnumber
  - F fullnumber
  - F getcurrentlevel
  - F getlevel
  - F getnumber
  - D levelmap
  - D levels
  - F load
  - F matchingtilldepth
  - F numberatdepth
  - F numbers
  - F popblock
  - F pushblock
  - F reportstructure
  - F save

|                  |              |                    |              |
|------------------|--------------|--------------------|--------------|
| F set            |              | F filter           |              |
| F setblock       |              | F finalize         |              |
| F setchecker     |              | F flush            |              |
| F setlevel       |              | F meaning          |              |
| F setnumber      |              | F prepare          |              |
| F somelevel      |              | F process          |              |
| F startautolevel |              | F register         |              |
| F stopautolevel  |              | F registerused     |              |
| F structuredata  |              | F sort             |              |
| F title          |              | F synonym          |              |
| D tobesaved      |              | D tobesaved        |              |
| F typesetnumber  |              | <b>tags</b>        | <b>table</b> |
| F userdata       |              | T data             |              |
| B verbose        |              | F getid            |              |
| F way            |              | F handler          |              |
| <b>sets</b>      | <b>table</b> | D labels           |              |
| F define         |              | F last             |              |
| F get            |              | F lastinchain      |              |
| F getall         |              | D properties       |              |
| D setlist        |              | F registerdata     |              |
| <b>specials</b>  | <b>table</b> | F setdescriptionid |              |
| D collected      |              | F setitemgroup     |              |
| F retrieve       |              | F setsorting       |              |
| F store          |              | F setsynonym       |              |
| D tobesaved      |              | F settagproperty   |              |
| <b>synonyms</b>  | <b>table</b> | F start            |              |
| F analyzed       |              | F stop             |              |
| D collected      |              | D taglist          |              |
| F compare        |              | T userdata         |              |
| F define         |              |                    |              |

## 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        |
| <b>maxn</b>     | <b>function</b> | toxml                | 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>prtcacodes</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>setlccode</b>       | function   |
| <b>getcatcode</b>       | function   | <b>setlist</b>         | function   |
| <b>getcount</b>         | function   | <b>setmath</b>         | function   |
| <b>getdelcode</b>       | function   | <b>setmathcode</b>     | function   |
| <b>getdimen</b>         | function   | <b>setnest</b>         | function   |
| <b>getlccode</b>        | function   | <b>setsfcode</b>       | function   |
| <b>getlist</b>          | function   | <b>setskip</b>         | function   |
| <b>getmath</b>          | function   | <b>settoks</b>         | function   |
| <b>getmathcode</b>      | function   | <b>setuccode</b>       | function   |
| <b>getnest</b>          | function   | <b>sfcode</b>          | table      |
| <b>getsfcode</b>        | function   | <b>shipout</b>         | function   |
| <b>getskip</b>          | function   | <b>skip</b>            | table      |
| <b>gettoks</b>          | function   | <b>sp</b>              | function   |
| <b>getuccode</b>        | function   | <b>sprint</b>          | function   |
| <b>hashtokens</b>       | function   | <b>systemmodes</b>     | data table |
| <b>ifs</b>              | data table | <b>texcatcodes</b>     | number     |
| <b>lccode</b>           | table      | <b>toks</b>            | table      |
| <b>linebreak</b>        | function   | <b>tpacatcodes</b>     | number     |
| <b>lists</b>            | table      | <b>tpbcacodes</b>      | number     |
| <b>luacacodes</b>       | number     | <b>tprint</b>          | function   |
| <b>mathcode</b>         | table      | <b>txtcatcodes</b>     | number     |
| <b>modes</b>            | data table | <b>uccode</b>          | table      |
| <b>nest</b>             | table      | <b>uniformdeviate</b>  | function   |
| <b>nilcatcodes</b>      | number     | <b>uprint</b>          | function   |
| <b>notcatcodes</b>      | number     | <b>vrbcacodes</b>      | number     |
| <b>number</b>           | function   | <b>write</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)

|                           |          |                            |          |
|---------------------------|----------|----------------------------|----------|
| <code>command_id</code>   | function | <code>get_next</code>      | function |
| <code>command_name</code> | function | <code>is_activechar</code> | function |
| <code>create</code>       | function | <code>is_expandable</code> | function |
| <code>csname_id</code>    | function | <code>is_protected</code>  | function |
| <code>csname_name</code>  | function | <code>lookup</code>        | function |
| <code>expand</code>       | 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)

