GitHub Codespaces and GitHub pages

*** - Instructor notes
** - Important
* - Consider this
Note: I provide more information than you will need in this course for your own studies outside of class, think of it as reference. Be curious and ask questions.

1. Introduction

This topic is going to be easier but will apply many ideas from the git and GitHub lecture so feel free to review those lecture notes as you go.

GitHub Codespaces is a cloud-based development (programming or coding) environment (a setup) that allows you to program from any device. Think of it like Google Docs, Slides, Sheets, etc.

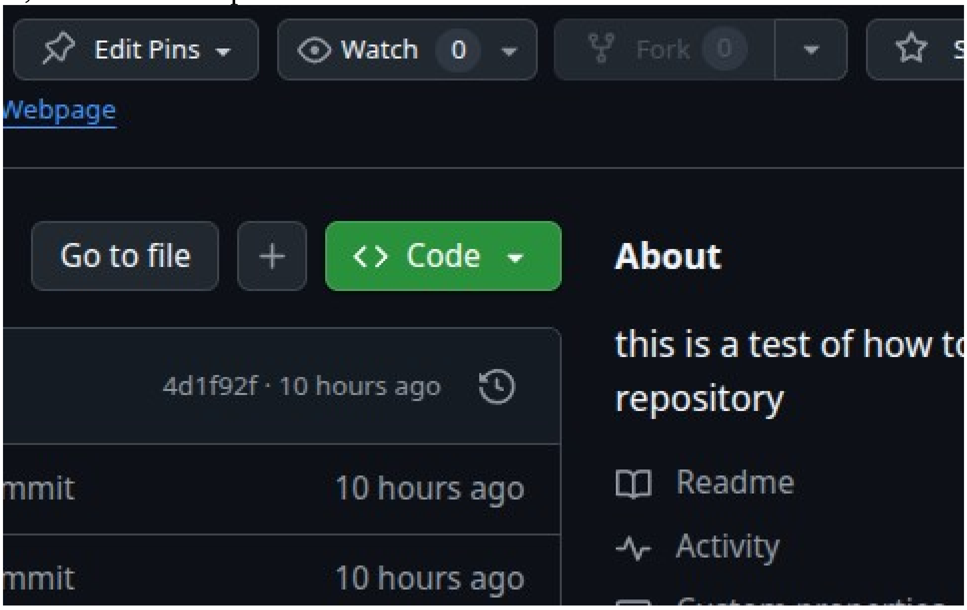
Codespaces allows you to skip all the setup required with a a traditional, local (on your computer) development environment because of its “containerized” setup. Containerized really just means that all the tools you need are built into this environment when you first launch Codespaces.

