

primal v1.0



primal

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- convenient compilation with `pdflatex` and `latex` → `dvi` → `pdf`
- automatic handling of glossaries and multiple Bib_TE_X databases
- clean workspace and robust, repeatable compilation
- straightforward customization - primal is a few small bash scripts
- templates for journal formats, cover letters, paper rebuttals, etc.
- integration with popular L^AT_EX editors

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From a terminal, enter

```
$ git clone https://github.com/michael-a-hansen/primal.git
```

which will clone the repository into a new directory named `primal`.

Here you can find:

- `doc/` - documentation
- `src/` - source code
- `templates/` - template documents
- `primal-configure.sh` - configure script

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Whenever you clone, pull, or make changes to your local repository, run the configure script from inside the `primal` directory.

```
$ cd primal  
$ ./primal-configure.sh
```

This will build the configured directory that contains scripts for primal's main functionality and testing.

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primal may fail for a number of reasons, such as paths not being set correctly¹ or errors committed when customizing the scripts.

To test primal go to the configured directory and run `runtests.sh`.

```
$ cd configured
$ ./runtests.sh
```

This will confirm that each template in primal successfully assembles into a project and builds a pdf.

¹‘Paths not being set correctly’ means that your system can’t find executables such as `pdflatex` or \LaTeX packages or style files.

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To make a blank primal project in directory `projname`, simply enter:

```
$ <primal-path>/configured/assemble-project.sh  
--name=projname --template=blank
```

where `<primal-path>` is the `primal` directory from earlier.

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The assembled project directory `projname` has four directories and a local configuration file:

- `projname/src/` - contains at least the main `tex` file
- `projname/output/` - `pdf`, `dvi`, `ps` output files are copied to this directory after document compilation
- `projname/log/` - the \LaTeX log file is stored here after compilation
- `projname/tmp/` - temporaries from \LaTeX and subprocesses (e.g. glossaries) are moved here after compilation
- `projname/primal-project-config` - see **next**

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The project configuration file, `projname/primal-project-config`, sets the following variables necessary for document compilation:

- `mainname`= the main tex file
- `texdir`= path of the `pdflatex` executable
- `primalbasedir`= path of the cloned `primal` directory
- `texer`= the executable (`pdflatex` or `latex`)
- `pdfinsrc`= set to 'y' to keep a copy of the pdf in the `src` directory, necessary for editors that sync the pdf continuously
- `tmpexts`= comma-separated (no spaces) list of extensions² belonging to the temporary files moved to `projname/tmp`

²The `glossaries` package may be used to create custom glossaries, each of which needs several extensions that should be added here.

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Templates have necessary class/style files, packages, and a document with placeholders (e.g. title, authors, abstract, keywords). Formats such as SIAM papers that require a `latex` \rightarrow `dvi` \rightarrow `pdf` build will automatically set the project configuration accordingly.

To assemble a project with a template below, simply use the `-template=` argument to `assemble-project.sh`.

- `blank` - a blank document
- `article` - simple document of article class
- `cover letter` - basic cover letter using the letter class
- `paper rebuttal` - document of article class with a package for writing responses to reviews
- **journal/conf. formats:** `elsevier-article`, `siam`, `combustion-theory-modelling`, `combustion-meeting`

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If you find yourself writing the same document over and over again, you can easily make it a new primal template.

- 1 Make a new folder in the `primal/templates/` directory
- 2 Add your `tex` files, class/style files, etc.
- 3 Change the name of the main `tex` document to `main.tex`

primal will automatically find the new template and include it in testing. You should **run the tests** after making a new template.

If your template requires `latex → dvi → pdf`, create an empty file named `USE_LATEX` in the new template directory. Projects of this type will then be configured to use `latex → dvi → pdf` instead of `pdflatex`.

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