



Jekyll theme for documentation — writers

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Company
logo

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Introduction

Overview

This site provides documentation, training, and other notes for the Jekyll Documentation theme. There's a lot of information about how to do a variety of things here, and it's not all unique to this theme. But by and large, understanding how to do things in Jekyll depends on how your theme is coded. As a result, these additional details are provided.

The instructions here are geared towards technical writers working on documentation. You may have a team of one or more technical writers working on documentation for multiple projects. You can use this same theme to author all of your documentation for each of your products. The theme is set up to push out documentation for multiple projects all from the same source. You can also share content across projects.

Survey of features

Some of the more prominent features of this theme include the following:

- Bootstrap framework
- Sidebar for table of contents
- Top navigation bar with drop-down menus
- PDF generation (through Prince XML utility)
- Build scripts to automate the workflow
- Notes, tips, and warning information notes
- A nifty system for creating links to different pages
- Tags for alternative navigation
- Content sharing across projects
- Emphasis on pages, not posts
- Relative (rather than absolute) link structure, so you can push the outputs anywhere and easily view them

I'm using this theme for my documentation projects, building about 20 different outputs for various products, versions, languages, and audiences from the same set of files. This single sourcing requirement has influenced how I constructed this theme.

For more discussion about the available features, see [Supported features \(page 3\)](#).

Getting started

To get started, see these three topics:

1. [1. Build the default project \(page 8\)](#)
2. [4. Set the configuration options \(page 17\)](#)
3. [2. Add a new project \(page 12\)](#)

PDF Download Option for Help Material

If you would like to download this help file as a PDF, you can do so here. The PDF is comprehensive of all the content in the online help.

 PDF Download

The PDF contains a timestamp in the header indicating when it was last generated.

Supported features

Summary: If you're not sure whether Jekyll and this theme will support your requirements, this list provides a semi-comprehensive overview of available features.

Before you get into exploring Jekyll as a potential platform for help content, you may be wondering if it supports some basic features. The following table shows what is supported in Jekyll and this theme.

FEATURES	SUPPORTED	NOTES
Content re-use	Yes	Supports re-use through Liquid. You can re-use variables, snippets of code, entire pages, and more. In DITA speak, this includes conref and keyref.
Markdown	Yes	You can author content using Markdown syntax. This is a wiki-like syntax for HTML that you can probably pick up in 10 minutes. Where Markdown falls short, you can use HTML. Where HTML falls short, you use Liquid, which is a scripting that allows you to incorporate more advanced logic.
Responsive design	Yes	Uses Bootstrap framework.
Translation	Yes	I haven't done a translation project yet (just a pilot test). Here's the basic approach: Export the pages and send them to a translation agency. Then create a new project for that language and insert the translated pages. Everything will be translated.
PDF	Yes	You can generate PDFs from your Jekyll site. This theme uses Prince XML (costs \$495) to do the PDF conversion task. You basically set up a page that uses Liquid logic to get all the pages you want, and then you use PrinceXML (not part of Jekyll) to convert that page into a PDF.

FEATURES	SUPPORTED	NOTES
Collaboration	Yes	You collaborate with Jekyll projects the same way that developers collaborate with software projects. (You don't need a CMS.) Because you're working with text file formats, you can use any version control software (Git, Mercurial, Perforce, Bitbucket, etc.) as a CMS for your files.
Scalability	Yes	Your site can scale to any size. It's up to you to determine how you will design the information architecture for your thousands of pages. You can choose what you display at first, second, third, fourth, and more levels, etc. Note that when your project has thousands of pages, the build time will be longer (maybe 1 minute per thousand pages?). It really depends on how many for loops you have iterating through the pages.
Lightweight architecture	Yes	You don't need a LAMP stack (Linux, Apache, MySQL, PHP) architecture to get your site running. All of the building is done on your own machine, and you then push the static HTML files onto a server.
Multichannel output	Yes	This term can mean a number of things, but let's say you have 10 different sites you want to generate from the same source. Maybe you have 7 different versions of your product, and 3 different locations. You can assemble your Jekyll site with various configurations, variants, and more. Jekyll actually does all of this quite well. Just specify a different config file for each unique build.
Skinnability	Yes	You can skin your Jekyll site to look identical to pretty much any other site online. If you have a UX team, they can really skin and design the site using all the tools familiar to the modern designer – JavaScript, HTML5, CSS, jQuery, and more. Jekyll is built on the modern web development stack rather than the XML stack (XSLT, XPath, XQuery).
Support	Yes	The community for your Jekyll site isn't so much other tech writers (as is the case with DITA) but rather the wider web development community. Jekyll Talk (http://talk.jekyllrb.com) is a great resource. So is Stack Overflow.

FEATURES	SUPPORTED	NOTES
Blogging features	No	This theme just uses pages, not posts. I may integrate in post features in the future, but the theme really wasn't designed with posts in mind. If you want a post version of the site, you can clone my blog theme (https://github.com/tomjohnson1492/tomjohnson1492.github.io), which is highly similar in that it's based on Bootstrap, but it uses posts to drive most of the features. I wanted to keep the project files simple.
CMS interface	No	Unlike with WordPress, you don't log into an interface and navigate to your files. You work with text files and preview the site dynamically in your browser. Don't worry – this is part of the simplicity that makes Jekyll awesome. I recommend using WebStorm as your text editor.
WYSIWYG interface	No, but ...	As noted in the previous point, I use WebStorm to author content, because I like working in text file formats. But you can use any Markdown editor you want (e.g., Lightpaper for Mac, Marked) to author your content.
Versioning	Yes, but...	Jekyll doesn't version your files. You upload your files to a version control system such as Git. Your files are versioned there.
PC platform	Yes, but ...	Jekyll isn't officially supported on Windows, and since I'm on a Mac, I haven't tried using Jekyll on Windows. See this page in Jekyllrb help (http://jekyllrb.com/docs/windows/) for details about installing and running Jekyll on a Windows machine. A couple of Windows users who have contacted me have been unsuccessful in installing Jekyll on Windows, so beware. In the configuration files, use <code>rouge</code> instead of <code>pygments</code> (which is Python-based) to avoid conflicts.

FEATURES	SUPPORTED	NOTES
jQuery plug-ins	Yes	You can use any jQuery plugins you and other JavaScript, CMS, or templating tools. However, note that if you use Ruby plugins, you can't directly host the source files on Github Pages because Github Pages doesn't allow Ruby plugins. Instead, you can just push your output to any web server. If you're not planning to use Github Pages, there are no restrictions on any plugins of any sort. Jekyll makes it super easy to integrate every kind of plugin imaginable. This theme doesn't actually use any plugins, so you can publish on Github if you want.
Bootstrap integration	Yes	This theme is built on Bootstrap (http://getbootstrap.com/) . If you don't know what Bootstrap is, basically this means there are hundreds of pre-built components, styles, and other elements that you can simply drop into your site. For example, the responsive quality of the site comes about from the Bootstrap code base.
Fast-loading pages	Yes	This is one of the Jekyll's strengths. Because the files are static, they loading extremely fast, approximately 0.5 seconds per page. You can't beat this for performance. (A typically database-driven site like WordPress averages about 2.5 + seconds loading time per page.) Because the pages are all static, it means they are also extremely secure. You won't get hacked like you might with a WordPress site.
Relative links	Yes	This theme is built entirely with relative links, which means you can easily move the files from one folder to the next and it will still display. You don't need to view the site on a web server either – you can view it locally just clicking the files. This relative link structure facilitates scenarios where you need to archive versions of content or move the files from one directory (a test directory) to another (such as a production directory).
Themes	Yes	You can have different themes for different outputs. If you know CSS, theming both the web and print outputs is pretty easy.

FEATURES	SUPPORTED	NOTES
Open source	Yes	This theme is entirely open source. Every piece of code is open, viewable, and editable. Note that this openness comes at a price — it's easy to make changes that break the theme or otherwise cause errors.

1. Build the default project

Summary: To get started with this theme, first make sure you have all the prerequisites in place; then build the theme following the sample build commands. Because this theme is set up for single sourcing projects, it doesn't follow the same pattern as most Jekyll projects (which have just a `_config.yml` file in the root directory).

Getting Started ▼

Set up the prerequisites

Before you start installing the theme, make sure you have all of these prerequisites in place.

- **Mac computer.** If you have a Windows machine, make sure you can get a vanilla Jekyll site working before proceeding. You'll probably need Ruby and Ruby Dev Kit installed first. Also note that the shell scripts (.sh files) in this theme for automating the builds work only on a Mac. To run them on Windows, you need to convert them to BAT.
- **Ruby** (<https://www.ruby-lang.org/en/>). On a Mac, this should already be installed. Open your Terminal and type `which ruby` to confirm.
- **Rubygems** (<https://rubygems.org/pages/download>). This is a package manager for Ruby. Type `which gem` to confirm.
- **Text editor:** My recommendation is WebStorm (or IntelliJ). You can use another text editor. However, there are certain shortcuts and efficiencies in WebStorm (such as using Find and Replace across the project, or Markdown syntax highlighting) that I'll be noting in this documentation.

I added a page called [Adding all project dependencies \(page 186\)](#) that explains how to install any necessary RubyGem dependencies in case you run into errors.

Build the default project

Before you start customizing the theme, make sure you can build the theme with the default content and settings first.

1. Download the theme from the [exp-docs Github repository](https://github.com/tomjohnson1492/exp-docs) (<https://github.com/tomjohnson1492/exp-docs>) and unzip it into your `~username/projects` folder.

You can either download the theme files directly by clicking the **Download Zip** button on the right of the repo, or use git to clone the repository to your local machine.

2. After downloading the theme, note some unique aspects of the file structure:
 - Although there's a `_config.yml` file in the root directory, it's there only so that Github Pages will build the theme. Because the theme is set up for single sourcing, there's a separate configuration file for each unique output you're building.
 - All the configuration files are stored in the `configs` directory. Each configuration file has a different preview port. If you want, you can build and preview all your outputs simultaneously in different preview servers.
 - Each configuration file specifies a different project and potentially a different audience, product, platform, and version. By setting unique values for these properties in the `includes/custom/conditions.html` file, you determine how the sidebar and top navigation get constructed.
 - A variety of shell scripts (`.sh` files) in the project's root directory automate the building and publishing of both the web and PDF files. After you configure the scripts, you can execute all the scripts through the master shell script, `mydoc_all.sh`.
 - "mydoc" is the name of the documentation project. You can leave the mydoc content in the theme. It won't affect the other projects you add to the theme.

✓ **Tip:** The main goal of this theme is to enable single sourcing. With single sourcing, you build multiple outputs from the same source, with somewhat different content in each output based on the particular product, platform, version, and audience. You don't have to use this theme for single sourcing, but most tech writing projects require this. If you're not a technical writer or not creating documentation, this theme is probably not for you. It doesn't have any post features coded, just pages.

There are four configuration files in this project: `config_writers.yml` and `config_designers.yml` as well as their PDF equivalents. The idea is that there's an output specific to writers, and an output specific to designers.

In reality, both of these outputs are pretty much the same. I mainly incorporated two outputs here mainly to demonstrate how the single sourcing works.

3. Unless you're planning to publish on Github Pages, you can delete the Gemfile. The Gemfile is only in this project to allow publishing on Github Pages.

The theme is not using a Gemfile to manage project dependencies. Although theoretically the Gemfile should make things easier, I've found that it tends to give users more errors than they need. Add to this the incompatibility of Github Pages with Jekyll 3.0 and the Gemfile becomes even more problematic.

4. Install the [Jekyll](https://rubygems.org/gems/jekyll) (<https://rubygems.org/gems/jekyll>), [kramdown](https://rubygems.org/gems/kramdown) (<https://rubygems.org/gems/kramdown>), and [pygments](https://rubygems.org/gems/pygments.rb) (<https://rubygems.org/gems/pygments.rb>) gems.

These gems are the only ones the project uses. Go to the [Rubygems site](https://rubygems.org) (<https://rubygems.org>) for each of these gems (based on the links above). In the right column, click the "INSTALL" command and paste the copied command into your terminal. If your computer gives you permissions errors, add `sudo` before the command.

5. In your terminal, browse to the `exp-docs` folder that you downloaded.
6. Build the writer's output:

```
jekyll serve --config configs/mydoc/config_writers.yml
```

The `--config` parameter specifies the location of the configuration file to be used in the build. The configuration file itself contains the destination location for where the site gets built.

Open a new tab in your browser and preview the site at the preview URL shown.

7. Press **Ctrl+C** in Terminal to shut down the writer's preview server.
8. Build the designers output:

```
jekyll serve --config configs/mydoc/config_designers.yml
```

Open a new tab in your browser and preview the site at the preview URL shown. Notice how the themes differ (designers is blue, writers is green).

9. Press **Ctrl+C** in Terminal to shut down the designer's preview server.

10. Build both themes by running the following command:

```
. mydoc_3_multibuild_web.sh
```

The themes build in the `../doc_outputs/mydoc/mydoc_designers` and `../doc_outputs/mydoc/mydoc_writers` folders. Browse to these directories to view the output.

Open the writers and designers folders and click the `index.html` file. The themes should launch and appear similar to their appearance in the preview folder. This is because the themes are built using a relative link structure, so you can move the theme to any folder you want without breaking the links.

If the theme builds both outputs successfully, great. You can move on to the other sections. If you run into errors building the themes, solve them before moving on. See [Troubleshooting \(page 183\)](#) for more information.

✓ **Tip:** You can set up profiles in iTerm to initiate all your builds with one selection. See [iTerm profiles \(page 153\)](#) for details.

More information about building the PDF versions is provided in [Generating PDFs \(page 124\)](#).

Questions

If you have questions, contact me at replace-me@scala.com. My regular site is idratherbewriting.com (<http://idratherbewriting.com>). I'm eager to make these installation instructions as clear as possible, so please let me know if there are areas of confusion that need clarifying.

Next: 2. Add a new project [\(page 12\)](#)

2. Add a new project

Summary: You add a new project essentially by duplicating all the mydoc project files in the `_data`, `_includes`, `configs`, and other folders. You can add as many projects as you want in this theme.

Getting Started ▼

About customizing the theme

The theme shows two build outputs: one for designers, and one for writers. The dual outputs is an example of the single sourcing nature of the theme. The designers output is comprehensive, whereas the writers output is a subset of the information. However, the outputs are mostly the same. I just created the separate output to demonstrate how the single sourcing aspect works.

You can add as many documentation projects as you want to the same Jekyll project. Some doc projects have multiple outputs, as is the case with the designers and writers outputs for the mydoc project.

Add a new project

Follow these steps to add additional projects.

⚠ Important: In these instructions, I'll assume your project's name is "acme." Replace "acme" with the real name of your project.

1. Copy and customize the mydoc folder in `_data`

Inside the `_data` folder, copy the mydoc folder and its contents. Rename it to acme, and then rename each of the YML files inside the folder with the acme prefix.

The files in data control how the side and top nav bar get populated. Here is also where URLs, definitions, and other settings are stored.

2. Copy and customize the mydoc folder in configs

In the configs folder, copy the mydoc folder and its contents. Rename it to acme, and then rename each of the config_ files to the outputs you need for your acme project.

In this theme, each output requires a separate config file. If you have 10 audiences and you want separate sites for each, then then you'll have 10 config files in this directory.

Change the file names from config_writers.yml and so forth to whatever file names best represent the audiences for your outputs.

More details about customizing the settings in the configuration files will be explained later. For now you're just duplicating the necessary project files for your new project.

3. Create a new folder inside _includes/custom

In the _includes/custom directory, add a new folder there called "acme." This folder should sit parallel to the mydoc folder. This is where you can store includes for your project.

4. Add a new folder in the root directory

In the root directory, add a folder for your pages called acme (similar to the mydoc folder). Include two subfolders inside acme: files and images.

Inside the mydoc folder, copy the home.md file and add it to the acme folder. (With most Jekyll projects, they open up on the index.html file in the root directory. However, because the pages for each project are stored in subfolders, it was necessary to create a redirect from the index page to the home.md page.)

This acme directory is where you'll store all your pages.

Note that you cannot create subfolders in this acme directory. All of your pages have to be flat in this directory. This is because the references to the resources (stylesheets, javascript, etc.) are relative, and creating additional directory levels will break the relative paths.

5. Copy and customize the mydoc shell scripts in the root directory

In the root directory, duplicate the shell scripts (the file extension is .sh) and rename the prefix to "acme_". The following files are the shell scripts that need to be duplicated:

- mydoc_1_multiserve_pdf.sh
- mydoc_2_multibuild_pdf.sh
- mydoc_3_multibuild_web.sh
- mydoc_4_publish.sh
- mydoc_all.sh

6. Copy the URL generator text file

In the root directory, copy `urls_mydoc.txt` and duplicate it. Change the suffix to `urls_acme.txt`.

✓ **Tip:** In this step, you're just duplicating project files. In later steps, you'll actually customize all of the settings.

Next: 3. Decide on your project's attributes [\(page 15\)](#)

3. Decide on your project's attributes

Summary: Each project has attributes that define the audience, platform, product, version, and output. These attributes are used in generating the outputs. The attributes function as filtering conditions that determine what content gets included in the navigation.

Getting Started ▾

Your attribute values

Before you can customize your project's settings, you have to make some decisions about the following:

- audience
- platform
- product
- version
- output (web, pdf)

Every project uses a value for these settings, so even if the attribute doesn't apply to your project, you will need to put some value for `audience`, `platform`, `product`, and `version` (a value such as `all` will work fine).

The `audience`, `platform`, `product`, and `version` settings derive from the same filtering attributes as in DITA. You can usually create any kind of filtered output by combining these attributes in different ways.

For example, you might have different product lines (lite versus pro), different versions (1.0 versus 2.0), different platforms (such as Java versus C++), and different audiences (administrators versus analysts) and so on. You'll need to know the values you want to use for each attribute in order to configure the project successfully to build the different outputs.

If you aren't sure of your outputs, just put `all` for the `audience`, `platform`, `product`, and `version`. For the `output` value, the options are fixed to either `web` or `pdf` (or both — `web, pdf` — separated by a comma).

Next: 4. Set the configuration options [\(page 17\)](#)

4. Set the configuration options

Summary: The configuration file contains important settings for your project. Some of the values you set here affect the display and functionality of the theme — especially the product, platform, audience, and version.

Getting Started ▾

Importance of the configuration file

The configuration file serves important functions with single sourcing. For each site output, you create a unique configuration file for that output.

The configuration file contains most of the settings and other details unique to that site output, such as variables, titles, output directories, build folders, and more.

Change the project name within the config file

By default, the config file contains the project name, such as mydoc, in numerous places. You can do a find and replace in each of the configuration files to replace “mydoc” with your new project’s name. You can also fine tune the configuration settings by looking at what each of them does (as described in the following sections).

Update the exclude list

By default, all the files in the Jekyll project are included in the output. You have two manually tell Jekyll which files and folders you want to exclude from the output. In each configuration file there is an `exclude` property that takes a list of items that should be excluded from the build.

In the new configuration file that you created, exclude the mydoc folder and any other mydoc files that you don’t want to be output. Similarly, update the mydoc configuration files to exclude the new project that you added.

Manually excluding files from the output is one of pain points in Jekyll that I could never solve. Jekyll was not designed for multiple output publishing but was conceived as a way to manage files for a single website.

Configuration file variables

You can define arbitrary key-value pairs in the configuration file, and then you can access them through `site.yourkey`, where `yourkey` is the name of the key.

However, some of the options you set in the configuration file determine theme settings. These options are required for this theme to work. The required settings are defined in the following tables.

Configuration settings for web outputs

The values in the following tables are used to control different aspects of the theme and are not arbitrary key-value pairs. As you set up your project, enter the appropriate values for each of these keys in the configuration file.

If you're unsure how or where the project setting affects the theme, just search for the project setting in the theme (for example, `site.sidebar_version`) and you'll see the files involved.

The order of the settings doesn't matter.

FIELD	REQUIRED?	DESCRIPTION
project	Required	A unique name for the project. The <code>_includes/custom/conditions.html</code> file will use this project name to determine what sidebar and top nav data files to use. Make this value unique. Note that the project name also determines what conditions are set in the <code>conditions.html</code> file. It's critical that the project name you specify in the configuration file matches the project names in the <code>conditions.html</code> file. Otherwise, the <code>conditions.html</code> file won't be able to set the right variables needed for single sourcing. (Admittedly, the settings for these attributes are somewhat duplicated between the <code>conditions.html</code> and configuration file.)

FIELD	REQUIRED?	DESCRIPTION
audience	Required	The audience for the output. This value is also set in the <code>_includes/custom/conditions.html</code> file. Each entry in <code>_data/sidebar_doc.yml</code> and <code>_data/topnav_doc.yml</code> needs to have an audience attribute that matches the correct audience value in order for the sidebar or topnav item to be included.
platform	Required	The platform for the output. The same matching logic applies as with audience.
product	Required	The product for the output. The same matching logic applies as with audience.
version	Required	The version for the output. The same matching logic applies as with audience.
destination	Required	The folder where the site is built. If you put this into your same folder as your other files, Jekyll may start building and rebuilding in an infinite loop because it detects more files in the project folder. Make sure you specify a folder outside your project folder, by using <code>../</code> or by specifying the absolute path. The recommended output folder is <code>../doc_outputs</code> . The PDF configuration files will look in that directory for the outputs needed to build the PDF outputs.

FIELD	REQUIRED?	DESCRIPTION
sidebar_tagline	Optional	Appears above the sidebar. Usually you put some term related to the site specific build, such as the audience name. In the sample theme files, the taglines are “writers” and “designers.” Keep these short — there’s not much room. Six or seven letters is perfect.
sidebar_version	Optional	Appears below the sidebar_tagline in a smaller font, usually specifying the version of the documentation. In the sample theme files, the version is “4.0.”
topnav_title	Required	Appears next to the home icon in the top nav bar. In the sample theme files, the topnav_title is “Jekyll Documentation Theme.”
homepage_title	Required	You set the title for your homepage via this setting. This is because multiple projects are all using the same index.md as their homepage. Because index.md has <code>homepage: true</code> in the frontmatter, the “page” layout will use the <code>homepage_title</code> property from the configuration file instead of the traditional title in the frontmatter. In the sample theme files, the homepage title is “Jekyll Documentation Theme — writers” or “Jekyll Documentation Theme — designers.”
site_title	Required	Appears in the webpage title area (on the browser tab, not in the page viewing area). In the sample theme files, the site title is rendered as <code>{{ page.title }}{% endif %} {{ site.site_title }}</code> (these values get dynamically replaced depending on the page name and title).

FIELD	REQUIRED?	DESCRIPTION
port	Required	The port used in the preview mode. This is only for the live preview and doesn't affect the published output. If you serve multiple outputs simultaneously, the port must be unique.
feedback_email	Required	Gets configured as the email address in the Send Feedback button in the top navigation bar.
markdown	Required	The processor used to convert Markdown to HTML. This is a Jekyll-specific setting. Use <code>kramdown</code> . Another option is <code>kramdown</code> . However, my examples will follow <code>kramdown</code> .
kramdown	Required	Extensions used with <code>kramdown</code> . You can read more about the Red Carpet extensions here (https://github.com/vmg/kramdown).
highlighter	Required	The syntax highlighter used. Use <code>rouge</code> because it has fewer dependencies on your operating system (it doesn't require Python). However, you can also use <code>pygments</code> . If so, you may need need to install Pygments (http://pygments.org/download/).
exclude	Optional	A list of files and directories that you want excluded from the build. By default, all the content in your project is included in the output. If you don't want to include a file or directory, list it here. It's helpful to name your files with a prefix such as <code>product_audience_filename.md</code> , so that you can exclude using wildcards such as <code>"product"</code> or <code>product_audience</code> . For more information about excluding files, see Excluding files (page 136) .

FIELD	REQUIRED?	DESCRIPTION
defaults	Optional	Here you can set default values for frontmatter based on the content type (page, post, or collection).
collections	Optional	Any specific collections (custom content types that extend beyond pages or posts) that you want to define. This theme defines a collection called <code>tooltips</code> . You access this collection by using <code>site.tooltips</code> instead of <code>site.pages</code> or <code>site.posts</code> . Put the tooltip content types inside a folder in your project called <code>_tooltips</code> . Tooltips are useful for creating UI content. For more information about creating tooltips for UI text, see Help APIs and UI tooltips (page 139) .
output	Optional	Boolean. Whether this build is <code>web</code> or <code>pdf</code> . This setting allows you to run conditions in your content such as <code>{% if site.output == pdf %} do this... {% endif %}</code> . Limit the options to just <code>web</code> or <code>pdf</code> for this setting.
github_editme_path	Optional	A path to configure the Github Edit Me button. Put the path to the branch on Github where you want to edit the theme. Here's a sample: <code>tomjohnson1492/exp-docs/edit/reviews</code> . In this case, "reviews" is the name of the branch where I want people to make edits. I can then merge the "reviews" branch with the "gh-pages" branch (which is the default branch). See the "page" layout (inside the <code>_layouts</code> folder) for how this path gets inserted into the rest of the HTML.
company_name	Optional	Used in the footer to brand your site.

