



GIT

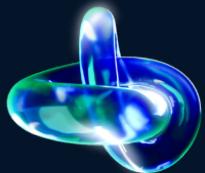
How are you?

1. Jira
2. VS Code
3. GitHub
4. Laptops



Git

- is about file changes
- is the best for team work



Menti

<https://www.menti.com/al4yqou23864>

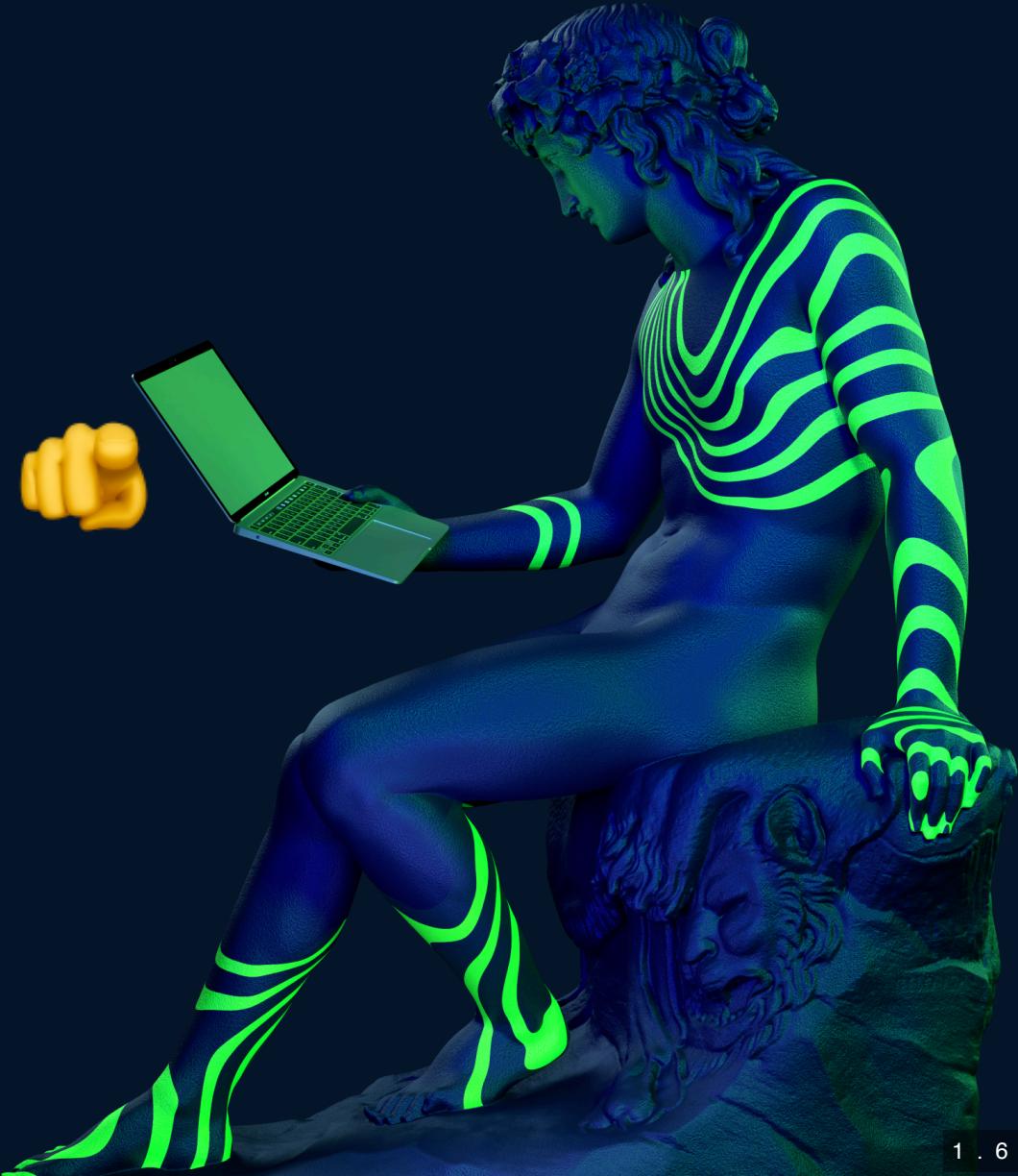


Agenda

Today we start a repo with README locally

- clarify why we need the git
- `git init / git clone` from GitHub
- `git status, .gitignore`
- `README.md` in markdown
- `git diff, git stage, git stash`
- `git commit` with rules
- `git log all and git blame` exact changes
- `git checkout` to commit and branch

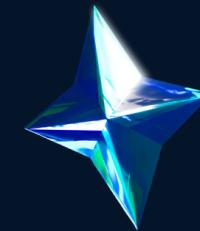
Show how it looks 💪





What was before

FS

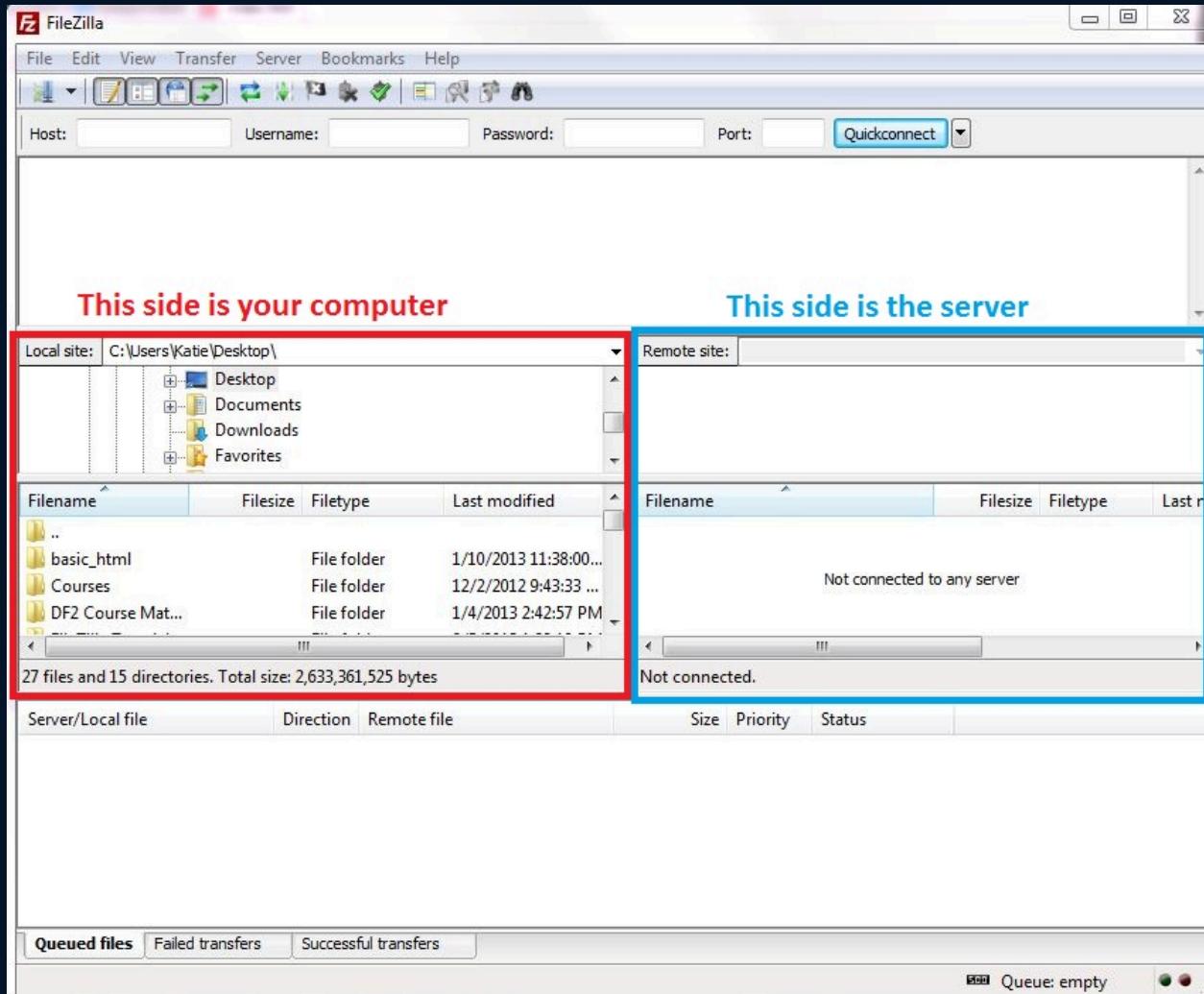


File system

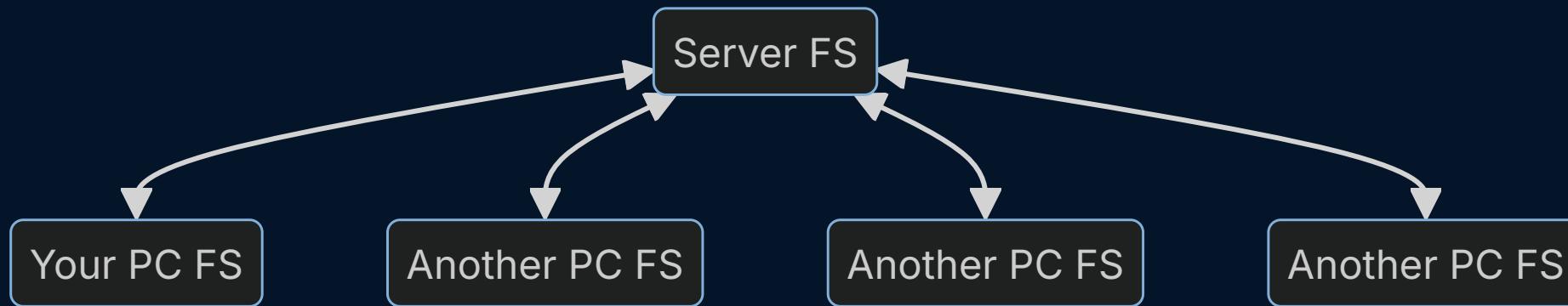
```
./binabox
└── index.html
└── styles.css
```

FTP

File transfer protocol



Synchronise with FTP



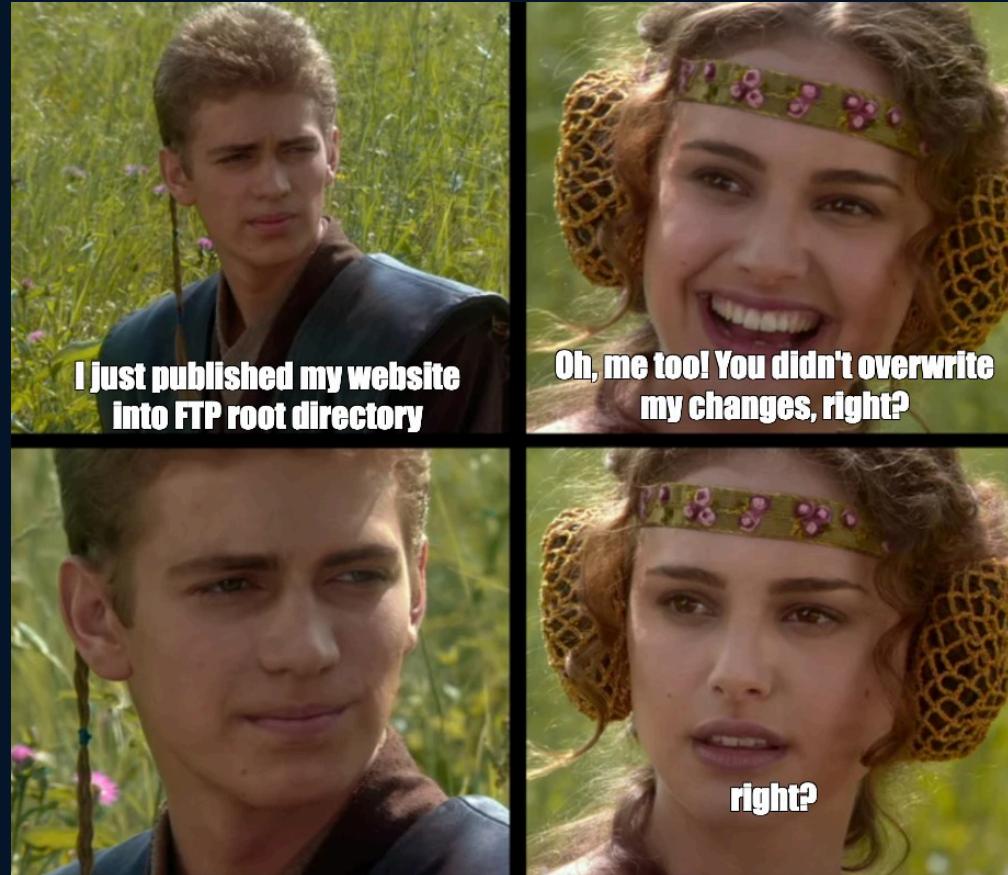
History problem

How to rollback
pre-pre-pre-previous
version?



Overrides problem

How to work
together?

