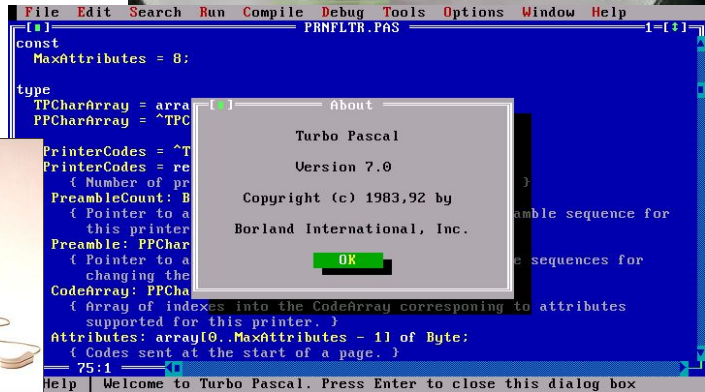
Front End Introduction

Mark MacCabe

https://www.linkedin.com/in/mmaccabe/

- BA in Information Systems, Minor Computer Science
- 15+ years of experience in IT
- Background in:
  - Many programming languages
  - Project/Account Management
  - AI/ML
  - Sales/ Pre-Sales Engineering
  - Robotics
- Currently working at ReTech Labs as a Director of Customer Success

First Programming Languages: Basic & Pascal



Jordan Herzig

- BA in Computer Information Technology
- 12 years of experience in IT
- Background in:
  - HTML, CSS, JavaScript, .NET, Angular, Python
  - Project Management
  - Customer Success
  - Robotics
  - Artificial Intelligence/Machine Learning
- Currently working at ReTech Labs as a Sr. Solution Manager

Meet the Class

Introductions

- Name
- Coding Experience
- What is your reason for taking this course?
- Hobby

Class Structure

Tuesday @ 5:30pm CST - 2 hours

- 50 minutes of lecture
- 10 minute break
- 60 applying what we learned to code

Thursday @ 5:30pm CST - 2 hours

- 2 hour coding assignment

Friday @ 4:00 / 5:30 Whatever pm CST - 1 hour

- 1 hour “open door” for anyone to join and ask questions

Need Help? Send Mark-M or Jordan-H a message on Slack to setup a time!

Passing the Class

- Attendance
- Final Project

What to expect from Front End Development Course

- Introduction to Programming
- Learn HTML development
- Learn CSS development
- Learn Javascript development
- How to connect to APIs
- Database structures
- How to build scalable web pages for a range of devices
- Design philosophies for user experience
- Deploying your website to the cloud

Class Syllabus and Main Site

https://winter2024.uoadev.com/

Goals for tonight

- Get setup in slack
- Overview of the coding “languages” we will be learning in the coming weeks
- Get setup to code
- Post your first webpage!

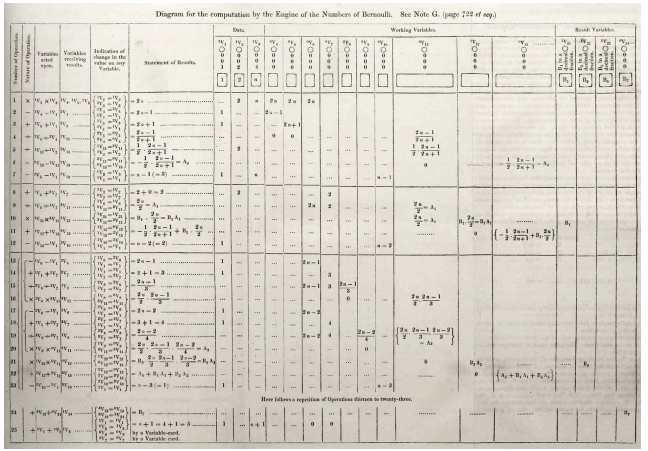
Slack Setup

https://slack.com/downloads/

Programming Intro

Birth of Programming!