FIELD	REQUIRED?	DESCRIPTION
footer_image_location	Optional	The image used in the footer to brand your site. Store this image in the common_images folder so that it's not excluded by a particular project. Example: ../common_images/company_logo.png
theme_file	Optional	The theme used for the output. Currently there are two options: theme-green.css or theme-blue.css. These themes cover both web and PDF output. The themes have the same style and layout. They only differ in the accent color for the top nav bar, buttons, hyperlinks, and other small details.
pdf_file_name	Optional	The name of the PDF file generated by Prince. This is helpful for the code on the home.md page that allows users to download a PDF of the material. If you have 5 different PDFs, you don't want to use <code>if</code> statements to render different PDF buttons. Instead, this theme uses the same PDF code but swaps out the PDF file name with a variable here.

Where to store configuration files

In this theme, all the configuration files are listed in the configs directory. There are some build scripts in the root directory that reference the configuration files in this configs folder.

There's also a `_config.yml` file in the root directory. This is simply copied from the configs directory and used to accommodate publishing with Github Pages.

Configuration settings for PDF output

The PDF configuration files build on all the settings in the web configuration files, but they add a few more options.

When you build the PDF output (such as for the writers output), the command will look like this:

```
jekyll serve --detach --config configs/  
config_writers.yml,configs/config_writers_pdf.yml
```

First Jekyll will read the `config_writers.yml` file, and then Jekyll will read the `config_writers_pdf.yml` file. Values from both configuration files will be used, but the later configuration file (on the right) will overwrite any values set in the previous configuration file (on the left).

(Previously people running Windows reported problems with cascading the configuration files like this. If you're on Windows, for PDF outputs, you may need to combine the settings from the web configuration file into the PDF configuration file.)

More detail about generating PDFs is provided in [Generating PDFs \(page 124\)](#), but the configuration settings used for the PDFs are described here.

The process for creating PDFs relies on two steps:

1. First you build a printer-friendly web version of the content.
2. Then you run PrinceXML to get all the printer-friendly web pages and package them into a PDF.

Thus, you actually build a web version for the PDF first before generating the PDF.

The following table describes the settings in the PDF configuration file.

FIELD	REQUIRED?	DESCRIPTION
destination		Where the PDF web version should be served so that Prince XML can find it. By default, this is in <code>../mydoc_designers-pdf</code> , which is just one level above where your project is.
url		The URL where the files can be viewed. This is <code>http://127.0.0.1:4002</code> in the sample theme files for the designers output. Prince XML requires a URL to access the file.

FIELD	REQUIRED?	DESCRIPTION
baseurl		The subdirectory after the url where the content is stored. In the sample theme files for the designers output, this is <code>/designers</code> .
port		The port required by the preview server.
output		<code>web</code> or <code>pdf</code> . This setting allows you to construct conditional statements in your content to check whether output is web or pdf. This setting can help you filter out content that doesn't fit well into a PDF (such as dynamic web elements). In particular, the Prince XML script conflicts with any JavaScript on the page, so you want to filter out the JavaScript from the PDF-friendly HTML output that Prince consumes.
print_title		The title for the PDF. In the sample theme files for designers output, the print title is "Jekyll Documentation Theme for Designers"
print_subtitle		The subtitle for the PDF. In the sample theme files, the subtitle is "version 4.0."
defaults		See the sample settings in the <code>config_designers_pdf.yml</code> file. The only difference between this file and <code>config_designers.yml</code> is that the layout used for pages is <code>page_print</code> instead of <code>page</code> . The <code>page_print</code> layout also used <code>head_print</code> instead of <code>head</code> . This layout strips out components such as the sidebar and top navigation. It also leverages <code>printstyles.css</code> and includes some JavaScript for Prince XML.

5. Customize the conditions file

Summary: The conditions file is included in various parts of the theme. Its purpose is to set attributes as variables that affect how the theme is constructed. The settings in this file are essential for single sourcing.

Getting Started ▾

About the conditions.html file

The conditions file is a critical file that sets certain variables used in constructing the theme. You already set some of these values in the configuration file, but you need to duplicate some of the settings here. In this file, the settings are variable assignments.

This file is used as include in certain files. When used as an include, it sets variables that are used to configure your theme. Because you're single sourcing your Jekyll content, you need this file.

Customize the conditions file

In the `_includes/custom` directory, open the `conditions.html` file. Duplicate one of the project settings blocks like this:

```
{% if site.project == "mydoc_writers" %}
{% assign audience = "writers" %}
{% assign sidebar = site.data.mydoc.mydoc_sidebar.entries %}
{% assign topnav = site.data.mydoc.mydoc_topnav.topnav %}
{% assign topnav_dropdowns =
site.data.mydoc.mydoc_topnav.topnav_dropdowns %}
{% assign version = "all" %}
{% assign product = "all" %}
{% assign platform = "all" %}
{% assign projectTags =
site.data.mydoc.mydoc_tags.allowed-tags %}
{% assign projectFolder = "mydoc" %}
{% endif %}
```

You need to duplicate this block for each output you have.

Once you've duplicated the block, make a few customizations:

- In each place that “mydoc” appears, change “mydoc” to “acme”.
- Use the same attributes for project, audience, version, product, and platform that you used in your configuration file. (If you don't have a specific attribute value that you need, just put “all”.) The values here have to exactly match those in the configuration file.

✓ **Tip:** If you want to create signposts in the code as shown in the conditions.html file, install a utility called [figlets](http://www.figlet.org/) on your Mac. The figlets just make scanning long code blocks easier. If you have 15+ configuration groupings in your conditions file, the figlets make it easy to scan.

Next: 8. Customize the URL generator [\(page 35\)](#)

6. Configure the sidebar

Summary: The sidebar and top navigation bar read their values from yaml files. The navigation components are one of the most unique parts of this theme, since the navigation components are only included if they meet all of the product, audience, version, etc., values as specified in the project settings. Understanding how the sidebar works is critical to successfully using this theme.

Getting Started ▾

Understand how the sidebar works

In the `_data` folder, the `mydoc_sidebar.yml` file contains the sidebar items for the theme. These list items (which are in YAML format) form your main navigation, and all pages in your project must appear here to be included in the PDF or the URL generator. Both the PDF and the URL generator (`mydoc_urls.txt`) iterate over the pages listed in the `mydoc_sidebar.yml` file to produce their output.

As a best practice, do the following with the sidebar:

- List all pages in your project somewhere in the sidebar.
- As soon as you create a new page, add it to your sidebar (so you don't forget about the page).
- Copy and paste the existing YAML chunks (then customize them) to get the formatting right.

YAML is a markup that uses spacing and hyphens instead of tags. YAML is a superset of JSON, so you can convert from YAML to JSON and vice versa equivalently.

There are certain values in the sidebar file coded to match the theme's code. These values include the main level names (`entries` , `subcategories` , `items` , `thirdlevel` , and `thirdlevelitems`). If you change these values in the sidebar file, the navigation won't display. (As long as you follow the sample with `mydoc_sidebar.yml`, you should be fine.)

At a high level, the sidebar data structure looks like this:

```
entries
  subcategories
    items
      thirdlevel
        thirdlevelitems
```

Within these levels, you add your content. You can only have two levels in the sidebar. Here's an example:

```
Introduction
-> Getting started
-> Features
-> Configuration
    -> Options
    -> Automation
```

“Introduction” is a heading — it's the first level. Beneath it are Getting started and Features — these sub-items for the first level.

Configuration is a heading announcing a second level. Below it are Options and Automation — these are on the second level.

You can't add more than two levels. In general, it's a best practice not to create more than two levels of navigation anyway, since it creates a paralysis of choice for the user.

(If you need deeper sublevels, I recommend creating different sidebars for different pages, which is logic that I haven't coded into the theme but which could probably be added fairly easily. Additionally, if you wanted to create a third level, you could do so by following the same pattern as the second level and customizing a few things. However, the theme is not coded to support additional levels.)

The code in the theme's sidebar.html file (in the _includes folder) iterates through the items in the mydoc_sidebar.yml file using a Liquid `for` loop and inserts the items into HTML. Iterating over a list in a data file to populate HTML is a common technique with static site generators.

What I've added in this theme is some special logic that checks if the sidebar items meet the right attribute conditions. As a result, the sidebar.html file has code that looks like this:

```
{% include custom/conditions.html %}
{% for entry in sidebar %}
  {% for subcategory in entry.subcategories %}
    {% if subcategory.audience contains audience and
subcategory.product contains product and subcategory.platform
contains platform and subcategory.version contains version and
subcategory.output contains "web" %}
```

Only if the sidebar item contains the right `audience` , `product` , `platform` , `version` , and `output` attributes does the item get included in the sidebar navigation.

This means you will have just one sidebar data file for all the outputs in a single project. Different projects will use different sidebar data files, but all outputs for a single project will use the same sidebar data file. (This allows you to do single sourcing.)

If you look at the code above, you'll see that `audience` , `product` , `platform` , and `version` are defined generally. In `sidebar.html`, there are lines like `subcategory.audience contains audience` .

This is where the `conditions.html` file (inside `_includes`) comes into play. `audience` is a variable defined in the `conditions.html` file. If you open up `conditions.html`, you'll see something like this:

```
{% if site.project == "mydoc_writers" %}
{% assign audience = "writers" %}
{% assign sidebar = site.data.mydoc.mydoc_sidebar.entries %}
{% assign topnav = site.data.mydoc.mydoc_topnav.topnav %}
{% assign topnav_dropdowns =
site.data.mydoc.mydoc_topnav.topnav_dropdowns %}
{% assign version = "all" %}
{% assign product = "all" %}
{% assign platform = "all" %}
{% assign projectTags =
site.data.mydoc.mydoc_tags.allowed-tags %}
{% assign projectFolder = "mydoc" %}
{% endif %}
```

`audience` is a variable set to `writers` for the `mydoc_writers` project. Therefore anywhere `audience` appears, `writers` gets inserted in its place.

When the `sidebar.html` code runs `subcategory.audience contains audience` , it's saying that the subcategory item must have an attribute called `audience` , and the value for `audience` must contain `writers` .

All of the attributes (which are defined in the `conditions.html` file) must be met in order to display in the navigation. The attributes must be present on both the heading and items under that heading.

However, note that the `output` attribute is a bit different. With this attribute, you just list whether you want a `web` or `pdf` output (or both, usually). For both, you just write `web`, `pdf`.

The logic in the sidebar is multi-step and somewhat complex, but you're also doing something truly sophisticated. You're instructing a static site generator to conditionally include certain information while using the same source files (not just the same sidebar data file, but the same `sidebar.html` file).

Fortunately, once you set it up, you don't need to think about the underlying logic that's processing. You just make sure you're putting the right attributes on your sidebar items.

Recognize the frontmatter in the sidebar

The first section in the sidebar subcategory list is a special frontmatter section that you should pretty much leave alone (except for changing the attribute values). It looks like this:

```
- title:
  audience: writers, designers
  platform: all
  product: all
  version: all
  output: pdf
  type: frontmatter
  items:
  - title:
    url: /titlepage.html
    audience: writers, designers
    platform: all
    product: all
    version: all
    output: pdf
    type: frontmatter
  - title:
    url: /tocpage.html
    audience: writers, designers
    platform: all
    product: all
    version: all
    output: pdf
    type: frontmatter
```

The only values you should change here are the values for the `audience`, `platform`, `product`, and `version`.

These frontmatter pages are used in producing the PDF. This part will grab the `titlepage.html` and `tocpage.html` content in the theme's root directory. (If you're not publishing PDF, you can remove this section.)

Note that the output is `pdf` only for these frontmatter pages. They are specific to the PDF output only.

To learn more about the sidebar, see [Sidebar navigation \(page 61\)](#).

Next: 7. Configure the top navigation [\(page 33\)](#)

Next: 5. Customize the conditions file [\(page 26\)](#)

7. Configure the top navigation

Summary: The top navigation provides either single links or a drop-down menu. There are some other features, such as a feedback email, custom menu, and popout link.

Getting Started ▼

Changing the top navigation

The top navigation reads from the `_data/mydoc/mydoc_topnav_doc.yml` file. There are two *separate* sections in the `mydoc_topnav_doc.yml` file:

- `topnav`
- `topnav_dropdowns`

Items in the `topnav` section are rendered as single links. In contrast, items in the `topnav_dropdowns` section are rendered as a drop-down menu. You can't mix up the order of single links and drop-down links. The single links appear on the left, and the drop-down menus appear on the right.

The Feedback email

If you click the Feedback link in the default theme, you'll see that it inserts the link to the current page along with a subject header and body. The `topnav.html` file contains an include to `feedback.html`. The `feedback.html` file contains the JavaScript that gets the current page URL and inserts it into the message body.

You configure the email in the configuration file through this property:
`site.feedback_email`.

External links

If you want the URL to point to an external site, use `external_url` instead of `url` in the data file. Then just enter the full HTTP URL. When you use `external_url`, the `sidebar.html` will apply this logic:

```
{% if item.external_url %}  
<li><a href="{{item.external_url}}"  
target="_blank">{{subcategory.title}}</a></li>
```

No links in topnav get included in the PDF

The way the PDF file is currently set up, only the links in the sidebar get included in the PDF. None of the links in the top nav get included in the PDF.

It wouldn't be hard to iterate through the top navigation bar and included the content in the PDF as well, but I think it's a best practice to put content links in the sidebar, and to put external links/resources in the top navigation.

If people open the site in a small browser, the top navigation will compress to a "hamburger." There's not a ton of room for adding links in this space.

Also note that the drop-down menus have one level only.

8. Customize the URL generator

Summary: You need to customize the URL generator with your project's name. This generator helps you make quick links within your content.

Getting Started ▾

About the URL generator

The URL generator is a special file that helps you generate the code you need for links. This generator helps you avoid broken links, and ensures more consistency.

To learn more about the linking strategy used with this theme, see [Links \(page 98\)](#). The step here simply explains how to customize the URL generator for a new project.

Customize the URL generator

1. In the project root directory, open `urls_acme.txt` (a file you should have already duplicated from `urls_mydoc.txt`) in an earlier step.
2. Do a find a replace for “mydoc” with “acme”.
3. Change the project conditions at the top:

```
{% if site.project == "mydoc_writers" or site.project == "mydoc_designers" %}
```

Add all the projects here that will use this URL generator. For example, if you have 3 different projects, list them here. Otherwise the file's contents will be replaced with the values from the latest project that you run.

Notice that this URL generator iterates through the sidebar file only, and it doesn't apply the attribute qualifiers as with the sidebar.html file. As such, this URL generator will work with the output from any of the project files.

Next: 9. Set up Prince XML [\(page 36\)](#)

9. Set up Prince XML

Summary: Prince XML is the utility used for creating PDFs. Though not free, this utility gets a list of links and compiles them into a PDF.

✓ **Tip:** More details about generating PDFs are listed in [Generating PDFs \(page 124\)](#).

Install Prince XML

Prince XML is a utility I've decided to use to create PDFs. The Prince XML utility requires a list of web pages from which it can construct a PDF.

You need to install Prince. See the [instructions on the Prince website \(http://www.princexml.com/doc/installing/#macosx\)](http://www.princexml.com/doc/installing/#macosx) for installing Prince.

Prince will work even without a license, but it will imprint a small Prince image on the first page.

Customize PDF headers and footers

Open up the `css/printstyles.css` file and customize the email address (`youremail@domain.com`) that is listed there. This email address appears in the bottom left footer of the PDF output.

10. Configure the build scripts

Summary: You need to customize the build scripts. These script automate the publishing of your PDFs and web outputs through shell scripts on the command line.

Getting Started ▼

About the build scripts

The mydoc project has 5 build scripts and a script that runs them all. These scripts will require a bit of detail to configure. Every team member who is publishing on the project should set up their folder structure in the way described here.

Get Set Up

Your command-line terminal opens up to your user name (for example, Users/tjohnson). I like to put all of my projects from repositories into a subfolder under my username called “projects.” This makes it easy to get to the projects from the command line. You can vary from the project organization I describe here, but following the pattern I outline will make configuration easier.

To set up your projects:

1. Set up your Jekyll theme in a folder called “docs.” All of the source files for every project the team is working on should live in this directory. Most likely you already either downloaded or cloned the jekyll-documentation-theme. Just rename the folder to “docs” and move it into the projects folder as shown here.
2. In the same root directory where the docs folder is, create another directory parallel to docs called doc_outputs.

Thus, your folder structure should be something like this:

```
projects - docs - doc_outputs
```

The docs folder contains the source of all your files, while the doc_outputs contains the site outputs.

Configure the Build Scripts

For the mydocs project, you'll see a series of build scripts for each project. There are 5 build scripts, described in the following sections. Note that you really only need to run the last one, e.g., `mydoc_all.sh`, because it runs all of the build scripts. But you have to make sure each script is correctly configured so that they all build successfully.

✓ **Tip:** In the descriptions of the build scripts, "mydoc" is used as the sample project. Substitute in whatever your real project name is.

`mydoc_1_multiserve_pdf.sh`

Here's what this script looks like:

```
echo 'Killing all Jekyll instances'
kill -9 $(ps aux | grep '[j]ekyll' | awk '{print $2}')
clear

echo "Building PDF-friendly HTML site for Mydoc Writers ..."
jekyll serve --detach --config configs/mydoc/
config_writers.yml,configs/mydoc/config_writers_pdf.yml
echo "done"

echo "Building PDF-friendly HTML site for Mydoc Designers ..."
jekyll serve --detach --config configs/mydoc/
config_designers.yml,configs/mydoc/config_designers_pdf.yml
echo "done"

echo "All done serving up the PDF-friendly sites. Now let's
generate the PDF files from these sites."
echo "Now run . mydoc_2_multibuild_pdf.sh"
```

After killing all existing Jekyll instances that may be running, this script serves up a PDF friendly version of the docs (in HTML format) at the destination specified in the configuration file.

Each of your configuration files needs to have a destination like this:

`../doc_outputs/mydoc/adtruth-java`. That is, the project should build in the `doc_outputs` folder, in a subfolder that matches the project name.

The purpose of this script is to make a version of the HTML output that is friendly to the Prince XML PDF generator. This version of the output strips out the sidebar, toptnav, and other components to just render a bare-bones HTML representation of the content.

Customize the script with your own PDF configuration file names.

mydoc_2_multibuild_pdf.sh

Here's what this script looks like:

```
# Doc Writers
echo "Building the Mydoc Writers PDF ..."
prince --javascript --input-list=../doc_outputs/mydoc/
writers-pdf/prince-file-list.txt -o mydoc/files/
mydoc_writers_pdf.pdf;
echo "done"

# Doc Designers
echo "Building Mydoc Designers PDF ..."
prince --javascript --input-list=../doc_outputs/mydoc/
designers-pdf/prince-file-list.txt -o mydoc/files/
mydoc_designers_pdf.pdf;
echo "done"

echo "All done building the PDFs!"
echo "Now build the web outputs: . mydoc_3_multibuild_web.sh"
```

This script builds the PDF output using the Prince command. The script reads the location of the prince-file-list.txt file in the PDF friendly output folder (as defined in the previous script) and builds a PDF.

The Prince build command takes an input parameter (--input-list=) that lists where all the pages are (prince-file-list.txt), and then combines all the pages into a PDF, including cross-references and other details. The Prince build command also specifies the output folder (-o).

The prince-file-list.txt file (which simply contains a list of URLs to HTML pages) is generated by iterating through the table of contents (mydoc_sidebar.yml) and creating a list of URLs. You can open up prince-file-list.txt in the doc output to ensure that it has a list of absolute URLs (not relative) in order for Prince to build the PDF.

This is one way the configuration file for the PDF-friendly output differs from the HTML output. (If the PDF isn't building, it's because the prince-file-list.txt in the output is empty or it contains relative URLs.)

The Prince build script puts the output PDF into the mydoc/mydoc/files directory. Now you can reference the PDF file in your HTML site. For example, on the homepage you can allow people to download a PDF of the content at files/adtruth_dotnet_pdf.pdf.

mydoc_3_multibuild_web.sh

Here's what this script looks like:

```
kill -9 $(ps aux | grep '[j]ekyll' | awk '{print $2}')
clear

echo "Building Mydoc Writers website..."
jekyll build --config configs/doc/config_writers.yml
# jekyll serve --config configs/doc/config_writers.yml
echo "done"

echo "Building Mydoc Designers website..."
jekyll build --config configs/doc/config_designers.yml
# jekyll serve --config configs/doc/config_designers.yml
echo "done"

echo "All finished building all the web outputs!!!"
echo "Now push the builds to the server with .
mydoc_4_publish.sh"
```

After killing all Jekyll instances, this script builds an HTML version of the projects and puts the output into the doc_outputs folder. This is the version of the content that users will mainly navigate. Since the sites are built with relative links, you can browse to the folder on your local machine, double-click the index.html file, and see the site.

The # part below the jekyll build commands contains a serve command that is there for mere convenience in case you want to serve up just one site among many that you're building. For example, if you don't want to build everything — just one site — you might just use the serve command instead. (Anything after # in a YAML file comments out the content.)

mydoc_4_publish.sh

Here's what this script looks like:

```
echo "remove previous directory and any subdirectories without  
a warning prompt"  
ssh yourusername@yourdomain.com 'rm -rf /var/www/html/  
yourpublishingdirectory'  
  
echo "push new content into the remote directory"  
scp -r -vrC ../mydoc_outputs/doc-writers  
yourusername@yourdomain:/var/www/html/yourpublishingdirectory  
  
echo "All done pushing doc outputs to the server"
```

This script assumes you're publishing content onto a Linux server.

Change `yourusername` to your own user name.

This script first removes the project folder on `/var/www/html/yourpublishingdirectory` site and then transfers the content from `doc_outputs` over to the appropriate folder in `/var/www/html/yourpublishingdirectory`.

Note that the delete part of the script (`rm -rf`) works really well. It annihilates a folder in a heartbeat and doesn't give you any warning prompts, so make sure you have it set up correctly.

Also, in case you haven't set up the SSH publishing without a password, see . Otherwise the script will stop and ping you to enter your password for each directory it transfers.

(Optional) Push to repositories

This script isn't included in the theme, but you might optionally decide to push the built sites into another github repository. For example, if you're using Cloud Cannon to deploy your sites, you can have Cloud Cannon read files from a specific Github repository.

Here's what this script looks like:

```
cd doc_outputs/mydoc/designers  
git add --all  
git commit -m "publishing latest version of docs"  
git push  
echo "All done pushing to Github"  
echo "Here's the link to download the guides..."  
cd ../../docs
```

This final script simply makes a commit into a Github repo for one of your outputs.

The `doc_outputs/mydoc/designers` contains the site output from mydoc, so when you push content from this folder into Github, you're actually pushing the HTML site output into Github, not the mydoc source files.

Your delivery team can also grab the site output from these repos. After downloading it, the person unzips the folder and sees the website folders inside.

mydoc_all.sh

Here's what this script looks like:

```
. deviceinsight_1_multiserve_pdf.sh; .  
deviceinsight_2_multibuild_pdf.sh; .  
deviceinsight_3_multibuild_web.sh; .  
deviceinsight_4_publish.sh;
```

This script simply runs the other scripts. To sequence the commands, you just separate them with semicolons. (If you added the optional script, be sure to include it here.)

After you've configured all the scripts, you can run them all by running `. mydoc_all.sh`. You might want to run this script at lunchtime, since it may take about 10 to 20 minutes to completely build the scripts. But note that since everything is now automated, you don't have to do anything at all after executing the script. After the script finishes, everything is published and in the right location.

Test out the scripts

After setting up and customizing the build scripts, run a few tests to make sure everything is generating correctly. Getting this part right is somewhat difficult and may likely require you to tinker around with the scripts a while before it works flawlessly.

Pages

Summary: This theme uses pages only, not posts. You need to make sure your pages have the appropriate frontmatter. One frontmatter tag your users might find helpful is the summary tag. This functions similar in purpose to the shortdesc element in DITA.

Where to author content

Use a text editor such as Sublime Text, WebStorm, IntelliJ, or Atom to create pages.

My preference is IntelliJ/WebStorm, since it will treat all files in your project as belonging to a project. This allows you to easily search for instances of keywords, do find-and-replace operations, or do other actions that apply across the whole project.

Page names and excluding files from outputs

By default, everything in your project is included in the output. This is problematic when you're single sourcing and need to exclude some files from an output.

Here's the approach I've taken. Put all files in your root directory, but put the project name first and then any special conditions. For example, mydoc_writers_intro.md.

In your configuration file, you can exclude all files that don't belong to that project by using wildcards such as the following:

exclude:

- mydoc_*
- mydoc_writers_*

These wildcards will exclude every match after the * .

Frontmatter

Make sure each page has frontmatter at the top like this:


```
---
title: Your page title
tags: [formatting, getting_started]
keywords: overview, going live, high-level
last_updated: November 30, 2015
summary: "Deploying DeviceInsight requires the following
steps."
---
```

Frontmatter is always formatted with three hyphens at the top and bottom. Your frontmatter must have a `title` value. All the other values are optional.

