Lua

the context libraries

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1 Introduction

Once we started the LuaTEX project it didn't take long for ConTEXt to use the Lua language extensively. And so, rather soon, a bunch of libraries evolved that provided all kind of helpers. Because LuaTEX can also act as a Lua interpreter, and because we have `mtxrun` as script runner we can also use some of those libraries outside ConTEXt. So, for me, a rather natural way to run a Lua script is:

```
mtxrun --script myscript.lua <optional arguments>
```

The advantage of this approach is that you operate in the same file domain as your TEX runs as all file locators are preloaded as well. However, in some cases this is not possible, for instance when you run a stock Lua or some embedded version. For this we provide an alternative mechanism.

2 Making libraries

In the ConTEXt distribution there is a script called `mtxlibs.lua` that can create a library for you that has the basic general purpose ConTEXt libraries on board, as well as whatever more you specify.

```
lua mtxlibs.lua --selfmerge  myproject-a-libs.lua
lua mtxlibs.lua --selfmerge  myproject-b-libs.lua \
    trac-lmx
lua mtxlibs.lua --selfmerge  myproject-c-libs.lua \
    util-sql util-sql-imp-client util-sql-imp-library
```

Here we create three libs. The first one has only the core libraries. You can read more about what they provide in the `cld-mkiv.pdf` manual. The second library includes code for creating web pages. The third variant preloads sql support.

You can best run this file in its own directory, in the ConTEXt tree, so that it knows where to find the libraries needed. Of course you can put the result everywhere you want, preferably alongside your normal scripts. As we merge code, this is a rather good way to prevent compatibility issues. After all, some of the code might get improved.

You can `require("mtxlibs")` directly in which case it will load the core libraries runtime. Of course this means that Lua should be able to figure out where it can find them.

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