- Programming is the process of writing text that the computer can interpret into commands
- Many agree the first programmer was English mathematician Ada Lovelace, who developed the first algorithm for a computational machine in 1843
- Today there are over 700 programming languages



HTML

- HTML stands for Hyper Text Markup Language
- HTML is the standard language used for web pages
- HTML is made up of elements
- HTML tells a browser (chrome, firefox, edge, safari) how to display content
- HTML elements label pieces of content (example: paragraphs, headings, links, etc)

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>

<h1>This is a Heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

CSS

- CSS stands for Cascading Style Sheets
- CSS tells pieces of HTML code how to be displayed on a webpage
- CSS can control multiple web pages at once

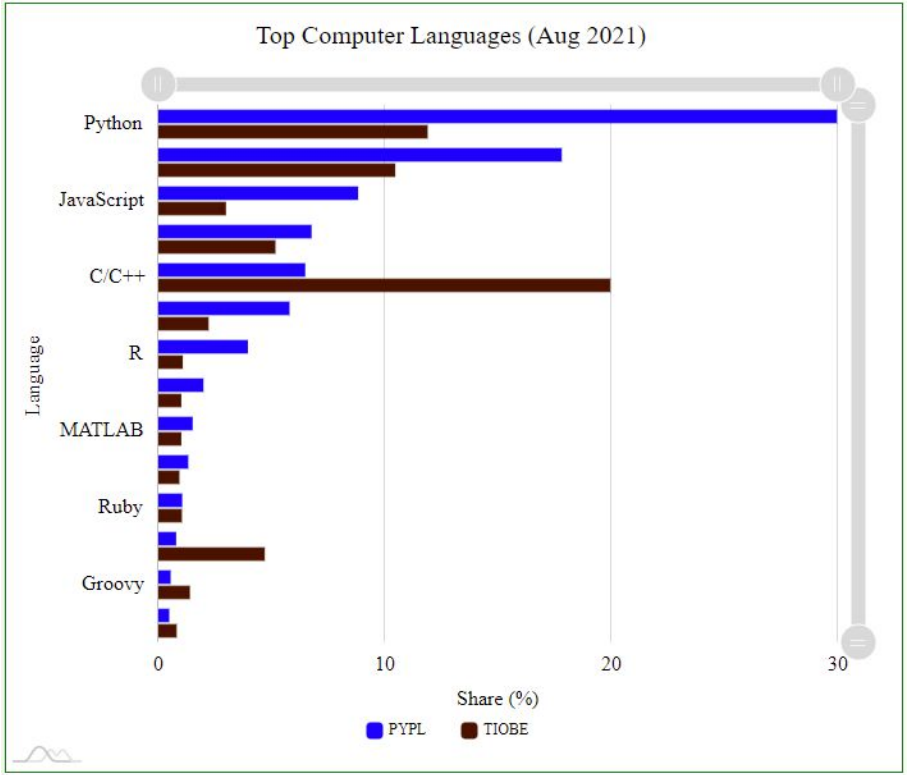
```
body {
  background-color: blue;
}

h1 {
  color: red;
}

p {
  font-size: 15px;
}
```

Javascript

- Javascript was invented in 1995 by Brendan Eich
- It is currently the 2nd most popular coding language used today
- Javascript is used to manipulate features on a web page
    - Show/Hide content based on permissions
    - Capture user input
    - Run animations
    - Basically it does all the work!



Getting Setup to Code

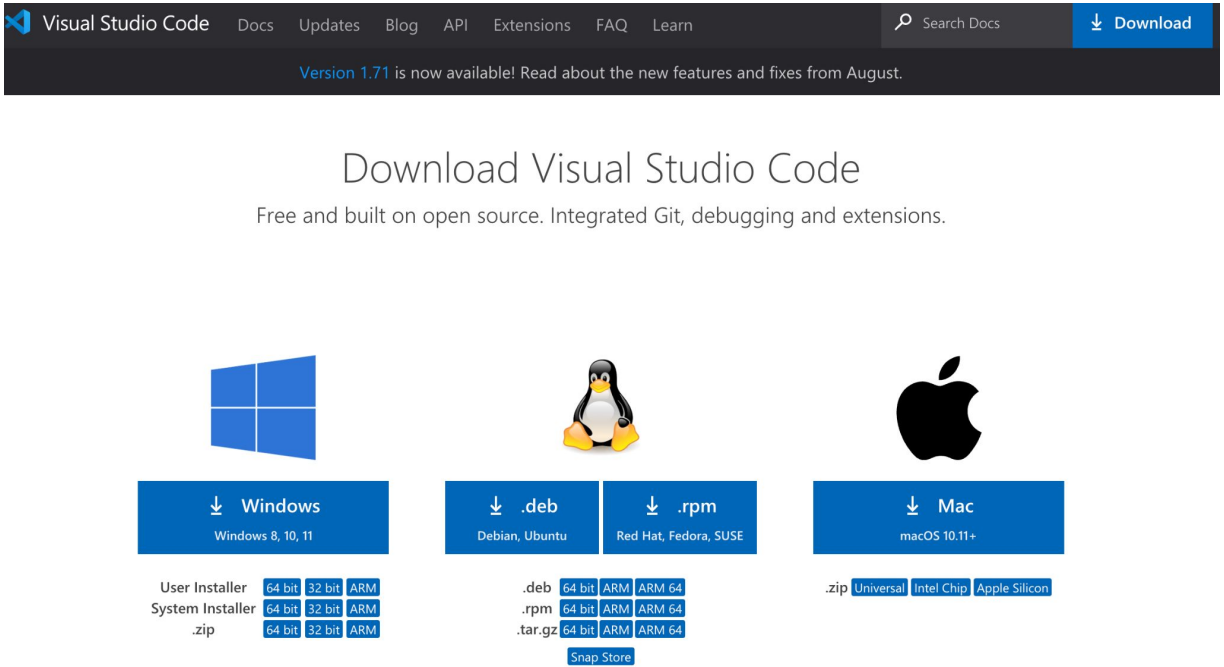
What is an IDE?