The following table describes each of the frontmatter that you can use with this theme:

FRONTMATTER	REQUIRED?	DESCRIPTION
title	Required	The title for the page
tags	Optional	Tags for the page. Make all tags single words, with hyphens if needed. Separate them with commas. Enclose the whole list within brackets. Also, note that tags must be added to <code>_data/tags_doc.yml</code> to be allowed entrance into the page.
keywords	Optional	Synonyms and other keywords for the page. This information gets stuffed into the page's metadata to increase SEO. The user won't see the keywords, but if you search for one of the keywords, it will be picked up by the search engine.
last_updated	Optional	The date the page was last updated. This information could helpful for readers trying to evaluate how current and authoritative information is. If included, the <code>last_updated</code> date appears in the footer of the page.
summary	Optional	A 1-2 word sentence summarizing the content on the page. This gets formatted into the summary section in the page layout. Adding summaries is a key way to make your content more scannable by users (check out Jakob Nielsen's site (http://www.nngroup.com/articles/corporate-blogs-front-page-structure/) for a great example of page summaries.)
datatable	Optional	Boolean. If you add <code>true</code> , then scripts for the jQuery datatables plugin (https://www.datatables.net/) get included on the page.

FRONTMATTER	REQUIRED?	DESCRIPTION
video	Optional	If you add <code>true</code> , then scripts for Video JS: The HTML5 video player (http://www.videojs.com/) get included on the page.

✓ **Tip:** You can see the scripts that conditionally appear by looking in the `_layouts/default.html` page. Note that these scripts are served via a CDN, so the user must be online for the scripts to work. However, if the user isn't online, the tables and video still appear. In other words, they degrade gracefully.

What about permalinks?

What about permalinks? This theme isn't build using permalinks because it makes linking and directory structures problematic. Permalinks generate an index file inside a folder for each file in the output. This makes it so links (to other pages as well as to resources such as styles and scripts) need to include `../` depending upon where the other assets are located. But for any pages outside folders, such as the `index.html` page, you wouldn't use the `../` structure.

Basically, permalinks complicate the linking structure significantly, so they aren't used here. As a result, page URLs have an `.html` extension. If you include `permalink: something` in your frontmatter, your link to the page will break (actually, you could still go to `sample` instead of `sample.html`, but none of the styles or scripts will be correctly referenced).

Colons in page titles

If you want to use a colon in your page title, you must enclose the title's value in quotation marks.

Saving pages as drafts

If you add `published: false` in the frontmatter, your page won't be published. You can also move draft pages into the `_drafts` folder to exclude them from the build.

✓ **Tip:** You can create file templates in WebStorm that have all your common frontmatter, such as all possible tags, prepopulated. See [WebStorm Text Editor \(page 49\)](#) for details.

Markdown or HTML format

Pages can be either Markdown or HTML format (specified through either an `.md` or `.html` file extension).

If you use Markdown, you can also include HTML formatting where needed. But not vice versa — if you use HTML (as your file extension), you can't insert Markdown content.

Also, if you use HTML inside a Markdown file, you cannot use Markdown inside of HTML. But you can use HTML inside of Markdown.

For your Markdown files, note that a space or two indent will set text off as code or blocks, so avoid spacing indents unless intentional.

Where to save pages

Store all your pages inside the root directory. This is because the site is built with relative links. There aren't any permalinks or baseurls used in the link architecture. This relative link nature of the site allows you to easily move it from one folder to another without invalidating the links.

If this approach creates too many files in one long list, consider grouping files into Favorites sections using WebStorms Add to Favorites feature.

Github-flavored Markdown

You can use standard Multimarkdown syntax for tables. You can also use fenced code blocks. The configuration file shows the Markdown processor and extensions:

```
markdown: kramdown

kramdown:
  extensions: ["no_intra_emphasis", "fenced_code_blocks",
    "tables", "with_toc_data"]
```

These extensions mean the following:

REDCARPET EXTENSION	DESCRIPTION
no_intra_emphasis	don't italicize words with underscores
fenced_code_blocks	allow three backticks before and after code blocks instead of <code><pre></code> tags
tables	allow table syntax
with_toc_data	add ID tags to headings automatically

You can also add “autolink” as an option if you want links such as <http://google.com> to automatically be converted into links.

Note: Make sure you leave the `with_toc_data` option included. This auto-creates an ID for each Markdown-formatted heading, which then gets injected into the mini-TOC. Without this auto-creation of IDs, the mini-TOC won't include the heading. If you ever use HTML formatting for headings, you need to manually add an ID attribute to the heading in order for the heading to appear in the mini-TOC.

Automatic mini-TOCs

By default, a mini-TOC appears at the top of your pages and posts. If you don't want this, you can remove the `{% include toc.html %}` from the `layouts/page.html` file.

If you don't want the TOC to appear for a specific page, add `toc: false` in the frontmatter of the page.

The mini-TOC requires you to use the `##` syntax for headings. If you use `<h2>` elements, then you must add an ID attribute for the `h2` element in order for it to appear in the mini-TOC.

Specify a particular page layout

The configuration file sets the default layout for pages as the “page” layout.

You can create other layouts inside the layouts folder. If you create a new layout, you can specify that your page use your new layout by adding `layout: mylayout.html` in the page's frontmatter. Whatever layout you specify in the frontmatter of a page will override the layout default set in the configuration file.

Comments

Disqus, a commenting system, is integrated into the theme. In the configuration file, specify the Disqus code for the universal code, and Disqus will appear. If you don't add a Disqus value, the Disqus code isn't included.

Posts

This theme isn't coded with any kind of posts logic. For example, if you wanted to add a blog to your project that leverages posts, you couldn't do this with the theme. However, you could easily take the post logic from another site and integrate it into this theme. I've just never had a strong need to integrate blog posts into documentation.

Custom keyboard shortcuts

Some of the Jekyll syntax can be slow to create. Using a utility such as [aText](https://www.trankynam.com/atext/) (<https://www.trankynam.com/atext/>) can make creating content a lot of faster.

For example, when I type `jif`, aText replaces it with `{% if site.platform == "x" %}`. When I type `jendif`, aText replaces it with `{% endif %}`.

You get aText from the App Store on a Mac for about \$5.

There are alternatives to aText, such as Typeitforme. But aText seems to work the best. You can read more about it on [Lifehacker](http://lifehacker.com/5843903/the-best-text-expansion-app-for-mac) (<http://lifehacker.com/5843903/the-best-text-expansion-app-for-mac>).

WebStorm Text Editor

Summary: You can use a variety of text editors when working with a Jekyll project. WebStorm from IntelliJ offers a lot of project-specific features, such as find and replace, that make it ideal for working with tech comm projects.

About text editors and WebStorm

There are a variety of text editors available, but I like WebStorm the best because it groups files into projects, which makes it easy to find all instances of a text string, to do find and replace operations across the project, and more.

If you decide to use WebStorm, here are a few tips on configuring the editor.

Remove unnecessary plugins

By default, WebStorm comes packaged with a lot more functionality than you probably need. You can lighten the editor by removing some of the plugins. Go to **WebStorm > Preferences > Plugins** and clear the check boxes of plugins you don't need.

Add the Markdown Support plugin

Since you'll be writing in Markdown, having color coding and other support for Markdown is key. Install the Markdown Support plugin by going to **WebStorm > Preferences > Plugins** and clicking **Install JetBrains Plugin**. Search for **Markdown Support**.

Enable Soft Wraps (word wrapping)

Most likely you'll want to enable soft wraps, which wraps lines rather than extending them out forever and requiring you to scroll horizontally to see the text. To enable softwrapping, go to **WebStorm > Preferences > Editor > General** and see the Soft Wraps section. Select the **Use soft wraps in editor** check box.

Learn a few key commands

COMMAND	SHORTCUTS
Shift + Shift	Allows you to find a file by searching for its name.
Shift + Command + F	Find in whole project. (WebStorm uses the term “Find in path”.)
Shift + Command + R	Replace in whole project. (Again, WebStorm calls it “Replace in path.”)
Command + F	Find on page
Shift + R	Replace on page
Right-click > Add to Favorites	Allows you to add files to a Favorites section, which expands below the list of files in the project pane.
Shift + tab	Applies outdenting (opposite of tabbing)
Shift + Function + F6	Rename a file
Command + Delete	Delete a file
Command + 2	Show Favorites pane
Shift + Option + F	Add to Favorites

☑ **Tip:** If these shortcut keys aren't working for you, make sure you have the "Max OS X 10.5+" keymap selected. Go to **WebStorm > Preferences > Keymap** and select it there.

Identifying changed files

When you have the Git and Github integration, changed files appear in blue. This lets you know what needs to be committed to your repository.

Creating file templates

Rather than insert the frontmatter by hand each time, it's much faster to simply create a Jekyll template. To create a Jekyll template in WebStorm:

1. Right-click a file in the list of project files, and select **New > Edit File Templates**.

If you don't see the Edit File Templates option, you may need to create a file template first. Go to **File > Default Settings > Editor > File and Code Templates**. Create a new file template with an md extension, and then close and restart WebStorm. Then repeat this step and you will see the File Templates option appear in the right context menu.

2. In the upper-left corner of the dialog box that appears, click the **+** button to create a new template.
3. Name it something like Jekyll page. Insert the frontmatter you want, and save it.

To use the Jekyll template, when you create a new file in your WebStorm project, you can select your Jekyll file template.

Disable pair quotes

By default, each time you type `'`, WebStorm will pair the quote (creating two quotes). You can disable this by going to **WebStorm > Preferences > Editor > Smartkeys**. Clear the **Insert pair quotes** check box.

Conditional logic

Summary: You can implement advanced conditional logic that includes if statements, or statements, unless, and more. This conditional logic facilitates single sourcing scenarios in which you're outputting the same content for different audiences.

About Liquid and conditional statements

If you want to create different outputs for different audiences, you can do all of this using a combination of Jekyll's Liquid markup and values in your configuration file.

You can then incorporate conditional statements that check the values in the configuration files.

✓ **Tip:** Definitely check out [Liquid's documentation](http://docs.shopify.com/themes/liquid-documentation/basics) (<http://docs.shopify.com/themes/liquid-documentation/basics>) for more details about how to use operators and other liquid markup. The notes here are a small, somewhat superficial sample from the site.

Where to store filtering values

You can filter content based on values that you have set either in your config file or in a file in your `_data` folder. If you set the attribute in your config file, you need to restart the Jekyll server to see the changes. If you set the value in a file in your `_data` folder, you don't need to restart the server when you make changes.

Required conditional attributes

This theme requires you to add the following attributes in your configuration file:

- `project`
- `audience`
- `product`
- `platform`

- version

If you've ever used DITA, you probably recognize these attributes, since DITA has mostly the same ones. I've found that most single_sourcing projects I work on can be sliced and diced in the ways I need using these conditional attributes.

If you're not single sourcing and you find it annoying having to specify these attributes in your sidebar, you can rip out the logic from the sidebar.html, toptnav.html file and any other places where conditions.html appears; then you wouldn't need these attributes in your configuration file.

Conditional logic based on config file value

Here's an example of conditional logic based on a value in the configs/config_writer.yml file. In my config_writer.yml file, I have the following:

```
audience: writers
```

On a page in my site (it can be HTML or markdown), I can conditionalize content using the following:

```
{% if site.audience == "writers" %}
The writer audience should see this...
{% elsif site.audience == "designers" %}
The designer audience should see this ...
{% endif %}
```

This uses simple `if-elsif` logic to determine what is shown (note the spelling of `elsif`). The `else` statement handles all other conditions not handled by the `if` statements.

Here's an example of `if-else` logic inside a list:

```
To bake a casserole:

1. Gather the ingredients.
{% if site.audience == "writer" %}
2. Add in a pound of meat.
{% elsif site.audience == "designer" %}
3. Add in an extra can of beans.
{% endif %}
3. Bake in oven for 45 min.
```

You don't need the `elsif` or `else`. You could just use an `if` (but be sure to close it with `endif`).

Or operator

You can use more advanced Liquid markup for conditional logic, such as an `or` command. See [Shopify's Liquid documentation](http://docs.shopify.com/themes/liquid-documentation/basics/operators) (<http://docs.shopify.com/themes/liquid-documentation/basics/operators>) for more details.

For example, here's an example using `or`:

```
{% if site.audience contains "vegan" or site.audience ==  
"vegetarian" %}  
  // run this.  
{% endif %}
```

Note that you have to specify the full condition each time. You can't shorten the above logic to the following:

```
{% if site.audience contains "vegan" or "vegetarian" %}  
  // run this.  
{% endif %}
```

This won't work.

Unless operator

You can also use `unless` in your logic, like this:

```
{% unless site.output == "pdf" %}  
...  
{% endunless %}
```

When figuring out this logic, read it like this: "Run the code here *unless* this condition is satisfied." Or "If this condition is satisfied, don't run this code."

Don't read it the other way around or you'll get confused. (It's not executing the code only if the condition is satisfied.)

In this situation, if `site.print == true`, then the code will *not* be run here.

Storing conditions in the `_data` folder

Here's an example of using conditional logic based on a value in a data file:

```
{% if site.data.options.output == "alpha" %}  
show this content...  
{% elsif site.data.options.output == "beta" %}  
show this content...  
{% else %}  
this shows if neither of the above two if conditions are met.  
{% endif %}
```

To use this, I would need to have a `_data` folder called `options` where the `output` property is stored.

I don't really use the `_data` folder as much for project options. I store them in the configuration file because I usually want different projects to use different values for the same property.

For example, maybe a file or function name is called something different for different audiences. I currently single source the same content to at least two audiences in different markets.

For the first audience, the function name might be called `generate`, but for the second audience, the same function might be called `expand`. In my content, I'd just use `{{site.function}}`. Then in the configuration file I change its value appropriately for the audience.

Specifying the location for `_data`

You can also specify a `data_source` for your data location in your configuration file. Then you aren't limited to simply using `_data` to store your data files.

For example, suppose you have 2 projects: `alpha` and `beta`. You might store all the data files for `alpha` inside `data_alpha`, and all the data files for `beta` inside `data_beta`.

In your `alpha` configuration file, specify the data source like this:

```
data_source: data_alpha
```

Then create a folder called `_data_alpha`.

For your beta configuratoin file, specify the data source like this:

```
data_source: data_beta
```

Then create a folder called `_data_beta`.

Conditional logic based on page namespace

You can also create conditional logic based on the page namespace. For example, create a page with front matter as follows:

```
---  
layout: page  
user_plan: full  
---
```

Now you can run logic based on the conditional property in that page's front matter:

```
{% if page.user_plan == "full" %}  
// run this code  
{% endif %}
```

Conditions versus includes

If you have a lot of conditions in your text, it can get confusing. As a best practice, whenever you insert an `if` condition, add the `endif` at the same time. This will reduce the chances of forgetting to close the if statement. Jekyll won't build if there are problems with the liquid logic.

If your text is getting busy with a lot of conditional statements, consider putting a lot of content into includes so that you can more easily see where the conditions begin and end.

Content reuse

Summary: You can reuse chunks of content by storing these files in the includes folder. You then choose to include the file where you need it. This works similar to conref in DITA, except that you can include the file in any content type.

About content reuse

You can embed content from one file inside another using includes. Put the file containing content you want to reuse (e.g., mypage.html) inside the _includes/mydoc folder (replacing “mydoc” with your project’s name), and then use a tag like this:

```
{% include mydoc/mypage.html %}
```

With content in your _includes folder, you don’t add any frontmatter to these pages because they will be included on other pages already containing frontmatter.

Also, when you include a file, all of the file’s contents get included. You can’t specify that you only want a specific part of the file included. However, you can use parameters with includes. See [Jekyll’s documentation](http://stackoverflow.com/questions/21976330/passing-parameters-to-inclusion-in-liquid-templates) (<http://stackoverflow.com/questions/21976330/passing-parameters-to-inclusion-in-liquid-templates>)

for more information on that.

Re-using content across projects

When you want to re-use a topic across projects, store the content in the \includes folder (it can be in any project’s subfolder). Any folder that begins with an underscore (_) isn’t included in the site output.

Also be sure to put any images in the common_images folder. None of the assets in the common_images folder should be excluded in the configuration files. This means every project’s output will include the resources from the common_images folder.

However, each project will likely exclude content from the specific folders where the pages are stored. This is why reuse across projects requires you to use the `_includes` folder and the `common_images` folder. (Unfortunately you can't include an image from the `_includes` folder.)

Page-level variables

You can also create custom variables in your frontmatter like this:

```
---
title: Page-level variables
permalink: /page_level_variables/
thing1: Joe
thing2: Dave
---
```

You can then access the values in those custom variables using the `page` namespace, like this:

```
thing1: {{page.thing1}}
thing2: {{page.thing2}}
```

I haven't found a use case for page-level variables, but it's nice to know they're available.

I use includes all the time. Most of the includes in the `_includes` directory are pulled into the theme layouts. For those includes that change, I put them inside custom and then inside a specific project folder.

Collections

Summary: Collections are useful if you want to loop through a special folder of pages that you make available in a content API. You could also use collections if you have a set of articles that you want to treat differently from the other content, with a different layout or format.

What are collections

Collections are custom content types different from pages and posts. You might create a collection if you want to treat a specific set of articles in a unique way, such as with a custom layout or listing. For more detail on collections, see [Ben Balter's explanation of collections here](http://ben.balter.com/2015/02/20/jekyll-collections/) (<http://ben.balter.com/2015/02/20/jekyll-collections/>).

Create a collection

To create a collection, add the following in your configuration file:

```
collections:
  tooltips:
    output: true
```

In this example, “tooltips” is the name of the collection.

Interacting with collections

You can interact with collections by using the `site.collectionname` namespace, where `collectionname` is what you've configured. In this case, if I wanted to loop through all tooltips, I would use `site.tooltips` instead of `site.pages` or `site.posts`.

See [Collections in the Jekyll documentation](http://jekyllrb.com/docs/collections/) (<http://jekyllrb.com/docs/collections/>) for more information.

How to use collections

I haven't found a huge use for collections in normal documentation. However, I did find a use for collections in generating a tooltip file that would be used for delivering tooltips to a user interface from text files in the documentation. See [Help APIs and UI tooltips \(page 139\)](#) for details.

Sidebar Navigation

Summary: The sidebar navigation uses a jQuery component called Navgoco. The sidebar is a somewhat complex part of the theme that remembers your current page, highlights the active item, stays in a fixed position on the page, and more.

Note: For basic information about configuring the sidebar navigation, see [6. Configure the sidebar \(page 28\)](#). This section gets into the top sidebar navigation in more depth.

When you set up your project, you configured the sidebar following the instructions in [6. Configure the sidebar \(page 28\)](#). In this topic, I dive deeper into other aspects of the sidebar.

Navgoco foundation

The sidebar uses the [Navgoco jQuery plugin \(https://github.com/tefra/navgoco\)](https://github.com/tefra/navgoco) as its basis. Why not use Bootstrap? Navgoco provides a few features that I couldn't find in Bootstrap:

- Navgoco sets a cookie to remember the user's position in the sidebar. If you refresh the page, the cookie allows the plugin to remember the state.
- Navgoco inserts an `active` class based on the navigation option that's open. This is essential for keeping the accordion open.
- Navgoco includes the expand and collapse features of a sidebar.

In short, the sidebar has some complex logic here. I've integrated Navgoco's features with the `sidebar.html` and `sidebar_doc.yml` to build the sidebar. It's probably the most impressive part of this theme. (Other themes usually aren't focused on creating hierarchies of pages, but this kind of hierarchy is important in a documentation site.)

Accordion sidebar feature

As mentioned in the previous section, the theme uses the [Navgoco sidebar \(http://www.komposta.net/article/navgoco\)](http://www.komposta.net/article/navgoco). The `sidebar.html` file (inside the `_includes` folder) contains the `.navgoco` method called on the `#mysidebar` element.

There are some options to set within the `.navgoco` method. The only noteworthy option is `accordion`. This option makes it so when you expand a section, the other sections collapse. It's a way of keeping your navigation controls condensed.

The value for `accordion` is a Boolean (`true` or `false`). By default, the `accordion` option is set as `true`. If you don't want the accordion, set it to `false`. Note that there's also a block of code near the bottom of `sidebar.html` that is commented out. Uncomment out that section to have the Collapse all and Expand All buttons appear.

There's a danger with setting the `accordion` to `false`. If you click Expand All and the sidebar expands beyond the dimensions of the browser, users will be stuck. When that happens, it's hard to collapse it. As a best practice, leave the sidebar's `accordion` option set to `true`.

Fixed position sidebar

The sidebar has one other feature — this one from Bootstrap. If the user's viewport is tall enough, the sidebar remains fixed on the page. This allows the user to scroll down the page and still keep the sidebar in view.

In the `customscripts.js` file in the `js` folder, there's a function that adds an `affix` class if the height of the browser window is greater than 800 pixels. If the browser's height is less than 800 pixels, the `nav affix` class does not get inserted. As a result, the sidebar can slide up and down as the user scrolls up and down the page.

Depending on your content, you may need to adjust 800 pixel number. If your sidebar is so long that having it in a fixed position makes it so the bottom of the sidebar gets cut off, increase the 800 pixel number here to a higher number.

Opening sidebar links into external pages

In the attributes for each sidebar item, if you use `external_url` instead of `url`, the theme will insert the link into an `a href` element that opens in a blank target.

For example, the `sidebar.html` file contains the following code:

```
{% if item.external_url %}
  <li><a href="{{item.external_url}}"
target="_blank">{{subcategory.title}}</a></li>
{% elsif page.url == item.url %}
```

You can see that the `external_url` is a condition that applies a different formatting. Although this feature is available, I recommend putting any external navigation links in the top navigation bar instead of the side navigation bar.

Sidebar item highlighting

The `sidebar.html` file inserts an `active` class into the sidebar element when the `url` attribute in the sidebar data file matches the page URL.

For example, the `sidebar.html` file contains the following code:

```
{% elsif page.url == item.url %}
  <li class="active"><a href="{{item.url | prepend:
".."}}">{{item.title}}</a></li>
{% else %}
  <li><a href="{{item.url | prepend:
".."}}">{{item.title}}</a></li>
{% endif %}
```

If the `page.url` matches the `item.url`, then an `active` class gets applied. If not, the `active` class does not get applied.

The `page.url` in Jekyll is a site-wide variable. If you insert `{{page.url}}` on a page, it will render as follows: `/mydoc/mydoc_sidebar_navigation.html`. The `url` attribute in the sidebar item must match the page URL in order to get the `active` class applied.

This is why the `url` value in the sidebar data file looks something like this:

```
- title: Understanding how the sidebar works
  url: /mydoc/mydoc_understand_sidebar.html
  audience: writers, designers
  platform: all
  product: all
  version: all
  output: web, pdf
```

Note that the `url` includes the project folder where the file is stored.

Now the `page.url` and the `item.url` can match and the `active` class can get applied. With the `active` class applied, the sidebar section remains open.

YAML tutorial in the context of Jekyll

Summary: YAML is a format that relies on white spacing to separate out the various elements of content. Jekyll lets you use Liquid with YAML as a way to parse through the data. Storing items for your table of contents is one of the most common uses of YAML with Jekyll.

Overview

One of the most interesting features of Jekyll is the ability to separate out data elements from formatting elements using a combination of YAML and Liquid. This setup is most common when you're trying to create a table of contents.

Not many Jekyll themes actually have a robust table of contents, which is critical when you are creating any kind of documentation or reference material that has a lot of pages.

Here's the basic approach in creating a table of contents. You store your data items in a YAML file using YAML syntax. (I'll go over more about YAML syntax in a later section.) You then create your HTML structure in another file, such as sidebar.html. You might leverage one of the many different table of content frameworks (such as [Navgoco](https://github.com/tefra/navgoco) (<https://github.com/tefra/navgoco>)) that have been created for this HTML structure.

Then, using Liquid syntax for loops and conditions, you access all of those values from the data file and splice them into HTML formatting. This will become more clear as we go through some examples.

YAML overview

Rather than just jump into YAML at the most advanced level, I'm going to start from ground zero with an introduction to YAML and how you access basic values in your data files using Jekyll.

Note that you don't actually have to use Jekyll when using YAML. YAML is used in a lot of other systems and is a format completely independent of Jekyll. However, because Jekyll uses Liquid, it gives you a lot of power to parse through your YAML data and make use of it.

YAML itself doesn't do anything on its own — it's just a way of storing your data in a specific structure that other utilities can parse.

YAML basics

You can read about YAML from a lot of different sources. Here are some basic characteristics of YAML:

- YAML (“**Y**AML **A**in’t **M**arkup **L**anguage”) doesn’t use markup tags. This means you won’t see any kind of angle brackets. It uses white space as a way to form the structure. This makes YAML much more human readable.
- Because YAML does use white space for the structure, YAML is extremely picky about the exactness of spaces. If you have just one extra space somewhere, it can cause the whole file to be invalid.
- For each new level in YAML, you indent two spaces. Each level provides a different access point for the content. You use dot notation to access each new level.
- Because tabs are not universally implemented the same way in editors, a tab might not equate to two spaces. In general, it’s best to manually type two spaces to create a new level in YAML.
- YAML has several types of elements. The most common are mappings and lists. A mapping is simply a key-value pair. A list is a sequence of items. List start with hyphens.
- Items at each level can have various properties. You can create conditions based on the properties.
- You can use “for” loops to iterate through a list.