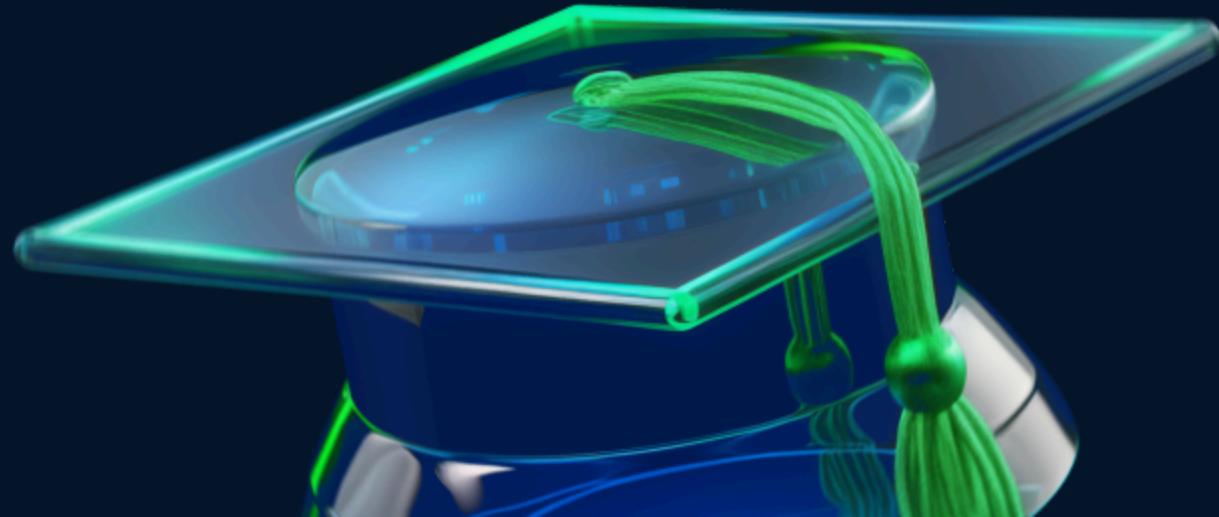


Quality problem

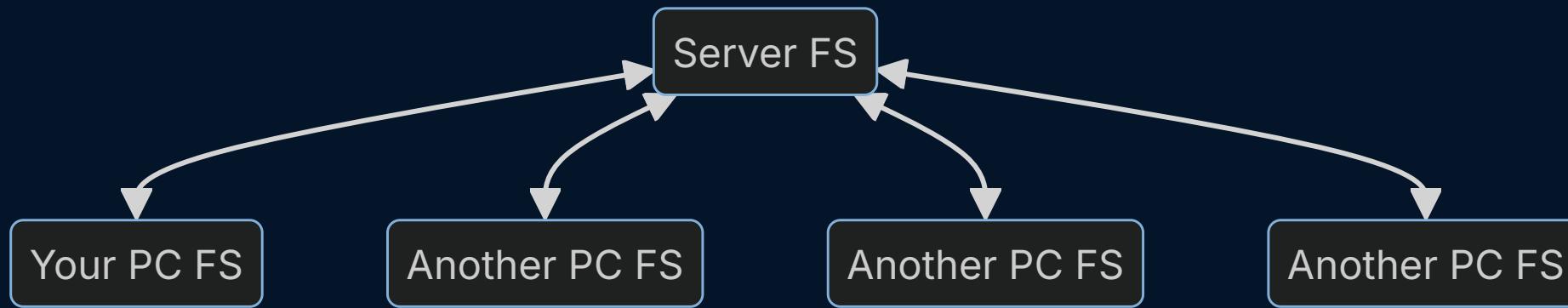
How to be sure in code
and product quality?



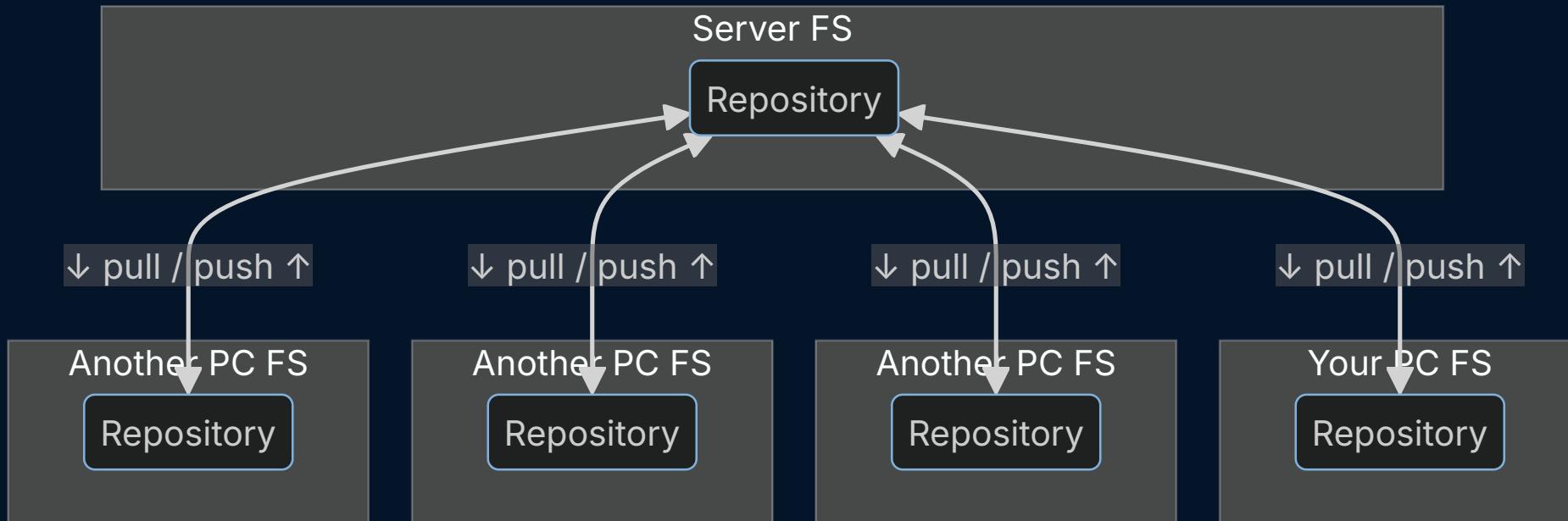
Let's add the git



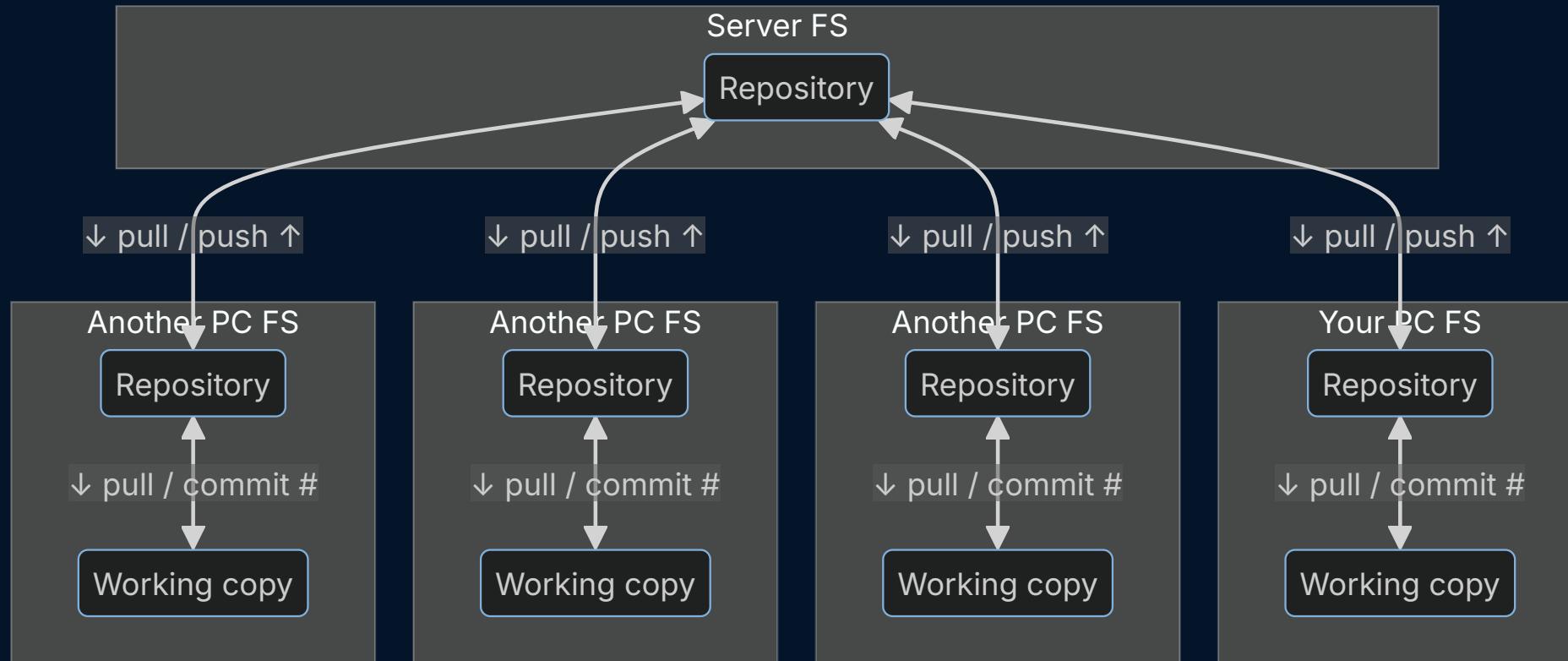
Syncronise with FTP



Syncronise with git



Working copy



Code hosting platforms

GitHub? Gitlab?

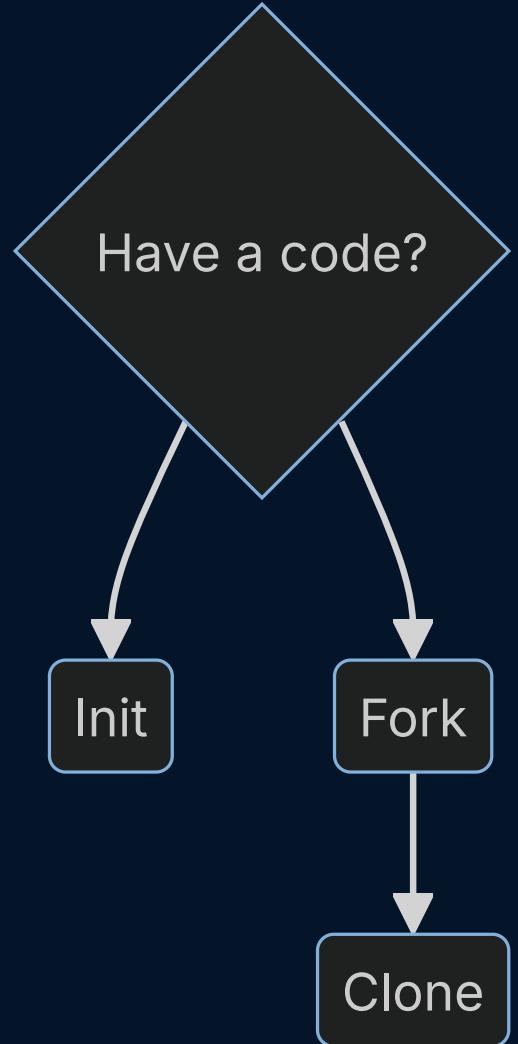


Most popular code hosting platforms

Name	Users	Projects
 GitHub 	94,000,000	330,000,000
 Gitlab	31,190,000	546,000
 Bitbucket	5,000,000	Unknown
 SourceForge	3,700,000	500,000

Source: [wiki](#)

Start



git init



The screenshot shows the VS Code interface with a dark theme. On the left is a vertical sidebar with several icons: a red circle, a yellow circle, a green circle, a file icon, a magnifying glass icon, a circular icon with two lines (circled in red), a play icon, and a grid icon. The main area is titled 'SOURCE CONTROL'. It contains the following text:
The folder currently open doesn't have a Git repository. You can initialize a repository which will enable source control features powered by Git.
Below this text is a large green button with white text that reads 'Initialize Repository'. This button is highlighted with a red border. At the bottom of the main area, there is another text block:
To learn more about how to use Git and source control in VS Code [read our docs](#).

Fork



A screenshot of a GitHub repository page for 'author / project'. The page shows various metrics: 736 issues, 95 pull requests, 16.6k forks, and 67.7k stars. A red arrow points to the 'Fork' button in the top right corner of the header.

Create a new fork

A *fork* is a copy of a repository. Forking a repository allows you to freely experiment with changes without affecting the original project.

Required fields are marked with an asterisk ().*

Owner *



Repository name *

binabox-fogrew is available.

By default, forks are named the same as their upstream repository. You can customize the name to distinguish it further.

Description (optional)

Bro-academy scope

What for?

- To set up automatic HTML validation
- To set up code reviewer automatically
- To set up restrictions on merge and push
 - No push into main branch
 - No merge without approve from reviewer
 - No merge without resolved discussions

Bro-academy scope

What does it mean as well?