- IDE stands for integrated development environment
- It is a program or software you use to write code
- Some popular IDEs are:
  - Visual Studio Code
  - Visual Studio
  - Eclipse
  - NetBeans
  - Xcode
- The IDE you chose typically is related to the coding language you are using
- For this class we will use Visual Studio Code

Let’s get it installed!

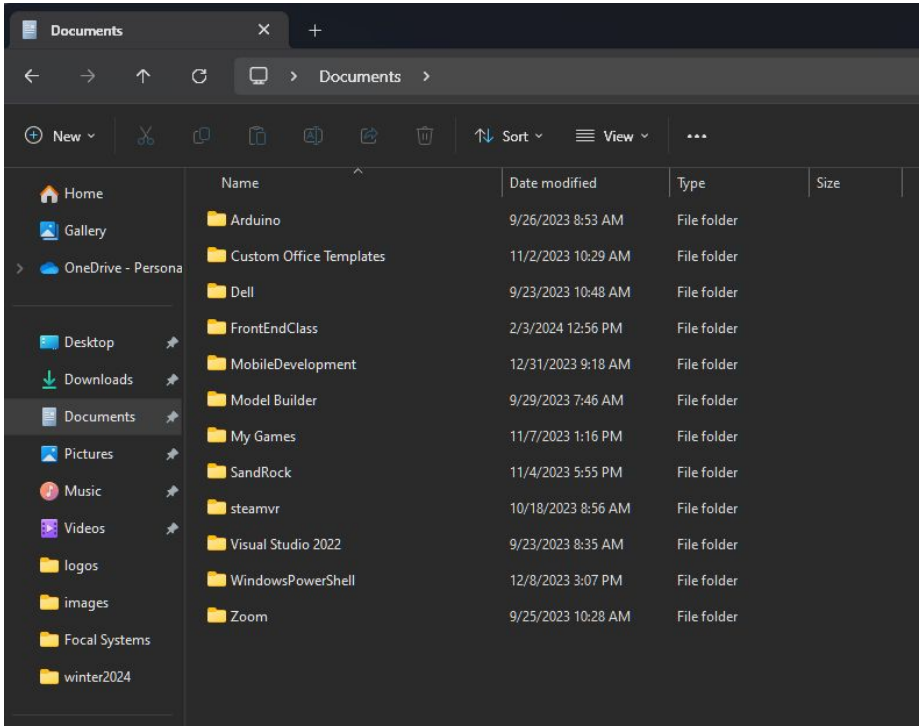
Visual Studio Code setup

https://code.visualstudio.com/