I realize a lot of this vague and general; however, it will become a lot more clear as we go through some concrete examples.

In the `_data/mydoc` folder, there’s a file called `samplelist.yml`. All of these examples come from that file.

Example 1: Simple mapping

YAML:

```
name:
  husband: Tom
  wife: Shannon
```

Markdown + Liquid:

```
Husband's name: {{site.data.mydoc.samplelist.name.husband}}
```

```
Wife's name: {{site.data.mydoc.samplelist.name.wife}}
```

Notice that in order to access the data file, you use `site.data.mydoc.samplelist`. `mydoc` is the folder, and `samplelist` is the name of the YAML file.

Result:

Husband's name: Tom

Wife's name: Shannon

Example 2: Line breaks

YAML:

```
feedback: >
  This is my feedback to you.
  Even if I include linebreaks here,
  all of the linebreaks will be removed when the value is
  inserted.
```

```
block: |
  This pipe does something a little different.
  It preserves the breaks.
  This is really helpful for code samples,
  since you can format the code samples with
  the appropriate
```

Markdown:

****Feedback****

This is my feedback to you. Even if I include linebreaks here, all of the linebreaks will be removed when the value is inserted.

****Block****

This pipe does something a little different. It preserves the breaks. This is really helpful for code samples, since you can format the code samples with the appropriate white spacing.

Result:

Feedback This is my feedback to you. Even if I include linebreaks here, all of the linebreaks will be removed when the value is inserted.

Block This pipe does something a little different. It preserves the breaks. This is really helpful for code samples, since you can format the code samples with the appropriate white spacing.

The right angle bracket `>` allows you to put the value on the next lines (which must be indented). Even if you create a line break, the output will remove all of those line breaks, creating one paragraph.

The pipe `|` functions like the angle bracket in that it allows you to put the values for the mapping on the next lines (which again must be indented). However, the pipe does preserve all of the line breaks that you use. This makes the pipe method ideal for storing code samples.

Example 3: Simple list

YAML:

```
bikes:  
  - title: mountain bikes  
  - title: road bikes  
  - title: hybrid bikes
```

Markdown + Liquid:


```
{% for item in site.data.mydoc.samplelist.bikes %}
* {{item.title}}
{% endfor %}
```

Result:

- mountain bikes
- road bikes
- hybrid bikes

Here we use a “for” loop to get each item in the bikes list. By using `.title` we only get the `title` property from each list item.

Example 4: List items

YAML:

```
salesteams:
- title: Regions
  subitems:
    - location: US
    - location: Spain
    - location: France
```

Markdown + Liquid:

```
{% for item in site.data.mydoc.samplelist.salesteams %}
<h3>{{item.title}}</h3>
<ul>
  {% for entry in item.subitems %}
  <li>{{entry.location}}</li>
  {% endfor %}
</ul>
{% endfor %}
```

Result:

Regions

- US
- Spain

- France

Hopefully you can start to see how to wrap more complex formatting around the YAML content. When you use a “for” loop, you choose the variable of what to call the list items. The variable you choose to use becomes how you access the properties of each list item. In this case, I decided to use the variable `item`. In order to get each property of the list item, I used `item.subitems`.

Each list item starts with the hyphen `-`. You cannot directly access the list item by referring to a mapping. You only loop through the list items. If you wanted to access the list item, you would have to use something like `[1]`, which is how you access the position in an array. You cannot access a list item like you can access a mapping key.

Example 5: Table of contents

YAML:

```
toc:
  - title: Group 1
    subitems:
      - page: Thing 1
      - page: Thing 2
      - page: Thing 3
  - title: Group 2
    subitems:
      - page: Piece 1
      - page: Piece 2
      - page: Piece 3
  - title: Group 3
    subitems:
      - page: Widget 1
      - page: Widget 2 it's
      - page: Widget 3
```

Markdown + Liquid:

```
{% for item in site.data.mydoc.samplelist.toc %}  
<h3>{{item.title}}</h3>  
<ul>  
  {% for entry in item.subitems %}  
    <li>{{entry.page}}</li>  
  {% endfor %}  
</ul>  
{% endfor %}
```

Result:**Group 1**

- Thing 1
- Thing 2
- Thing 3

Group 2

- Piece 1
- Piece 2
- Piece 3

Group 3

- Widget 1
- Widget 2
- Widget 3

This example is similar to the previous one, but it's more developed as a real table of contents.

Example 6: Variables

YAML:

```
something: &hello Greetings earthling!  
myref: *hello
```

Markdown:

```
{{ site.data.mydoc.samplelist.myref }}
```

Result:

Greetings earthling!

This example is notably different. Here I'm showing how to reuse content in YAML file. If you have the same value that you want to repeat in other mappings, you can create a variable using the `&` symbol. Then when you want to refer to that variable's value, you use an asterisk `*` followed by the name of the variable.

In this case the variable is `&hello` and its value is `Greetings earthling!` In order to reuse that same value, you just type `*hello`.

I don't use variables much, but that's not to say they couldn't be highly useful. For example, let's say you put name of the product in parentheses after each title (because you have various products that you're providing documentation for in the same site). You could create a variable for that product name so that if you change how you're referring to it, you wouldn't have to change all instances of it in your YAML file.

Example 7: Positions in lists

YAML:

```
about:
- zero
- one
- two
- three
```

Markdown:

```
{{ site.data.mydoc.samplelist.about[0] }}
```

Result:

zero

You can see that I'm accessing one of the items in the list using `[0]`. This refers to the position in the array where a list item is. Like most programming languages, you start counting at zero, not one.

I wanted to include this example because it points to the challenge in getting a value from a specific list item. You can't just call out a specific item in a list like you can with a mapping. This is why you usually iterate through the list items using a "for" loop.

Example 8: Properties from list items at specific positions

YAML:

```
numbercolors:
- zero:
  properties: red
- one:
  properties: yellow
- two:
  properties: green
- three:
  properties: blue
```

Markdown + Liquid:

```
{{ site.data.mydoc.samplelist.numbercolors[0].properties }}
```

Result:

red

This example is similar as before; however, in this case we're getting a specific property from the list item in the zero position.

Example 9: Conditions

YAML:

```
mypages:
- section1: Section 1
  audience: developers
  product: acme
  url: facebook.com
- section2: Section 2
  audience: writers
  product: acme
  url: google.com
- section3: Section 3
  audience: developers
  product: acme
  url: amazon.com
- section4: Section 4
  audience: writers
  product: gizmo
  url: apple.com
- section5: Section 5
  audience: writers
  product: acme
  url: microsoft.com
```

Markdown + Liquid:

```
{% for sec in site.data.mydoc.samplelist.mypages %}
{% if sec.audience == "writers" %}
* {{sec.url}}
{% endif %}
{% endfor %}
```

Result:

- google.com
- apple.com
- microsoft.com

This example shows how you can use conditions in order to selectively get the YAML content. In your table of contents, you might have a lot of different pages. However, you might only want to get the pages for a particular audience. Conditions lets you get only the items that meet those audience attributes.

Now let's adjust the condition just a little. Let's add a second condition so that the audience property has to be writers and the product property has to be gizmo. This is how you would write it:

```
{% for sec in site.data.mydoc.samplelist.mypages %}  
{% if sec.audience == "writers" and sec.product == "gizmo" %}  
* {{sec.url}}  
{% endif %}  
{% endfor %}
```

And here is the result:

- [apple.com](#)

More resources

For more examples and explanations, see this helpful post on tournemille.com:

[How to create data-driven navigation in Jekyll](#)

(<http://www.tournemille.com/blog/How-to-create-data-driven-navigation-in-Jekyll/>).

Tags

Summary: Tags provide another means of navigation for your content. Unlike the table of contents, tags can show the content in a variety of arrangements and groupings. Implementing tags in this Jekyll theme is somewhat of a manual process.

Add a tag to a page

You can add tags to pages by adding `tags` in the frontmatter with values inside brackets, like this:

```
---
title: 2.0 Release Notes
permalink: /release_notes_2_0/
tags: [formatting, single_sourcing]
---
```

Tags overview

Note: With posts, tags have a namespace that you can access with `posts.tags.tagname`, where `tagname` is the name of the tag. You can then list all posts in that tag namespace. But pages don't off this same tag namespace, so you could actually use another key instead of `tags`. Nevertheless, I'm using the same `tags` name here.

To prevent tags from getting out of control and inconsistent, first make sure the tag appears in the `\date/tags_doc.yml` file. If it's not there, the tag you add to a page won't be read. I added this check just to make sure I'm using the same tags consistently and not adding new tags that don't have tag archive pages.

Note: Unlike with WordPress, you have to build out the functionality for tags so that clicking a tag name shows you all pages with that tag. Tags in Jekyll are much more manual.

Additionally, you must create a tag archive page similar to the other pages named `tag_{tagname}.html` folder. This theme doesn't auto-create tag archive pages.

For simplicity, make all your tags single words (connect them with hyphens if necessary).

Setting up tags

Tags have a few components.

1. First make sure you configure a few details in the `conditions.html` file. In particular, see this setting:

```
liquid {% assign projectTags = site.data.tags_doc.allowed-tags %}
```

The `tags_doc` name must correspond with how you label your tags file. Here, “doc” should be your project name.

2. In the `_data` file, add a `yml` file similar to `tags_doc.yml`. The `YML` file lists the tags that are allowed:

```
json allowed-tags: - getting_started - overview - formatting - publishing - single
```

3. Create a tag archive file for each tag in your `tags_doc.yml` list. Name the file like this: `tag_getting_started.html`, where `doc` is your project name. (Again, tags with multiple words need hyphens in them.)

Each tag archive file needs only this:

```
liquid --- title: "Getting Started Pages" tagName: getting_started --- {% include
```

Note: In the `_includes/mydoc` folder, there's a `taglogic.html` file. This file (included in each tag archive file) has common logic for getting the tags and listing out the pages containing the tag in a table with summaries or truncated excerpts. You don't have to do anything with the file — just leave it there because the tag archive pages reference it.

4. Adjust button color or tag placement as desired.

By default, the `_layouts/page.html` file will look for any tags on a page and insert them at the bottom of the page using this code:

```
""
```

```
{% if page.tags != null %} Tags: {% include custom/conditions.html %} {% for
tag in page.tags %} {% if projectTags contains tag %}
```

```
  {{page.tagName}}{{tag}} (page 0) {% endif %} {% endfor %} {% endif %}
```

```
...
```

Because this code appears on the `_layouts/page.html` file by default, you don't need to do anything. However, if you want to alter the placement or change the button color, you can do so.

You can change the button color by changing the class on the button from `btn-info` to one of the other button classes bootstrap provides. See [Labels \(page 97\)](#) for more options on button class names.

Retrieving pages for a specific tag

If you want to retrieve pages outside of a particular `tag_archive` page, you could use this code:

```
Getting started pages:
<ul>
{% for page in site.pages %}
{% for tag in page.tags %}
{% if tag == "getting_started" %}
<li><a href="{{page.url | prepend:
'..' }}">{{page.title}}</a></li>
{% endif %}
{% endfor %}
{% endfor %}
</ul>
```

Here's how that code renders:

Getting started pages:

- [Introduction \(page 1\)](#)
- [About the theme author \(page 0\)](#)
- [2. Add a new project \(page 12\)](#)
- [6. Configure the sidebar \(page 28\)](#)

- [3. Decide on your project's attributes \(page 15\)](#)
- [1. Build the default project \(page 8\)](#)
- [Pages \(page 43\)](#)
- [Sidebar Navigation \(page 61\)](#)
- [Support \(page 0\)](#)
- [Supported features \(page 3\)](#)
- [Troubleshooting \(page 183\)](#)
- [WebStorm Text Editor \(page 49\)](#)

If you want to sort the pages alphabetically, you have to apply a `sort` filter:

```
Getting started pages:
<ul>
{% assign sorted_pages = (site.pages | sort: 'title') %}
{% for page in sorted_pages %}
{% for tag in page.tags %}
{% if tag == "getting_started" %}
<li><a href="{{page.url | prepend:
'..' }}">{{page.title}}</a></li>
{% endif %}
{% endfor %}
{% endfor %}
</ul>
```

Here's how that code renders:

Getting started pages:

- [1. Build the default project \(page 8\)](#)
- [2. Add a new project \(page 12\)](#)
- [3. Decide on your project's attributes \(page 15\)](#)
- [6. Configure the sidebar \(page 28\)](#)
- [About the theme author \(page 0\)](#)
- [Introduction \(page 1\)](#)
- [Pages \(page 43\)](#)
- [Sidebar Navigation \(page 61\)](#)
- [Support \(page 0\)](#)

- [Supported features \(page 3\)](#)
- [Troubleshooting \(page 183\)](#)
- [WebStorm Text Editor \(page 49\)](#)

Efficiency

Although the tag approach here uses `for` loops, these are somewhat inefficient on a large site. Most of my tech doc projects don't have hundreds of pages (like my blog does). If your project does have hundreds of pages, this `for` loop approach with tags is going to slow down your build times.

Without the ability to access pages inside a universal namespace with the `page` type, there aren't many workarounds here for faster looping.

With posts (instead of pages), since you can access just the posts inside `posts.tag.tagName`, you can be a lot more efficient with the looping.

Still, if the build times are getting long (e.g., 1 or 2 minutes per build), look into reducing the number of `for` loops on your site.

Empty tags?

If your page shows "tags:" at the bottom without any value, it could mean a couple of things:

- You're using a tag that isn't specified in your allowed tags list in your `tags.yml` file.
- You have an empty `tags: []` property in your frontmatter.

If you don't want tags to appear at all on your page, remove the `tags` property from your frontmatter.

Remembering the right tags

Since you may have many tags and find it difficult to remember what tags are allowed, I recommend creating a template that prepopulates all your frontmatter with all possible tags. Then just remove the tags that don't apply.

See [WebStorm Text Editor \(page 49\)](#) for tips on creating file templates in WebStorm.

Series

Summary: You can automatically link together topics belonging to the same series. This helps users know the context within a particular process.

Using series for pages

You create a series by looking for all pages within a tag namespace that contain certain frontmatter. Here's a [demo](#).

1. Create the series button

First create an include that contains your series button:

```
<div class="seriesContext">
  <div class="btn-group">
    <button type="button" data-toggle="dropdown"
class="btn btn-primary dropdown-toggle">Series Demo <span
class="caret"></span></button>
    <ol class="dropdown-menu">
      {% assign pages = site.pages | sort:"weight" %}
      {% for p in pages %}
      {% if p.series == "ACME series" %}
      {% if p.url == page.url %}
      <li class="active"> → {{p.weight}}.
{{p.title}}</li>
      {% else %}
      <li>
        <a href="{{p.url | prepend:
'..' }}">{{p.weight}}. {{p.title}}</a>
      </li>
      {% endif %}
      {% endif %}
      {% endfor %}
    </ol>
  </div>
</div>
```

Change “ACME series” to the name of your series.

Save this in your `_includes/custom/mydoc` folder as something like `series_acme.html`.

⚠ Warning: With pages, there isn't a universal namespace created from tags or categories like there is with Jekyll posts. As a result, you have to loop through all pages. If you have a lot of pages in your site (e.g., 1,000+), then this looping will create a slow build time. If this is the case, you will need to rethink the approach to looping here.

2. Create the “next” include

Now create another include for the Next button at the bottom of the page. Copy the following code, changing the series name to your series' name:

```
<p>{% assign series_pages = site.tags.series_acme %}
  {% for p in pages %}
    {% if p.series == "ACME series" %}
      {% assign nextTopic = page.weight | plus: "0.1" %}
      {% if p.weight == nextTopic %}
        <a href="{{p.url | prepend: '..'}}"><button type="button"
class="btn btn-primary">Next: {{p.weight}}
{{p.title}}</button></a>
      {% endif %}
    {% endif %}
  {% endfor %}
</p>
```

Change “acme” to the name of your series.

Save this in your `_includes/custom/mydoc` folder as `series_acme_next.html`.

3. Add the correct frontmatter to each of your series pages

Now add the following frontmatter to each page in the series:

```
series: "ACME series"
weight: 1.0
```

With weight, you could use 1, 2, 3, etc., but Jekyll will treat 10 as coming after 1. This is why I use 1.0 and 1.1, 1.2, etc.

If you do use whole numbers, change the plus: "0.1" to plus: "1" .

Additionally, if your page names are prefaced with numbers, such as "1. Download the code," then the `{{p.weight}}` will create a duplicate number. In that case, just remove the `{{p.weight}}` from both code samples here.

4. Add links to the series button and next button on each page.

On each series page, add a link to the series button at the top and a link to the next button at the bottom.

```
<!-- your frontmatter goes here -->

{% include custom/mydoc/series_acme.html %}

<!-- your page content goes here ... -->

{% include custom/mydoc/series_acme_next.html %}
```

Changing the series drop-down color

The Bootstrap menu uses the `primary` class for styling. If you change this class in your theme, the Bootstrap menu should automatically change color as well. You can also just use another Bootstrap class in your button code. Instead of `btn-primary`, use `btn-info` or `btn-warning`. See [Labels \(page 97\)](#) for more Bootstrap button classes.

Using a collection with your series

Instead of copying and pasting the button includes on each of your series, you could also create a collection and define a layout for the collection that has the include code. For more information on creating collections, see [Collections \(page 59\)](#).

Tooltips

Summary: You can add tooltips to any word, such as an acronym or specialized term. Tooltips work well for glossary definitions, because you don't have to keep repeating the definition, nor do you assume the reader already knows the word's meaning.

Creating tooltips

Because this theme is built on Bootstrap, you can simply use a specific attribute on an element to insert a tooltip.

Suppose you have a `glossary.yml` file inside your `_data` folder. You could pull in that glossary definition like this:

```
<a href="#" data-toggle="tooltip"
data-original-title="{{site.data.glossary.jekyll_platform}}">Jekyll</a>
is my favorite tool for building websites.</a>
```

This renders to the following:

[Jekyll](#) is my favorite tool for building websites.

Alerts

Summary: You can insert notes, tips, warnings, and important alerts in your content. These notes are stored as shortcodes made available through the `linksrefs.html` include.

About alerts

Alerts are little warnings, info, or other messages that you have called out in special formatting. In order to use these alerts or callouts, just reference the appropriate value stored in the `alerts.yml` file as described in the following sections.

Alerts

You can insert an alert by using any of the following code.

ALERT	CODE
note	<code>{{site.data.alerts.note}}</code> your note <code>{{site.data.alerts.end}}</code>
tip	<code>{{site.data.alerts.tip}}</code> your tip <code>{{site.data.alerts.end}}</code>
warning	<code>{{site.data.alerts.warning}}</code> your warning <code>{{site.data.alerts.end}}</code>
important	<code>{{site.data.alerts.important}}</code> your important info <code>{{site.data.alerts.end}}</code>

The following demonstrate the formatting associated with each alert.

✓ **Tip:** Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.

Note: Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.

Important: Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.

Warning: Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.

Callouts

In contrast to the alerts, the callouts don't have a pre-coded bold-formatted preface such as note or tip. You just add one (if desired) in the callout text itself.

CALLOUT	CODE
callout_default	{{site.data.alerts.callout_default}} your callout_default content {{site.data.alerts.end}}
callout_primary	{{site.data.alerts.callout_primary}} your callout_primary content {{site.data.alerts.end}}
callout_success	{{site.data.alerts.callout_success}} your callout_success content {{site.data.alerts.end}}
callout_warning	{{site.data.alerts.callout_warning}} your callout_warning content {{site.data.alerts.end}}
callout_info	{{site.data.alerts.callout_info}} your callout_info content {{site.data.alerts.end}}

The following demonstrate the formatting for each callout.

callout_danger: Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard

dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.

callout_default: Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.

calloutprimary: Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.

calloutsuccess: Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.

calloutinfo: Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.

calloutwarning: Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.

Blast a warning to users

If you want to blast a warning to users on every page, add the alert or callout to the `layouts/page.html` page right below the frontmatter. Every page using the page layout (all, by default) will show this message.

Using Markdown inside of notes

You can't use Markdown formatting inside alerts. This is because the alerts leverage HTML, and you can't use Markdown inside of HTML tags.

Icons

Summary: You can integrate font icons through the Font Awesome and Glyphical Halflings libraries. These libraries allow you to embed icons through their libraries delivered as a link reference. You don't need any image libraries downloaded in your project.

Font icon options

The theme has two font icon sets integrated: Font Awesome and Glyphicons Halflings. The latter is part of Bootstrap, while the former is independent. Font icons allow you to insert icons drawn as vectors from a CDN (so you don't have any local images on your own site).

See Font Awesome icons available

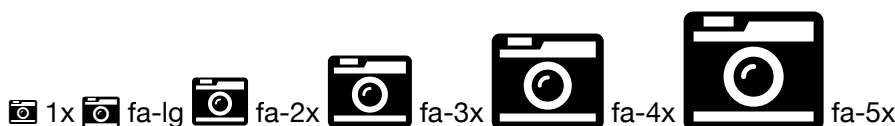
Go to the [Font Awesome library](http://fontawesome.github.io/Font-Awesome/icons/) (<http://fontawesome.github.io/Font-Awesome/icons/>) to see the available icons.

The Font Awesome icons allow you to adjust their size by simply adding `fa-2x`, `fa-3x` and so forth as a class to the icon to adjust their size to two times or three times the original size. As vector icons, they scale crisply at any size.

Here's an example of how to scale up a camera icon:

```
<i class="fa fa-camera-retro"></i> normal size (1x)  
<i class="fa fa-camera-retro fa-lg"></i> fa-lg  
<i class="fa fa-camera-retro fa-2x"></i> fa-2x  
<i class="fa fa-camera-retro fa-3x"></i> fa-3x  
<i class="fa fa-camera-retro fa-4x"></i> fa-4x  
<i class="fa fa-camera-retro fa-5x"></i> fa-5x
```


Here's what they render to:



With Font Awesome, you always use the `i` tag with the appropriate class. You also implement `fa` as a base class first. You can use font awesome icons inside other elements. Here I'm using a Font Awesome class inside a Bootstrap alert:

```
<div class="alert alert-danger" role="alert"><i class="fa fa-exclamation-circle"></i> <b>Warning: </b>This is a special warning message.
```

Here's the result:

 This is a special warning message.

The notes, tips, warnings, etc., are pre-coded with Font Awesome and stored in the `alerts.yml` file. That file includes the following:

```
tip: '<div class="alert alert-success" role="alert"><i class="fa fa-check-square-o"></i> <b>Tip: </b>'
note: '<div class="alert alert-info" role="alert"><i class="fa fa-info-circle"></i> <b>Note: </b>'
important: '<div class="alert alert-warning" role="alert"><i class="fa fa-warning"></i> <b>Important: </b>'
warning: '<div class="alert alert-danger" role="alert"><i class="fa fa-exclamation-circle"></i> <b>Warning: </b>'
end: '</div>'

callout_danger: '<div class="bs-callout bs-callout-danger">'
callout_default: '<div class="bs-callout bs-callout-default">'
callout_primary: '<div class="bs-callout bs-callout-primary">'
callout_success: '<div class="bs-callout bs-callout-success">'
callout_info: '<div class="bs-callout bs-callout-info">'
callout_warning: '<div class="bs-callout bs-callout-warning">'

hr_faded: '<hr class="faded"/>'
hr_shaded: '<hr class="shaded"/>'
```

This means you can insert a tip, note, warning, or important alert simply by using these tags:

```
{{site.data.alerts.note}} Add your note here.
{{site.data.alerts.end}}
```

Here's the result:

Note: Add your note here.

Tip: Here's my tip.

Important: This information is very important.

Warning: If you overlook this, you may die.


The color scheme is the default colors from Bootstrap. You can modify the icons or colors as needed.

Creating your own combinations

You can innovate with your own combinations. Here's a similar approach with a file download icon:

```
<div class="alert alert-success" role="alert"><i class="fa fa-download fa-lg"></i> This is a special tip about some file to download....</div>
```

And the result:

 This is a special tip about some file to download....

Grab the right class name from the [Font Awesome library](http://fontawesome.github.io/Font-Awesome/icons/) (<http://fontawesome.github.io/Font-Awesome/icons/>) and then implement it by following the pattern shown previously.

If you want to make your fonts even larger than the 5x style, add a custom style to your stylesheet like this:

```
.fa-10x{font-size:1700%;}
```

Then any element with the attribute `fa-10x` will be enlarged 1700%.

Glyphicon icons available

Glyphicons work similarly to Font Awesome. Go to the [Glyphicons library](http://getbootstrap.com/components/#glyphicons) (<http://getbootstrap.com/components/#glyphicons>) to see the icons available.

Although the Glyphicon Halflings library doesn't provide the scalable classes like Font Awesome, there's a [StackOverflow trick](http://stackoverflow.com/questions/24960201/how-do-i-make-glyphicons-bigger-change-size) (<http://stackoverflow.com/questions/24960201/how-do-i-make-glyphicons-bigger-change-size>)

to make the icons behave in a similar way. This theme's stylesheet (customstyles.css) includes the following to the stylesheet:

```
.gi-2x{font-size: 2em;}  
.gi-3x{font-size: 3em;}  
.gi-4x{font-size: 4em;}  
.gi-5x{font-size: 5em;}
```

Now you just add `gi-5x` or whatever to change the size of the font icon:

```
<span class="glyphicon glyphicon-globe gi-5x"></span>
```

And here's the result:



Glyphicons use the `span` element instead of `i` to attach their classes.

