NAME

memoize−extract.pl, memoize−extract.py − Extract extern pages out of the PDF

SYNOPSIS

memoize−extract.pl [*OPTIONS*] *document.mmz*

memoize−extract.py [*OPTIONS*] *document.mmz*

DESCRIPTION

memoize−extract is a script accompanying Memoize, a TeX package which allows the author to reuse the results of compilation−intensive code such as TikZ pictures.

Memoize dumps the created externs (boxes containing the typeset material to be reused) onto their own pages in the produced PDF file. It is the job of **memoize−extract** to extract these extern pages into separate PDF files. At subsequent compilations, Memoize will include those extern files into the document, without compiling their source again.

Memoize communicates with **memoize−extract** through file *document.mmz*. When *document.tex* is compiled to produce *document.pdf*, Memoize produces *document.mmz*, which records which pages in the produced document are extern pages and to which extern files they should be extracted. Therefore, after compiling *document.tex*, the externs should be extracted by **memoize−extract** *document.mmz*.

document.mmz may also be given as document* or *document.tex*. When environment variable *TEXMF_OUTPUT_DIRECTORY* is set, this filename is relative to the output directory specified by this variable.

document.mmz also records the expected width and height of each extern. In case of a mismatch, **memoize−extract** refuses to extract the page and removes the extern file if it already exist, and prints a warning message to the standard error. The script also refuses to extract the page if a (c)c−memo associated to the extern does not exist. See also section SECURITY.

The Perl (.pl) and the Python (.py) version of the script are functionally equivalent. The Perl script requires library PDF::API2 ⟨https://metacpan.org/pod/PDF::API2⟩, and the Python script requires library pdfrw2 ⟨https://pypi.org/project/pdfrw2⟩.

OPTIONS

−P, −−pdf *filename.pdf*

>   The externs will be extracted from *filename.pdf*. By default, they are extracted from *document.pdf*.

−p, −−prune

>   Remove the extern pages from the PDF after extraction.

−k, −−keep

>   Do not modify the *document.mmz* to mark the externs as extracted. By default, they are commented out to prevent double extraction.

−F, −−format *latex|plain|context*

>   When this option is given, the script assumes that it was called from within a TeX compilation of a document in the given format: it prefixes all output by the script name, and creates a log file *document.mmz.log*, which receives any extraction−related warnings and errors.

−f, −−force

>Extract the extern even if the size−check fails.

−q, −−quiet

>Don't describe what's happening.

−m, −−mkdir

>A paranoid *mkdir −p*. (No extraction occurs, *document.mmz* is interpreted as a directory name, which may end in any suffix; no suffix mangling is performed.)

−V, −−version

>Show the Memoize version number and exit.

−h, −−help

>Show help and exit.

SECURITY

This script respects the restrictions on file input and output imposed by the TeX configuration, more precisely, the variables *openin_any* and *openout_any* of the **kpathsea** library (https://tug.org/kpathsea). You can inspect the values of these variables by executing `kpse-which -var-value=openin_any` and `kpsewhich -var-value=openout_any`. The interpretation is as follows:

a (or **y** or **1**) any

>Allows any file to be opened.

r (or **n** or **0**) restricted

>Means disallowing special file names.

p (or any other value) paranoid

>Means being really paranoid: disallowing special file names and restricting input/output files to be in or below the working directory or the directory specified by *TEXMFOUT-PUT* or *TEXMF_OUTPUT_DIRECTORY*. *TEXMFOUTPUT* may be set either in *texmf.cnf* (e.g. by **tlmgr**) or as an environment variable. *TEXMF_OUTPUT_DIREC-TORY* may only be set as an environment variables; it is automatically set by TeX when called by *−output−directory* option (starting in TeXLive 2024).

EXIT STATUS

0   The externs were successfully extracted. This exit code is returned even if no externs need to be extracted, or if *document.mmz* does not exist.

10   A warning also reported back to the compilation when given option **−−format**. Currently, either: (i) size−mismatch; (ii) a non−existing associated (c)c−memo file; or (iii) unavailable *kpsewhich*.

11   An error also reported back to the compilation when given option **−−format**. Currently, either: (i) a corrupted document PDF, or (ii) a kpathsea permission error.

Other exit codes are as produced by the underlying scripting language (Perl of Python).

SEE ALSO

Memoize manual ⟨https://ctan.org/pkg/memoize⟩, section 6.6.1.