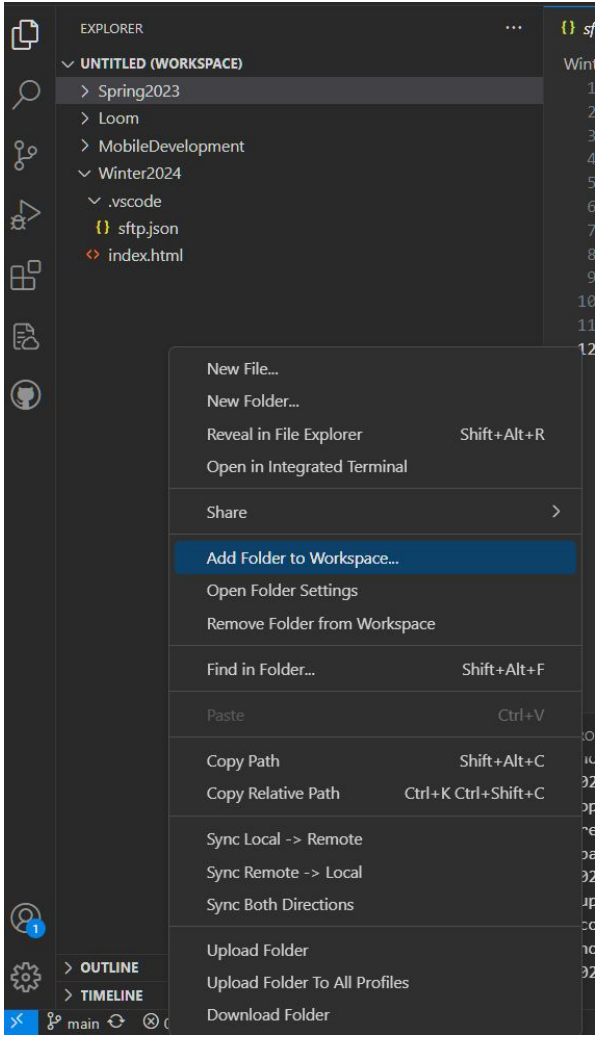
Creating a project space

Open File Explorer and create a new folder in your documents called FrontEndClass (ALL one word no spaces!!)



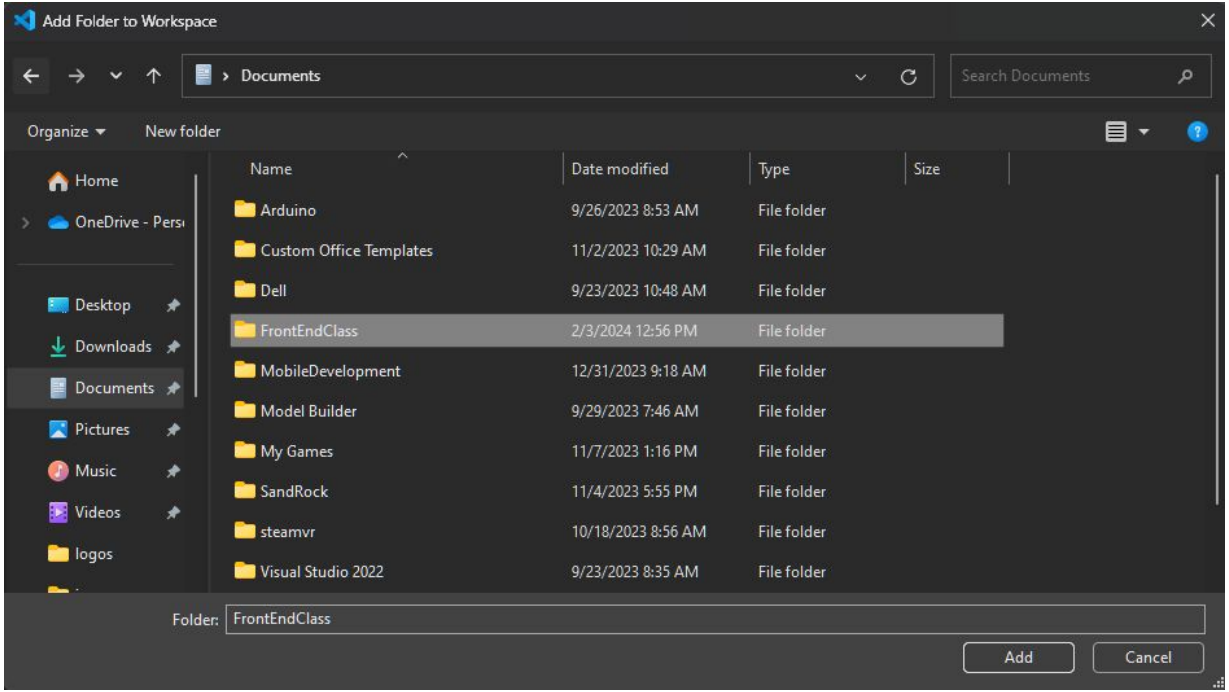
Add folder to workspace

Right click in the empty space in visual studio code and select “Add Folder to Workspace”



Add folder

Navigate to where you made your folder and select Add



Make your first webpage!