- BrainRocket has all rights to change, hide or remove these repositories
- If you want to save your repo, copy or transfer it into personal scope after the course

Clone from GitHub

The screenshot shows a GitHub repository page for 'bro-academy / binabox'. The 'Code' tab is selected. The repository is described as a 'Public template' generated from [broacademy/fork-test](#). The 'About' section notes 'No description, website, or topics provided.' It shows 1 watch, 0 forks, and 0 stars. A red arrow points to the 'Clone' section where the HTTPS URL `https://github.com/bro-academy/binabox.git` is displayed.

bro-academy / binabox

Code Issues Pull requests Actions Projects Security Insights

binabox Public template Watch 1 Fork 0 Star 0 Use this template

generated from [broacademy/fork-test](#)

main Go to file + Code

Local Codespaces

Clone

HTTPS SSH GitHub CLI

`https://github.com/bro-academy/binabox.git`

Clone using the web URL.

Open with GitHub Desktop

Download ZIP

About

No description, website, or topics provided.

Activity

Custom properties

0 stars

1 watching

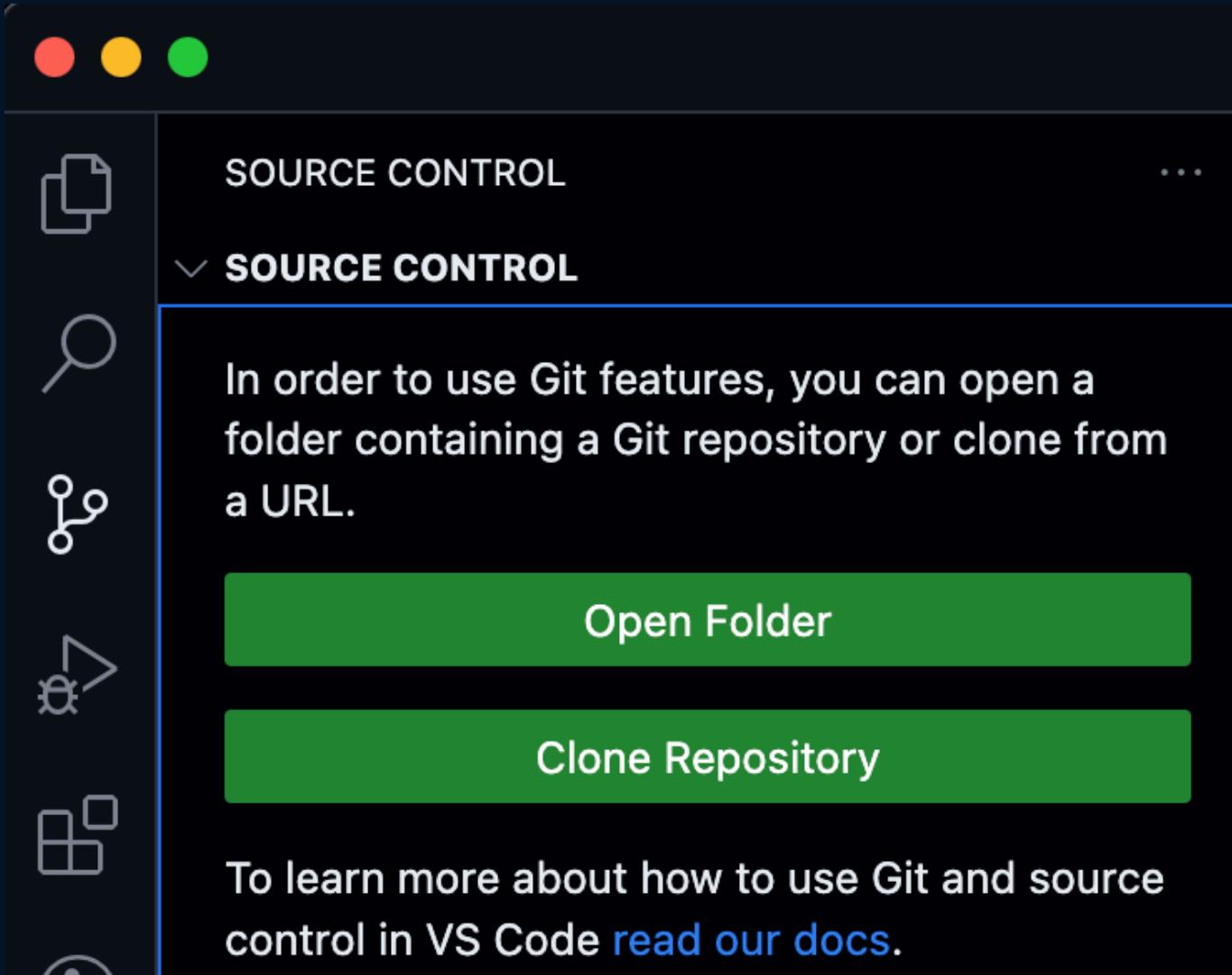
0 forks

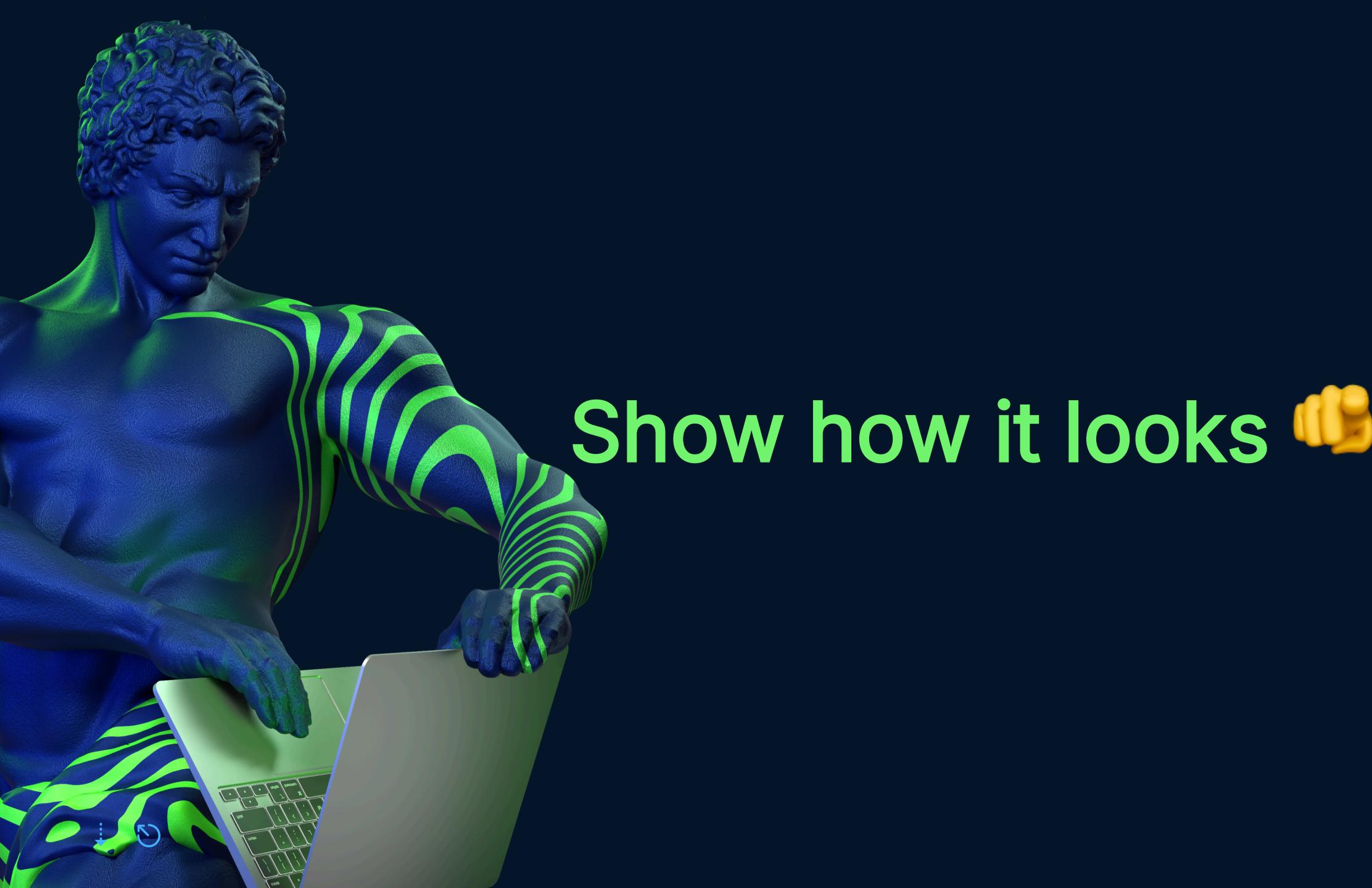
Report repository

Releases

No releases published

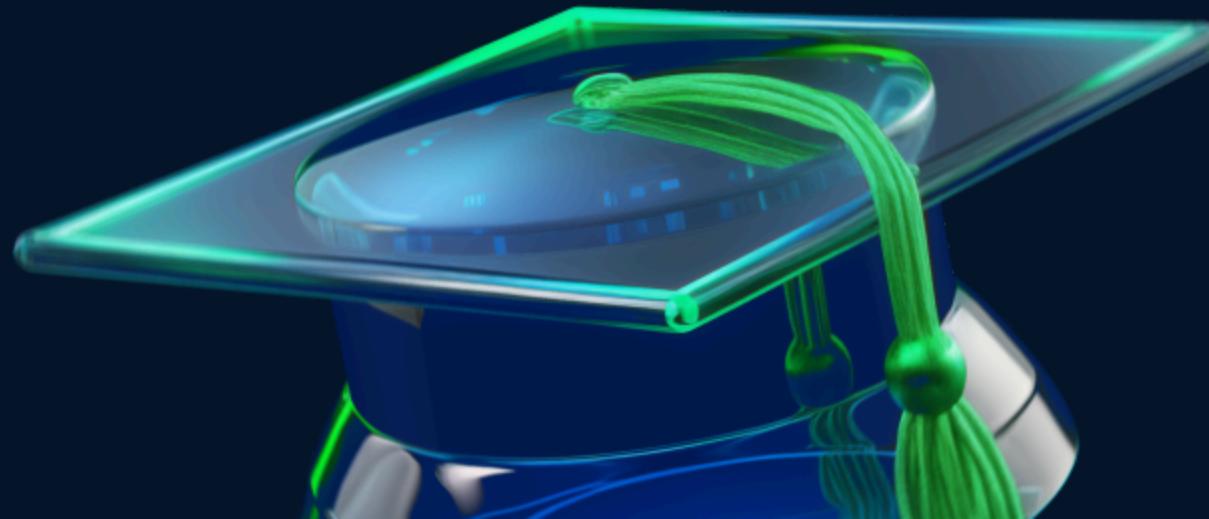
git clone URL





Show how it looks 💪

What's in repo



.git folder

```
1 ./binabox
2 - .git/
3 - index.html
4 - styles.css
```

git status



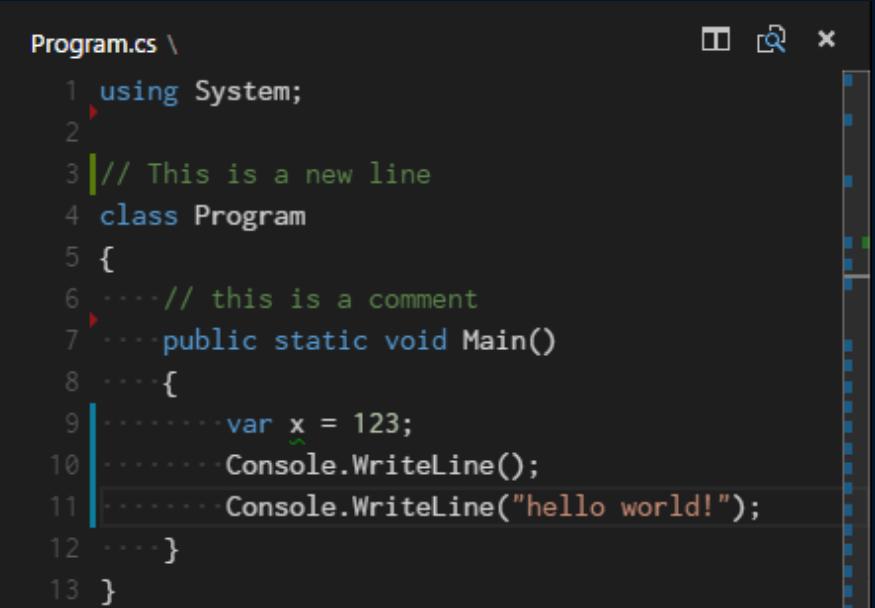
Sync

versioncontrol* 0 0

Publish

update 0 0

Gutter indicators

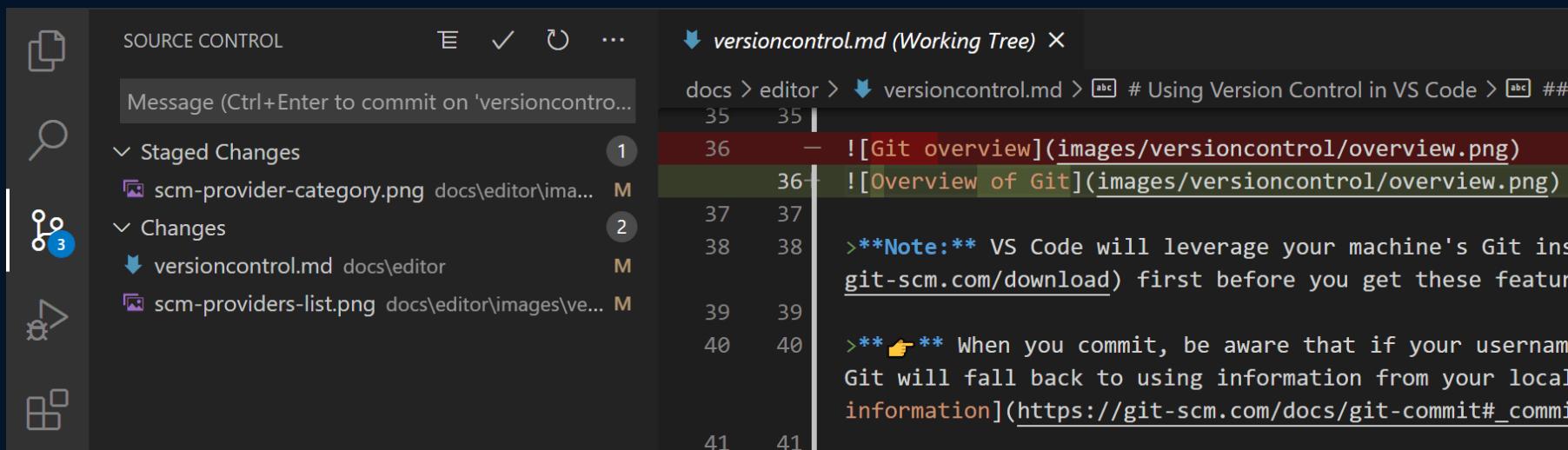


A screenshot of a code editor window titled "Program.cs \". The editor shows the following C# code:

```
1 using System;
2
3 // This is a new line
4 class Program
5 {
6     // this is a comment
7     public static void Main()
8     {
9         var x = 123;
10        Console.WriteLine();
11        Console.WriteLine("hello world!");
12    }
13 }
```

