

PreTeXt Quick Reference: Command Line Interface (CLI)

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Setup

Check requirements

Note: python might be called python3 if you have MacOS or Linux.

`python --version` : the CLI requires Python version 3.8 or later

`pip --version` : pip is the package installer for Python

`xelatex --version` : some PreTeXt features require L^AT_EX

Install PreTeXt

`python -m pip install pretext` : install PreTeXt

`pretext --version` : check version to verify install

Create a new project

`pretext new book` : creates a new PreTeXt book in `new-pretext-project`

`pretext new article` : creates a new PreTeXt article in `new-pretext-project`

Update a project to use the CLI

`pretext init`: creates project manifest (`project.ptx`), and publication file (`publication/publication.ptx`). Edit these files appropriately before proceeding.

`pretext pretext init --refresh`: creates new copies of project manifest and publication file to compare for new features.

Upgrade PreTeXt

`python -m pip install --upgrade pretext` : upgrade to latest stable release

Get Help

`pretext --help`: show general help

`pretext build --help`: show help for build command. Each subcommand has its own help.

Basic Usage

Build a PreTeXt document

`pretext build`: Builds the project to the format of the first target in `project.ptx`.

`pretext build print`: Create pdf version (assuming `<target name="print">`) is in `project.ptx`

Generate source images and WeBWorK

If your book has any WeBWorK, latex-image, asymptote, sageplot, interactive, etc. you need to generate these from source.

`pretext generate`: Generate all assets for first target in `project.ptx`.

`pretext generate webwork`: Generate webwork for first target in `publication.ptx`

`pretext generate sageplot -t print`: Generate sageplot for target "print".

`pretext generate latex-image -x img-graph1`: Generate latex-image with `xml:id "img-graph1"` (for first target).

View a PreTeXt document (local)

`pretext view`: Creates a local server to preview the first target in `project.ptx`

`pretext view print`: Views the "print" target

`pretext view -w`: Builds, starts server, and rebuilds every time the source is saved

Deploy to GitHub Pages

`pretext deploy` : deploys Git-managed project to GitHub Pages

Useful Shortcuts

`pretext build -g`: build and generate in one step

`pretext build web -g latex-image`: build web target and generate latex-images

`pretext view -b`: build before you preview

`pretext view -g`: generate assets before you view

`pretext view -bg`: generate assets, build, and view

Project Manifest The file `project.ptx` describes your build targets. Each target has a *name* (e.g. "print-latex") that you build or view with, e.g. `pretext build print-latex` or generate assets for with, e.g. `pretext generate webwork -t print-latex`.

Structure of a target:

```
<target name="web">
  <format>html</format>
  <source>...</source>
  <publication>...</publication>
  <output-dir>...</output-dir>
</target>
```

`<format>` can be html, latex, pdf, custom, epub, or kindle

`<source>` is the path to the root ptx document. Usually `source/main.ptx`

`<publication>` is the path to the publication file. Usually `publication/publication.ptx`

`<output-dir>` is the path the the folder that will hold output. Usually something like `output/web`

Other optional elements:

`<stringparam key="..." value="..."/>`: allows for setting the value of string parameters

`<xmlid-root>ch-first</xmlid-root>`: used to restrict build to a subset of the source, starting with the element with `xml:id "ch-first"`

`<xsl>xsl/custom.xsl</xsl>`: used to build with a custom xsl file. Import standard xsl from that file using, e.g. `<xsl:import href=".core/pretext-common.xsl"/>`

Recommended Project Structure

assets: Contains all static assets.

generated-assets: Contains the products of running `pretext generate`. Should not be edited manually.

output: Contains the products of running `pretext build`. Should not be edited manually.

publication: Contains your publication file(s) (e.g. `publication/publication.ptx`).

source: Contains your PreTeXt source file(s) (e.g. `source/main.ptx`).

project.ptx: Describes your project's targets (e.g. `web`, `print-latex`) and executables.

requirements.txt: Specifies version of CLI used to build your project.

.gitignore: Specifies files not shared publicly when using Git or `pretext deploy`.