Create first file

Right click under the folder and select new file. Name it index.html

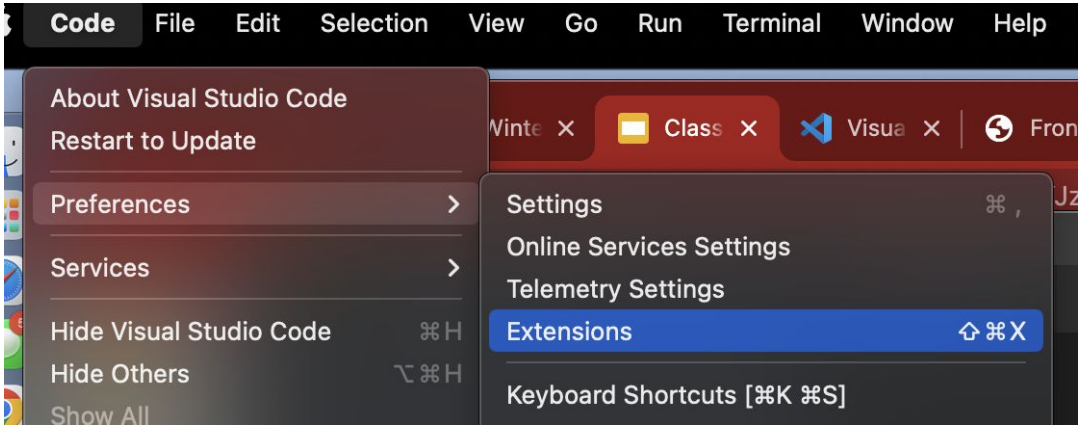
Your first HTML File

```
<!DOCTYPE html>
<html>
      <body>
            <p>This will appear on the page</p>
      </body>
</html>
```

Prepare to Publish!

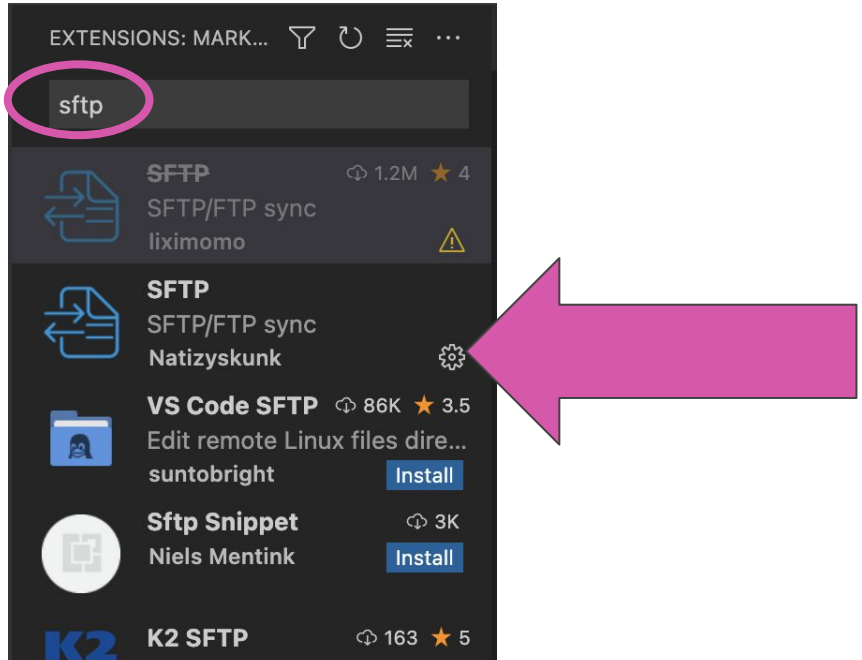
FTP - File Transfer Protocol

1. Navigate to Extensions in VS Code



Prepare to Publish!

2. Search for FTP in the extensions sidebar



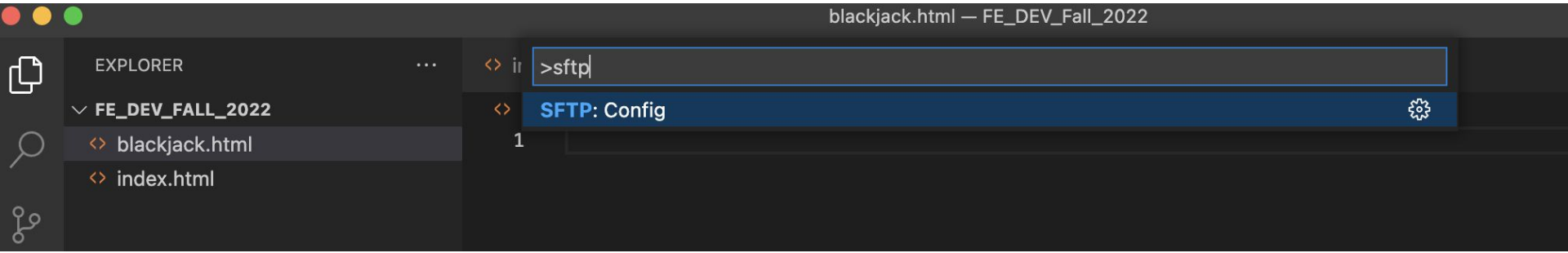
3. Search for “sftp” in the extensions sidebar.