The gutter on the left side of the code editor displays several colored indicators: red for lines 1, 2, 6, and 7; green for lines 3, 9, and 11; blue for lines 10 and 12; and light blue for line 13. These indicators likely represent different types of code analysis results or warnings.

Source control panel



.gitignore file



```
1 ./binabox
2 - .git/
3 - .gitignore
4 - index.html
5 - styles.css
```

What to ignore

- Generated files
- Debug logs

Official syntax docs Generator

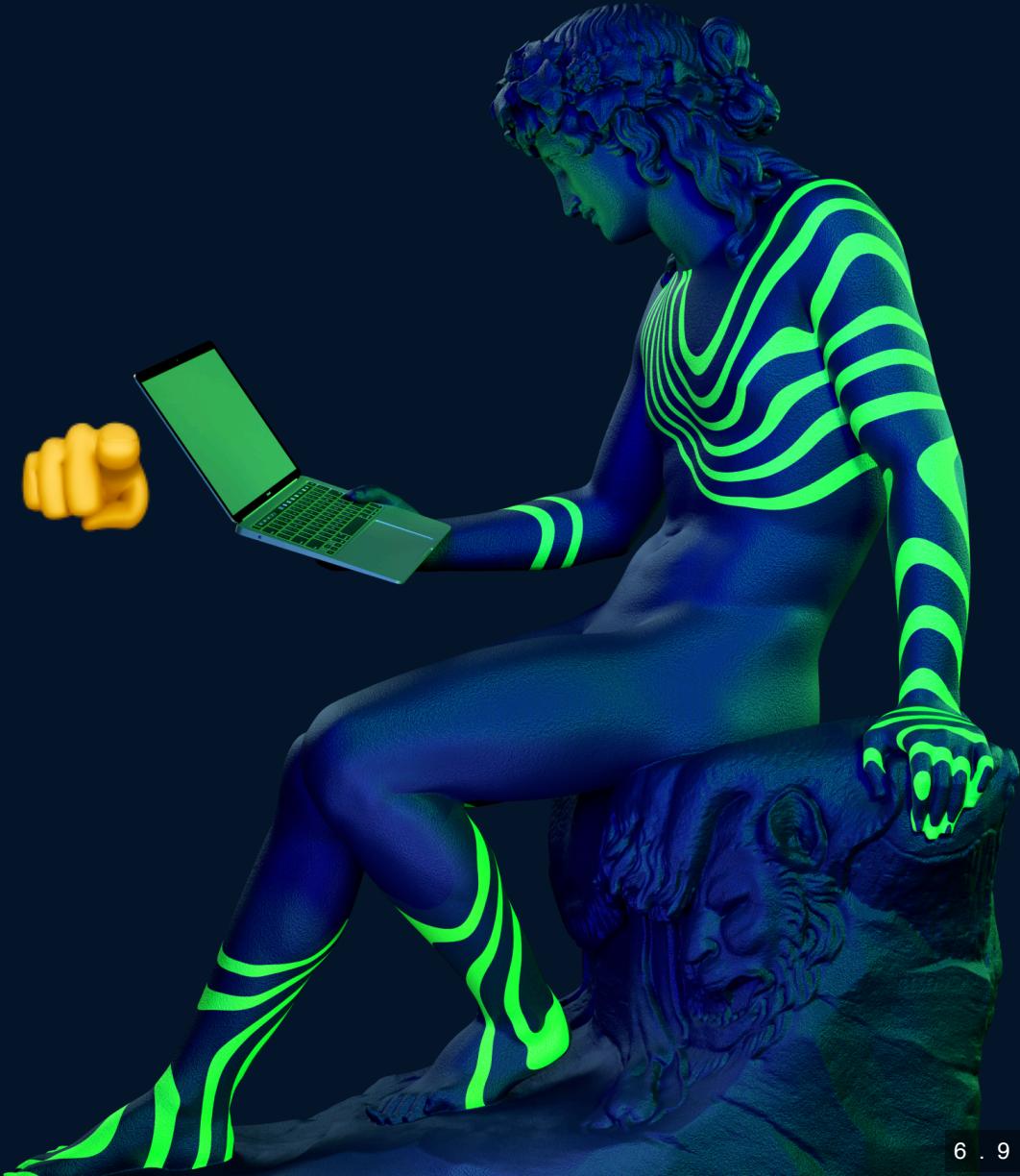
`~/.gitignore_global`



- System files
 - `.DS_Store` for macOS
 - `Thumbs.db` for Windows
- Your editor settings
 - `.vscode`
 - `.history`

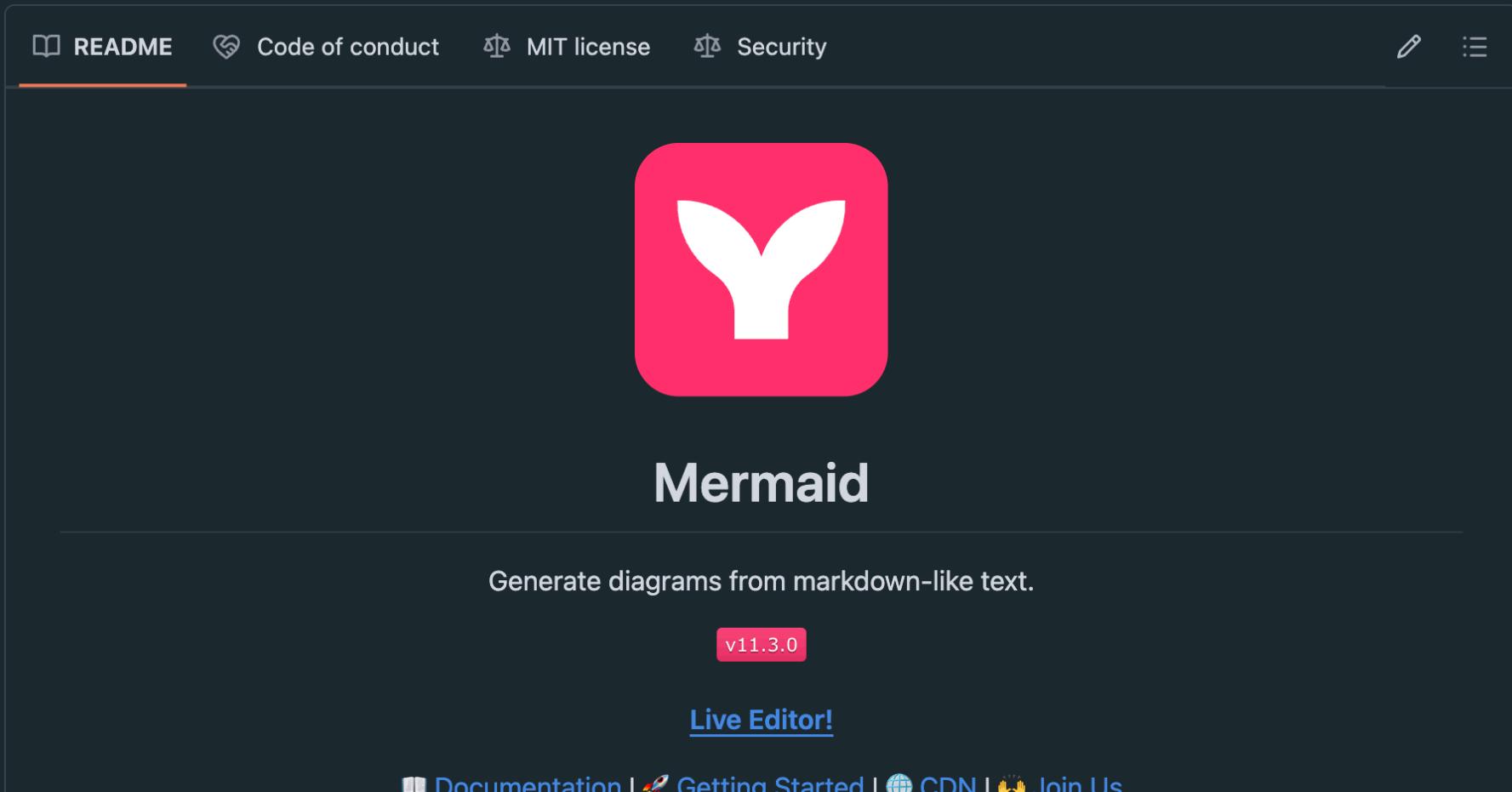
Collection of useful global ignores
(Diff, VS Code, Windows, macOS, JetBrains)

Show how it looks 💪



README

As main descriptive file of each repo and folder



The screenshot shows the GitHub README page for the Mermaid repository. At the top, there are navigation links: 'README' (which is underlined in red), 'Code of conduct', 'MIT license', and 'Security'. To the right of these are edit and settings icons. Below the navigation, there is a large red square containing a white stylized 'Y' logo. The word 'Mermaid' is centered below the logo. A horizontal line separates this from the description text. Below the line, it says 'Generate diagrams from markdown-like text.' and 'v11.3.0'. At the bottom, there is a 'Live Editor!' button and footer links for 'Documentation', 'Getting Started', 'CDN', and 'Join Us'. The footer also includes a page number '7 . 1'.

README

Code of conduct

MIT license

Security

Mermaid

Generate diagrams from markdown-like text.

v11.3.0

Live Editor!

Documentation | Getting Started | CDN | Join Us

7 . 1

Markdown

- `# Heading`
- `## Heading 2`
- `### Heading 3`
- `**bold**` or `bold`
- `*italic*` or `italic`
- `~~Strikethrough~~`
- `> Quote`
- ``Code``