Here's another example:

```
<span class="glyphicon glyphicon-download"></span>
```



And magnified:

```
<span class="glyphicon glyphicon-download gi-3x"></span>
```




You can also put glyphs inside other elements:

```
<div class="alert alert-danger" role="alert">
  <span class="glyphicon glyphicon-exclamation-sign"
  aria-hidden="true"></span>
  <b>Error:</b> Enter a valid email address
</div>
```

❗ Error: Enter a valid email address

Callouts

The previously shown alerts might be fine for short messages, but with longer notes, the solid color takes up a bit of space. In this theme, you also have the option of using callouts, which are pretty common in Bootstrap's documentation but surprisingly not offered as an explicit element. Their styles have been copied into this theme, in a way similar to the alerts:

```
<div class="bs-callout bs-callout-info">
  This is a special info message. This is a special info
  message. This is a special info message. This is a special
  info message. This is a special info message. This is a
  special info message. This is a special info message. This is
  a special info message. This is a special info message. </div>
```

❓ This is a special info message. This is a special info message. This is a special info message. This is a special info message. This is a special info message. This is a special info message. This is a special info message. This is a special info message. This is a special info message. This is a special info message.

And here's the shortcode:

```
{{site.data.alerts.callout_info}}<div class="bs-callout
bs-callout-info">{{site.data.alerts.end}}
```

You can use any of the following:

```
{{callout_danger}}  
{{site.data.alerts.callout_default}}  
{{site.data.alerts.callout_primary}}  
{{site.data.alerts.callout_success}}  
{{site.data.alerts.callout_info}}  
{{site.data.alerts.callout_warning}}
```

Callouts are explained in a bit more detail here: [Alerts \(page 84\)](#).

Images

Summary: You embed images using traditional HTML or Markdown syntax for images. Unlike pages, you can store images in subfolders (in this theme). This is because when pages reference the images, the references are always as subpaths, never requiring the reference to move up directories.

You embed an image the same way you embed other files or assets: you put the file into a folder, and then link to that file.

Put images inside the `images` folder in your root directory. You can create subdirectories inside this directory. Although you could use Markdown syntax for images, the HTML syntax is probably easier:

```

```

And the result:



Here's the same Markdown syntax:

```
![My sample page](images/jekyll.png)
```

And the result:



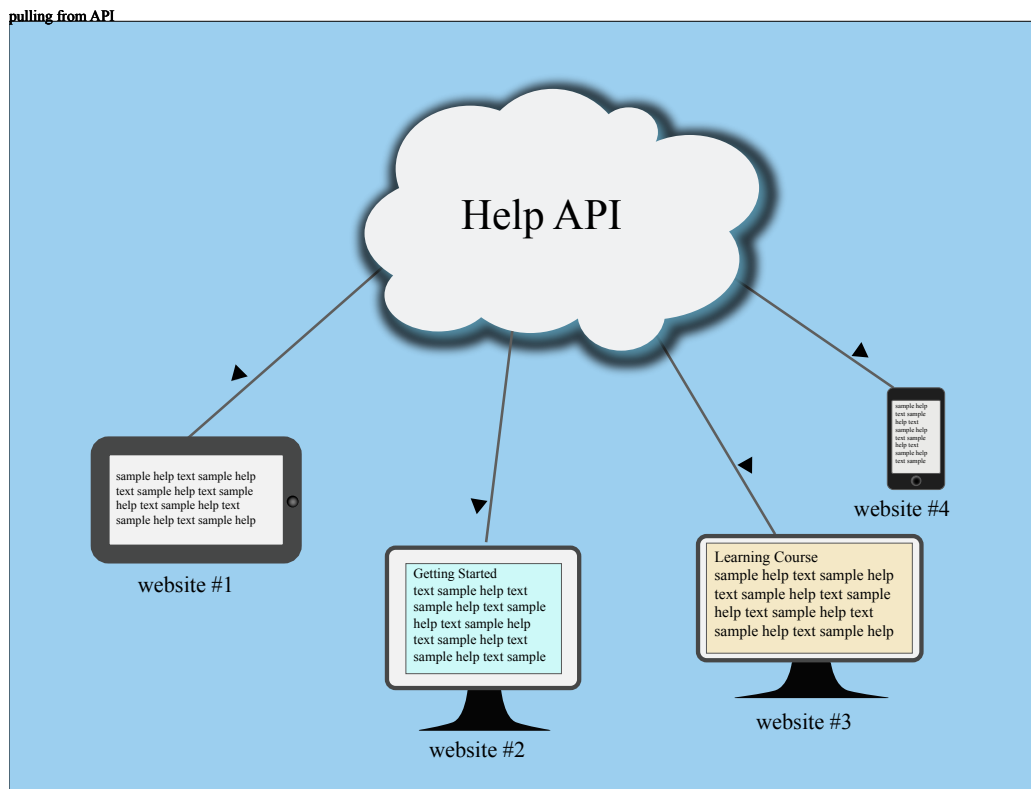
SVG Images

You can also embed SVG graphics. If you use SVG, you need to use the HTML syntax so that you can define a width/container for the graphic. Here's a sample embed:

```

```

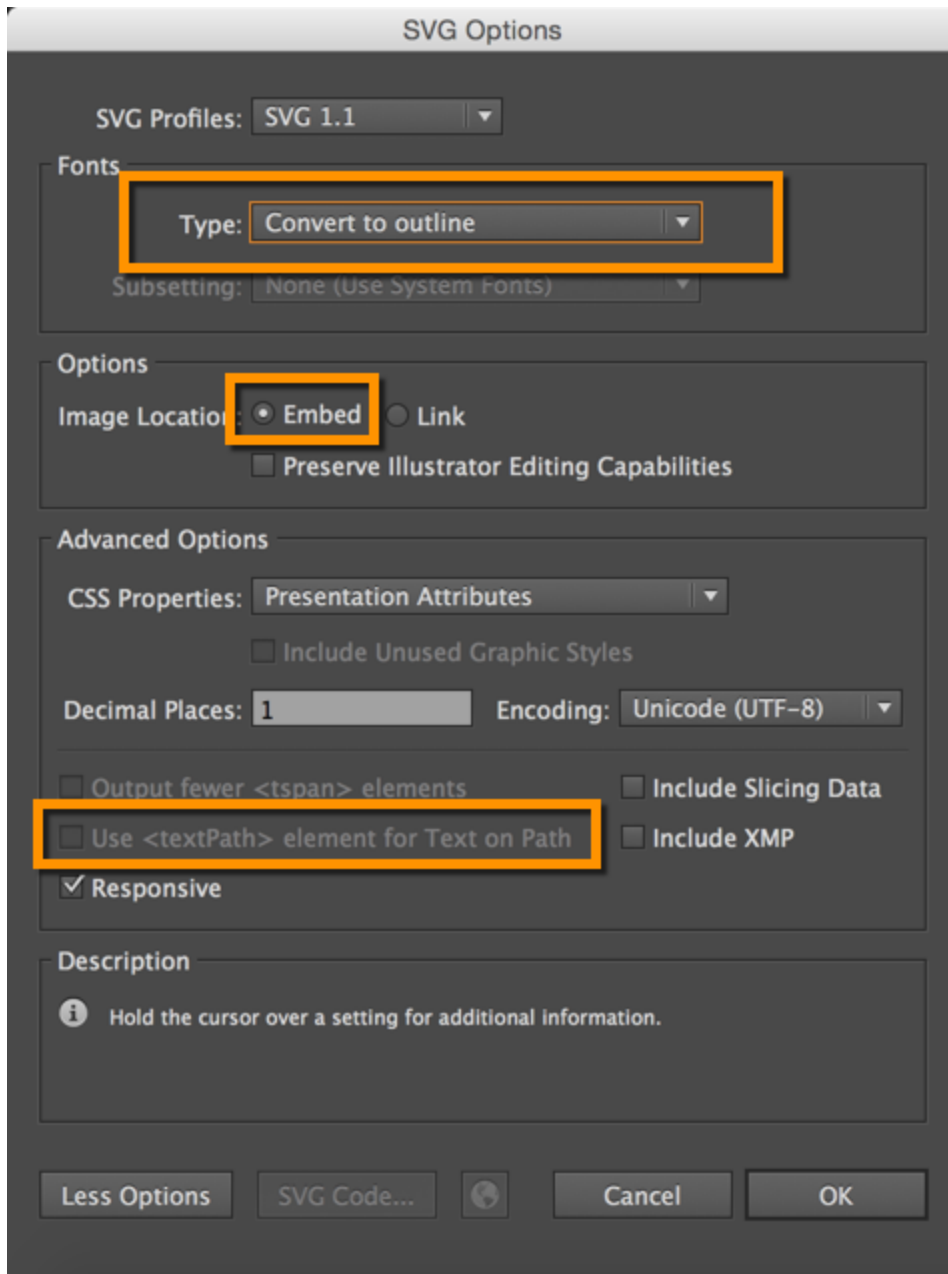
Here's the result:



SVG images will expand to the size of their artboard, so you can either set the artboard the right size when you create the graphic in Illustrator, or you can set an inline style that confines the size to a certain width as shown in the code above.

Also, if you're working with SVG graphics, note that Firefox does not support SVG fonts. In Illustrator, when you do a Save As with your AI file and choose SVG, to preserve your fonts, in the Font section, select "Convert to outline" as the Type (don't choose SVG in the Font section).

Also, remove the check box for "Use textpath element for text on a path". And select "Embed" rather than "Link." The following screenshot shows the settings I use. Your graphics will look great in Firefox.



Labels

Summary: Labels are just a simple Bootstrap component that you can include in your pages as needed. They represent one of many Bootstrap options you can include in your theme.

About labels

Labels might come in handy for adding button-like tags next to elements, such as POST, DELETE, UPDATE methods for endpoints. You can use any classes from Bootstrap in your content.

```
<span class="label label-default">Default</span>  
<span class="label label-primary">Primary</span>  
<span class="label label-success">Success</span>  
<span class="label label-info">Info</span>  
<span class="label label-warning">Warning</span>  
<span class="label label-danger">Danger</span>
```

Default **Primary** **Success** **Info** **Warning** **Danger**

You can have a label appear within a heading simply by including the span tag in the heading. However, you can't mix Markdown syntax with HTML, so you'd have to hard-code the heading ID for the auto-TOC to work.

Links

Summary: When creating links, although you can use standard HTML or Markdown, this approach is usually susceptible to a lot of errors and broken links. There's a URL generator that will facilitate linking to other pages in ways that ensures the links won't break.

Link strategies

One of the more difficult parts of a documentation site is keeping all the internal links accurate and valid. When you're single sourcing, you usually have multiple documentation outputs that include certain pages for certain audiences. Orphan links are a common problem to avoid.

Although there are many ways to create links, I'll just describe what I've found to work well.

Create an external link

When linking to an external site, use Markdown formatting:

```
[Google](http://google.com)
```

If you need to use HTML, use the normal syntax:

```
<a href="http://google.com">Google</a>
```

Linking to internal pages

When linking to internal pages, you could use this same syntax:

```
[Sample](sample.html)
```

OR

```
<a href="sample.html">Sample</a>
```

However, what happens when you change the page's title or link? Jekyll doesn't automatically pull in the page's title when you create links.

In my experience, coding links like this results in a lot of broken links.

Managed links

For internal links, I've found that it's a best practice to store the link in a YAML file that is derived from the table of contents.

The theme has a file called `urls_mydoc.txt`. This file contains the same code as the table of contents (but without the conditional qualifiers). It iterates through every page listed in the table of contents sidebar (as well as the top navigation menus) and creates an output that looks like this for each link:

```
mydoc_getting_started:  
  title: "Getting started with this theme"  
  url: "mydoc_getting_started.html"  
  link: "<a href='mydoc_getting_started.html'>Getting started  
with this theme</a>"
```

From the site output folder (in `../doc_outputs`), open `urls_mydoc.txt` and observe that it is properly populated (blank spaces between entries doesn't matter). Then manually copy the contents from the `mydoc_urls.txt` and insert it into the `_data/mydoc/mydoc_urls.yml` file in your project folder.

Because the `urls.txt` is produced from the table of contents, you ensure that the same titles and URLs used in your table of contents and top navigation will also be used in your inline links.

To create a link in a topic, just reference the appropriate value in the `urls.yml` file, like this:

```
{{site.data.mydoc.mydoc_urls.mydoc_getting_started.link}}
```

This will insert the following into your topic:


```
<a href='mydoc_getting_started.html'>Getting started with this theme</a>
```

You don't need to worry whether you can use Markdown syntax when inserting a link this way, because the insertion is HTML.

To insert a link in the context of a phrase, you can use this syntax:

```
After downloading the theme, you can [get started in building the theme]({{site.data.mydoc.mydoc_urls.mydoc_getting_started.url}}).
```

This leverages Markdown syntax. If you're in an HTML file or section, use this:

```
<p>After downloading the theme, you can <a href="{{site.data.mydoc.mydoc_urls.mydoc_getting_started.url}}">get started in building the theme</a>.</p>
```

Note that the `url` value accesses the URL for the page only, whereas `link` gets the title and url in a link format.

You shouldn't have to copy the contents from the `urls.txt` file into your YAML data source too often — only when you're creating new pages.

By using this approach, you're less likely to end up with broken links.

✓ **Tip:** To avoid having to remember this long syntax, use a text macro program like [aText](https://itunes.apple.com/us/app/atext/id488566438?mt=12) (<https://itunes.apple.com/us/app/atext/id488566438?mt=12>).

Always make sure your TOC page is accurate

You should treat your `sidebar_doc.yml` file with a lot of care. Every time you add a page to your site, make sure it's listed in your `sidebar_doc.yml` file (or in your top navigation). If you don't have pages listed in your `sidebar_doc.yml` file, they won't be included in the `urls_mydoc.txt` file, and as your site grows, it will be harder to recognize pages that are absent from the TOC.

Because all the pages are stored in the root directory, the list of files can grow really long. I typically find pages by navigating to the page in the preview server, copying the page name (e.g., `mydoc_hyperlinks`), and then pressing **Shift + Shift** in WebStorm to locate the page.

This is the only sane way to locate your pages when you have hundreds of pages in your root directory. If the page isn't listed in your TOC, it will be difficult to navigate to it and find it.

Checking for broken links

Another way to ensure you don't have any broken links in your output is to [generate a PDF \(page 124\)](#). When you generate a PDF, look for the following two problems in the output:

- page 0
- see .

Both instances indicate a broken link. The “page 0” indicates that Prince XML couldn't find the page that the link points to, and so it can't create a cross reference. This may be because the page doesn't exist, or because the anchor is pointing to a missing location.

If you see “see .” it means that the reference (for example, `{{myLink...}}`) doesn't actually refer to anything. As a result, it's simply blank in the output.

Note: To keep Prince XML from trying to insert a cross reference into a link, add `class="noCrossRef"` to the link.

Relative link paths

The site is coded with relative links. There aren't any permalinks, urls, or baseurls. The folder structure you see in the project directory is the same folder directory that gets built in the site output.

Author all pages in your root directory. This greatly simplifies linking. However, when you're linking to images, files, or other content, you can put these assets into subfolders.

For example, to link to a file stored in `files/doc/whitepaper.pdf`, you would use “`files/doc/whitepaper.pdf`” as the link.

Why not put pages too into subfolders? If you put a page into a subfolder, then links to the stylesheets, JavaScript, and other sources will fail. On those subfolder pages, you'd need to use `../` to move up a level in the directory to access the stylesheets, JavaScript, etc. But if you have some pages in folders on one level, others in sub-sub-folders, and others in the root, trying to guess which files should contain `../` or `../../` or nothing at all and which shouldn't will be a nightmare.

Jekyll gets around some of this link path variation by using `baseurl` and including code that prepends the `baseurl` before a link. This converts the links into absolute rather than relative links.

With absolute links, the site only displays at the `baseurl` you configured. This is problematic for tech docs because you usually need to move files around from one folder to another based on versions you're archiving or when you're moving your documentation from draft to testing to production folders.

Limitations with links

One of the shortcomings in this theme is that the link titles in the sidebar and inline links don't necessarily have to match the titles specified on each page. You have to manually keep the page titles in sync with the titles listed in the sidebar and top navigation. Although I could potentially get rid of the titles key in the article topic, it would make it more difficult to know what page you're editing.

Navtabs

Summary: Navtabs provide a tab-based navigation directly in your content, allowing users to click from tab to tab to see different panels of content. Navtabs are especially helpful for showing code samples for different programming languages. The only downside to using navtabs is that you must use HTML instead of Markdown.

Common uses

Navtabs are particularly useful for scenarios where you want to show a variety of options, such as code samples for Java, .NET, or PHP, on the same page.

While you could resort to single-source publishing to provide different outputs for each unique programming language or role, you could also use navtabs to allow users to select the content you want.

Navtabs are better for SEO since you avoid duplicate content and drive users to the same page.

Navtabs demo

The following is a demo of a navtab. Refresh your page to see the tab you selected remain active.

[Profile](#) [About](#) [Match](#)

Profile

Praesent sit amet fermentum leo. Aliquam feugiat, nibh in u ltrices mattis, felis ipsum venenatis metus, vel vehicula libero mauris a enim. Sed placerat est ac lectus vestibulum tempor. Quisque ut condimentum massa. Proin venenatis leo id urna cursus blandit. Vivamus sit amet hendrerit metus.

Code

Here's the code for the above (with the filler text abbreviated):

```
<ul id="profileTabs" class="nav nav-tabs">
  <li class="active"><a href="#profile"
data-toggle="tab">Profile</a></li>
  <li><a href="#about" data-toggle="tab">About</a></li>
  <li><a href="#match" data-toggle="tab">Match</a></li>
</ul>
<div class="tab-content">
<div role="tabpanel" class="tab-pane active" id="profile">
  <h2>Profile</h2>
<p>Praesent sit amet fermentum leo....</p>
</div>

<div role="tabpanel" class="tab-pane" id="about">
  <h2>About</h2>
  <p>Lorem ipsum ...</p></div>

<div role="tabpanel" class="tab-pane" id="match">
  <h2>Match</h2>
  <p>Vel vehicula ....</p>
</div>
</div>
```

Design constraints

Bootstrap automatically clears any floats after the navtab. Make sure you aren't trying to float any element to the right of your navtabs, or there will be some awkward space in your layout.

Appearance in the mini-TOC

If you put a heading in the navtab content, that heading will appear in the mini-TOC as long as the heading tag has an ID. If you don't want the headings for each navtab section to appear in the mini-TOC, omit the ID attribute from the heading tag. Without this ID attribute in the heading, the mini-TOC won't insert the heading title into the mini-TOC.

Must use HTML

You must use HTML within the navtab content because each navtab section is surrounded with HTML, and you can't use Markdown inside of HTML.

Match up ID tags

Each tab's `href` attribute must match the `id` attribute of the tab content's `div` section. So if your tab has `href="#acme"`, then you add `acme` as the ID attribute in `<div role="tabpanel" class="tab-pane" id="acme">`.

Set an active tab

One of the tabs needs to be set as active, depending on what tab you want to be open by default (usually the first one).

```
<div role="tabpanel" class="tab-pane active" id="acme">
```

Sets a cookie

The navtabs are part of Bootstrap, but this theme sets a cookie to remember the last tab's state. The `js/customscripts.js` file has a long chunk of JavaScript that sets the cookie. The JavaScript comes from [this StackOverflow thread](http://stackoverflow.com/questions/10523433/how-do-i-keep-the-current-tab-active-with-twitter-bootstrap-after-a-page-reload) (<http://stackoverflow.com/questions/10523433/how-do-i-keep-the-current-tab-active-with-twitter-bootstrap-after-a-page-reload>)

.

By setting a cookie, if the user refreshes the page, the active tab is the tab the user last selected (rather than defaulting to the default active tab).

Functionality to implement

One piece of functionality I'd like to implement is the ability to set site-wide nav tab options. For example, if the user always chooses PHP instead of Java in the code samples, it would be great to set this option site-wide by default. However, this functionality isn't yet coded.

Video embeds

Summary: You can embed files with a Video JS wrapper by adding 'video: true' in the frontmatter. Alternatively, you can just fall back on the default video wrapper in the browser.

About Video JS

The theme has the [video.js](http://www.videojs.com/) (<http://www.videojs.com/>) player integrated. But the scripts only appear on a page or post if you have certain frontmatter in that page or post. If you want to embed a video in a page and use the Video JS player, add `video: true` in your frontmatter of a page or post, and then add code like this where you want the video to appear:

```
<p><video id="scenario-1" class="video-js vjs-default-skin
vjs-big-play-centered" controls
  preload="auto" width="640" height="480" data-setup='{}'>
  <source src="http://idratherbetellingstories.com/podcasts/
ontariochapterpresentation/ontariochapterv4.mp4" type='video/
mp4'>
</video></p>
```

Here's an example:



If you want the player button in the upper-left corner (which is the default), remove the `vjs-big-play-centered` from the video class.



Here are [more details on this video player from Video JS](https://github.com/videojs/video.js/blob/stable/docs/guides/setup.md)
(<https://github.com/videojs/video.js/blob/stable/docs/guides/setup.md>).

Note that if some of the js doesn't load correctly, the default fallback player is the regular HTML5 video player available via the browser. Here's an example of the built-in browser video wrapper:

Your browser does not support the video tag.

However, I don't think the built-in browser video players work very well (you can't easily scrub around the video without seeing lots of buffering and other issues). But definitely compare the two. You may find that adding the Video JS wrapper is overkill.

⚠ Warning: Github wasn't designed to store video content. If you have an mp3 file, don't store it in your Github directory. Instead, put it on a web host using regular FTP methods, or stream the video from a video streaming

service such as Youtube or Vimeo. Also, note that Github's Large File Storage (which does handle large files) isn't compatible with Github Pages.

Tables

Summary: You can format tables using either multimarkdown syntax or HTML. You can also use jQuery datatables (a plugin) if you need more robust tables.

Multimarkdown Tables

You can use Multimarkdown syntax for tables. The following shows a sample:

```
Column 1 | Column 2
-----|-----
cell 1a | cell 1b
cell 2a | cell 2b
```

This renders to the following:

COLUMN 1	COLUMN 2
cell 1a	cell 1b
cell 2a	cell 2b

jQuery datables

You also have the option of using a [jQuery datatable](https://www.datatables.net/) (<https://www.datatables.net/>), which gives you some more options. If you want to use a jQuery datatable, then add `datatable: true` in a page's frontmatter. This will load the right jQuery datatable scripts for the table on that page only (rather than loading the scripts on every page of the site.)

Also, you need to add this script to trigger the jQuery table on your page:

```
<script>
$(document).ready(function(){

    $('table.display').DataTable( {
        paging: true,
        stateSave: true,
        searching: true
    }
    );
});
</script>
```

The available options for the datatable are described in the [datatable documentation](https://www.datatables.net/manual/options) (<https://www.datatables.net/manual/options>), which is excellent.

Additionally, you must add a class of `display` to your tables. (You can change the class, but then you'll need to change the trigger above from `table.display` to whatever class you want to you. You might have different triggers with different options for different tables.)

Since Markdown doesn't allow you to add classes to tables, you'll need to use HTML for any datatables. Here's an example:

```
<table id="sampleTable" class="display">
  <thead>
    <tr>
      <th>Parameter</th>
      <th>Description</th>
      <th>Type</th>
      <th>Default Value</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>Parameter 1</td>
      <td>Sample description
      </td>
      <td>Sample type</td>
      <td>Sample default value</td>
    </tr>
    <tr>
      <td>Parameter 2</td>
      <td>Sample description
      </td>
      <td>Sample type</td>
      <td>Sample default value</td>
    </tr>
    <tr>
      <td>Parameter 3</td>
      <td>Sample description
      </td>
      <td>Sample type</td>
      <td>Sample default value</td>
    </tr>
    <tr>
      <td>Parameter 4</td>
      <td>Sample description
      </td>
      <td>Sample type</td>
      <td>Sample default value</td>
    </tr>
  </tbody>
</table>
```

This renders to the following:

FOOD	DESCRIPTION	CATEGORY	SAMPLE TYPE
Apples	A small, somewhat round and often red-colored, crispy fruit grown on trees.	Fruit	Fuji
Bananas	A long and curved, often-yellow, sweet and soft fruit that grows in bunches in tropical climates.	Fruit	Snow
Kiwis	A small, hairy-skinned sweet fruit with green-colored insides and seeds.	Fruit	Golden
Oranges	A spherical, orange-colored sweet fruit commonly grown in Florida and California.	Fruit	Navel

Notice a few features:

- You can keyword search the table. When you type a word, the table filters to match your word.
- You can sort the column order.
- You can page the results so that you show only a certain number of values on the first page and then require users to click next to see more entries.