4. Click blue “Install” button on the version by Natizyskunk

Prepare to Publish!

5. Once installed, hit cmd+shift+p (pc: ctrl+shift+p)

6. Type in SFTP, and select the SFTP:Config option



Prepare to Publish!

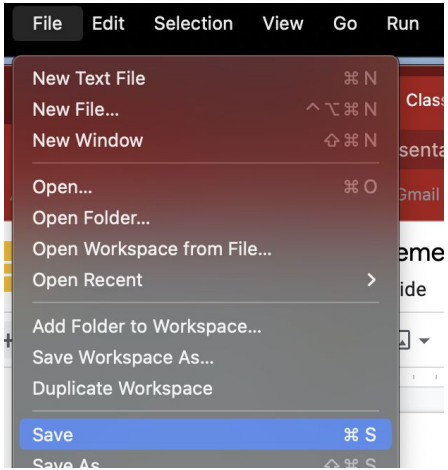
7. Configure your connection to the server

8. SAVE!

```
{
    "name": "uoadev.com",
    "host": "winter2024.uoadev.com",
    "protocol": "sftp",
    "port": 22,
    "secure": true,
    "username": "FrontEndClass",
    "remotePath": "/winter2024/pages/jordan-h",
    "password": "PeanutButter23",
    "uploadOnSave": true,
    "secureOptions": { "rejectUnauthorized": false}
}
```

Change to yourFirstName-lastInitial

8. Save!!!!!



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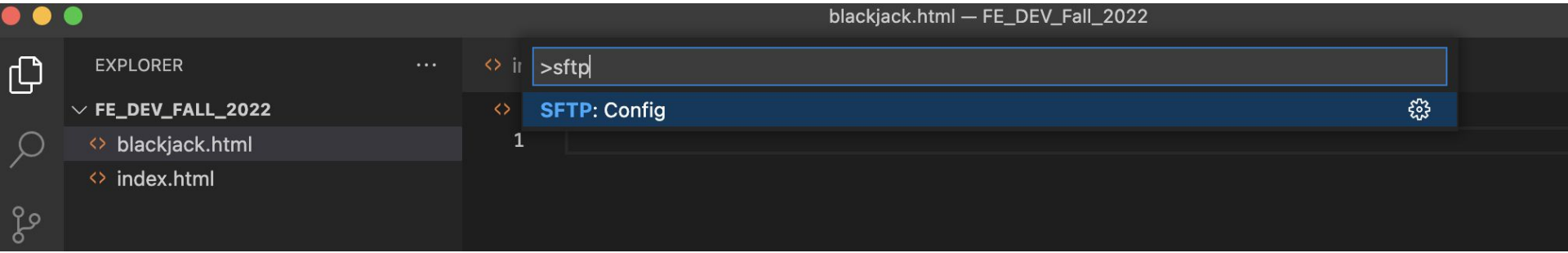
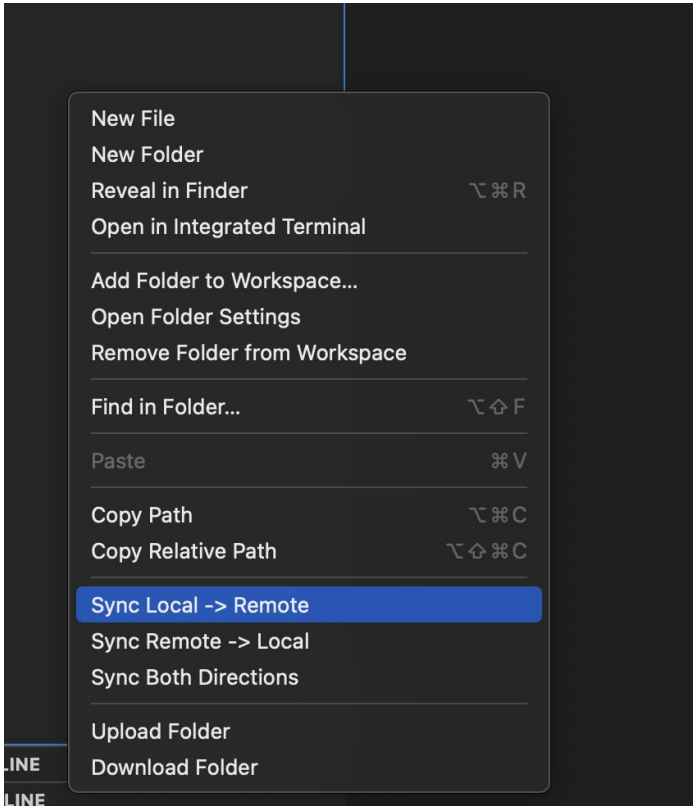