Markdown lists

Unordered

```
* Item  
* Item  
* Item  
* Item
```

- Item
- Item
- Item
- Item

Ordered

```
1. Item  
1. Item  
1. Item  
1. Item
```

1. Item
2. Item
3. Item
4. Item

Markdown table

ID	Name	Status
--	-	---
1	Alice	online
2	Mark	online
3	Bran	offline

ID	Name	Status
1	Alice	online
2	Mark	online
3	Bran	offline

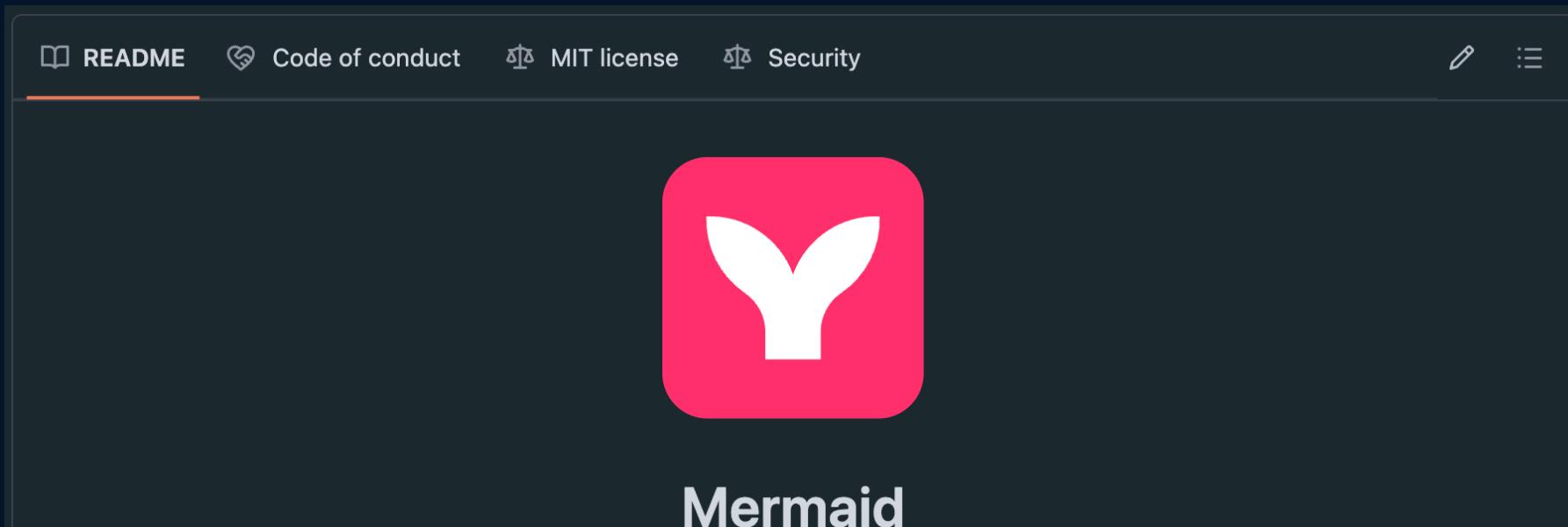
Markdown checklists

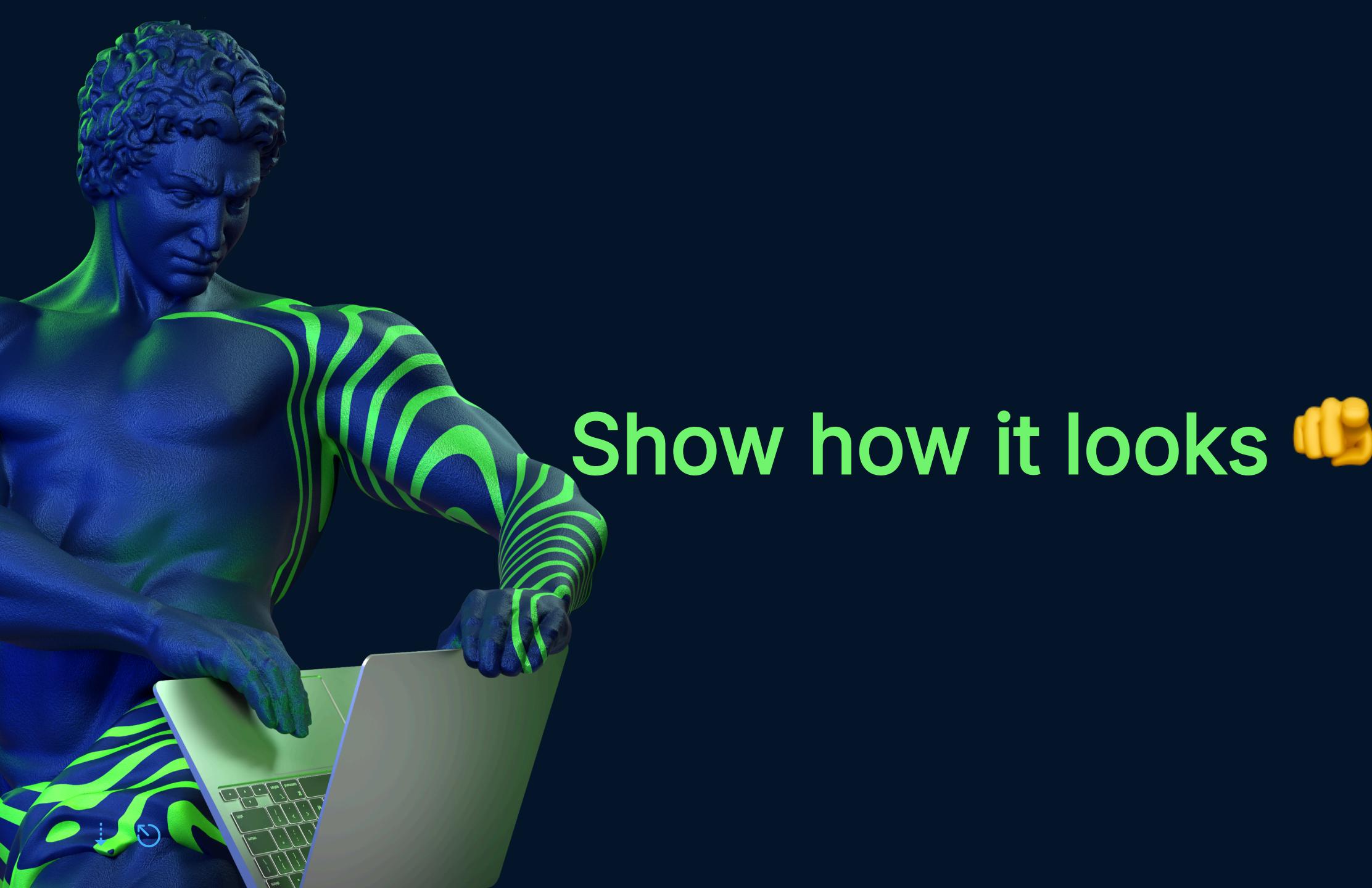
```
- [ ] Item  
- [ ] Item  
- [x] Item  
- [ ] Item
```

- Item
- Item
- Item
- Item

Markdown files

- README.md
- LICENSE
- CONTRIBUTING.md
- CODE_OF_CONDUCT.md
- SECURITY.md

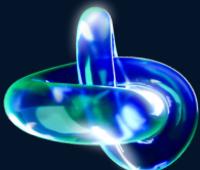




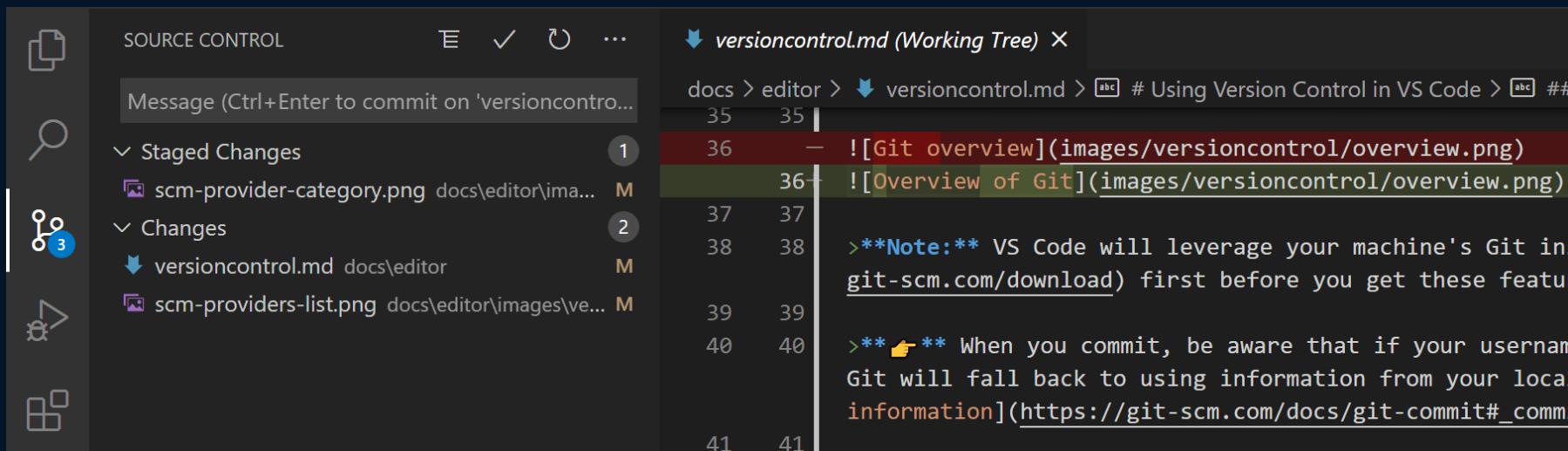
Show how it looks 💪



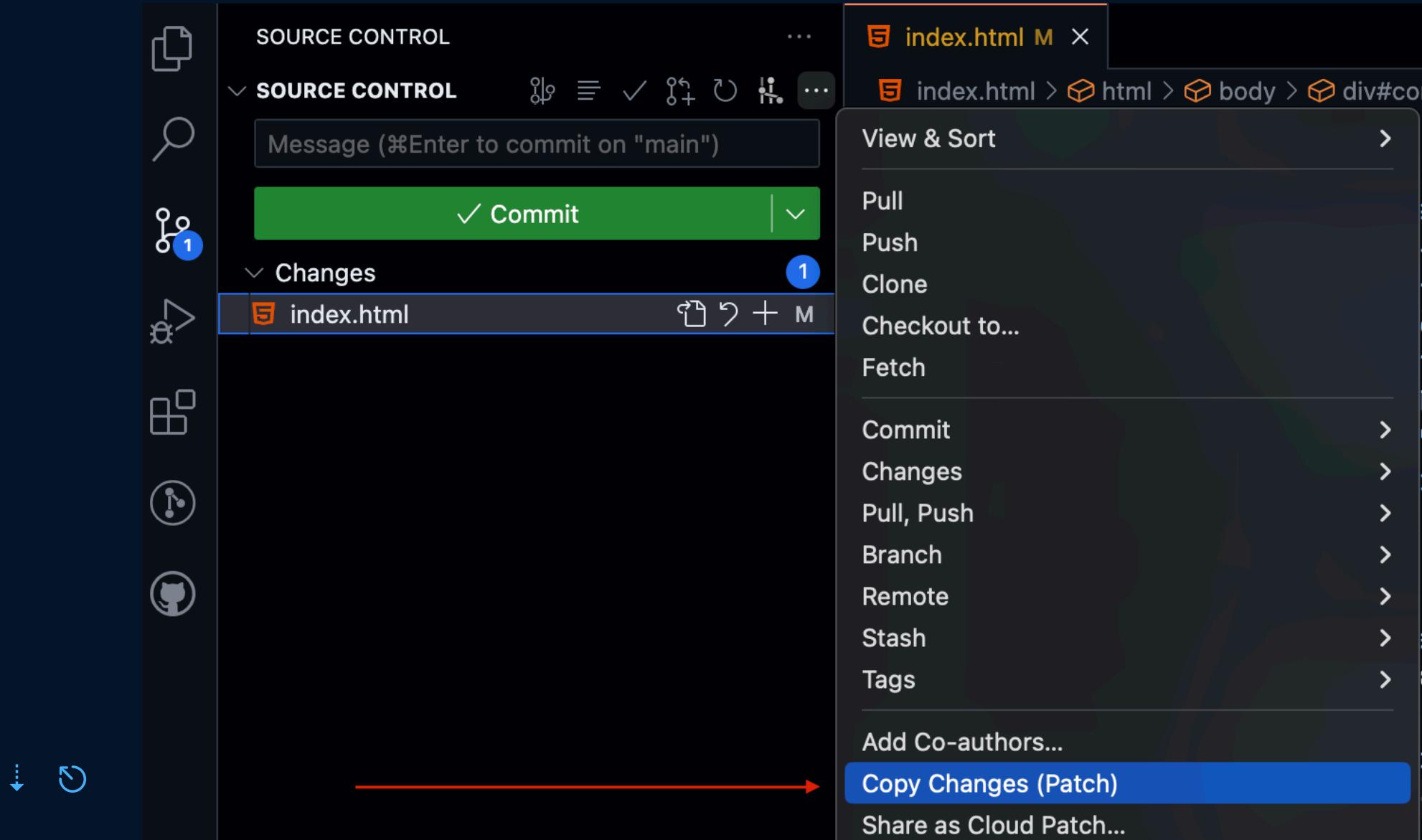
Changes ≠ files



Source control panel



Git stores diffs, not files



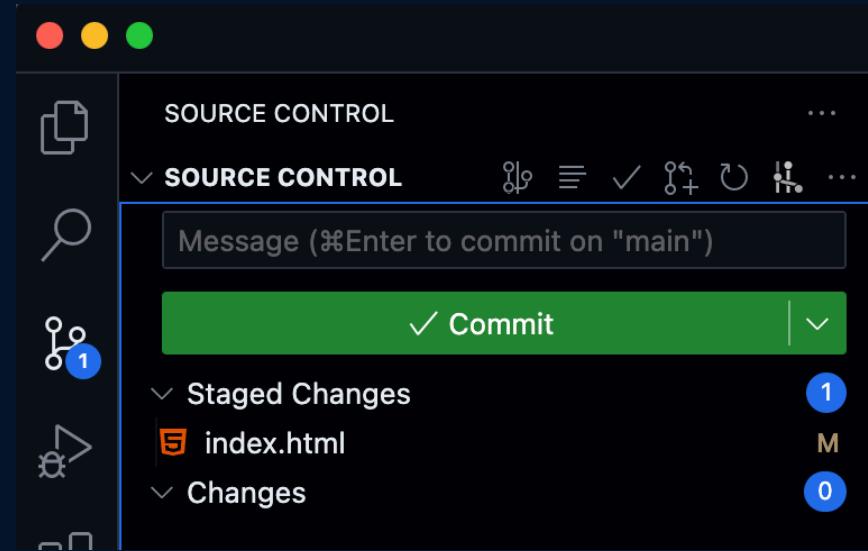
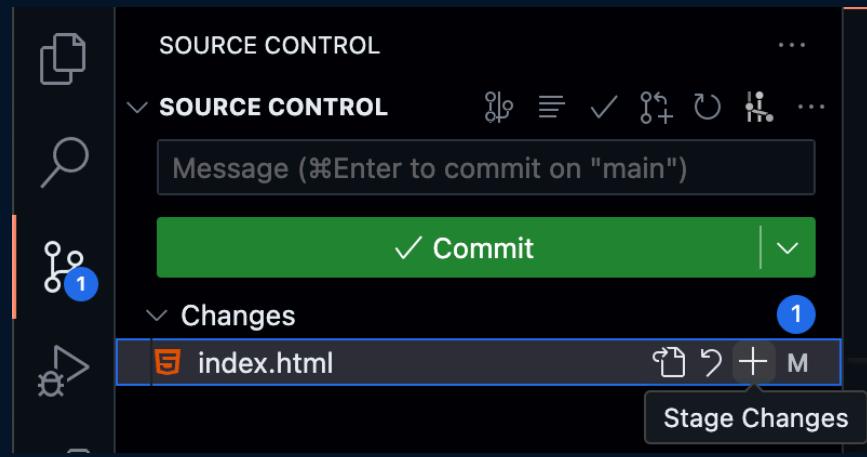
git diff > am.patch

```
diff --git a/index.html b/index.html
index 4ff5454..3600ce7 100644
--- a/index.html
+++ b/index.html
@@ -32,7 +32,7 @@
          <p>AYAKO YOKOYA</p> <!-- Name --
          </div>
          <div class="aboutme">
-          <p>Creative Developer <span>(I
+          <p>Creative Developer <span>(I
          </div>

          <div class="sns-btn-box">
```