Read more of the [datatable documentation](https://www.datatables.net/manual/options) (<https://www.datatables.net/manual/options>) to get a sense of the options you can configure. You should probably only use datatables when you have long, massive tables full of information.

❗ Note: Try to keep the columns to 3 or 4 columns only. If you add 5+ columns, your table may create horizontal scrolling with the theme.

Syntax highlighting

Summary: You can apply syntax highlighting to your code. This theme uses pygments and applies color coding based on the lexer you specify.

Available lexers

The keywords you must add to specify the highlighting (in the previous example, `ruby`) are called “lexers.” You can search for “lexers.” Here are some common ones I use:

- `js`
- `html`
- `yaml`
- `css`
- `json`
- `php`
- `java`
- `cpp`
- `dotnet`
- `xml`
- `http`

Commenting on files

Summary: You can add a button to your pages that allows people to add comments. Prose.io is an overlay on Github that would allow people to make comments in an easier interface.

About the review process

If you're using the doc as code approach, you might also consider using the same techniques for reviewing the doc as people use in reviewing code. This approach will involve using Github to edit the files.

There's an Edit me button on each page on this theme. This button allows collaborators to edit the content on Github.

Here's the code for that button on the page.html layout:

```
{% if site.github_editme_path %}
<a
href="https://github.com/{{site.github_editme_path}}{{page.url
| replace: '.html', '.md'}}" class="btn btn-default "
role="button"><i class="fa fa-github fa-lg"></i> Edit me</a>
{% endif %}
```

You could also make it so the Github button appears only when you're working in a development environment.

```
{% if jekyll.environment == "development" %}
{% if site.github_editme_path %}
<a target="_blank"
href="https://github.com/{{site.github_editme_path}}{{page.url
| replace: '.html', '.md'}}" class="btn btn-default
githubEditButton" role="button"><i class="fa fa-github
fa-lg"></i> Edit me</a>
{% endif %}
```

To activate the development environment, add the [environment flag](http://jekyllrb.com/docs/configuration/) (<http://jekyllrb.com/docs/configuration/>) in your build command:


```
JEKYLL_ENV=development jekyll serve
```

The default environment is production.

Add reviewers as collaborators

If you want people to collaborate on your project so that their edits get committed to a branch on your project, you need to add them as collaborators. For your Github repo, click **Settings** and add the collaborators on the Collaborators tab using their Github usernames.

If you don't want to allow anyone to commit to your Github branch, don't add the reviewers as collaborators. When someone makes an edit, Github will fork the theme. The person's edit then will appear as a pull request to your repo. You can then choose to merge the change indicated in the pull or not.

Note: When you process pull requests, you have to accept everything or nothing. You can't pick and choose which changes you'll merge. Therefore you'll probably want to edit the branch you're planning to merge or ask the contributor to make some changes to the fork before processing the pull request.

Build arguments

Summary: When you have a single sourcing project, you use more advanced arguments when you're building or serving your Jekyll sites. These arguments specify a particular configuration file and may build on other configuration files.

How to build Jekyll sites

The normal way to build the Jekyll site is through the `build` command:

```
jekyll build
```

To build the site and view it in a live server so that Jekyll rebuilds that site each time you make a change, use the `serve` command:

```
jekyll serve
```

By default, the `_config.yml` in the root directory will be used, Jekyll will scan the current directory for files, and the folder `_site` will be used as the output. You can customize these build commands like this:

```
jekyll serve --config configs/config_writers.yml --destination  
/users/tjohnson/projects/exp-docs-builds/writer
```

Here the `configs/config_writers.yml` file is used instead of `_config.yml`. The destination directory is `../mydoc_writers`.

Shortcuts for the build arguments

If you don't want to enter the long Jekyll argument every time, with all your configuration details, you can create a shell script and then just run the script. This theme shows an example with the `mydoc_multibuild_web.sh` file in the root directory.

My preference is to add the scripts to profiles in iTerm. See [iTerm profiles \(page 153\)](#) for more details.

Stop a server

When you're done with the preview server, press **Ctrl+C** to exit out of it. If you exit iTerm or Terminal without shutting down the server, the next time you build your site, or if you build multiple sites with the same port, you may get a server-already-in-use message.

You can kill the server process using these commands:

```
ps aux | grep jekyll
```

Find the PID (for example, it looks like “22298”).

Then type `kill -9 22298` where “22298” is the PID.

To kill all Jekyll instances, use this:

```
kill -9 $(ps aux | grep '[j]ekyll' | awk '{print $2}')
```

I created a profile in iTerm that stores this command. Here's what the iTerm settings look like:

General Colors Text Window Terminal Session Keys Advanced

Basics

Name: Kill all Jekyll

Shortcut key: ^⌘

Tags: Example: linux, dark bg, tall window

Command

☒ Login shell

☐ Command:

Send text at start: kill -9 \$(ps aux | grep '[j]ekyll' | awk '{print \$2})

Working Directory

☐ Home directory

☐ Reuse previous session's directory

☒ Directory: /Users/tjohnson/projects/docs

☐ Advanced Configuration [Edit...](#)

URL Schemes

Schemes handled: Select URL Schemes...

Themes

Summary: You can choose between two different themes (one green, the other blue) for your projects. The theme CSS is stored in the CSS folder and configured in the configuration file for each project.

Theme options

You can choose a green or blue theme, or you can create your own. In the css folder, there are two theme files: theme-blue.css and theme-green.css. These files have the most common CSS elements extracted in their own CSS file. Just change the hex colors to the ones you want.

In the configuration file, specify the theme file you want the output to use — for example, `theme_file: theme-green.css`.

Theme differences

The differences between the themes is fairly minimal. The main navigation bar, sidebar, buttons, and heading colors change color. That's about it.

In a more sophisticated theming approach, you could use Sass files to generate rules based on options set in a data file, but I kept things simple here.

Link validation

Summary: Before deploying your published site, you want to ensure that you don't have any broken links. There are a few ways to check for broken links.

Why broken links are challenging for technical writers

One of the challenging aspects of technical writing is avoiding broken links in your output. Consider this example. You have three outputs, with different topics included for different audiences. The topics each have inline cross references pointing to the other topics, but since some of the topics aren't included for each audience, you risk having a broken link for the output that omits that topic.

Additionally, technical writers frequently manage large numbers of topics, and as they make updates, they rename titles, remove some topics, combine multiple topics into the same topic, and make other edits. When you're developing content, the pages and titles in your topics and navigation are in flux. You shift things around constantly trying to find the right organization, the right titles, and more.

During this time, if you have inline links that point to specific pages, how do you avoid broken links in your output?

Use the title checker

The theme has a file called `title-checker.html`. This file will iterate through all the pages listed in the sidebar navigation and top navigation, and compare the navigation titles against the page titles based on matching URLs. If there are inconsistencies in the titles, they get noted on the `title-checker.html` page.

To run the link checker, just build or serve your project, and go to `title-checker.html` in your browser (such as Chrome). If there are inconsistencies, they will be noted on the page.

Note that in order for the title-checker file to run correctly, it has to detect a match between the URL listed in the sidebar or top navigation with the URL for the page (based on the file name). If you have the wrong URL, it won't tell you if the page titles match. Therefore you should always click through all the topics in your navigation to make sure the URLs are accurate.

Generate a PDF

When you generate a PDF, Prince XML will print “page 0” for any cross references it can't find. This lets you know that a particular link is bad because the page is missing.

If you have links in your PDF that aren't references to other topics (maybe they're links to PDF file assets, or links within a navtab or collapsible section), then you must add a class of `noCrossRef` to the link to avoid having Prince write “page 0” for the link.

(Note that there are still some kinks I'm working out with this. You may find that links still say “page 0” even if they have the `noCrossRef` class.)

Use data references for all inline links

Instead of creating links to direct pages, use the data reference technique described in [Links \(page 98\)](#). With this method, the `urls.txt` file iterates through all the pages in your navigation and formats them into a YAML syntax.

Then you insert an inline link by referring to that YAML data. For example, the previous hyperlink is

```
{{site.data.mydoc.mydoc_urls.mydoc_hyperlinks.link}}
```

As you go through the link validation process, make sure you copy over the content from the generated `urls.txt` (in the Jekyll site output) and insert it into the `urls.yml` file in your `_data` folder.

Check page title consistency

Summary: The title checker page helps ensure that the titles in your pages match the titles in your TOC.

To make sure your page titles match the sidebar titles, there's a file called "title-checker.html." After your site builds, view this file in your browser. It will tell if you any of your page titles don't match up with your sidebar titles.

This utility isn't 100% comprehensive, though. If your sidebar has a URL that doesn't match any file name in your project, it won't be able to handle that URL. Therefore, when you do validity checks for the links on your site, click through each item in the sidebar to make sure the page loads.

Generating PDFs

Summary: You can generate a PDF from your Jekyll project. You do this by creating a web version of your project that is printer friendly. You then use utility called Prince to iterate through the pages and create a PDF from them. It works quite well and gives you complete control to customize the PDF output through CSS, including page directives and dynamic tags from Prince.

PDF overview

This process for creating a PDF relies on Prince XML to transform the HTML content into PDF. Prince costs about \$500 per license. That might seem like a lot, but if you're creating a PDF, you're probably working for a company that sells a product, so you likely have access to some resources.

The basic approach is to generate a list of all pages that need to be added to the PDF, and then add leverage Prince to package them up into a PDF.

It may seem like the setup is somewhat cumbersome, but it doesn't take long. Once you set it up, building a pdf is just a matter of running a couple of commands.

Also, creating a PDF this way gives you a lot more control and customization capabilities than with other methods for creating PDFs. If you know CSS, you can entirely customize the output.

Demo

You can see an example of the finished product here:

 PDF Download

1. Set up Prince

Download and install [Prince](http://www.princexml.com/doc/installing/) (<http://www.princexml.com/doc/installing/>).

You can install a fully functional trial version. The only difference is that the title page will have a small Prince PDF watermark.

2. Create a new configuration file for each of your PDF targets

The PDF configuration file will build on the settings in the regular configuration file but will have some additional fields. Here's the configuration file for the `config_designers.yml` file for this theme:

```
destination: ../doc_outputs/mydoc/designers-pdf
url: "http://127.0.0.1:4010"
baseurl: "/mydoc/designers-pdf"
port: 4010
output: pdf
print_title: Jekyll theme for documentation – designers
print_subtitle: version 4.0
output: pdf
defaults:
  -
    scope:
      path: ""
      type: "pages"
    values:
      layout: "page_print"
      comments: true
      search: true
```

Note: Although you're creating a PDF, you must still build an HTML web target before running Prince. Prince will pull from the HTML files and from the file-list for the TOC. Prince won't be able to find files if they simply have relative paths, such as `/sample.html`. They must have full URLs it can access — hence the `url` and `baseurl`.

Also note that the default page layout is `page_print`. This layout strips out all the sections that shouldn't appear in the print PDF, such as the sidebar and top navigation bar.

Finally, note that there's a `output: pdf` toggle in case you want to make some of your content unique to PDF output. For example, you could add conditional logic that checks whether `site.output` is `pdf` or `web`. If it's `pdf`, then include information only for the PDF, and so on.

In the configuration file, customize the values for the `print_title` and `print_subtitle` that you want. These will appear on the title page of the PDF.

3. Make sure your `sidebar_doc.yml` file has a `titlepage.html` and `tocpage.html`

There are two template pages in the root directory that are critical to the PDF:

- `titlepage.html`
- `tocpage.html`

These pages should appear in your sidebar YML file (in this theme, `sidebar_doc.yml`):

```
- title:
  audience: writers, designers
  platform: all
  product: all
  version: all
  output: pdf
  type: frontmatter
  items:
  - title:
    url: /titlepage.html
    audience: writers, designers
    platform: all
    product: all
    version: all
    output: pdf
    type: frontmatter
  - title:
    url: /tocpage.html
    audience: writers, designers
    platform: all
    product: all
    version: all
    output: pdf
    type: frontmatter
```

Leave these pages here in your sidebar. (The `output: pdf` property means they won't appear in your online TOC because the conditional logic of the `sidebar.html` checks whether `web` is equal to `pdf` or not before including the item in the web version of the content.)

The code in the `tocpage.html` is nearly identical to that of the `sidebar.html` page except that it includes the `site` and `baseurl` for the URLs. This is essential for Prince to create the page numbers correctly with cross references.

There's another file (in the root directory of the theme) that is critical to the PDF generation process: `prince-file-list.txt`. This file simply iterates through the items in your sidebar and creates a list of links. Prince will consume the list of links from `prince-file-list.txt` and create a running PDF that contains all of the pages listed, with appropriate cross references and styling for them all.

Note: If you have any files that you do not want to appear in the PDF, add `output: web` (rather than `output: pdf`) in the list of attributes in your sidebar. The `prince-file-list.txt` file that loops through the `mydoc_sidebar.yml` file to grab the URLs of each page that should appear in the PDF will skip over any items that do not list `output: pdf` in the item attributes. For example, you might not want your tag archives to appear in the PDF, but you probably will want to list them in the online help navigation.

4. Customize your headers and footers

Open up the `css/printstyles.css` file and customize what you want for the headers and footers. At the very least, customize the email address (`youremail@domain.com`) that appears in the bottom left.

Exactly how the print styling works here is pretty cool. You don't need to understand the rest of the content in this section unless you want to customize your PDFs to look different from what I've configured.

This style creates a page reference for a link:

```
a[href]::after {
  content: " (page " target-counter(attr(href), page) ")"
}
```

You don't want cross references for any link that doesn't reference another page, so this style specifies that the content after should be blank:

```
a[href*="mailto"]::after, a[data-toggle="tooltip"]::after,
a[href].noCrossRef::after {
  content: "";
}
```

✓ **Tip:** If you have a link to a file download, or some other link that shouldn't have a cross reference (such as link used in JavaScript for navtabs or collapsible sections, for example, add `\noCrossRef` as a class to the link to avoid having it say "page 0" in the cross reference.

This style specifies that following links to web resources, the URL should be inserted instead of the page number:

```
a[href^="http:"]::after, a[href^="https:"]::after {  
  content: " (" attr(href) ")";  
}
```

This style sets the page margins:

```
@page {  
  margin: 60pt 90pt 60pt 90pt;  
  font-family: sans-serif;  
  font-style:none;  
  color: gray;  
}
```

To set a specific style property for a particular page, you have to name the page. This allows Prince to identify the page.

First you add frontmatter to the page that specifies the type. For the `titlepage.html`, here's the frontmatter:

```
---  
type: title  
---
```

For the `tocpage`, here's the frontmatter:

```
---  
type: frontmatter  
---
```

For the `index.html` page, we have this type tag (among others):

```
---  
type: first_page  
---
```

The `default_print.html` layout will change the class of the `body` element based on the `type` value in the page's frontmatter:

```
<body class="{% if page.type == "title"%}title{% elsif  
page.type == "frontmatter" %}frontmatter{% elsif page.type ==  
"first_page" %}first_page{% endif %} print">
```

Now in the `css/printstyles.css` file, you can assign a page name based on a specific class:

```
body.title { page: title }
```

This means that for content inside of `body class="title"`, we can style this page in our stylesheet using `@page title`.

Here's how that title page is styled:

```
@page title {  
  @top-left {  
    content: " ";  
  }  
  @top-right {  
    content: " "  
  }  
  @bottom-right {  
    content: " ";  
  }  
  @bottom-left {  
    content: " ";  
  }  
}
```

As you can see, we don't have any header or footer content, because it's the title page.

For the `tocpage.html`, which has the `type: frontmatter`, this is specified in the stylesheet:

```
body.frontmatter { page: frontmatter }
body.frontmatter {counter-reset: page 1}

@page frontmatter {
  @top-left {
    content: prince-script(guideName);
  }
  @top-right {
    content: prince-script(datestamp);
  }
  @bottom-right {
    content: counter(page, lower-roman);
  }
  @bottom-left {
    content: "youremail@domain.com"; }
}
```

With `counter(page, lower-roman)` , we reset the page count to 1 so that the title page doesn't start the count. Then we also add some header and footer info. The page numbers start counting in lower-roman numerals.

Finally, for the first page (which doesn't have a specific name), we restart the counting to 1 again and this time use regular numbers.

```
body.first_page {counter-reset: page 1}

h1 { string-set: doctitle content() }

@page {
  @top-left {
    content: string(doctitle);
    font-size: 11px;
    font-style: italic;
  }
  @top-right {
    content: prince-script(datestamp);
    font-size: 11px;
  }

  @bottom-right {
    content: "Page " counter(page);
    font-size: 11px;
  }
  @bottom-left {
    content: prince-script(guideName);
    font-size: 11px;
  }
}
```

You'll see some other items in there such as `prince-script`. This means we're using JavaScript to run some functions to dynamically generate that content. These JavaScript functions are located in the `_includes/head_print.html`:

```
<script>
  Prince.addScriptFunc("datestamp", function() {
    return "PDF last generated: March 07, 2016";
  });
</script>

<script>
  Prince.addScriptFunc("guideName", function() {
    return "Jekyll theme for documentation – writers User
Guide";
  });
</script>
```

There are a couple of Prince functions that are default functions from Prince. This gets the heading title of the page:


```
content: string(doctype);
```

This gets the current page:

```
content: "Page " counter(page);
```

Because the theme uses JavaScript in the CSS, you have to add the `--javascript` tag in the Prince command (detailed later on this page).

5. Customize the PDF script

Open the `mydoc_1_multiserve_pdf.sh` file in the root directory and customize it for your specific configuration files.

```
echo 'Killing all Jekyll instances' kill -9 $(ps aux | grep '[j]ekyll' | awk '{print $2}')
clear

echo "Building PDF-friendly HTML site for Mydoc Writers ..." jekyll serve -detach
-config configs/mydoc/config_writers.yml,configs/mydoc/config_writers_pdf.yml
echo "done"

echo "Building PDF-friendly HTML site for Mydoc Designers ..." jekyll serve
-detach -config configs/mydoc/config_designers.yml,configs/mydoc/
config_designers_pdf.yml echo "done"

echo "All done serving up the PDF-friendly sites. Now let's generate the PDF files
from these sites." echo "Now run . mydoc_2_multibuild_pdf.sh"
```

Note that the first part kills all Jekyll instances. This way you won't try to server Jekyll at a port that is already occupied.

The `jekyll serve` command serves up the HTML-friendly PDF configurations for our two projects. This web version is where Prince will go to get its content.

6. Configure the Prince scripts

Open up `mydoc_2_multibuild_pdf.sh` and look at the Prince commands:

```
# Doc Writers
echo "Building the Mydoc Writers PDF ..."
prince --javascript --input-list=../doc_outputs/mydoc/
writers-pdf/prince-file-list.txt -o mydoc/files/
mydoc_writers_pdf.pdf;
echo "done"

# Doc Designers
echo "Building Mydoc Designers PDF ..."
prince --javascript --input-list=../doc_outputs/mydoc/
designers-pdf/prince-file-list.txt -o mydoc/files/
mydoc_designers_pdf.pdf;
echo "done"

echo "All done building the PDFs!"
echo "Now build the web outputs: . mydoc_3_multibuild_web.sh"
```

This script issues a command to the Prince utility. JavaScript is enabled (`--javascript`), and we tell it exactly where to find the list of files (`--input-list`) — just point to the `prince-file-list.txt` file. Then we tell it where and what to output (`-o`).

Make sure that the path to the `prince-file-list.txt` is correct. For the output directory, I like to output the PDF file into my project's source (into the `files` folder). Then when I build the web output, the PDF is included and something I can refer to.

7. Add a download button for the PDF

You can add a download button for your PDF using some Bootstrap button code:

```
<a target="_blank" class="noCrossRef" href="files/
mydoc_writers_pdf.pdf"><button type="button" class="btn
btn-default" aria-label="Left Align"><span class="glyphicon
glyphicon-download-alt" aria-hidden="true"></span> PDF
Download</button></a>
```

Here's what that looks like:



The `{{site.pdf_file_name}}` `{% raw %}` is set in the configuration file.

{{site.data.alerts.note}} If you don't like the style of the PDFs, just adjust the styles in the `printstyles.css` file.{{site.data.alerts.end}}

JavaScript conflicts

If you have JavaScript on any of your pages, Prince will note errors in Terminal like this:

```
error: TypeError: value is not an object
```

However, the PDF will still build.

You need to conditionalize out any JavaScript from your PDF web output before building your PDFs. Make sure that the PDF configuration files have the `output: pdf` property.

Then surround the JavaScript with conditional tags like this:

```
{% raw %}  
{% unless site.output == "pdf" %} javascript content here ... {% endunless %}
```

For more detail about using `unless` in conditional logic, see [Conditional logic \(page 52\)](#). What this code means is “run this code unless this value is the case.”

Overriding Bootstrap Print Styles

The theme relies on Bootstrap's CSS for styling. However, for print media, Bootstrap applies the following style:

```
@media  
print{*,:after,:before{color:#000!important;text-shadow:none!important;background:0  
0!important;-webkit-box-shadow:none!important;box-shadow:none!important}}
```

This is minified, but basically the `*` (asterisk) means select all, and applied the color `#000` (black). As a result, the Bootstrap style strips out all color from the PDF (for Bootstrap elements).

This is problematic for code snippets that have syntax highlighting. I decided to remove this de-coloring from the print output. I commented out the Bootstrap style:

```
@media  
print{*,:after,:before{/*color:#000!important;*/text-shadow:none!important;*/backgro  
0!important*/;-webkit-box-shadow:none!important;box-shadow:none!important}
```

If you update Bootstrap, make sure you make this edit. (Sorry, admittedly I couldn't figure out how to simply overwrite the `*` selector with a later style.)

I did, however, remove the color from the alerts and lighten the background shading for `pre` elements. The `printstyles.css` has this setting.

Excluding files

Summary: By default, all the files in your Jekyll project are included in the output (this differs from DITA projects, which don't include files unless noted on the map). If you're single sourcing, you'll need to exclude the files that shouldn't be included in the output. The sidebar doesn't control inclusion or exclusion.

About exclusion

By default, all files in your project are included in your output (regardless of whether they're listed in the sidebar_doc.yml file or not). To exclude files, note them in the `exclude` section in the configuration file. Here's a sample:

```
exclude:
  - mydoc_writers_*
  - bower_components
  - Gemfile
```

If you have different outputs for your site, you'll want to customize the exclude sections in your various configuration files.

Exclude strategies

Here's the process I recommend. Put all files in the root directory of your project. Suppose one project's name is alpha and the other is beta. Then name each file as follows:

- alpha_sample.html
- beta_sample.html

In your exclude list for your beta project, specify it as follows:

```
exclude:
  - alpha_*
```

In your exclude list for your alpha project, specify it as follows:

```
exclude:  
- beta_*
```

If you have more sophisticated exclusion, add another level to your file names. For example, if you have different programming languages you want to filter by, add this:

- alpha_java_sample.html
- alpha_cpp_sample.html

Then you exclude files for your Alpha C++ project as follows:

```
exclude:  
- alpha_java_*  
- beta_*
```

And you exclude files for your Alpha Java project as follows:

```
exclude:  
- alpha_cpp_*  
- alpha_beta_*
```

When you exclude folders, include the trailing slash at the end of the folder name:

```
exclude:  
- images/alpha/
```

There isn't a way to automatically exclude anything. By default, everything is included unless you explicitly list it under the exclude section.

Excluding draft content

If you're working on a draft, put it inside the `_drafts` folder or add `published: false` in the frontmatter. The `_drafts` folder is excluded by default, so you don't have to specify it in your exclude list.

Limitations

What if a file should appear in two projects but not the third? This can get tricky. For some files, rather than using a wildcard, you may need to manually specify the entire filename that you're excluding instead of excluding it by way of a wildcard pattern.

Help APIs and UI tooltips

Summary: You can loop through files and generate a JSON file that developers can consume like a help API. Developers can pull in values from the JSON into interface elements, styling them as popovers for user interface text, for example. The beauty of this method is that the UI text remains in the help system (or at least in a single JSON file delivered to the dev team) and isn't hard-coded into the UI.

Full code demo of content API

You can create a help API that developers can use to pull in content.

For the full code demo, see the notes in the [tooltip demo](#).

