

Advanced website features

The background of the slide is a repeating pattern of red hexagons of varying shades, creating a textured, honeycomb-like effect.

Other common features

URLs

The website will mirror your file structure, including subdirectories

/about.qmd



example.com/about.html

/research/project1.qmd



example.com/research/project1.html

Custom URLs

What if you want nicer URLs?

[example.com/about/](#)

[example.com/research/project1/](#)

`index.html`

By convention, web servers treat `index.html` files in a special way.

`example.com/about/`

implicitly means

`example.com/about/index.html`

index.qmd

If you want **example.com/about/**, put your about page in a folder named **about** and rename it to **index.qmd**.

/about.qmd



/about/index.qmd



example.com/about/

User-friendly URLs

You could have a blog post like this (ew):

/2025-10-16_blog-post-title.qmd



example.com/2025-10-16_blog-post-title.html

Or like this (yay):

/blog/2025/10/16/blog-post-title/index.qmd



example.com/blog/2025/10/16/blog-post-title/

Your turn

1. Make your `about.qmd` page appear at `about/`

05:00

Page layout

Page layouts

- **article**: Default layout with main text area between 600px–900px
- **full**: Expand main text area into the sidebar and margin area if there's no content there
- **custom**: Provide your own HTML template for the main text area

Component widths



YAML settings

```
format:
  html:
    page-layout: article # or "full" or "custom"
    grid:
      sidebar-width: 300px
      body-width: 900px
      margin-width: 300px
      gutter-width: 1.5rem
```

Your turn

1. Change the page layout settings for one of your page
2. *Bonus task!* Try using the Bootstrap CSS Grid layout system with `page-layout: custom`.
 - [See the documentation here](#)
 - [See an IRL example here \(and code here\)](#)

Advice:

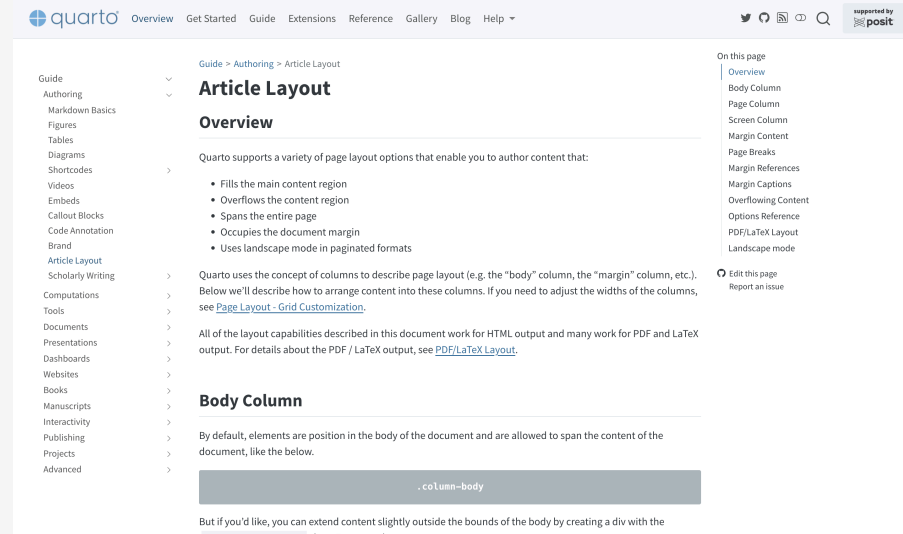
- Don't try to make all these changes at once! Remember the workflow: edit, save, preview, repeat.
- Use the documentation at [Quarto.org > Guide > Advanced > Page Layout](#).

10:00

Article layout

Quarto offers *a ton* of article-specific layout options:

- Make content go into the margin
- Make content go across the whole page
- Put content in the margins



The screenshot shows the Quarto website's "Article Layout" guide. The page has a light blue header with the Quarto logo and navigation links: Overview, Get Started, Guide, Extensions, Reference, Gallery, Blog, and Help. On the right side of the header, there are social media icons and a "supported by" logo for "posit".

The main content area is titled "Article Layout" and "Overview". It explains that Quarto supports a variety of page layout options. A bulleted list includes: "Fills the main content region", "Overflows the content region", "Spans the entire page", "Occupies the document margin", and "Uses landscape mode in paginated formats".