2. Codespaces Benefits

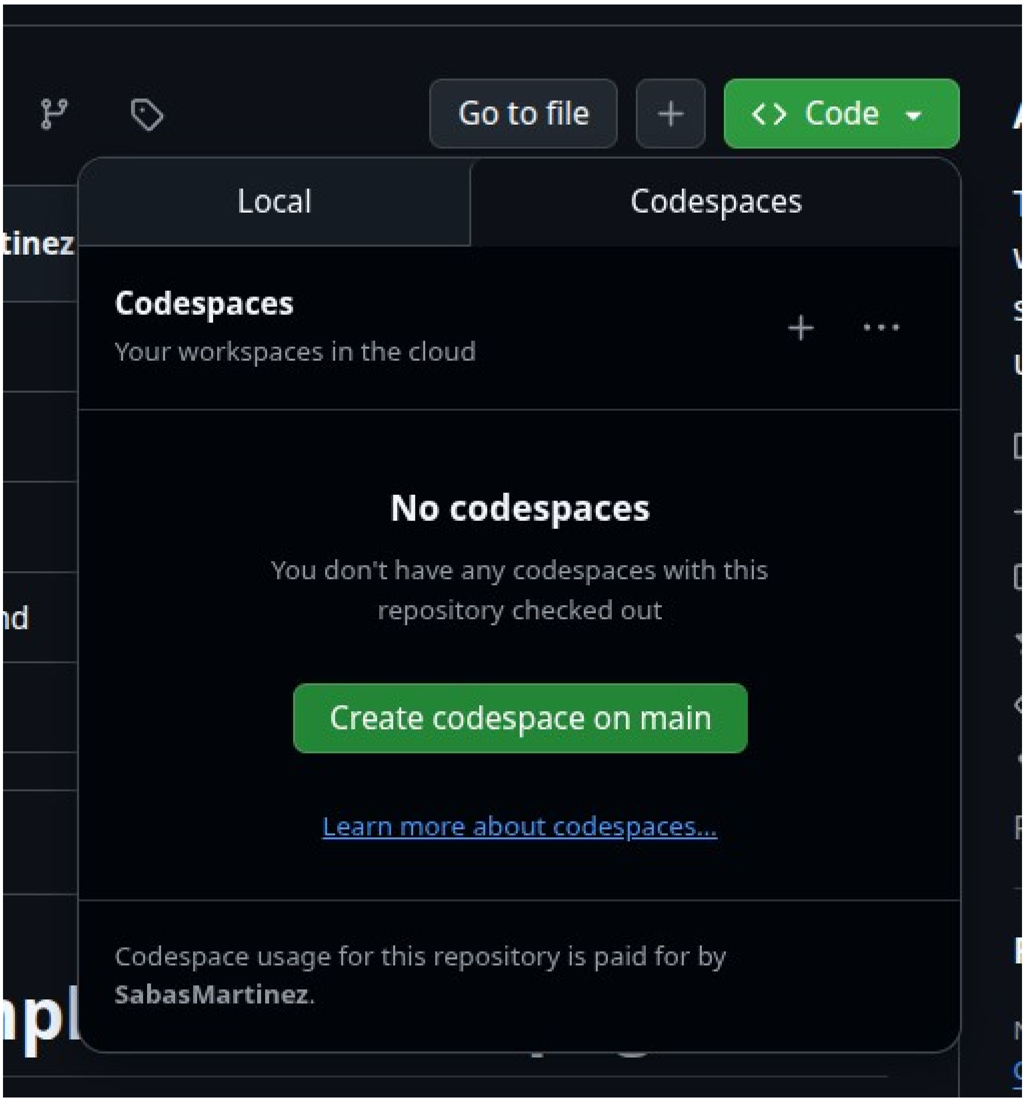
- Setup time is next to nothing. There is no installation or further configuration necessary
- Members of the repository (collaborators) can use the same codespace.
- You can program from many devices.
- It includes a terminal, vscode, git, and can install any vscode extension.
- You can modify the container to include more advanced tools you need.
- It allows you to run a preview server for web pages.

3. Using Codespaces

To get started, navigate to a GitHub repository you own or are part of, click on the big, green "Code" button, choose "Codespaces".



Then click on Codespaces followed by clicking create codespaces on main.