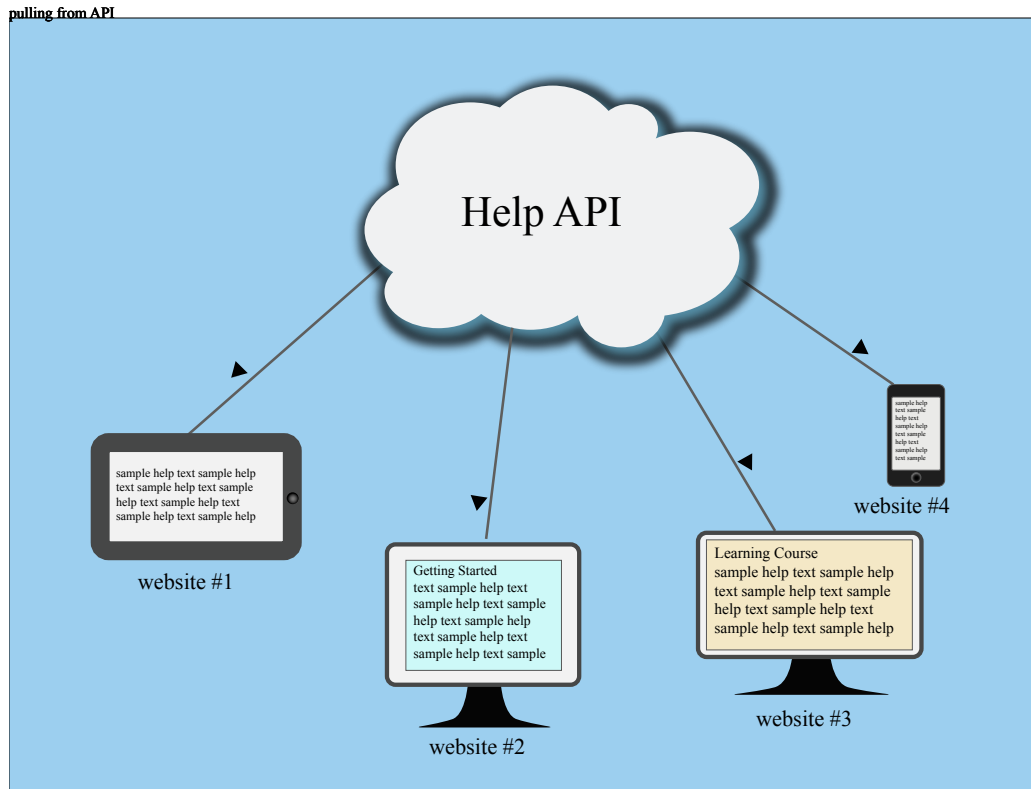
In this demo, the popovers pull in and display content from the information in a [mydoc_tooltips_source.json \(page 0\)](#) file located in the same directory.

Instead of placing the JSON source in the same directory, you could also host the JSON file on another site.

Additionally, instead of tooltip popovers, you could also print content directly to the page. Basically, whatever you can stuff into a JSON file, developers can integrate it onto a page.

Diagram overview

Here's a diagram showing the basic idea of the help API:



Is this really an API? Well, sort of. The help content is pushed out into a JSON file that other websites and applications can easily consume. The endpoints don't deliver different data based on parameters added to a URL. But the overall concept is similar to an API: you have a client requesting resources from a server.

Note that in this scenario, the help is openly accessible on the web. If you have a private system, it's more complicated.

To deliver help this way using Jekyll, follow the steps in each of the sections below.

1. Create a “collection” for the help content

A collection is another content type that extends Jekyll beyond the use of pages and posts. Call the collection “tooltips.”

Add the following information to your configuration file to declare your collection:

```
collections:
  tooltips:
    output: false
```

In your Jekyll project's root directory, create a new folder called “_tooltips” and put every page that you want to be part of that tooltips collection inside that folder.

In Jekyll, folders that begin with an underscore (“_”) aren't included in the output. However, in the collection information that you add to your configuration file, if you change `output` to `true`, the tooltips folder will appear in the output, and each page inside tooltips will be generated. You most likely don't want this for tooltips (you just want the JSON file), so make the `output` setting `false`.

2. Create tooltip definitions in a YAML file

Inside `_data > mydoc` create a YAML file called something like `mydoc_definitions.yml`. Add the definitions for each of your tooltips here like this:

```
basketball: "Basketball is a sport involving two teams of five
players each competing to put a ball through a small circular
rim 10 feet above the ground. Basketball requires players to
be in top physical condition, since they spend most of the
game running back and forth along a 94-foot-long floor."
```

The definition of basketball is stored this data file so that you can re-use it in other parts of the help as well. You'll likely want the definition to appear not only in the tooltip in the UI, but also in the regular documentation as well.

3. Create pages in your collection

Create pages inside your new tooltips collection (that is, inside the `_tooltips` folder). Each page needs to have a unique `id` in the frontmatter as well as a `product`. Then reference the definition you created in the `mydoc_definitions.yml` file.

Here's an example:

```
---
id: basketball
product: mydoc
---

{{site.data.mydoc.mydoc_definitions.basketball}}
```

You need to create a separate page for each tooltip you want to deliver.

The product attribute is required in the frontmatter to distinguish the tooltips produced here from the tooltips for other products in the same `_tooltips` folder. When creating the JSON file, Jekyll will iterate through all the pages inside `_tooltips`, regardless of any subfolders included here.

4. Create a JSON file that loops through your collection pages

Now it's time to create a JSON file with Liquid code that iterates through our tooltip collection and grabs the information from each tooltip file.

Inside your project's pages directory (e.g., `mydoc`), add a file called `"mydoc_tooltips_source.json"` (You can use whatever name you want.) Add the following to your JSON file:

```
---
layout: none
search: exclude
---
{
  "entries":
  [
    {% for page in site.tooltips %}
    {% if page.product == "mydoc" %}
    {
      "id"      : "{{ page.id }}",
      "body": "{{ page.content | strip_newlines | replace: '\',
        '\\\\' | replace: '\"', '\\\"' }}"
    } {% unless forloop.last %},{% endunless %}
    {% endif %}
    {% endfor %}
  ]
}
```

Change “mydoc” to the product name you used in each of the tooltip files. The template here will only include content in the JSON file if it meets the product attribute requirements. We need this `if` statement to prevent tooltips from other products from being included in the JSON file.

This code will loop through all pages in the tooltips collection and insert the `id` and `body` into key-value pairs for the JSON code. Here’s an example of what that looks like after it’s processed by Jekyll in the site build:

```
{
  "entries": [
    {
      "id": "baseball",
      "body": "Baseball is considered America's pasttime sport, though that may be more of a historical term than a current one. There's a lot more excitement about football than baseball. A baseball game is somewhat of a snooze to watch, for the most part."
    },
    {
      "id": "basketball",
      "body": "Basketball is a sport involving two teams of five players each competing to put a ball through a small circular rim 10 feet above the ground. Basketball requires players to be in top physical condition, since they spend most of the game running back and forth along a 94-foot-long floor."
    },
    {
      "id": "football",
      "body": "No doubt the most fun sport to watch, football also manages to accrue the most injuries with the players. From concussions to blown knees, football players have short sport lives."
    },
    {
      "id": "soccer",
      "body": "If there's one sport that dominates the world landscape, it's soccer. However, US soccer fans are few and far between. Apart from the popularity of soccer during the World Cup, most people don't even know the name of the professional soccer organization in their area."
    }
  ]
}
```

You can also view the same JSON file here: [mydoc_tooltips_source.json](#).

You can add different fields depending on how you want the JSON to be structured. Here we just have to fields: `id` and `body`. And the JSON is looking just in the tooltips collection that we created.

✓ **Tip:** Check out [Google's style guide for JSON](https://google-styleguide.googlecode.com/svn/trunk/jsonstyleguide.xml) (<https://google-styleguide.googlecode.com/svn/trunk/jsonstyleguide.xml>). These best practices can help you keep your JSON file valid.

You can store your `mydoc_tooltips_source.json` file anywhere you want, but to me it make sense to store it inside a `tooltips` folder for your specific project. This way it will automatically be excluded from other projects that are already excluding that project directory.

Note that you can create different JSON files that specialize in different content. For example, suppose you have some getting started information. You could put that into a different JSON file. Using the same structure, you might add an `if` tag that checks whether the page has frontmatter that says `type: getting_started` or something. Or you could put the content into separate collection entirely (different from `tooltips`).

By chunking up your JSON files, you can provide a quicker lookup, though I'm not sure how big the JSON file can be before you experience any latency with the jQuery lookup.

5. Build your site and look for the JSON file

When you build your site, Jekyll will iterate through every page in your `_tooltips` folder and put the page id and body into this format. In the output, look for the JSON file in the `mydoc/tooltips/mydoc_tooltips_source.json` file. You'll see that Jekyll has populated it with content. This is because of the triple hyphen lines in the JSON file — this instructs Jekyll to process the file.

6. Allow CORS access to your help if stored on a remote server

You can simply deliver the JSON file to devs to add to the project. But if you have the option, it's best to keep the JSON file stored in your own help system. Assuming you have the ability to update your content on the fly, this will give you completely control over the tooltips without being tied to a specific release window.

When people make calls to your site *from other domains*, you must allow them access to get the content. To do this, you have to enable something called CORS (cross origin resource sharing) within the server where your help resides.

In other words, people are going to be executing calls to reach into your site and grab your content. Just like the door on your house, you have to unlock it so people can get in. Enabling CORS is unlocking it.

How you enable CORS depends on the type of server.

If your server setup allows htaccess files to override general server permissions, create an .htaccess file and add the following:

```
Header set Access-Control-Allow-Origin "*"
```

Store this in the same directory as your project. This is what I've done in a directory on my web host (bluehost.com). Inside <http://idratherbetellingstories.com/wp-content/apidemos/>, I uploaded a file called ".htaccess" with the preceding code. You can view it [here](http://idratherbetellingstories.com/wp-content/apidemos/mydoc_tooltips_source.json) (http://idratherbetellingstories.com/wp-content/apidemos/mydoc_tooltips_source.json).

After I uploaded it, I renamed it to .htaccess, right-clicked the file and set the permissions to 774.

To test whether your server permissions are set correctly, open a terminal and run the following curl command pointing to your tooltips.json file:

```
curl -I http://idratherbetellingstories.com/wp-content/apidemos/mydoc_tooltips_source.json
```

The `-I` command tells cURL to return the request header only.

If the server permissions are set correctly, you should see the following line somewhere in the response:

```
Access-Control-Allow-Origin: *
```

If you don't see this response, CORS isn't allowed for the file.

If you have an AWS S3 bucket, you can supposedly add a CORS configuration to the bucket permissions. Log into AWS S3 and click your bucket. On the right, in the Permissions section, click **Add CORS Configuration**. In that space, add the following policy:

```
<CORSConfiguration>
  <CORSRule>
    <AllowedOrigin>*</AllowedOrigin>
    <AllowedMethod>GET</AllowedMethod>
  </CORSRule>
</CORSConfiguration>
```

Although this should work, in my experiment it doesn't. And I'm not sure why...

In other server setups, you may need to edit one of your Apache configuration files. See [Enable CORS \(http://enable-cors.org/server.html\)](http://enable-cors.org/server.html) or search online for ways to allow CORS for your server.

If you don't have CORS enabled, users will see a CORS error/warning message in the console of the page making the request.

☑ **Tip:** If enabling CORS is problematic, you could always just send developers the tooltips.json file and ask them to place it on their own server.

7. Explain how developers can access the help

Developers can access the help using the `.get` method from jQuery, among other methods. Here's an example of how to get a page with the ID of `basketball` :

```
<script type="text/javascript">
$(document).ready(function(){

var url = "mydoc_tooltips_source.json";

$.get( url, function( data ) {

    $.each(data.entries, function(i, page) {
        if (page.id == "basketball") {
            $( "#basketball" ).attr(
"data-content", page.body );
        }
    });
});

});
</script>
```

View the [Tooltip Demo](#) for a demo.

The `url` here is relative, but you could equally point it to an absolute path on a remote host assuming CORS is enabled on the host.

The `each` method looks through all the JSON content to find the item whose `page.id` is equal to `basketball`. It then looks for an element on the page named `#basketball` and adds a `data-content` attribute to that element.

⚠ Warning: Note: Make sure your JSON file is valid. Otherwise, this method won't work. I use the [JSON Formatter extension for Chrome](#)

(<https://chrome.google.com/webstore/detail/json-formatter/bcjindcccaagfpajjjmafapmmgkkhgoa?hl=en>)

. When I go to the `tooltips.json` page in my browser, the JSON content — if valid — is nicely formatted (and includes some color coding). If the file isn't valid, it's not formatted and there isn't any color. You can also check the JSON formatting using [JSON Formatter and Validator](#) (<http://jsonformatter.curiousconcept.com/>). If your JSON file isn't valid, identify the problem area using the validator and troubleshoot the file causing issues. It's usually due to some code that isn't escaping correctly.

Why `data-content` ? Well, in this case, I'm using [Bootstrap popovers](#) (<http://getbootstrap.com/javascript/#popovers>) to display the tooltip content. The `data-content` attribute is how Bootstrap injects popovers.

Here's the section on the page where the popover is inserted:

```
<p>Basketball <span class="glyphicon glyphicon-info-sign"
id="basketball" data-toggle="popover"></span></p>
```

Notice that I just have `id="basketball"` added to this popover element. Developers merely need to add a unique ID to each tooltip they want to pull in the help content. Either you tell developers the unique ID they should add, or ask them what IDs they added (or just tell them to use an ID that matches the field's name).

In order to use jQuery and Bootstrap, you'll need to add the appropriate references in the head tags of your page:

```
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/
bootstrap/3.3.2/css/bootstrap.min.css">
<script src="https://ajax.googleapis.com/ajax/libs/jquery/
1.11.2/jquery.min.js"></script>
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.2/
js/bootstrap.min.js"></script>

<script type="text/javascript">
$(document).ready(function(){
    $('[data-toggle="popover"]').popover({
        placement : 'right',
        trigger: 'hover',
        html: true
    });
});
```

Again, see the [Tooltip Demo](#) for a demo of the full code.

Note that even though you reference a Bootstrap JS script, Bootstrap's popovers require you to initialize them using the above code as well — they aren't turned on by default.

View the source code of the [Tooltip Demo](#) for the full comments.

8. Create easy links to embed the help in your help site

You might also want to insert the same content into different parts of your help site. For example, if you have tooltips providing definitions for fields, you'll probably want to create a page in your help that lists those same definitions.

You could use the same method developers use to pull help content into their applications. But it will probably be easier to simply use Jekyll's tags for doing it.

Here's how you would reuse the content:

```
<h2>Reuse Demo</h2>

<table>
<thead>
<tr>
<th>Sport</th>
<th>Comments</th>
</tr>
</thead>
<tbody>

<tr>
<td>Basketball</td>
<td>{{site.data.mydoc.mydoc_definitions.basketball}}</td>
</tr>

<tr>
<td>Baseball</td>
<td>{{site.data.mydoc.mydoc_definitions.baseball}}</td>
</tr>

<tr>
<td>Football</td>
<td>{{site.data.mydoc.mydoc_definitions.football}}</td>
</tr>

<tr>
<td>Soccer</td>
<td>{{site.data.mydoc.mydoc_definitions.soccer}}</td>
</tr>
</tbody>
</table>
```

And here's the code:

Reuse Demo

SPORT	COMMENTS
Basketball	Basketball is a sport involving two teams of five players each competing to put a ball through a small circular rim 10 feet above the ground. Basketball requires players to be in top physical condition, since they spend most of the game running back and forth along a 94-foot-long floor.
Baseball	Baseball is considered America's pasttime sport, though that may be more of a historical term than a current one. There's a lot more excitement about football than baseball. A baseball game is somewhat of a snooze to watch, for the most part.
Football	No doubt the most fun sport to watch, football also manages to accrue the most injuries with the players. From concussions to blown knees, football players have short sport lives.
Soccer	If there's one sport that dominates the world landscape, it's soccer. However, US soccer fans are few and far between. Apart from the popularity of soccer during the World Cup, most people don't even know the name of the professional soccer organization in their area.

Now you have both documentation and UI tooltips generated from the same definitions file.

Search configuration

Summary: The search feature uses JavaScript to look for keyword matches in a JSON file. The results show instant matches, but it doesn't provide a search results page like Google. Also, sometimes invalid formatting can break the JSON file.

About search

The search is configured through the `search.json` file in the root directory. Take a look at that code if you want to change what fields are included.

The search is a simple search that looks at content in pages. It looks at titles, summaries, keywords, tags, and bodies.

However, the search doesn't work like google — you can't hit return and see a list of results on the search results page, with the keywords in bold. Instead, this search shows a list of page titles that contain keyword matches. It's fast, but simple.

Excluding pages from search

By default, every page is included in the search. Depending on the type of content you're including, you may find that some pages will break the JSON formatting. If that happens, then the search will no longer work.

If you want to exclude a page from search add `search: exclude` in the frontmatter.

Troubleshooting search

You should exclude any files from search that you don't want appearing in the search results. For example, if you have a `tooltips.json` file or `prince-file-list.txt`, don't include it, as the formatting will break the JSON format.

If any formatting in the `search.json` file is invalid (in the build), search won't work. You'll know that search isn't working if no results appear when you start typing in the search box.

If this happens, go directly to the search.json file in your browser, and then copy the content. Go to a [JSON validator \(http://jsonlint.com/\)](http://jsonlint.com/) and paste in the content. Look for the line causing trouble. Edit the file to either exclude it from search or fix the syntax so that it doesn't invalidate the JSON.

The search.json file already tries to strip out content that would otherwise make the JSON invalid:

```
"body": "{ { page.content | strip_html | strip_newlines |  
replace: '\\', '\\\\' | replace: '\"', '\\\"' | replace: '^t',  
'    ' } }",
```

Note that the last replace, `| replace: '^t', ' '`, looks for any tab character and replaces it with four spaces. Yes, an innocent little tab character invalidates JSON. Geez. If you run into other problematic formatting, you can use regex expressions to find and replace the content. See [Regular Expressions \(http://www.ultraedit.com/support/tutorials_power_tips/ultraedit/regular_expressions.html\)](http://www.ultraedit.com/support/tutorials_power_tips/ultraedit/regular_expressions.html) for details on finding and replacing code.

It's possible that the formatting may not account for all the scenarios that would invalidate the JSON. (Sometimes it's an extra comma after the last item that makes it invalid.)

iTerm profiles

Summary: Set up profiles in iTerm to facilitate the build process with just a few clicks. This can make it a lot easier to quickly build multiple outputs.

About iTerm profiles

When you're working with tech docs, a lot of times you're single sourcing multiple outputs. It can be a hassle to fire up each one of these outputs using the build files containing the shell scripts. Instead, it's easier to configure iTerm with profiles that initiate the scripts.

Set up profiles

1. Open iTerm and go to **Profiles > Open Profiles**.
2. Click **Edit Profiles**.
3. Click the + button in the lower-left corner to create a new profile.
4. In the **Name** field, type a name describing the output, such as `Doc theme -- designers`.
5. In the **Send text at start** field, type the command for the build script, such as this:

```
jeekyll serve --config configs/config_designers.yml
```

 Leave the Login shell option selected.
6. In the Working Directory section, select **Directory** and enter the directory for your project, such as `/Users/tjohnson/projects/exp-docs`.
7. Close the profiles panel.

Here's an example:

The screenshot shows the 'General' tab of the iTerm profile configuration window. The tabs at the top are: General (selected), Colors, Text, Window, Terminal, Session, Keys, and Advanced. The 'Basics' section contains: Name: 'Doc theme -- designers', Shortcut key: '^⌘' (Command), and Tags: 'Example: linux, dark bg, tall window'. The 'Command' section has radio buttons for 'Login shell' (selected) and 'Command:', with a text field below it containing 'jekyll serve --config configs/config_designers.yml'. The 'Working Directory' section has radio buttons for 'Home directory', 'Reuse previous session's directory', 'Directory:' (selected), and 'Advanced Configuration' (with an 'Edit...' button). The 'Directory:' text field contains '/Users/tjohnson/projects/documentation-theme-jekyll'. The 'URL Schemes' section has a 'Schemes handled:' dropdown menu set to 'Select URL Schemes...'.

Launching a profile

1. In iTerm, make sure the Toolbar is shown. Go to **View > Toggle Toolbar**.
2. Click the **New** button and select your profile.

☑ **Tip:** When you're done with the session, make sure to click ****Ctrl+C****.

Pushing builds to server

Summary: You can push your build to AWS using commands from the command line. By including your copy commands in commands, you can package all of the build and deploy process into executable scripts.

Pushing to AWS S3

If you have the AWS Command Line Interface installed and are pushing your builds to AWS, the following commands show how you can build and push to an AWS location from the command line:

```
#aws s3 cp ~/users/tjohnson/projects/exp-docs-builds/  
mydoc_writers s3://[aws path]exp-docs/mydoc_writers --recursive  
  
#aws s3 cp ~/users/tjohnson/projects/exp-docs-builds/  
mydoc_designers s3://[aws path]/exp-docs/mydoc_designers  
--recursive
```

The first path is the local location; the second path is the destination.

Pushing to a regular server

If you're pushing to a regular server that you can ssh into, you can use `scp` commands to push your build. Here's an example:

```
scp -r /users/tjohnson/projects/exp-docs-builds/mydoc_writers  
name@domain:/var/www/html/exp-docs/mydoc_writers
```

Similar to the above, the first path is the local location; the second path is the destination.

Getting around the password prompts in SCP

You can publish your docs via SSH through a Terminal window or more likely, via a shell script that you simply execute as part of the publishing process. However, you will be prompted for your password with each file transfer unless you configure passwordless SSH.

The basic process for setting up password less SSH is to create a key on your own machine that you also transfer to the remote machine. When you use the SCP command, the remote machine checks that you have the authorized key and allows access without a password prompt.

To remove the password prompts when connecting to servers via SSH:

1. On your local machine, go to your `.ssh` directory:

```
cd ~/.ssh
```

Note that any directory that starts with a dot, like `.ssh`, is hidden. You can view hidden folders by enabling them on your Mac. See [this help topic](http://ianlunn.co.uk/articles/quickly-showhide-hidden-files-mac-os-x-mavericks/) (<http://ianlunn.co.uk/articles/quickly-showhide-hidden-files-mac-os-x-mavericks/>). Additionally, when you look at the files in a directory, use `ls -a` instead of just `ls` to view the hidden files.

If you don't have an `.ssh` directory, create one with `mkdir .ssh`.

Create a new key inside your `.ssh` directory:

```
ssh-keygen -t rsa
```

Press Enter. When prompted about "Enter file in which to save the key ...", press Enter again.

This will create a file called `id_rsa.pub` (the key) and `id_rsa` (your identification) in this `.ssh` folder.

When prompted for a passphrase for the key, just leave it empty and press Enter twice. You should see something like this:

tjohnson-mbpr13:ssh tjohnson\$ ssh-keygen -t rsa Generating public/private rsa key pair. Enter passphrase (empty for no passphrase): Enter same passphrase again: Your identification has been saved in /Users/tjohnson/.ssh/id_rsa. Your public key has been saved in /Users/tjohnson/.ssh/id_rsa.pub. The key fingerprint is: 9a:8f:b5:495:39:78:t5:dc:19:d6:29:66:02:e8:02:a0 tjohnson@tjohnson-mbpr13.local The key's randomart image is:

```

+--[ RSA 2048 ]-----+
| .                      |
|+                      |
|E                      |
|o.  .                  |
|.. = o S               |
|.&^  + 7i = o          |
|      = B .            |
|      o O +            |
|      *.o              |
+-----+

```

Icon As you can see, RSA draws a picture for you. Take a screenshot of the picture, print it out, and put it up on your fridge.

Open up another terminal window (in iTerm, open another tab), and SSH in to your remote server:

```
ssh <your_username>@remoteserver.com
```

Change <your_username> to your actual username, such as tjohnson.

When you connect, you'll be prompted for your password.

When you connect, by default you are routed to the personal folder on the directory. For example, /home/remoteserver/<your_username> . To see this directory, type `pwd` .

Create a new directory called .ssh on remoteserver.com server inside the /home/remoteserver/<your_username> directory.

```
mkdir -p .ssh
```

You can ensure that it's there with this command:

```
ls -a
```

Without the `-a`, the hidden directory won't be shown.

Open another Terminal window and browse to `/Users//.ssh` on your local machine.

```
cd ~/.ssh
```

Copy the `id_rsa.pub` from the `/.ssh` directory on your local machine to the `/home/remoteserver//.ssh` directory on the `remoteserver` server:

```
scp id_rsa.pub <your-username>@yourserver.com:/home/remoteserver/<your-username>/.ssh
```

Switch back into your terminal window that is connected to `remoteserver.com`, change directory to the `.ssh` directory, and rename the file from `id_rsa.pub` to `authorized_keys` (without any file extension):

```
mv id_rsa.pub authorized_keys
```

Change the file permissions to 700:

```
chmod 700 authorized_keys
```

Now you should be able to SSH onto `remoteserver` without any password prompts.

Open another terminal (which is not already SSH'd into `remoteserver.com`) and try the following:

```
ssh <your_username>@remoteserver.com
```

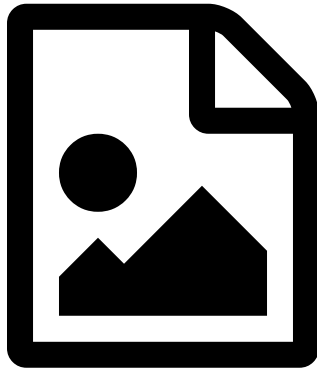
If successful, you shouldn't be prompted for a password.