Below this, it states that Quarto uses the concept of columns to describe page layout (e.g., the "body" column, the "margin" column, etc.). It mentions that below they will describe how to arrange content into these columns and provides links to "Page Layout - Grid Customization" and "PDF/LaTeX Layout".

The next section is "Body Column". It states that by default, elements are positioned in the body of the document and are allowed to span the content of the document, like the below. A code block shows: `.column-body`.

At the bottom, it notes that you can extend content slightly outside the bounds of the body by creating a div with the `column-span: full` class. For example:

```
<div class="column-span: full">
```

Your turn

1. Add an image that spans across the whole page
2. Add some text to the margin

Advice:

- Don't try to make all these changes at once! Remember the workflow: edit, save, preview, repeat.
- Use the documentation at [Quarto.org > Guide > Authoring > Article Layout](#).

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The background of the image is a dense, repeating pattern of hexagons in various shades of red, ranging from light pink to a deeper, more saturated red. The hexagons are of different sizes and are arranged in a way that creates a complex, crystalline texture.

Freezing

Re-running code

your-document.qmd

```
1 ---
2 title: "My Complex Document"
3 format: html
4 ---
5
6 Here we run all our models and ther
7
8 ```{r}
9 # Intensive code!
10 ```
11
12 ```{r}
13 # Intensive code!
14 ```
15
16 ```{r}
17 # Intensive code!
18 ```
```

- Sometimes you'll have a lot of code chunks that take a long time to run.
- Quarto will re-run these chunks each time you render the site.
- Good for reproducibility! Bad for speed!

Freeze computational output

your-document.qmd

```
1 ---
2 title: "My Complex Document"
3 format: html
4 execute:
5   freeze: auto
6 ---
7
8 Here we run all our models and ther
9
10 ```{r}
11 # Intensive code!
12 ```
13
14 ```{r}
15 # Intensive code!
16 ```
17
18 ```{r}
```

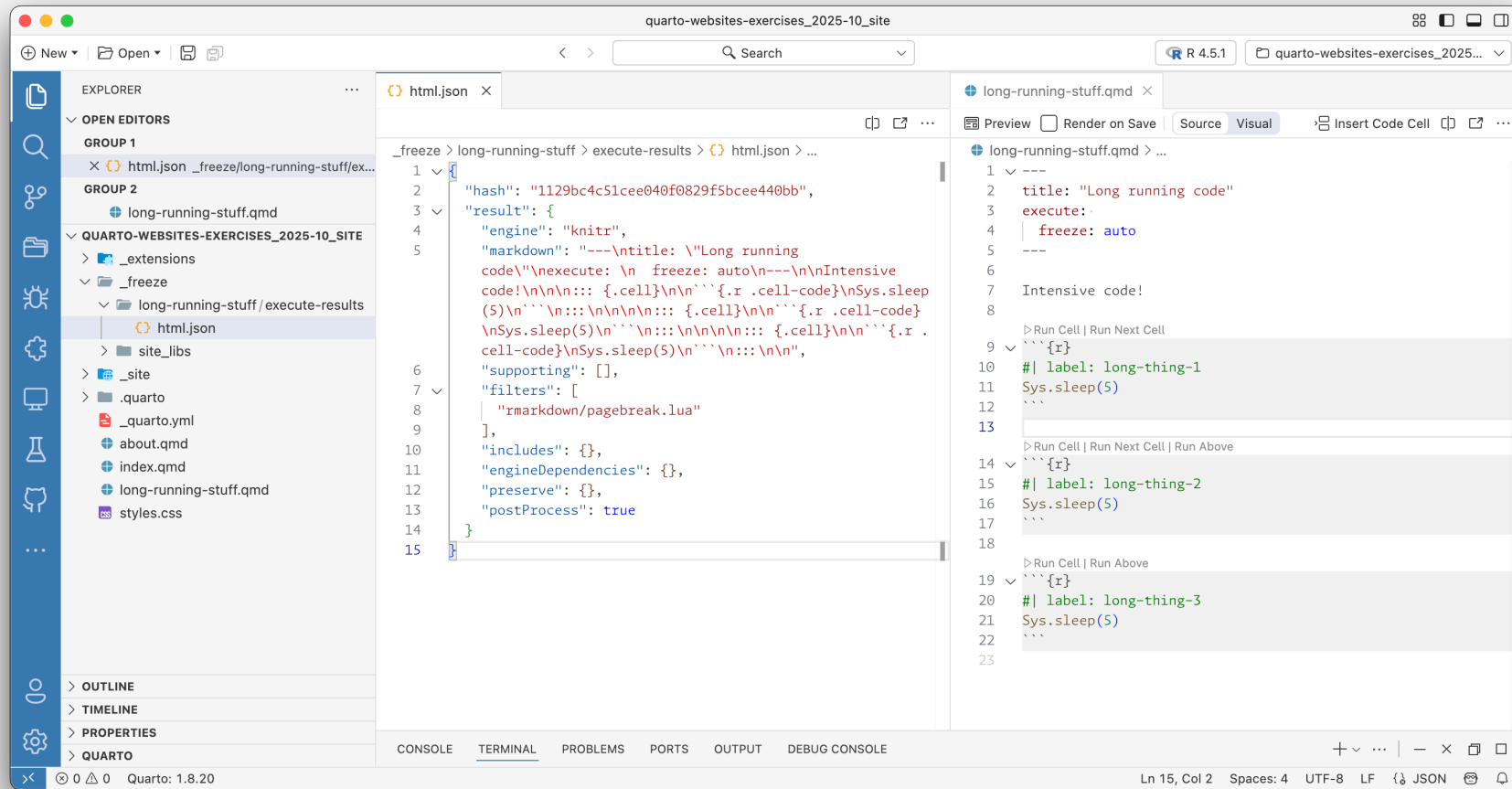
Use `freeze: auto` to only re-run the code if the source file changes.