git add . to stage files

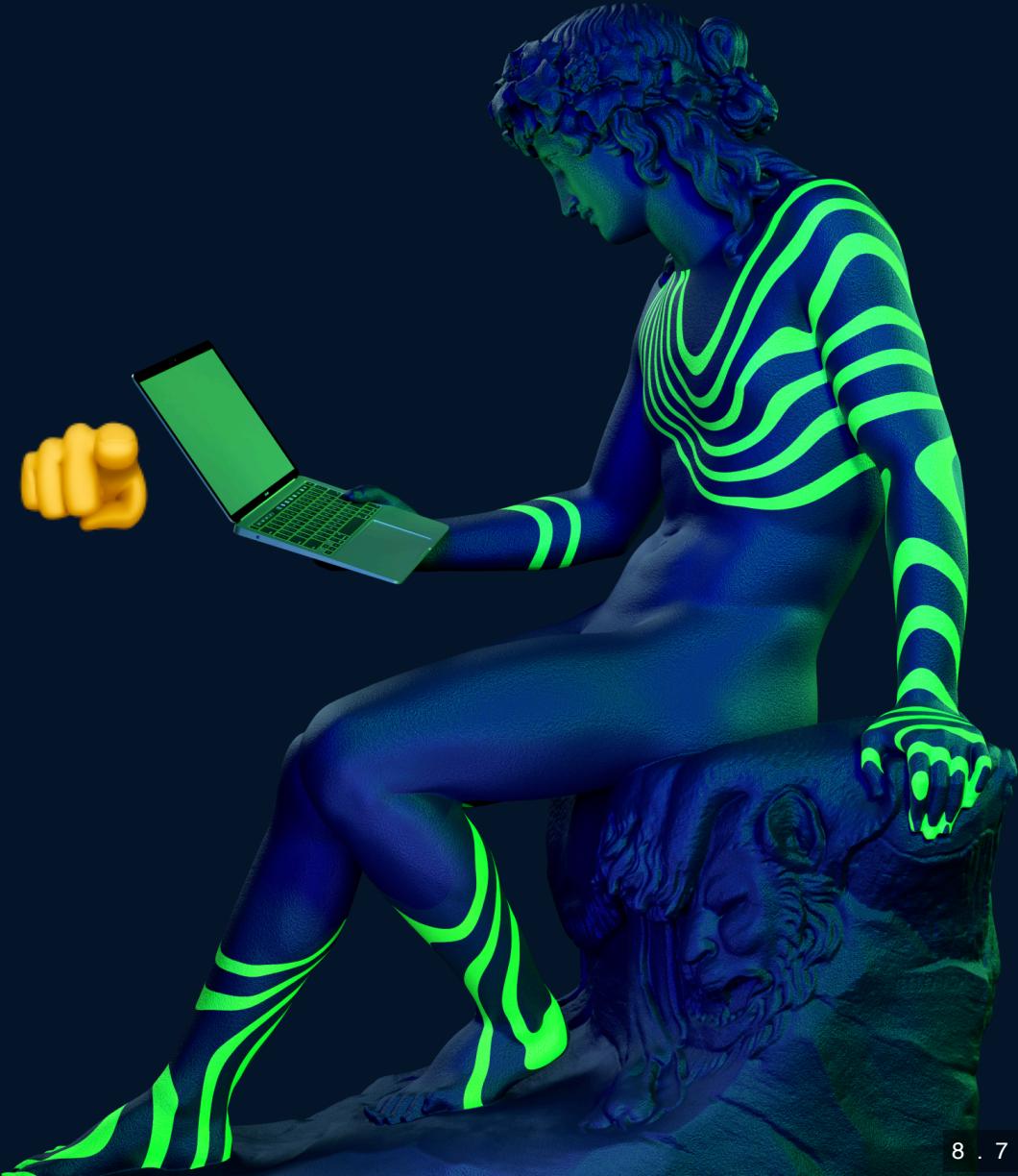
add files to stage for commit

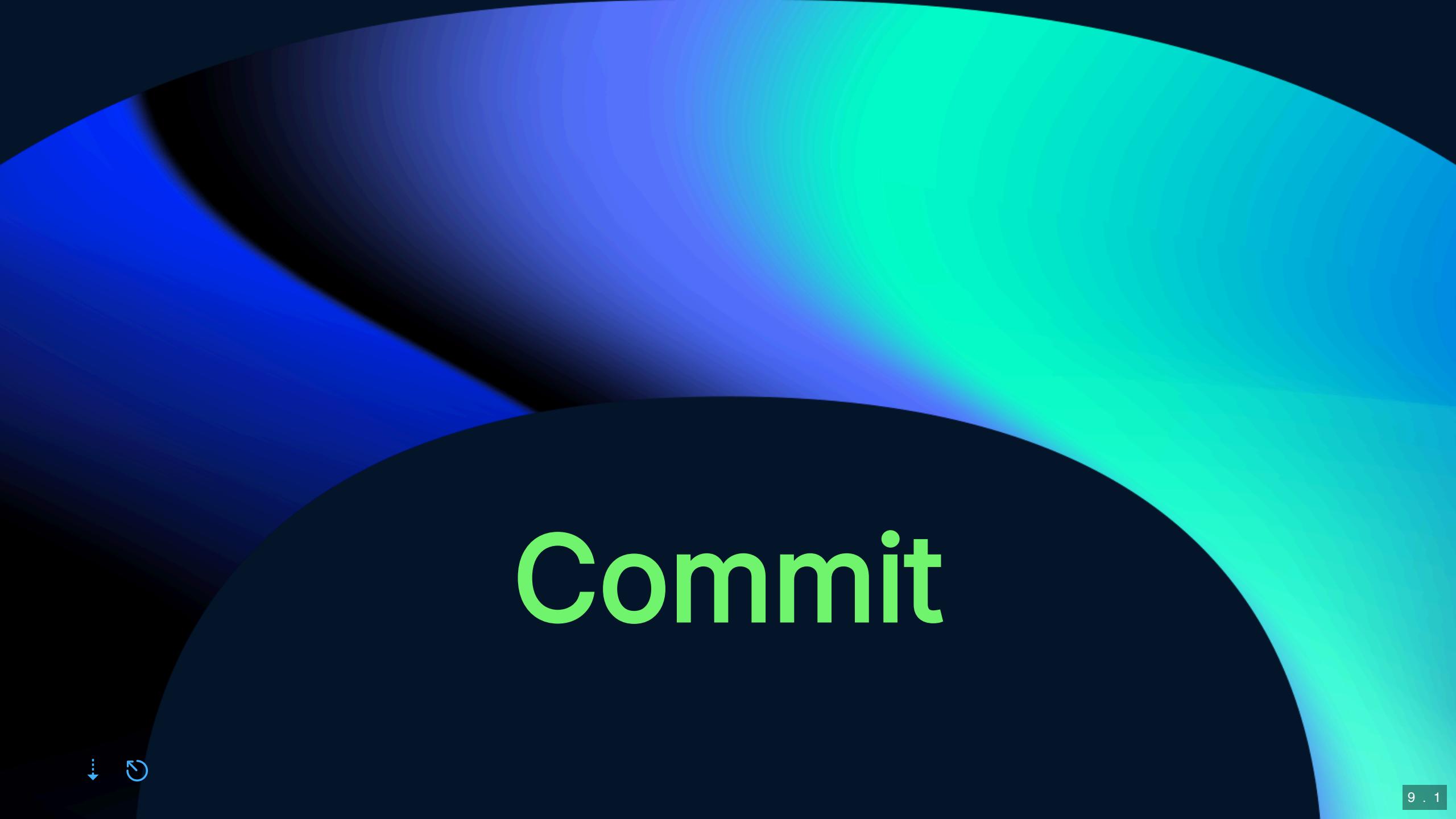


git stash to hide changes

- hide to stash
- pop from stash

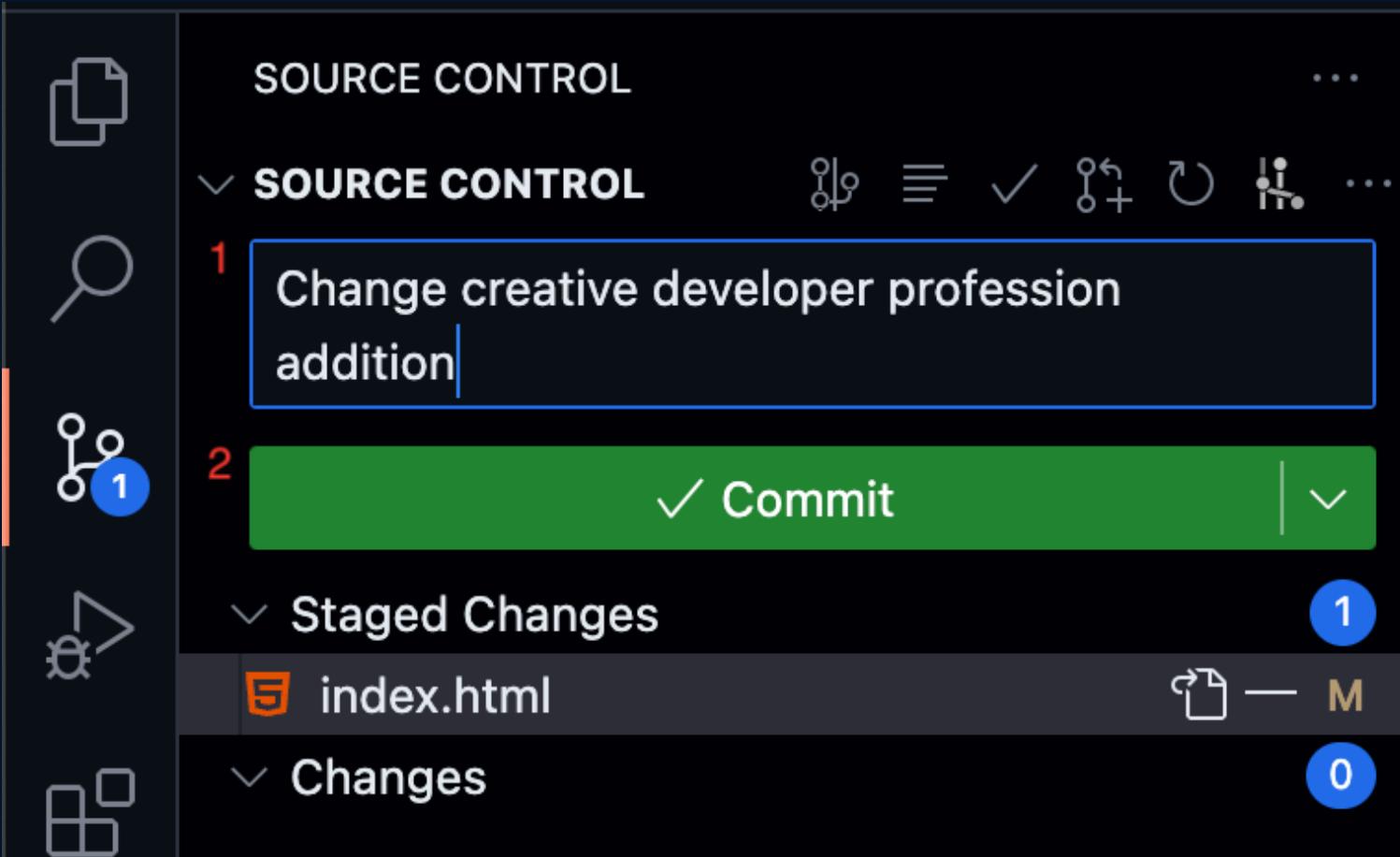
Show how it looks 💪





Commit

git commit -m 'text'