Now that you can connect without password prompts, you can use the `scp` scripts to transfer files to the server without password prompts. For example:

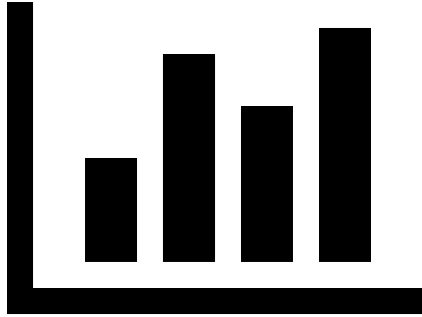
```
scp -r ../doc_outputs/mydoc/writers  
<your-username>@remoteserver:/var/www/html/
```

Knowledge-base layout

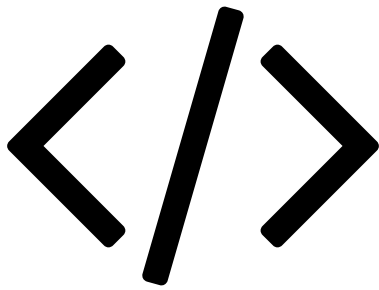
Summary: This shows a sample layout for a knowledge base. Each square could link to a tag archive page. In this example, font icons from Font Awesome are enlarged to a large size. You can also add captions below each icon.



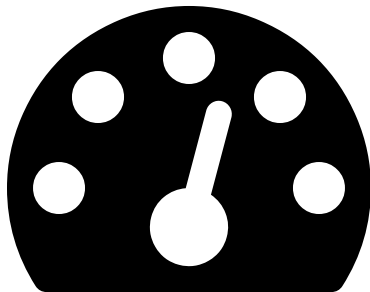
Getting Started



Navigation



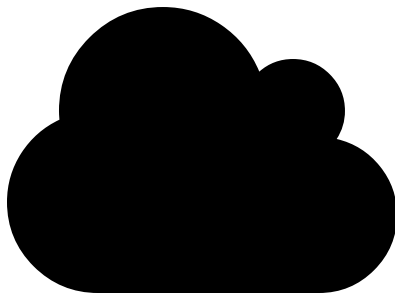
single_sourcing



Publishing



Special layouts



Formatting

Generating a list of all pages with a certain tag If you don't want to link to a tag archive index, but instead want to list all pages that have a certain tag, you could use this code: ``html Getting started pages:

```
{% assign sorted_pages = (site.pages | sort: 'title') %} {% for page in
sorted_pages %} {% for tag in page.tags %} {% if tag ==
"getting_started" %}
```

- [{{page.title}}](#) (page 0)

```
{% endif %} {% endfor %} {% endfor %}
```

`` Getting started pages:

- [1. Build the default project \(page 8\)](#)
- [2. Add a new project \(page 12\)](#)
- [3. Decide on your project's attributes \(page 15\)](#)
- [6. Configure the sidebar \(page 28\)](#)
- [About the theme author \(page 0\)](#)
- [Introduction \(page 1\)](#)

- [Pages \(page 43\)](#)
- [Sidebar Navigation \(page 61\)](#)
- [Support \(page 0\)](#)
- [Supported features \(page 3\)](#)
- [Troubleshooting \(page 183\)](#)
- [WebStorm Text Editor \(page 49\)](#)

Scroll layout

Summary: This page demonstrates how you the integration of a script called ScrollTo, which is used here to link definitions of a JSON code sample to a list of definitions for that particular term. The scenario here is that the JSON blocks are really long, with extensive nesting and subnesting, which makes it difficult for tables below the JSON to adequately explain the term in a usable way.

Note: The content on this page doesn't display well on PDF, but I included it anyway so you could see the problems this layout poses if you're including it in PDF.

Shuffle layout

Summary: This layout shows an example of a knowledge-base style navigation system, where there is no hierarchy, just groups of pages that have certain tags.

Note: The content on this page doesn't display well on PDF, but I included it anyway so you could see the problems this layout poses if you're including it in PDF.

[All](#)[Getting Started](#)[Formatting](#)[Publishing](#)[Content types](#)[Single Sourcing](#)[Special Layouts](#)

Getting started

If you're getting started with Jekyll, see the links in this section. It will take you from the beginning level to comfortable.

- [Introduction \(page 1\)](#)
- [About the theme author \(page 0\)](#)
- [2. Add a new project \(page 12\)](#)
- [6. Configure the sidebar \(page 28\)](#)
- [3. Decide on your project's attributes \(page 15\)](#)
- [1. Build the default project \(page 8\)](#)
- [Pages \(page 43\)](#)
- [Sidebar Navigation \(page 61\)](#)
- [Support \(page 0\)](#)
- [Supported features \(page 3\)](#)
- [Troubleshooting \(page 183\)](#)
- [WebStorm Text Editor \(page 49\)](#)

Content types

This section lists different content types and how to work with them.

- [Collections \(page 59\)](#)
- [Generating PDFs \(page 124\)](#)
- [Help APIs and UI tooltips \(page 139\)](#)
- [Pages \(page 43\)](#)
- [Series \(page 80\)](#)

Formatting

These topics get into formatting syntax, such as images and tables, that you'll use on each of your pages:

- [Tooltips \(page 83\)](#)
- [Alerts \(page 84\)](#)
- [Algolia search \(page 173\)](#)
- [Glossary layout \(page 170\)](#)
- [Links \(page 98\)](#)
- [Icons \(page 88\)](#)
- [Images \(page 94\)](#)
- [Labels \(page 97\)](#)
- [Navtabs \(page 103\)](#)
- [Pages \(page 43\)](#)
- [Syntax highlighting \(page 114\)](#)
- [Tables \(page 110\)](#)
- [Video embeds \(page 106\)](#)
- [YAML tutorial in the context of Jekyll \(page 64\)](#)

Single Sourcing

These topics cover strategies for single_sourcing. Single sourcing refers to strategies for re-using the same source in different outputs for different audiences or purposes.

- [Conditional logic \(page 52\)](#)
- [4. Set the configuration options \(page 17\)](#)
- [Content reuse \(page 57\)](#)
- [Excluding files \(page 136\)](#)
- [Generating PDFs \(page 124\)](#)
- [Help APIs and UI tooltips \(page 139\)](#)

Publishing

When you're building, publishing, and deploying your Jekyll site, you might find these topics helpful.

- [Build arguments \(page 117\)](#)
- [10. Configure the build scripts \(page 37\)](#)
- [4. Set the configuration options \(page 17\)](#)
- [Generating PDFs \(page 124\)](#)
- [Help APIs and UI tooltips \(page 139\)](#)
- [iTerm profiles \(page 153\)](#)
- [Link validation \(page 121\)](#)
- [9. Set up Prince XML \(page 36\)](#)
- [Pushing builds to server \(page 155\)](#)
- [Search configuration \(page 151\)](#)
- [Themes \(page 120\)](#)

Special Layouts

These pages highlight special layouts outside of the conventional page and TOC hierarchy.

- [FAQ layout \(page 169\)](#)
- [Glossary layout \(page 170\)](#)
- [Knowledge-base layout \(page 160\)](#)
- [Scroll layout \(page 164\)](#)
- [Shuffle layout \(page 165\)](#)
- [Special layouts overview \(page 0\)](#)

Note: This was mostly an experiment to see if I could break away from the hierarchical TOC and provide a different way of arranging the content. However, this layout is somewhat problematic because it doesn't allow you to browse other navigation options on the side while viewing a topic.

FAQ layout

Summary: You can use an accordion-layout that takes advantage of Bootstrap styling. This is useful for an FAQ page.

If you want to use an FAQ format, use the syntax shown on the `faq.html` page. Rather than including code samples here (which are bulky with a lot of nested `div` tags), just look at the source in the `mydoc_faq.html` theme file.

Lorem ipsum dolor sit amet, consectetur adipiscing elit?

Curabitur eget leo at velit imperdiet varius. In eu ipsum vitae velit congue iaculis vitae at risus?

Aenean consequat lorem ut felis ullamcorper?

Lorem ipsum dolor sit amet, consectetur adipiscing elit?

Curabitur eget leo at velit imperdiet varius. In eu ipsum vitae velit congue iaculis vitae at risus?

Aenean consequat lorem ut felis ullamcorper?

Lorem ipsum dolor sit amet, consectetur adipiscing elit?

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Aenean consequat lorem ut felis ullamcorper?

Glossary layout

Summary: Your glossary page can take advantage of definitions stored in a data file. This gives you the ability to reuse the same definition in multiple places. Additionally, you can use Bootstrap classes to arrange your definition list horizontally.

You can create a glossary for your content. First create your glossary items in a data file such as `glossary.yml`.

Then create a page and use definition list formatting, like this:

```
<dl class="dl">

<dt id="fractious">fractious</dt>
<dd></dd>

<dt id="gratuitous">gratuitous</dt>
<dd></dd>

<dt id="haughty">haughty</dt>
<dd></dd>

<dt id="gratuitous">gratuitous</dt>
<dd></dd>

<dt id="impertinent">impertinent</dt>
<dd></dd>

<dt id="intrepid">intrepid</dt>
<dd></dd>

</dl>
```

Here's what that looks like:

fractious

gratuitous

haughty

gratuitous

impertinent

intrepid

The glossary works well as a link in the top navigation bar.

Horizontally styled definiton lists

You can also change the definition list (`dl`) class to `dl-horizontal` . This is a Bootstrap specific class. If you do, the styling looks like this:

fractious

gratuitous

haughty

gratuitous

impertinent

intrepid

If you squish your screen small enough, at a certain breakpoint this style reverts to the regular `dl` class.

Although I like the side-by-side view for shorter definitions, I found it problematic with longer definitions.

Algolia search

Summary: This page demonstrates an integration of Algolia search.

algolia:

Mercurial notes and tips

Summary: If you're using Mercurial to collaborate on a project, see the tips and notes on this page.

This is my reference notes and quick reference for using Mercurial.

Terminology

Distributed revision control

Mercurial is distributed revision control instead of centralized revision control. This means everyone keeps a copy of the repo on their local machine, and then they merge back the changes. With centralized revision control, team members check out a version that remains in a central repo, and it becomes locked when checked out. The latter results in more wait time to check out files, little innovation for experimentation without committing, latency, and other issues.

Working directory

The files that Mercurial is tracking in a directory.

Changeset

A list of the most recent changes to the repo.

Tip

The name of the latest changeset.

Tags

A more user-friendly way to name changesets.

Default

The name of the main repo. This is defined in the `.hg/hgrc` file in the `[paths]` section. When you run `hg push` and other commands, if you don't specify another source, the default path gets used.

Diff

A list of differences with a file.

Patch

Synonym for diff.

Repo

The directory where Mercurial is activated.

head

A changeset with no child changesets. When you get two heads, it's because you pulled in changes.

parent

The previous changeset before the latest change.

child

Later in the changeset history. the first parent is the first changeset, and then you have a list of descendants, which are the children.

merge conflict scenarios

Merge conflicts happen when add or modify a file that another has removed from one commit to another, you make conflicting changes to the same file from one commit to another, or Mercurial notes some other file discrepancy. When a merge conflict happens, Mercurial launches a merge program to resolve the conflict. When merge conflicts happen, Mercurial removes the problematic files from the working directory until you fix them. You have to add them again to the working directory.

bookmarks:

This is a way to create branches in Mercurial. First run `hg bookmark hell`. Then `hg checkout hell`. Now you're working in hell. Then run `hg bookmark --delete hell` to delete hell.

branches

You don't really work with branches in Mercurial. If you create a branch, it's considered a separate line of code. Rarely do you merge branches back in. In this regard, Mercurial differs greatly from Git. However, Mercurial's approach to branching is that you should simply clone the repository. When you want to merge your clone, you pull changes from your clone. There's really no reason to add in this new "branching" functionality when all you're doing is basically the same clone operation.

.

Commands

COMMANDS	DESCRIPTION
clone	copy a specific repository (can be URL or local path)
init	initialize Mercurial in the existing repository
outgoing	show changes committed locally but not yet pushed
incoming	show changes committed to remote but not yet pulled
pull	pull the latest changeset into local repo
pull -u	pull the latest changeset into local repo and update working directory to that changeset
fetch	pull -u + merge + commit (if merge was successful) all in one command
help -v	show help in verbose mode
help (command)	shows help about a specific command
summary	summarizes the state of the current local working directory
summary -remote	summarizes the state of the remote working directory
log	show history of all change sets in the repo
log -r 2 -v	show the history of changeset 2 in the repo, with verbose details
log -r 2:4	show history of change sets from ranges 2 to 4
log -p home.md	show log of changes (patches) for specific file
log -v -p -r 2 or log -vpr2	show a diff of what has changed in a specific changeset (2)
diff (filename)	shows differences in a file

COMMANDS	DESCRIPTION
status	gives you details about the repo's files that have been modified, added, or removed since the last change. The files in the response will show ? for untracked, A for added, M for modified, and R for removed.
tip	show the latest changset
tip -vp	show the latest changeset and list verbose details of the differences
update	pull the latest changeset into the working directory. By default pull just brings in the changeset, but it doesn't change your working directory to the latest changeset.
heads	Shows the heads in the repo
addremove	add all files in directory, remove missing files from previous tracking. (This is the equivalent of using hg add and hg rm for all the files.)
merge	After you do a merge, you have to commit the merge.
commit -m 'Merged remote changes'	
add	add a file to Mercurial's working directory. You can list a filename or a directory. Or "." to select all.
remove	delete the file and tell Mercurial to stop tracking it. (addremove is a way of bulk doing this.)
resolve -mark	
forget (filename)	tells Mercurial to stop tracking a file
branches	lists the branches created for the repo
bookmarks	lists the bookmarks you have set
bookmark {bookmark_name}	creates a bookmark named sophia
checkout {bookmark_name}	checks out the bookmark. now you're working in bookmark_name.

COMMANDS	DESCRIPTION
bookmark -delete {bookmark_name}	deletes the bookmark
revert	go back to the way the files were at the last commit

Note: You can add a source for all of these commands. If no source is specified, the default repo (from which the existing repo was cloned) is used. For example, pull (source) will pull from a source other than the default if specified.

When you run `hg status`, there are various icons next to the files.

hg status icons	Description
!	Mercurial can't find the file. You probably deleted it manually and didn't do an <code>hg rm filename</code> or <code>hg addremove</code> .
?	Mercurial doesn't know anything about this file, even though it's in the same directory as other files you're tracking.
M	you modified this file.
A	Mercurial added this file to the list of files you're tracking.
R	removed from tracking and the directory.

General workflow

As a general workflow:

1. Commit
2. Pull -u (or fetch)
3. Merge
4. Push

Merge conflicts

When a conflict happens, the default merge program configured in `.hgrc` launches.

P4Merge

(<https://www.perforce.com/product/components/perforce-visual-merge-and-diff-tools>)

works well. To configure Mercurial to use `p4merge`, install P4Merge, and then put this into your `.hgrc` file (if it's not already there).

```
p4merge.executable = /Applications/p4merge.app/Contents/MacOS/
p4merge
p4merge.priority = 50
p4merge.premerge = True
p4merge.gui = True
p4merge.args = $base $local $other $output
p4merge.binary = True
```

When P4Merge launches to resolve a merge conflict, you select the change you want, or add your own. Then Save. Then quit P4merge completely.

(I am not sure if you have to run `hg addremove` and then `hg resolve --mark` to mark the conflict as resolved.)

For more details, see [P4Merge](https://www.mercurial-scm.org/wiki/P4Merge) (<https://www.mercurial-scm.org/wiki/P4Merge>).

Binary files

P4Merge can't handle merges with binary files. However, you can run a diff to see the differences between files. You would need to clone your repository and use a different changeset for that repo. Then compare the same file in the different repos in different changesets.

Ignoring certain files

Some files you don't want in Mercurial because they only have relevance locally. Here is the list of files to ignore to add to your `.hgignore` file:


```
.jekyll-metadata
_site
.DS_Store
.idea
```

If you forget to add certain files to your ignore list, you can add them later and apply the ignore rule retroactively. See [this stackoverflow thread](http://stackoverflow.com/questions/8129912/mercurial-and-xcuserdata-ds-store-and-git) (<http://stackoverflow.com/questions/8129912/mercurial-and-xcuserdata-ds-store-and-git>) for more details. once you make the update, run `hg forget "set:hgignore()"`.

Merge conflicts

Here's the scenario. After you do `hg pull -u`, you get this error message:

```
abort: untracked files in working directory differ from files
in requested revision
```

The problem is that you modified files in your working directory, such as adding or removing a file. Another person added or removed the same file and committed to the repo. Now when you get the latest changeset that has a discrepancy with the added/removed files, Mercurial complains.

For example, Writer A removes file `apple.md` from his working directory. Writer B adds file `apple.md` to his working directory. Writer B commits. Now Writer A does a pull `-u`. At this point, Mercurial responds with the abort message listed above because Writer A's files don't match up with the incoming revision.

Theoretically, you can do an `hg merge` and resolve the issue. However, when I tried this, the abort message didn't go away. Saga continued. I'm actually unclear how to resolve this. After fruitless attempts to fix it, I moved on to the nuclear option.

Exercising the Nuclear Option

When you run into problems with Mercurial, you should try to sort it out the best you can. However, if things just won't behave, you can always exercise the nuclear option.

1. Change the name of your "repo" to "repo-old".
2. Reclone the project.

3. Copy over the contents from repo-old into repo. (Don't copy over the .hg, .idea, .DS_Store, or .hgignore files.)

Now follow the standard Commit and Push instructions here. It should fix the issue.

Creating a Mercurial Test Playground on Your Local Machine

You can create some local Mercurial repos on your machine so you can play around with commits, merges, and other experiments.

Create a folder and initialize Mercurial in the folder:

```
hg init hgrepo
```

This creates a folder called hgrepo. This is your main repository.

Now change into hgrepo and add a file:

```
cd hgrepo
touch mytestfile.txt
open mytestfile.txt
```

Type some text and then click Ctrl + S to save it. Then Ctrl + W to close.

Add the file to Mercurial's tracking and make a commit:

```
hg addremove
hg commit -m "my first commit"
```

Now make a couple of clones of the repo:

```
cd ../
hg clone /Users/tjohnson/projects/hgrepo hgclone1
```

and

```
hg clone /Users/tjohnson/projects/hgrepo hgclone2
```

(Replace /Users/tjohnson/projects/hgrepo with the path to your repo.)

You should now have a file structure that looks like this:

```
hgrepo
- mytestfile.txt
hgclone1
- mytestfile.txt
hgclone2
- mytestfile.txt
```

In iTerm, open two separate tabs and go into hgclone1 and hgclone2 on the different tabs. Now you can make changes to mytestfile.txt and commit and push it into the main repo.

Stop Tracking a File

Sometimes you inadvertently add a file into Mercurial that you really don't want to track. One example is the .jekyll-metadata file that is included by default when you do incremental builds. This file is used locally to remember what changes have been made to your build and what haven't.

This file shouldn't be pushed to Mercurial because it will conflict with the content of other people's .jekyll-metadata files. You need to tell Mercurial to stop tracking the file and then add it to the ignore list.

To stop tracking a file:

```
hg forget filename.txt
```

If you run the hg addremove command, Mercurial will simply add back the file you ignored.

You should add this file to an ignore list.

1. Go to the root directory of your jekyll project.
2. Create a file called .hgignore.
3. Add each file you want to ignore (e.g., .jekyll-metadata) on a separate line.
4. Now make sure that everyone else adds these files to their ignore list. If someone else commits a file that you've ignored, Mercurial will complain when you pull the latest revision.

Troubleshooting

Summary: This page lists common errors and the steps needed to troubleshoot them.

Issues building the site

Address already in use

When you try to build the site, you get this error in iTerm:

```
jeekyll 2.5.3 | Error:  Address already in use - bind(2)
```

This happens if a server is already in use. To fix this, edit your config file and change the port to a unique number.

If the previous server wasn't shut down properly, you can kill the server process using these commands:

```
ps aux | grep jeekyll
```

Find the PID (for example, it looks like "22298").

Then type `kill -9 22298` where "22298" is the PID.

Alternatively, type the following to stop all Jekyll servers:

```
kill -9 $(ps aux | grep '[j]ekyll' | awk '{print $2}')
```

Build not entirely finishing

If your build doesn't entirely finish on the command line, check to see if you have a space after a comma when using multiple configuration files, like this:

```
jeekyll serve --config config_base.yml, config_designer.yml
```

Remove the space after the comma, and the build will finish executing:

```
jeekyll serve --config config_base.yml,config_designer.yml
```

shell file not executable

If you run into permissions errors trying to run a shell script file (such as `mydoc_multibuild_web.sh`), you may need to change the file permissions to make the sh file executable. Browse to the directory containing the shell script and run the following:

```
chmod +x build_writer.sh
```

Pygments not installed

The config file requires pygments for the highlighter. You must [download and install Pygments](http://pygments.org/download/) (<http://pygments.org/download/>), which requires Python, in order to use this syntax highlighter. If you don't want to bother with Pygments, open the configuration file and change `pygments` to `rouge`.

“page 0” cross references in the PDF

If you see “page 0” cross-references in the PDF, the URL doesn't exist. Check to make sure you actually included this page in the build.

If it's not a page but rather a file, you need to add a `noCrossRef` class to the file so that your print stylesheet excludes the counter from it. Add `class="noCrossRef"` as an attribute to the link. In the `css/printstyles.css` file, there is a style that should remove the counter from anchor elements with this class.

The PDF is blank

Check the `prince-file-list.txt` file in the output to see if it contains links. If not, you have something wrong with the logic in the `prince-file-list.txt` file. Check the `conditions.html` file in your `_includes` to see if the audience specified in your configuration file aligns with the `buildAudience` in the `conditions.html` file

Sidebar not appearing

If you build your site but the sidebar doesn't appear, check the following:

Look in `_includes/custom/conditions.html` and make sure the conditional values there match up with the values declared in the configuration file. Specifically, you need to make sure you've declared a value for project, product, platform, and version.

If you don't have any values for these properties, you still need to keep them in your configuration file. Just put something like `all` as the value.

Note: This theme is designed for single sourcing. If you're only building one site, you can remove these values from the `_includes/sidebar.html` file and `_data/sidebar.yml` files.

Understanding how the theme works can be helpful in troubleshooting. The `_includes/sidebar.html` file loops through the values in the `_data/sidebar.yml` file. There are `if` statements that check whether the conditions (as specified in the `conditions.html` file) are met. If the `sidebar.yml` item has the right product, platform, audience, and version, then it gets displayed in the sidebar. If not, it gets skipped.

Sidebar heading level not opening

In your `_data/sidebar.yml` file, you must also include the correct parameters (platform, product, audience version) for each heading. If an item contains something that should be displayed, the attributes for the heading should be listed.

Without any attributes on heading levels, you could end up with scenarios where a section is entirely designed for one output but appears in every output regardless.

Sidebar isn't collapsed

If the sidebar levels aren't collapsed, usually your JavaScript is broken somewhere. Open the JavaScript Console and look to see where the problem is. If one script breaks, then other scripts will break too, so troubleshooting it is a little tricky.

Search isn't working

If the search isn't working, check the JSON validity in the `search.json` file in your output folder. Usually something is invalid. Identify the problematic line, fix the file, or put `search: exclude` in the frontmatter of the file to exclude it from search.

Adding all project dependencies

Summary:

You want to be sure that you have all the required gems and other utilities on your computer to make the project run. Jekyll runs on Ruby, and there are various plugins for Ruby that enable different functionality. These Ruby plugins are referred to as gems, and you install the gems you need for your projects.

To manage the various gems and their versions needed for your project, you can use a package manager called Bundler. Many projects will have a gemfile in their project that lists the gems required for the project. You then run Bundler in order to automatically install the required gems and any dependencies for those gems on your machine.

RubyGems

Make sure you have RubyGems. This should be installed by default.

Open Terminal and type `which gem`. You should get a response indicating the location of RubyGems, such as

```
/Users/MacBookPro/.rvm/rubies/ruby-2.2.1/bin/gem.
```

If you need to install RubyGems, see [Download RubyGems](https://rubygems.org/pages/download) (<https://rubygems.org/pages/download>).

Install Bundler

Bundler (<http://bundler.io/>) is a package manager for RubyGems.

You install Bundler by using the `gem` command with RubyGems:

```
gem install bundler
```

If you're prompted to which to superuser mode (`sudo`) to get the correct permissions to install Bundler in that directory, avoid doing this. All other applications that need to use Bundler will likely not have the needed permissions to run.

If you get a permissions error when trying to install Bundler, use Homebrew to install a Ruby package manager called rbenv.

Install Homebrew:

```
/usr/bin/ruby -e "$(curl -fsSL  
https://raw.githubusercontent.com/Homebrew/install/master/  
install)"
```

Use brew to install rbenv:

```
brew install rbenv
```

Initialize rbenv:

```
rbenv init
```

Log out of terminal, and then then log back in.

Install Bundler:

```
gem install bundler
```

Open the gemfile:

```
open gemfile
```

You should see some gems listed. If you don't have a gemfile, your project may not need any gems, or those gems may not be managed at the project level but rather directly installed manually. You can create a gemfile by typing `bundle init`.

Your gemfile might look like this:


```
# A sample Gemfile
source "https://rubygems.org"

# gem "rails"
gem 'github-pages'
gem 'pygments.rb'
gem 'kramdown'
```

Use Bundler to install the needed gems:

```
bundle install
```

Finally, you can run the following to make sure the installed gems get associated or initialized with your project:

```
bundle exec jekyll serve
```