← Individual files
or site-wide ↓

_quarto.yml

```
1 project:
2   type: website
3
4 execute:
5   freeze: auto
6
7 website:
8   title: "Example site"
```

Code output is stored in `_freeze`



Freezing \neq caching

- Freezing *only* stores the text of the code output.
- Changing the file will force a re-run.
- Consider caching if you don't want the code to re-run (see **documentation**):

```
execute:  
  cache: true
```

Listings

Automatic content

We can automatically add all the pages in a folder to a sidebar:

```
_quarto.yml
1 website:
2   sidebar:
3     contents:
4       - href: index.qmd
5         text: Home
6       - section: Research
7         contents:
8           - research/project1.qmd
9           - research/project2.qmd
10          - research/project3.qmd
```

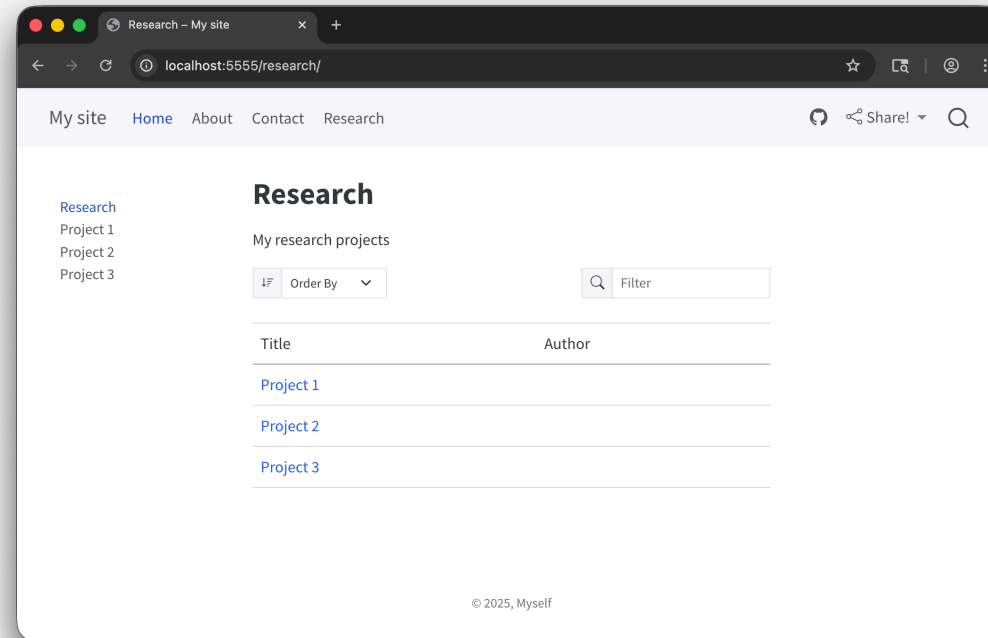
```
_quarto.yml
1 website:
2   sidebar:
3     contents:
4       - href: index.qmd
5         text: Home
6       - section: Research
7         contents: research/*
```

What if we want fancier automatic pages?