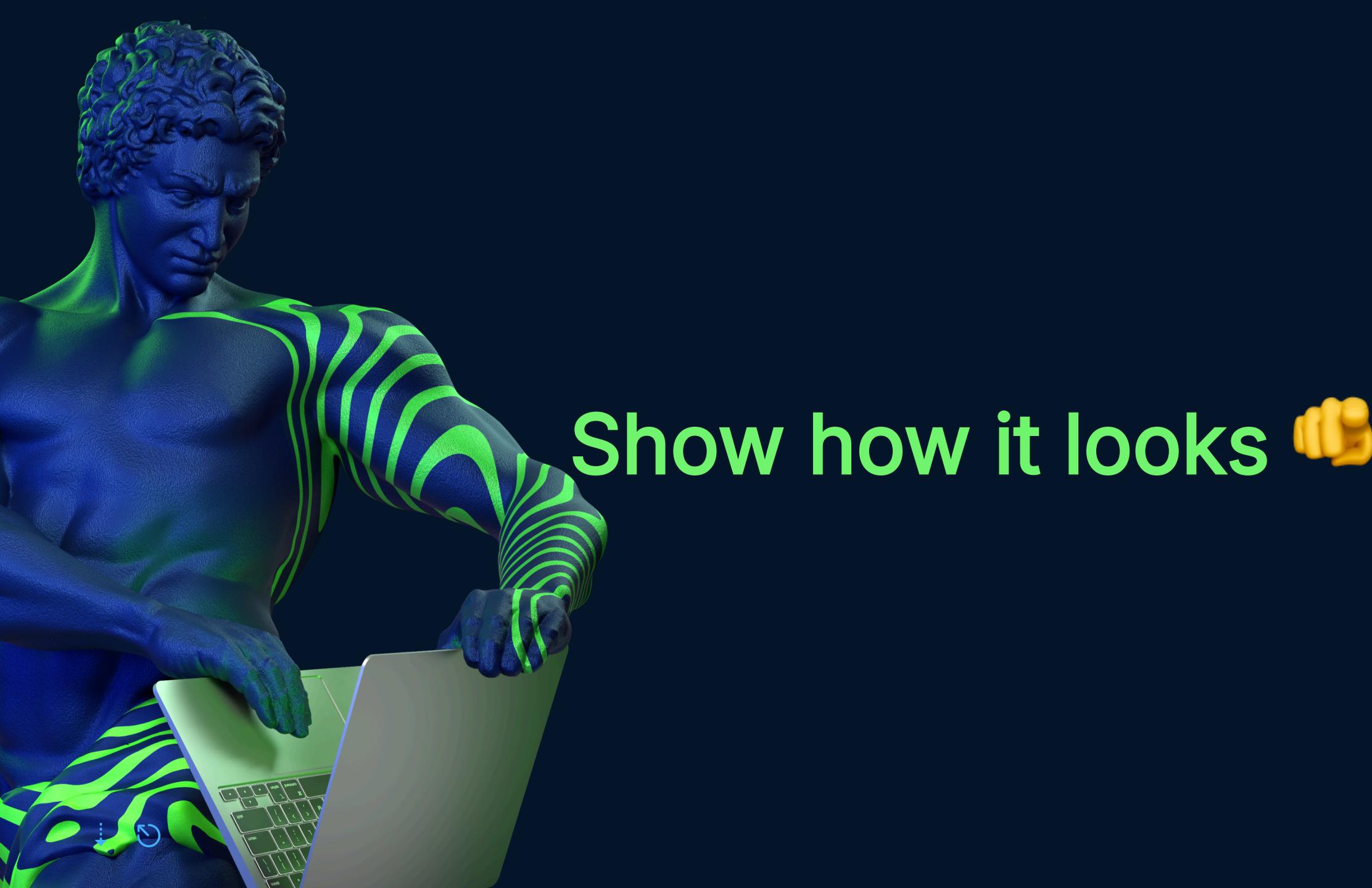
Commit message

- Use a descriptive commit message
 - ✓ good: "fix validation in contact form", ✗ bad: "fix", "sdfsdf"
- Use the imperative mood
 - ✓ good: "fix validation", ✗ bad: "fixed validation"
- Make each commit a logical unit
 - don't commit more than described
- Make atomic commits
 - logical units, the smallest possible size
- Strive to use no more than 60 symbols
 - to be visible in GitHub UI

Care about your teammates

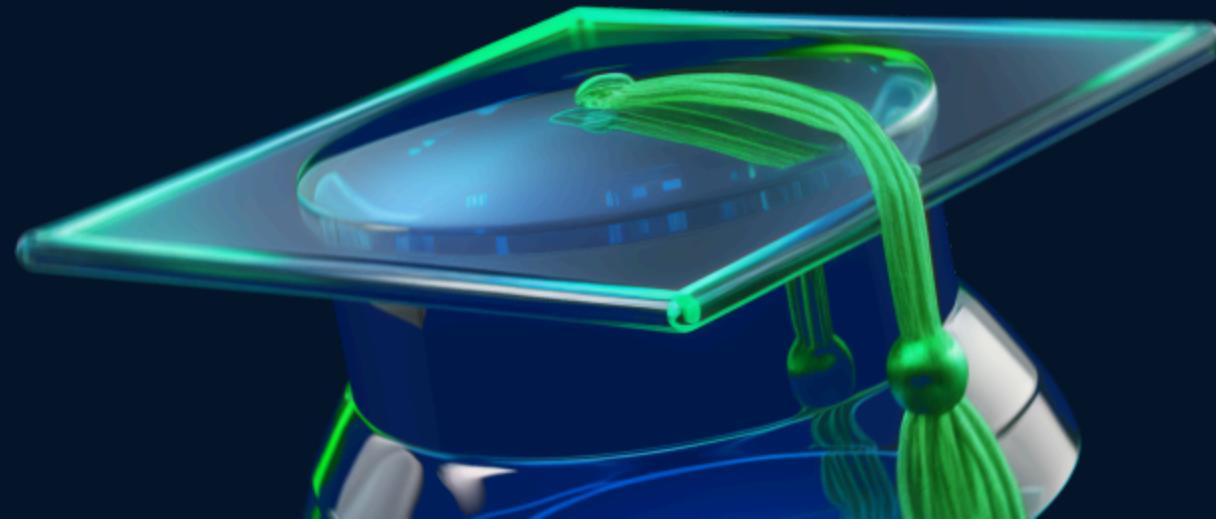
What or how to commit

- Pull before all new commits
- Coordinate with your co-workers
- Remember that the tools are line-based

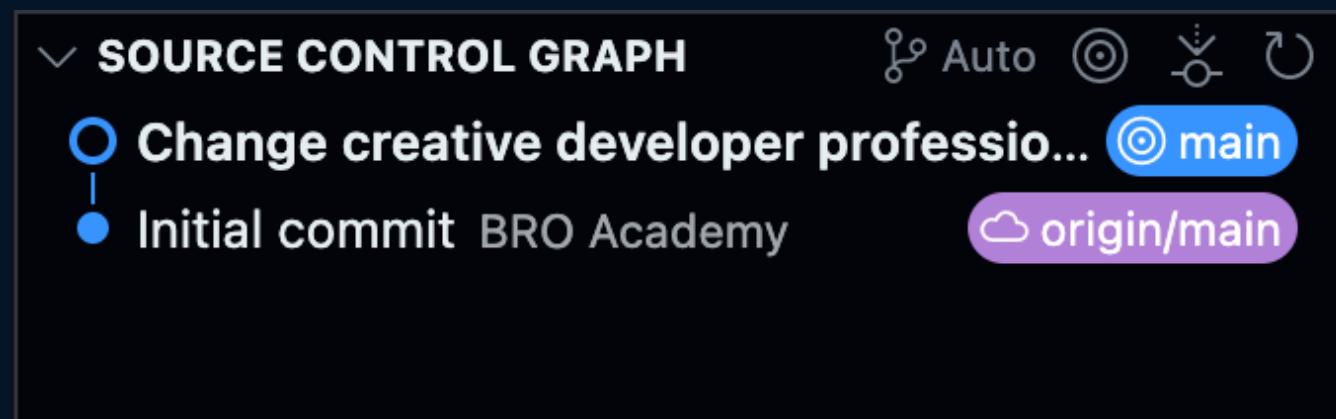


Show how it looks 💪

History



git log



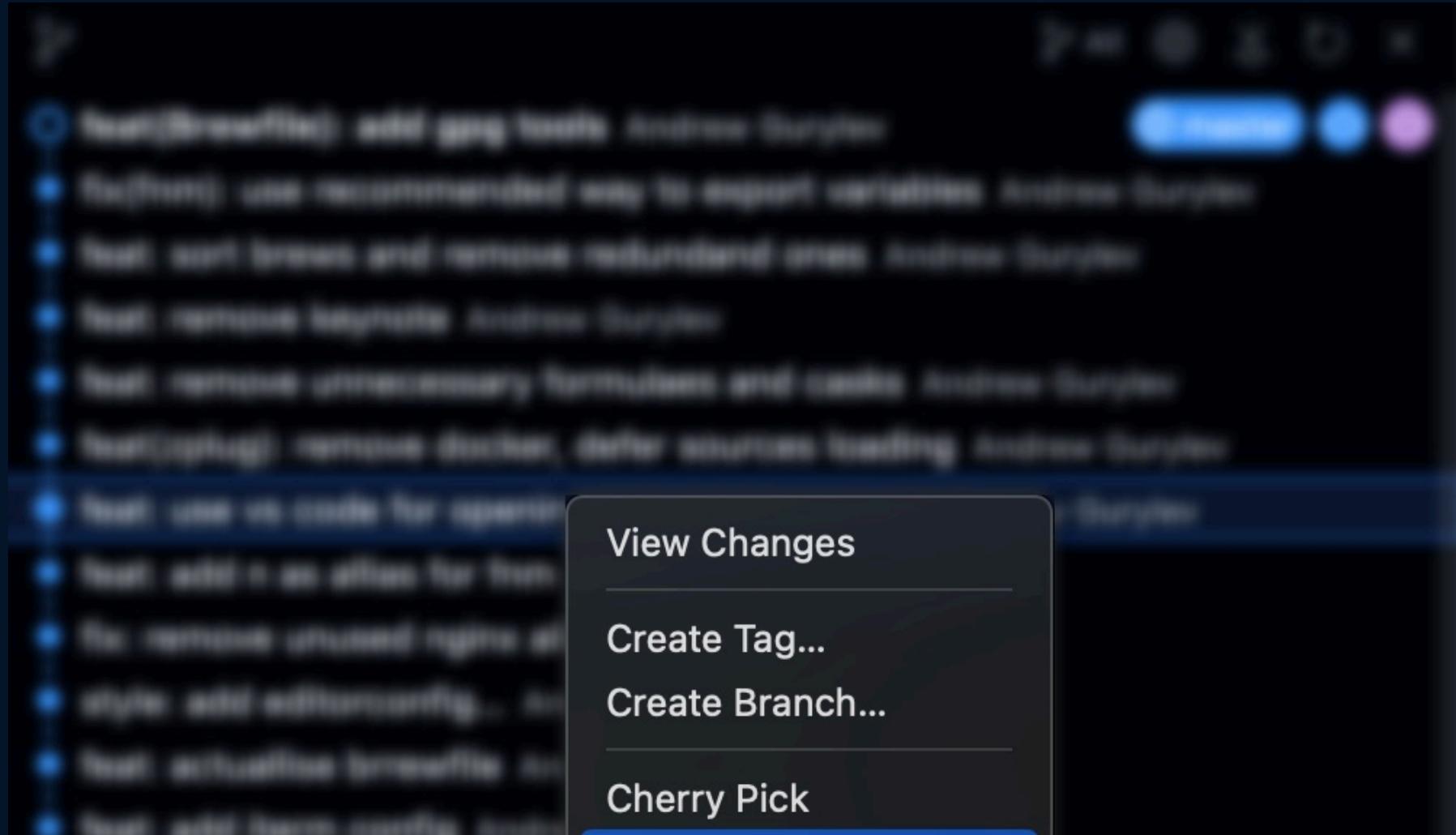
```
git blame index.html
```

- annotate
- how to leave vim (:q)