Your workspaces in the cloud

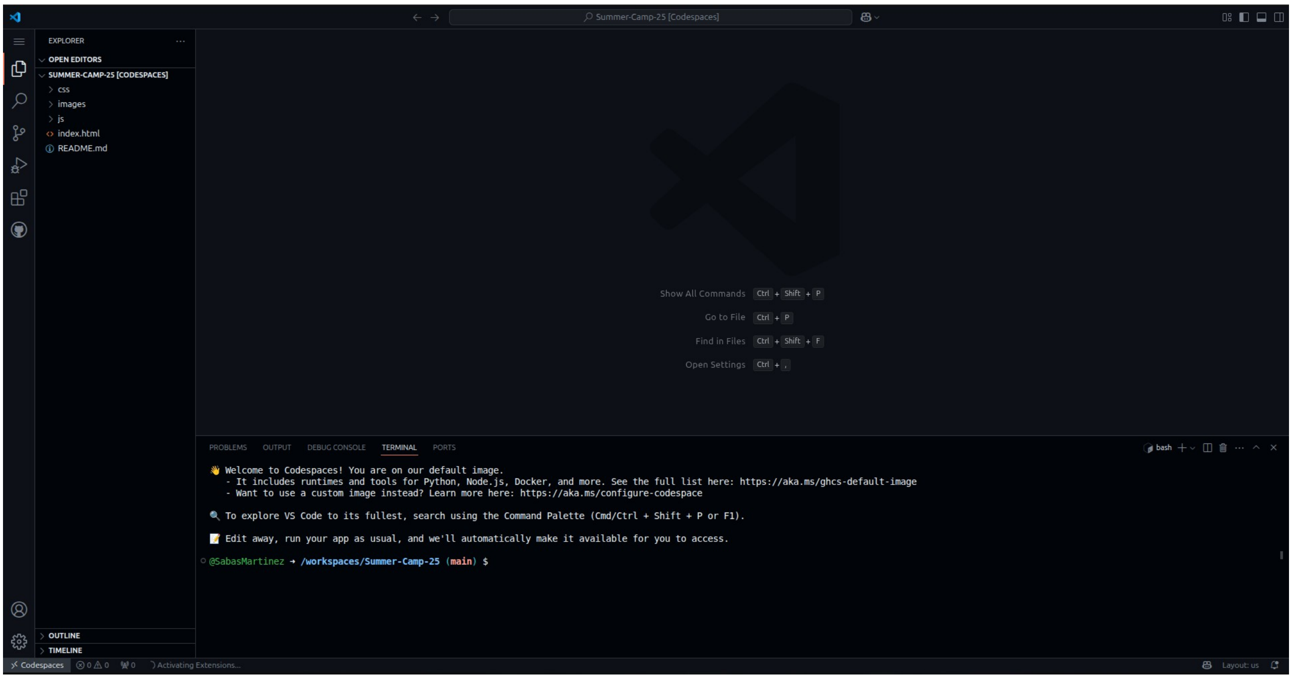
No codespaces

You don't have any codespaces with this repository checked out

Codespace usage for this repository is paid for by **SabasMartinez**.

And that is all, It will load in a new tab for a short while and will automatically move you to your Codespaces once its done loading.

The page will look like this:



```
👋 Welcome to Codespaces! You are on our default image.
   - It includes runtimes and tools for Python, Node.js, Docker, and more. See the full list here: https://aka.ms/ghcs-default-image
   - Want to use a custom image instead? Learn more here: https://aka.ms/configure-codespace

🔍 To explore VS Code to its fullest, search using the Command Palette (Cmd/Ctrl + Shift + P or F1).

📝 Edit away, run your app as usual, and we'll automatically make it available for you to access.

@SabasMartinez ➜ /workspaces/Summer-Camp-25 (main) $
```

-- Side note --

*There is a terminal, so if you are curious feel free to play with it. *
Use and research command like:

- `git status`
- `git add`

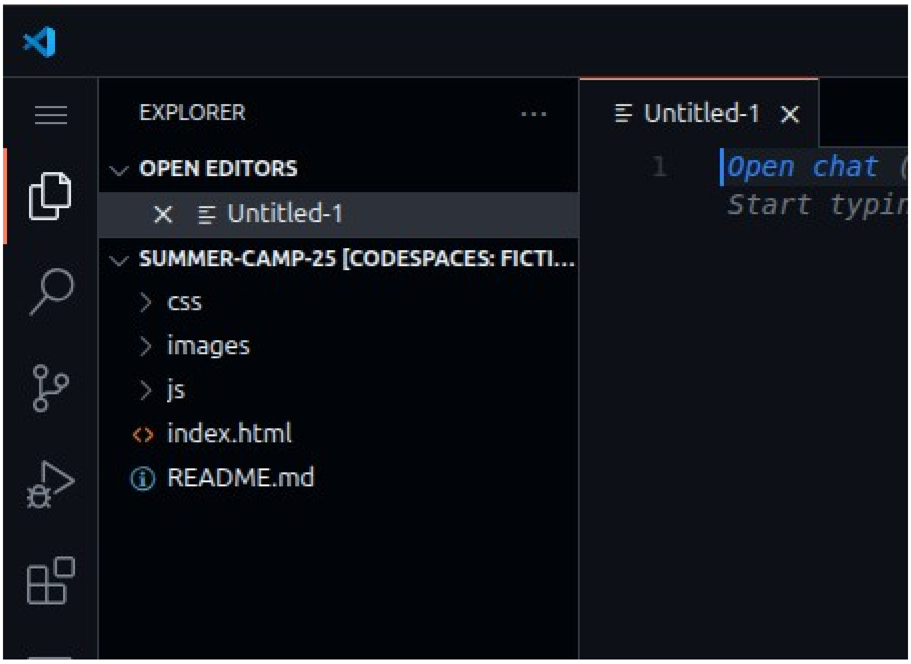
or non git commands like:

-`ls' to show what is in the current directory (folder)
-`cd` to change the folder you are in.
- `pwd`
- `touch <filename>' to create a file, filename is any name you want and the extension (img.jpg, dog.html, cat.css)

