

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 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.