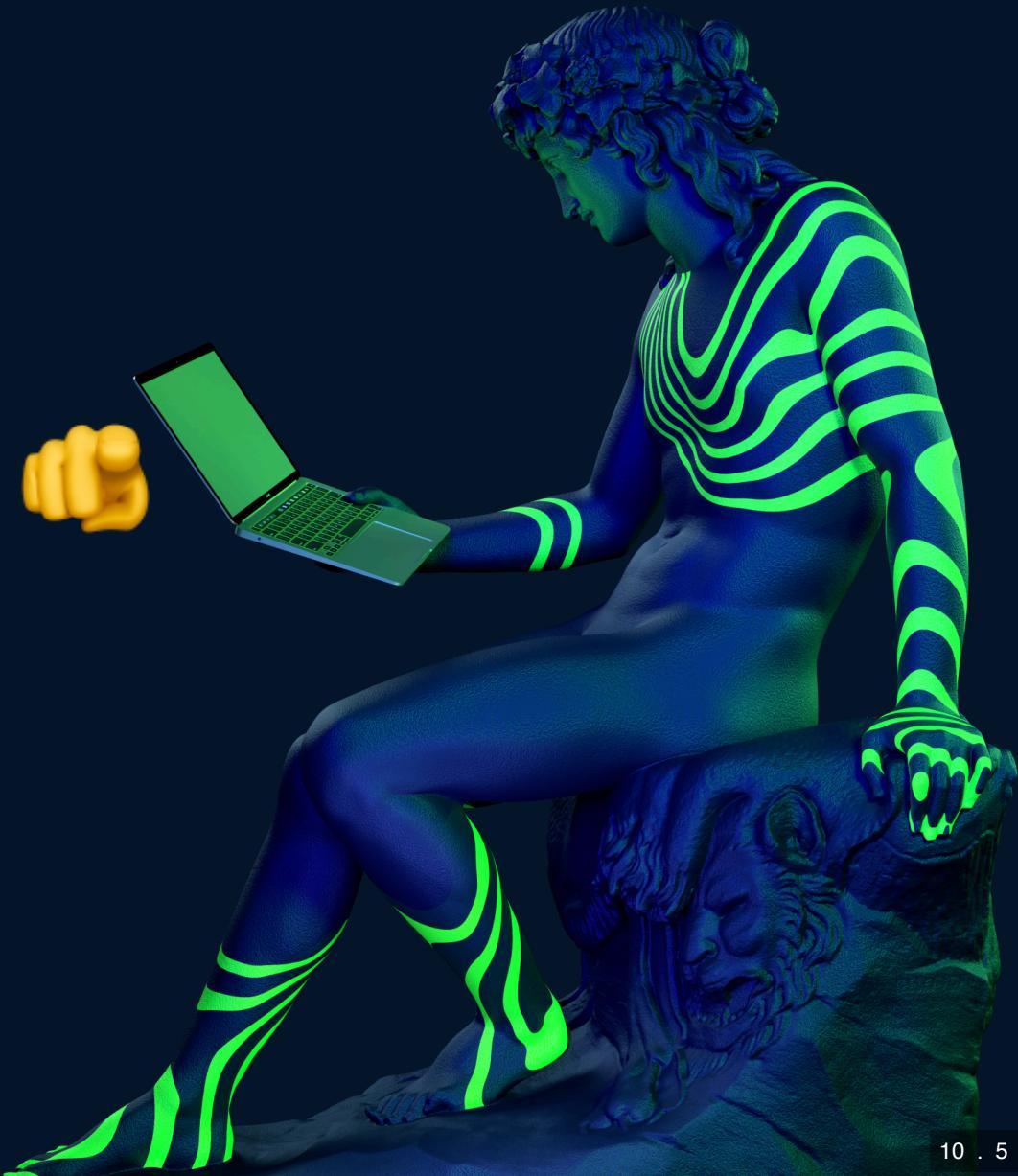
VS Code extension: [GitLens](#)

Checkout commits

Commits as versions



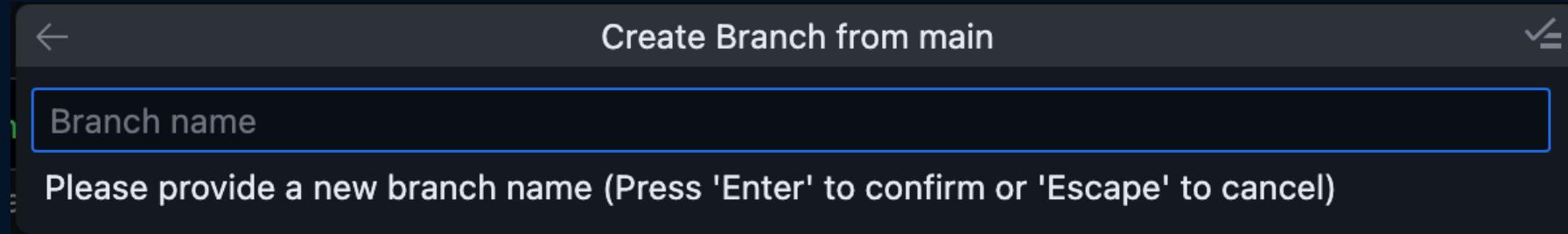
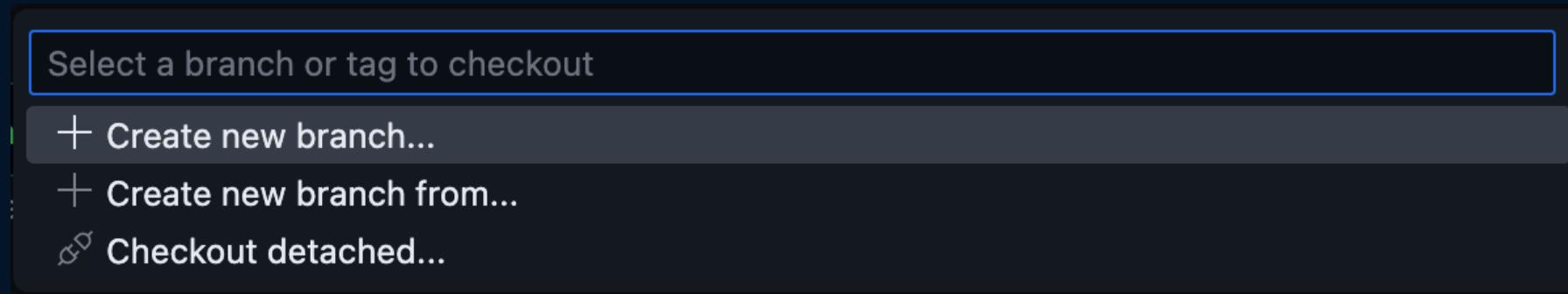
Show how it looks 💪



Branching

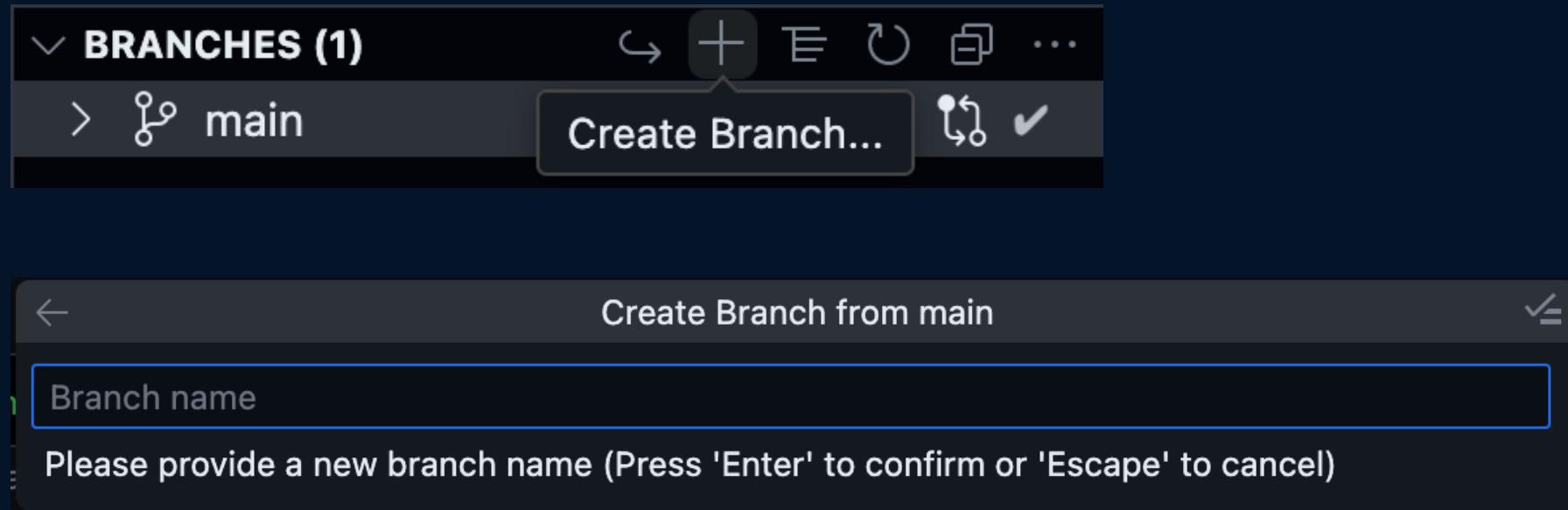
git checkout -b BRANCH

From status bar



git checkout -b BRANCH

Or from Branches in the Source Control panel



Good practices

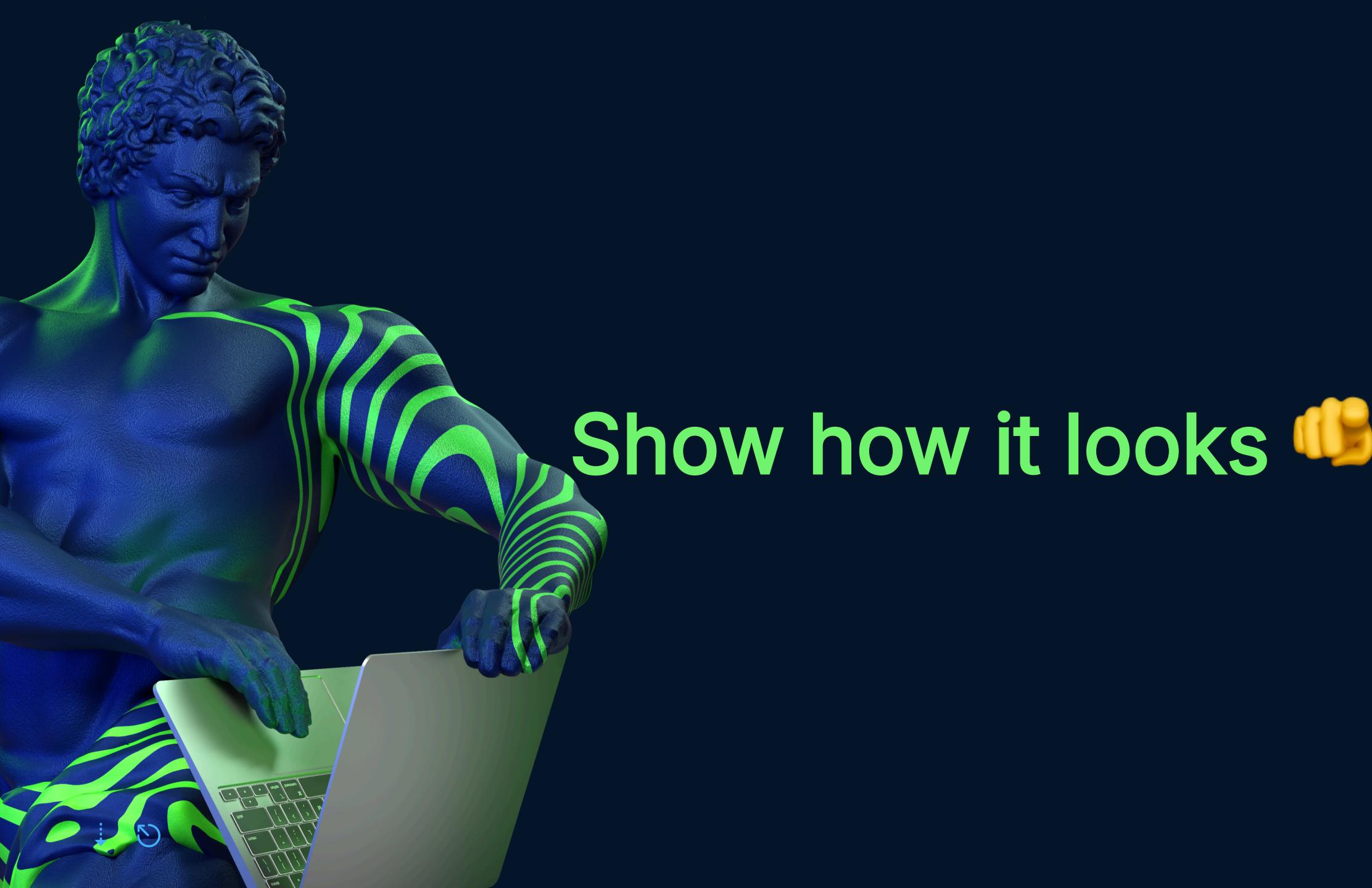
- Don't commit into target branch (main)
- Create a branch for each task
- Use team branching rules

Branch naming team rules

1. Type of task
2. Task ID and short name

Good examples:

- 1 feature/3-add-markup
- 2 feature/MEW-4-add-styles
- 3 bugfix/8-wrong-form-validation
- 4 12-add-initial-styling



Show how it looks 💪

Summary

- Git is more convenient than FTP
- Git is about changes, not files
- Git provides a time traversal abilities

Next lesson

- Team work
 - Roles
 - Workflow
- Online part of git
 - Fetch / Pull
 - Push
 - Pull request
 - Automatic things
 - Code review
 - Merge

Homework?

- Fork Binabox
- Add Readme
- Read Additional materials

Quality criteria

- ❤️ The site should have a GitHub repository
- ❤️ There's no system file like `.DS_Store` or `Thumbs.db` in the repository
- ❤️ There are no commits in the target branch (usually `main`)
- 🤍 Commit messages are descriptive
- 💚 Each commit is a logical unit
- 💚 Commits are atomic
- 💚 Commit message no longer than 60 symbols

**Please fill out the feedback
form**





Thank you!
Bye!