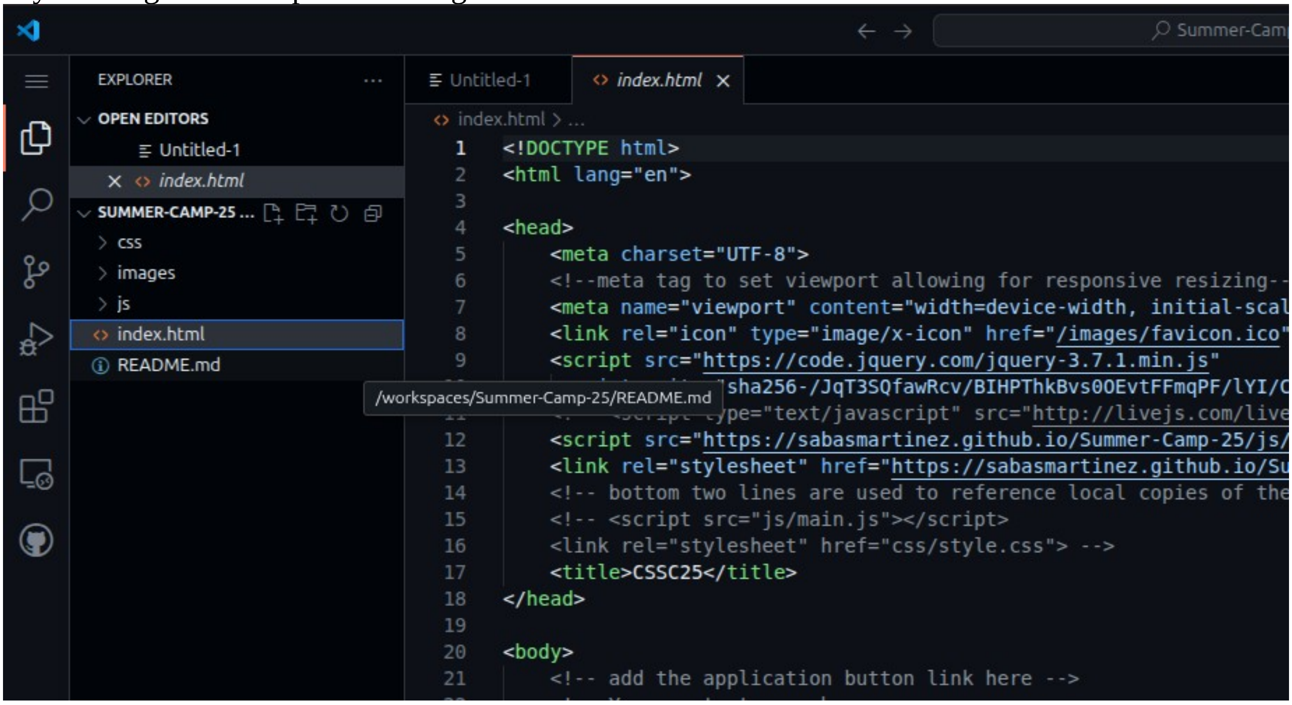
The list of commands is huge but we do not require learning them all. This is an extension so do not get lost over understanding it, I will have a crash course on terminal usage.

-- End side note --

Besides the terminal there is a file explorer tab on the left, you can click on anything to open it and you can also collapse an expand folders using the “carrot” (>) icon. You can also modify and rename files by right clicking.



Try clicking a file. It opens it the right hand section.



```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <!--meta tag to set viewport allowing for responsive resizing--
    <meta name="viewport" content="width=device-width, initial-scal
    <link rel="icon" type="image/x-icon" href="/images/favicon.ico"
    <script src="https://code.jquery.com/jquery-3.7.1.min.js"
                   "sha256-/JqT3SQfawRcv/BIHPThkBvs0OEvtFFmqPF/lYI/C
    <!-- <script type="text/javascript" src="http://livejs.com/live
    <script src="https://sabasmartinez.github.io/Summer-Camp-25/js/
    <link rel="stylesheet" href="https://sabasmartinez.github.io/Su
    <!-- bottom two lines are used to reference local copies of the
    <!-- <script src="js/main.js"></script>
    <link rel="stylesheet" href="css/style.css"> -->
    <title>CSSC25</title>
</head>

<body>
    <!-- add the application button link here -->
```

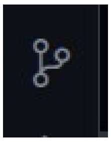
Awesome. You know how to open files, to edit them, it’s just like docs, you select where to type and begin typing.

To save… Codespaces is nice and autosaves for us.