Publish your Website!

Local

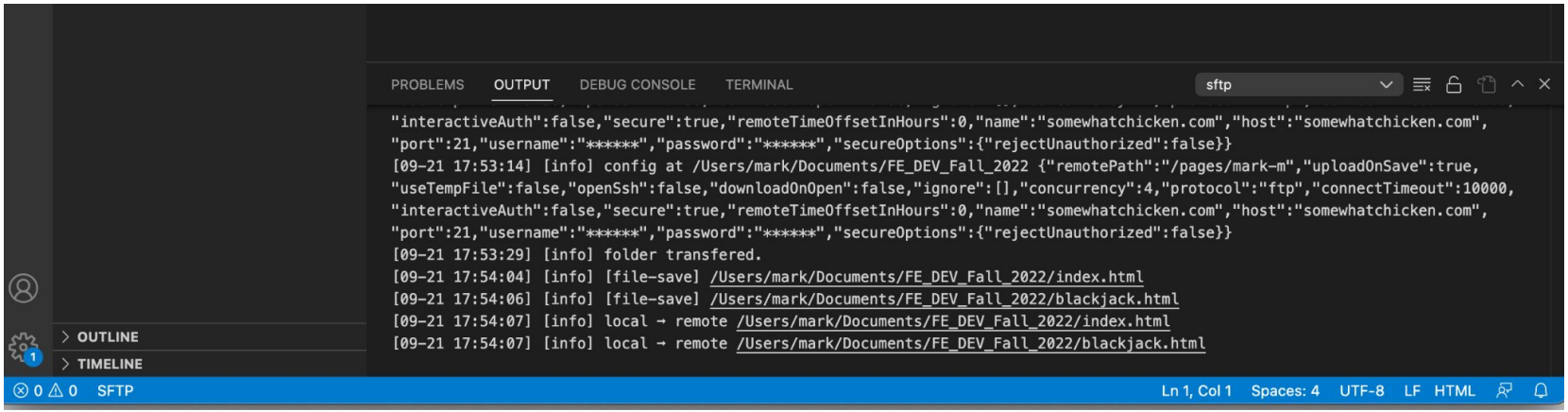
Vs.

Remote



Did it Work?

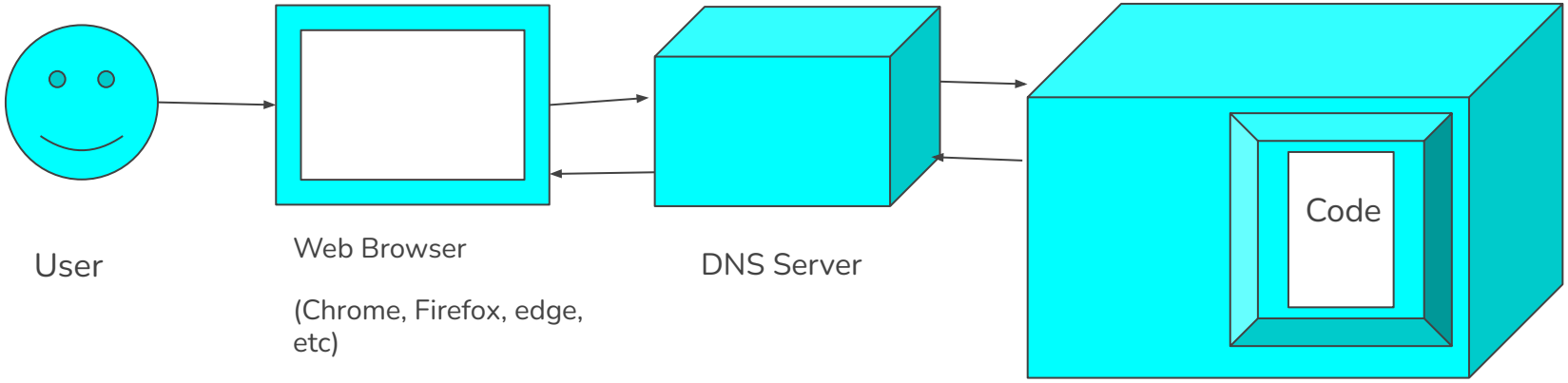
Check the console in VS Code



Validate at https://winter2024.uoadev.com/YOURNAME/

What did we just do?