Listing pages

research/index.qmd

```
1 ---
2 title: "Research"
3 listing:
4   contents: "*.qmd"
5   type: table
6 ---
```



Your turn

1. Edit `research/index.qmd` to be a listing page, showing all the pages in the `research` folder.
2. Experiment with changing the listing type to `default`, then `table`, then `grid`.

Advice:

- Don't try to make all these changes at once! Remember the workflow: edit, save, preview, repeat.
- Use the documentation at [Quarto.org > Guide > Websites > Listing Pages](#).

10:00

Metadata in listings

Listing Example

2/8/2022
Harlow Malloc

Post With Code

This is a post with executable code.

2/5/2022
Tristan O'Malley

Welcome To My Blog

This is the first post in a Quarto blog.
Welcome!

date

title

image

author

description

post.qmd

```
1 ---
2 title: "Research"
3 author: "Your name"
4 description: "Something"
5 date: 2025-10-06
6 image: "img/thing.jpg"
7 ---
```

Your turn

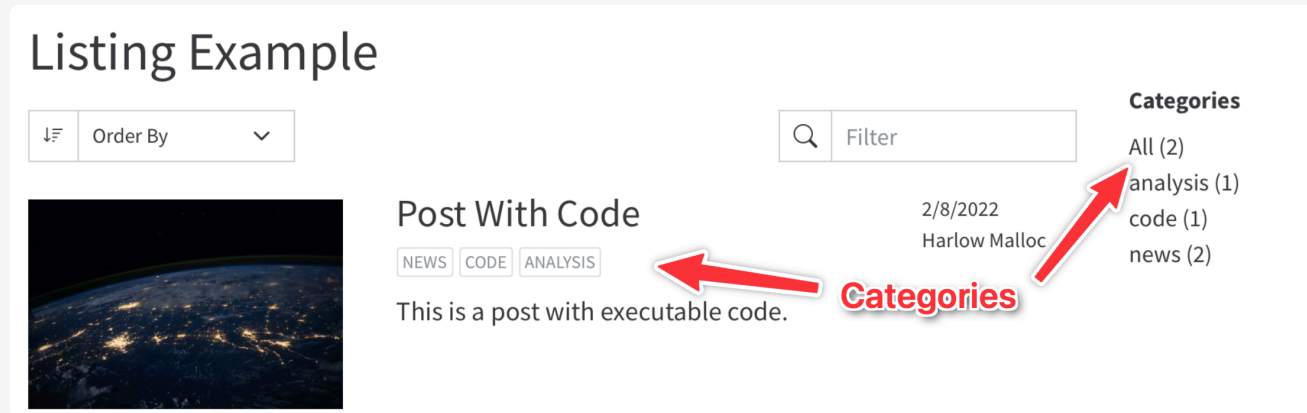
1. Add metadata to your different research `.qmd` files, including images (find some at [Unsplash](#)). See how those are reflected in the listing page.
2. *Bonus task!* Modify how the listing page is sorted. Sort it by descending title.
 - [See the documentation here](#)
3. *Bonus task!* Change how the dates are shown in the listing page with the `date-format` option.
 - [See the documentation here](#)

Advice:

- Don't try to make all these changes at once! Remember the workflow: edit, save, preview, repeat.
- Use the documentation at [Quarto.org > Guide > Websites > Document Listings](#).

10:00

Categories



Enable categories in the listing settings

```
listing-page.qmd
1 listing:
2   categories: true
```

Specify categories in the document

```
post.qmd
1 ---
2 title: "Research"
3 categories:
4   - statistics
5   - r
6   - tidyverse
7 ---
```


Your turn

1. Add categories to your different research `.qmd` files. See how those are reflected in the listing page after rendering.
2. *Bonus task!* Change the category list on the listing page to appear as a word cloud.
 - [See the documentation here](#)

Advice:

- Don't try to make all these changes at once! Remember the workflow: edit, save, preview, repeat.
- Use the documentation at [Quarto.org > Guide > Websites > Document Listings > Categories](#).

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Extra advanced bonus stuff

Multiple listings

Include lists of different document types on the same page (**example** + **code**)

Custom listings

Go beyond `default`, `table`, and `grid` and make your own template (**example** + **code**)

YAML lists

Generate listings of items in a YAML file instead of `.qmd` files (**example**)

Your turn

Make a blog!