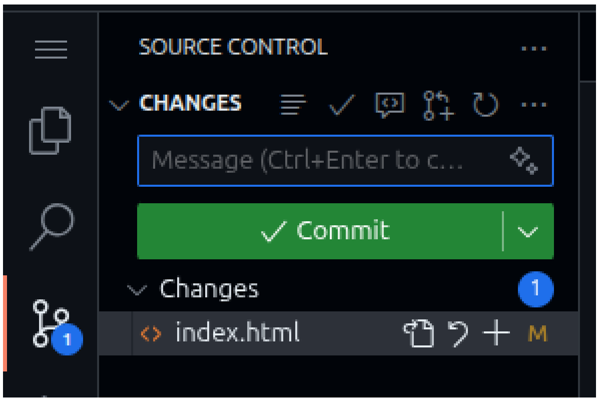
What it does not do Is automatically save our changes to the repository.

There is two options to work with git:
You can use the terminal route using; git pull, git add, git commit, git push. Just be sure to be in the right folder, if you didn’t cd or change directory, by default you are already in the git folder.

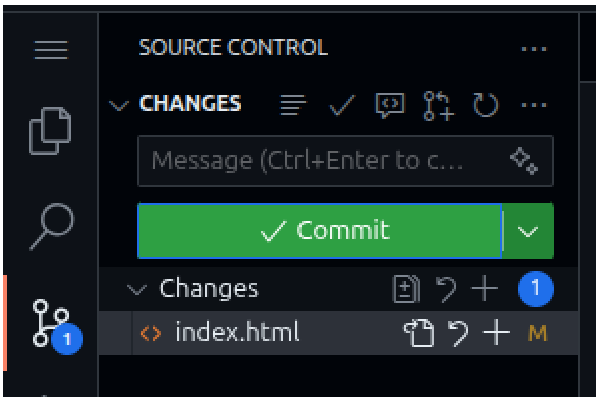
Or you can also use the git source control extension on vscode, on the left list of icons it looks like:



It looks like a branch.



Any changes trigger a count of changes and it will tell you what has changed. Here it’s index.html, to save a snapshot:
- Stage your changes:



Click on the plus sing next to each file or click the plus sign next to the changes tab to stage all.

- Click on commit It will open a window in vscode and ask for a messages. Remember it autosaves so just type and click on the x to close the file.
- And finally click sync changes, this is our push.

Codespaces is a simple way to get started with code anywhere on any device. Please play around, it is your playground. If you break anything its reversible, so ask. Don’t be afraid to try stuff.

4. GitHub Pages

Pages is a way for us to “host” or share our pages with the world. It is free to host some pages but can have cost depending on our uses. For basic use in this class it is free.

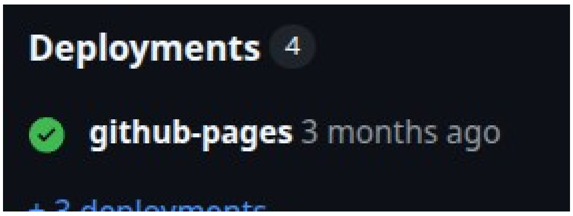
5. Why use pages?

- It is free
- It works directly off your repository
- No backend server setup is needed
- Any push will automatically build and serve the updated files

6. To get started

1. Click repository settings
2. Click on Pages
3. Confirm that for build and deployment “Deploy from a branch” is selected.
4. In the branch section select main and then root
5. Click save

The website will automatically start building and will host.
To check the status go back to the code tab of the repository and you will see a deployments section on the bottom right of the page.

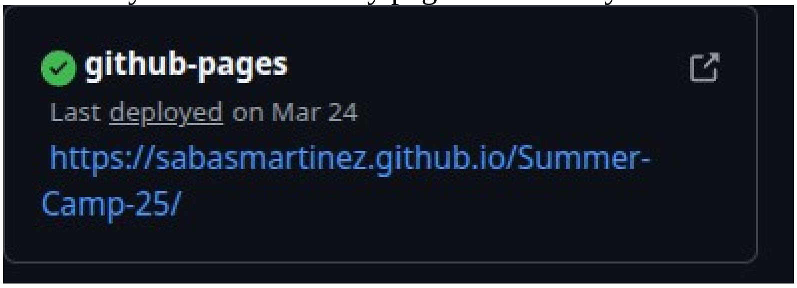


Deployments 4

✓ github-pages 3 months ago

+ 3 deployments

Click on that and it will take you to the summary page with a link you can use to access your page.



✓ github-pages

Last deployed on Mar 24

https://sabasmartinez.github.io/Summer-Camp-25/

If any issues are present this page will also tell you.

GitHub pages is quick and easy to setup and learn and you will be up and running in no time.
You can build your own runner when you want to build more specific and advanced pages and can find information regarding that on GitHub’s documentation page.