

610 migration documentation

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1 Requirements

The first page being migrated to Hugo in order to explore the process is SWEN-610. The 610 site has 3 main pages available in the header navigation bar: Schedule, Syllabus, and Project. The Schedule page also functions as the site's homepage, and contains the course schedule in a complex table. The majority of the pages and resources on the site are accessed from within the Schedule table. The Syllabus page contains the course information, and primarily consists of text with a few simple tables. The Project page contains a brief text description of the course project.

The remaining pages fall under five main categories: Topics, Assignments, Project Phases, External Resources, and Downloadable Resources. Topic, Assignment, and Project Phase pages all contain structurally similar content consisting primarily of text with some images or tables.

In summary, the site's pages generally fall under the following types:

- The Schedule page, which also acts as the site's homepage. This page consists primarily of a complex table containing the course schedule and links to assignment pages and resources.
- Text pages consist primarily of text with headers, links, and occasionally simple tables or images.
- External resources on other sites.
- Downloadable resources, such as .pptx files.

Assignment pages and Project pages make up the bulk of the Text pages, but other single pages such as the Syllabus would also fall into this category. Text pages with tables should be able to easily construct their tables with markdown in their content pages, meaning that they do not need alternate layouts or the use of shortcodes.

None of the existing pages on the 610 site would make use of a Hugo list page. However, Hugo does make use of a list layout as one of the default layouts to fall back on. As such a simple list layout and archetype is needed as well. In this case, the layout is provided by the Book theme and could be used to

construct a fifth List page category if needed (such as for a list of Assignment pages).

2 Hugo Components

2.1 Content

Most of the pages on the site will be content markdown files organized into several subdirectories of the primary content directory. The book theme uses the content files in the “docs” directory to construct the site’s navigation menu, and so important pages such as the Syllabus and Project page will be in their own subdirectories within “docs.” Other types of content will be organized in their own subdirectories outside of the “docs” directory.

Due to how the book theme functions, the primary content files of subdirectories within the “docs” directory will all be `_index.md` files. This is necessary for the theme to recognize which is the main file of the directory and structure the navigation menu accordingly.

2.2 Layouts

Layouts contain the html that defines the structure of different pages, and will be provided by the book theme. See the Theme subsection for more information.

2.3 Partial

Partials allow small reusable sections of html to be included in a layout file, and will be provided by the book theme. See the Theme subsection for more information.

2.4 Archetypes

Archetypes define the initial state of a newly created content file, allowing you to automatically fill out certain parts of the front matter or markdown content. Due to the similarity of many of the pages, a single archetype should be able to accommodate the vast majority of pages.

2.5 Resources

Downloadable resources, such as .pptx files, will be stored in Hugo’s “static” directory.

2.6 Shortcodes

Shortcodes allow small reusable sections of html to be included in a markdown file, and will be provided by the book theme. See the Theme subsection for more information.

2.7 Theme

Currently the Book theme (found [here](#)) is being used for the migrated 610 site. This provides the benefit of a high quality visual theme with pre-built support for several useful features such as drop-down menus for navigation and translation files for multiple languages. In addition to the layouts for the site's pages, the theme also provides several shortcodes to customize the content of markdown pages.

Shortcodes of note include:

- Column: allows markdown content to exist in side-by-side columns. This is primarily used in the Schedule page.
- Card: creates borders around content to help visually group related information.
- Hint: add colored backgrounds (with several color options) to sections of content in order to draw the reader's attention.
- Image: easily add an image to markdown in a content file.
- Steps: display a numbered list in a more visually appealing way than a standard numbered list.

The documentation for the book theme is split between the readme in the theme's Git repo (linked above), or on the theme's demo page (found [here](#)).

If the existing style of 610 is kept, or if the Book theme proves too difficult to maintain, a new custom theme will be needed. This would require additional steps in the migration process. First, the site's existing css would need to be migrated into the Hugo custom theme's assets directory. Then layouts for each type of content would need to be constructed (currently just for the index and single pages). Partials for the head, header, and footer would also need to be constructed for the new layouts. Custom Shortcodes would need to be developed as the need for them arises as well.

3 Hugo File Structure

The site's files will be divided between the site's main directories and the Book theme's directories. For a visual representation of the file structure, see figure 1.

- Archetypes: 610/archetypes/
- Content: 610/content/
 - navigation pages will be in subdirectories in the /docs subdirectory.
 - other content pages will be in their own subdirectories such as /assignments

- Downloadable: 610/static/
- Layouts: 610/themes/book/layouts
- Partials: 610/themes/book/layouts/_partials
- Partials: 610/themes/book/layouts/_shortcodes

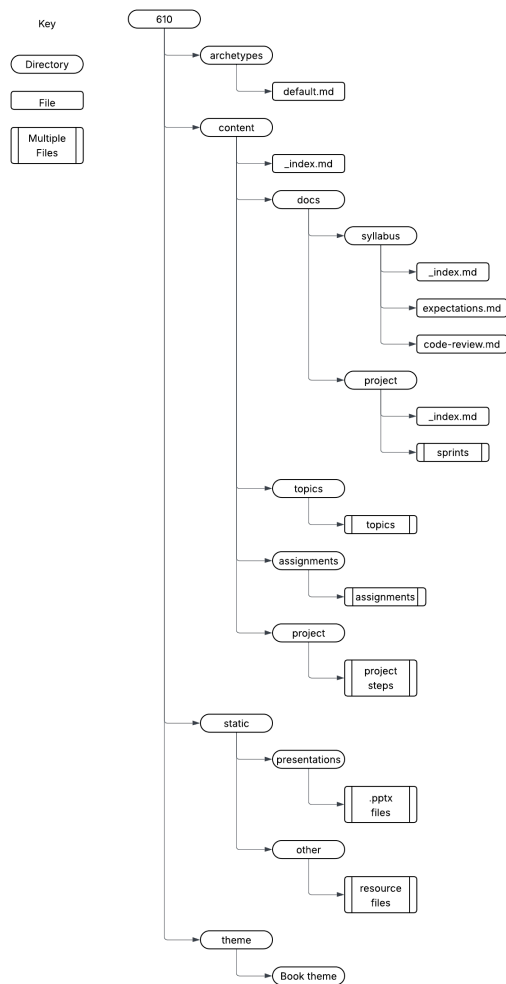


Figure 1: File Structure for 610 site