1. Create a new folder named `blog` with a file named `index.qmd` in it.
2. Make a few folders and files named `blog/2025/10/16/thing/index.qmd`, etc.
3. Add some fake content in the blog posts. Add images, titles, descriptions, etc.
4. Make the blog posts appear as a listing page at `blog/index.qmd`.
5. Add `blog/index.qmd` to your top navigation bar.

Advice:

- Don't try to make all these changes at once! Remember the workflow: edit, save, preview, repeat.
- Use the documentation at [Quarto.org > Guide > Websites > Document Listings](#).

20:00

Extensions

Extensions

Quarto has **extensions** that let you add custom...

- shortcodes
- filters
- document formats and templates
- brands

Shortcode extensions

Font Awesome icons (**site** + **extension**)

Terminal

```
quarto add quarto-ext/fontawesome
```





Text	Output
<code>{{< fa home >}}</code>	
<code>{{< fa wand-magic-sparkles >}}</code>	
<code>{{< fa brands apple >}}</code>	
<code>{{< fa brands r-project >}}</code>	
<code>{{< fa globe >}}</code>	

Use in Markdown:

my-document.qmd

```
- {{< fa book >}} [Book page](https://www.bayesrulesbook.com/)
- {{< fa person-chalkboard >}} [Teaching resources](https://bayes-rules.github.io/)
- {{< fa brands r-project >}} [R package](https://github.com/bayes-rules/bayesrules)
- {{< fa brands youtube >}} Alicia Johnson, ["Bayes Rules! An Introduction to Bayesian Modeling with R with Alicia Johnson"], presentation for R-Ladies Philly on October 18, 2021
```



-  **Book page**
-  **Project page**
-  **R package** and **package documentation**
-  Alicia Johnson, **"Bayes Rules! An Introduction to Bayesian Modeling with R with Alicia Johnson"**, presentation for R-Ladies Philly on October 18, 2021

Use in YAML:

_quarto.yml

```
website:  
  navbar:  
    left:  
      - text: "{{< fa person-chalkboard >}} Teaching"  
        href: teaching.qmd  
      - text: "{{< fa flask >}} Research"  
        href: research.qmd  
    right:  
      - text: "{{< fa brands google-scholar >}}"  
        href: "https://example.com"
```



Example site

 Teaching

 Research



Filter extensions

Preview Color (extension)

Terminal

```
quarto add mcanouil/quarto-preview-colour
```

Enable in YAML, either for one page or site-wide:

```
filters:  
  - preview-colour
```

We use #1696d2 for Democrats and #db2b27 for Republicans.



We use #1696d2🟦 for Democrats and #db2b27🟥 for Republicans.

Lots of others!

There are hundreds of extensions: find them all at [Quarto.org > Extensions](#) or at [the Quarto Extensions directory](#).

Here are some common extensions for websites specifically:

Extension	Description
Font Awesome	Include Font Awesome icons
Academicons	Include academicons icons
Custom Callouts	Go beyond Quarto's default note , warning , important , tip , and caution callouts
Preview Color	Add little circles to show hex colors
Embed PDFs	Easily embed PDF files in HTML documents
Downloadthis	Create download buttons

Your turn

1. Install the [Font Awesome extension](#) in your website project.
2. Use Font Awesome shortcodes:
 - Include a Font Awesome icon in your navigation bar
 - Include a Font Awesome icon in the text of one of your pages
3. Install another Quarto extension and play around with it.

Advice:

- Don't try to make all these changes at once! Remember the workflow: edit, save, preview, repeat.
- Use the documentation at the [Font Awesome extension page](#) and [Quarto.org > Extensions](#).

10:00




Start building a real website

At some point today you've (hopefully!) thought "I could use these tools to make something really cool!" A new personal website with a portfolio and blog. A website for an upcoming event. A notebook to accompany a research project. A course website. Something!

Start building it!

1. Create a new website project skeleton
2. Start building your idea
 - Do this gradually! Remember the workflow: edit, save, preview, repeat
 - Pore over the Quarto documentation and these slides for tips and tricks
3. Ask for help.
 - We'll work on it now and tomorrow (and maybe on your own tonight)

Course outline

-  ~~Intro to Quarto~~
-  ~~Creating basic websites~~
-  ~~Advanced website features~~
- Publishing
- Customization and branding
- Interactivity