|                    |                  |                 |                 |
|--------------------|------------------|-----------------|-----------------|
| <b>alignments</b>  | table            |                 |                 |
|                    | F handler        |                 | F handler       |
|                    | F set            |                 | F process       |
|                    |                  |                 | F set           |
| <b>breakpoints</b> | table            | <b>hpack</b>    | function        |
|                    | N attribute      | <b>kerns</b>    | table           |
|                    | F enable         |                 | D factors       |
|                    | F handler        |                 | F handler       |
|                    | D mapping        |                 | B keepligature  |
|                    | T methods        |                 | B keptogether   |
|                    | F set            |                 | D mapping       |
|                    | F setreplacement |                 | F set           |
| <b>cases</b>       | table            | <b>margins</b>  | table           |
|                    | T actions        |                 | F finalhandler  |
|                    | F handler        |                 | F globalhandler |
|                    | F set            |                 | F localhandler  |
| <b>cleaners</b>    | table            |                 | F save          |
|                    | F handler        | <b>spacings</b> | table           |
|                    | F set            |                 | N attribute     |
| <b>digits</b>      | table            |                 | F handler       |
|                    | T actions        |                 | D mapping       |
|                    | N attribute      |                 | F set           |
|                    | F handler        |                 | F setup         |
|                    | F set            | <b>tonodes</b>  | function        |
| <b>directions</b>  | table            | <b>vpack</b>    | function        |

# unicode (extra lua)

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

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

## visualizers (context)

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

## xml (context)

|                  |            |                  |          |
|------------------|------------|------------------|----------|
| after            | function   | F quit           |          |
| all              | function   | F tag            |          |
| applylpath       | function   | F text           |          |
| assign           | function   | F undefined      |          |
| attribute        | function   | F upper          |          |
| before           | function   | fillin           | function |
| body             | function   | filter           | function |
| checkbom         | function   | finalizers       | table    |
| checkerror       | function   | T tex            |          |
| checknamespace   | function   | F all            |          |
| checkns          | function   | F attribute      |          |
| cleansed         | function   | F bibtexconcat   |          |
| collect          | function   | F bibtexshort    |          |
| collect_elements | function   | F chainattribute |          |
| collect_tags     | function   | F command        |          |
| collect_texts    | function   | F concat         |          |
| collected        | function   | F concatrange    |          |
| collecttexts     | function   | F context        |          |
| content          | function   | F count          |          |
| convert          | function   | F ctxtext        |          |
| copy             | function   | F default        |          |
| count            | function   | F first          |          |
| cprint           | function   | F function       |          |
| defaulthandlers  | table      | F index          |          |
| D file           |            | F last           |          |
| D parsedxml      |            | F lettered       |          |
| D string         |            | F lower          |          |
| D tex            |            | F match          |          |
| D verbose        |            | F name           |          |
| defaultprotocol  | string     | F position       |          |
| delete           | function   | F reverse        |          |
| delete_element   | function   | F stripped       |          |
| each             | function   | F tag            |          |
| each_element     | function   | F tags           |          |
| elements         | function   | F text           |          |
| empty            | function   | F upper          |          |
| entities         | data table | T xml            |          |
| erase            | function   | F all            |          |
| escaped          | function   | F att            |          |
| expressions      | table      | F attribute      |          |
| F boolean        |            | F attributes     |          |
| F child          |            | F chainattribute |          |
| F contains       |            | F count          |          |
| F count          |            | F default        |          |
| F error          |            | F elements       |          |
| F find           |            | F empty          |          |
| F lower          |            | F first          |          |
| F name           |            | F function       |          |
| F number         |            | F index          |          |
| F oneof          |            | F last           |          |
| F print          |            | F match          |          |



|                       |          |                     |          |
|-----------------------|----------|---------------------|----------|
| F name                |          | position            | 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 | resolvedentity      | function |
| inject_element_after  | function | resolvens           | function |
| inject_element_before | function | root                | function |
| injectafter           | function | save                | function |
| injectbefore          | function | selection           | function |
| insert                | function | serialize           | 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 |
| is_valid              | function | string              | function |
| last                  | function | strip               | function |
| load                  | function | strip_whitespace    | function |
| lpath                 | function | stripelement        | function |
| lpathcached           | function | stripleadingspaces  | function |
| lpathcalls            | function | table               | function |
| lshow                 | function | text                | function |
| makestandalone        | function | textonly            | function |
| match                 | function | tocdata             | function |
| name                  | function | toelement           | function |
| newhandlers           | function | tostring            | function |
| nodesettostring       | function | toxml               | function |
| originalload          | function | tprint              | function |
| package               | function | traverse            | function |
| parent                | function | unescaped           | function |
| parsedentitylpeg      | userdata | withelement         | function |
| pihandlers            | table    | withelements        | function |
| placeholders          | table    | wrap                | function |
| F unknown_dec_entity  |          | xmlns               | table    |
| F unknown_hex_entity  |          |                     |          |

## 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)

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