

# Script runtexfile

—

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## 1 Introduction

The Lua program `runtextfile` parses an  $\LaTeX$ -document for lines starting with `! HV`. The `«HV»` has no meaning, it should only be a significant marker for the command lines. Such lines can define commands which will be executed by `runtextfile`. These lines must be at the beginning of the document. Only empty lines before will be ignored. `runtextfile` will stop parsing for commands if a line without a preceding `! HV` is found. If there is no such line, it runs the document by default with `lualatex`.

### 1.1 Syntax

The syntax is `runtextfile [...] <file>` where `[...]` are optional arguments, either in short or long form which, of course, can be mixed:

```
runtextfile [-h,--help] [-v,--verbose] [-V,--version ] main-filename
```

Every executed command gets an own logfile `runtextfile-?.log` in which the question mark is the number of the corresponding command line in the document. This allows to locate any problem in the several external runs. With the option `-v` (verbose) a short logfile which lists more or less only the important steps from within the script is `runtextfile.log`.

All  $\LaTeX$  commands are startet with the option

```
--interaction=nonstopmode
```

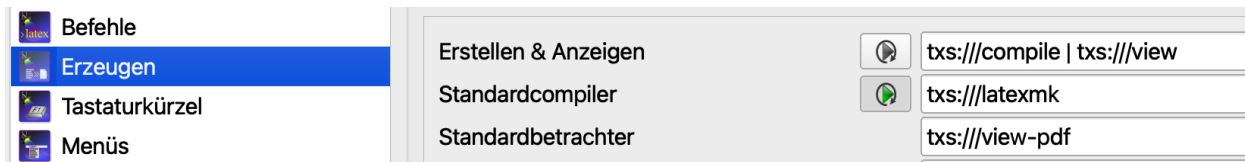
The supported  $\LaTeX$ -commands are

```
local commands = {"lualatex", "luatex", "luahbtex", "latex", "pdflatex",  
                 "xelatex", "xetex" }
```

This is not really of interest, because it is only needed for the decision to use the option `--interaction=nonstopmode` or not. It is only valid for any run depending to a  $\LaTeX$ -program. The optional filename `<file>` must always be used if the current command expects another filename (see example for multiple index files). See also section [2.4 on page 4](#) for online-compilers where you often do not know the main filename.

### 1.2 $\TeX$ studio

For  $\TeX$ studio use as default compiler `latexmk` and simply replace the name by `runtextfile` (see last line in the second image):



Befehle		
Erzeugen	Externer PDF-Betrachter	<code>open %.pdf &gt; /dev/null</code>
Tastaturkürzel	DviPs	<code>dvips -o %.ps %.dvi</code>
Menüs	Dvipng	<code>dvipng -T tight -D 120 %.dvi</code>
Symbolleisten	Ps2Pdf	<code>ps2pdf -dALLOWPSTRANSPARENCY -dNoSafer %.ps</code>
GUI-Skalierung	DviPdf	<code>dvipdfmx %.dvi</code>
Editor	BibTeX	<code>bibtex %.aux</code>
Erweiterter Editor	BibTeX 8-Bit	<code>bibtex8 %.aux</code>
Syntaxhervorhebung	Biber	<code>biber %</code>
Vervollständigung	Makeindex	<code>makeindex %.idx</code>
Sprache prüfen	Texindy	<code>texindy %.idx</code>
Vorschau	Xindex	<code>xindex -k %.idx</code>
Interner PDF-Betrachter	Makeglossaries	<code>makeglossaries %</code>
SVN/GIT	MetaPost	<code>mpost -interaction=nonstopmode ?me)</code>
	Asymptote	<code>asy ?m*.asy</code>
	Ghostscript	<code>gs "?am.ps"</code>
	Latexmk	<code>runtexfile ?m</code>

## 2 examples

### 2.1 This document

The header looks like

```

Command lines for this document

%! HV lua $l$ atex
%! HV biber
%! HV xindex
%! HV lua $l$ atex
%! HV lua $l$ atex

%% .42025 08 1314 58 56
%
\listfiles\setcounter{errorcontextlines}{100}
\documentclass[paper=a4,fontsize=11pt,DIV=14,parskip=half-,
captions=tableabove,twoside=on]{scrartcl}
\usepackage{fontspec}
[...]
```

In this case no extra filename is needed, running `runtexfile runtexfile-doc` is sufficient. More complex is the header of example test2:

### 2.2 Document test

This document uses package `imakeidx` which itself runs the index commands. (Beccari and Gregorio 2016)

## Example test

```

%! HV lua $\LaTeX$  --shell-escape
%! HV biber <test.aux>
%! HV lua $\LaTeX$  --shell-escape
%! HV lua $\LaTeX$  --shell-escape

%% The index files are run by imakeidx
[...]
```

The filename for biber is not really needed, because it also works with the main filename.

## 2.3 Document test2

A more complex example:

## Example test2

```

%! HV lua $\LaTeX$  --shell-escape
%! HV biber
%! HV lua $\LaTeX$  --shell-escape
%! HV xindex
%! HV xindex --config DIN2 -l DE -o test2.vwd <test2.vwx>
%! HV xindex --config DIN2 -l DE -o test2.dbd <test2.dbx>
%! HV lua $\LaTeX$  --shell-escape
%! HV lua $\LaTeX$  --shell-escape
```

There is an optional argument for lua $\LaTeX$  and options with another filename for two of the three xindex runs. (Voß 2025)

## 2.4 Document test3 – for Online-Compiler

Most applications do not need the original filename, but in an extended version, like  $\LaTeX$  together with asymptote it is different. (Bowman and Hammerlindl 2025) Sometimes you do not know the original filename, for example when working with an online-compiler. In such a case one can use the placeholder `!!file!!` which will be later replaced by the original  $\TeX$ -filename which is used by the first command line..

## Example test3 (Asymptote)

```

%! HV lua $\LaTeX$  --shell-escape
%! HV asy <!!file!!-*asy>
%! HV lua $\LaTeX$  --shell-escape
```

Remember that this makes no real sense here, because you know the main file name.

## References

- Beccari, Claudio and Enrico Gregorio (Oct. 15, 2016). *The imakeidx package. A package for producing multiple indexes*. Version 1.3e. URL: <https://ctan.org/pkg/imakeidx>.
- Bowman, John and Andy Hammerlindl (July 4, 2025). *The asymptote package. 2D and 3D  $\TeX$ -Aware Vector Graphics Language*. Version 3.05. URL: <https://ctan.org/pkg/asymptote>.
- Voß, Herbert (Aug. 2, 2025). *The xindex package. Unicode-compatible index generation*. Version 1.02. URL: <https://ctan.org/pkg/xindex>.

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