How does a website work?



User

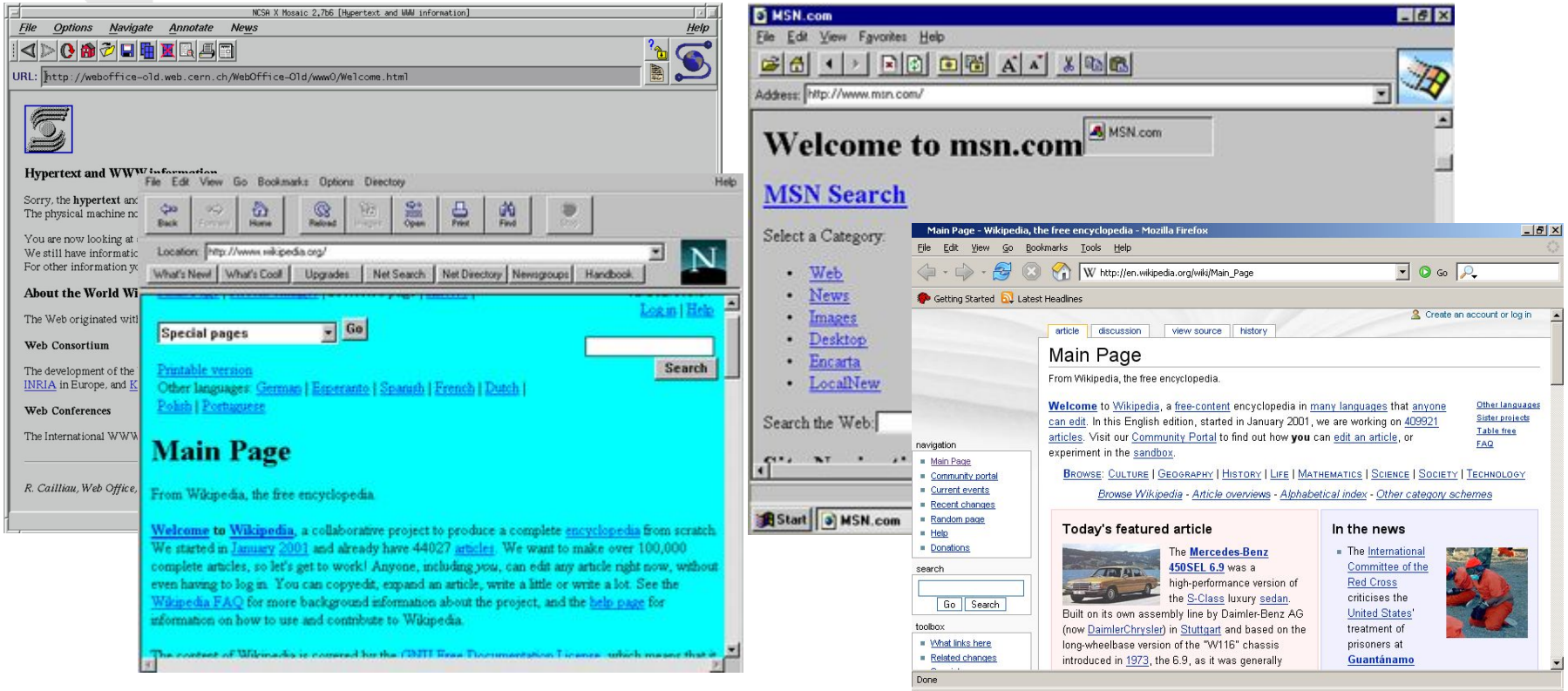
Web Browser

(Chrome, Firefox, edge, etc)

DNS Server

Web Server

Role of Browser



File structure of a website

Every site MUST have an index.html

When someone navigates to your web page it will direct to index.html

Other web pages are created by making .html files

Documents can either be in the root directory or in folders

Let’s create a few sub pages!

What is <!DOCTYPE>?

<!DOCTYPE> tells the browser the document type, and helps to properly display the web page

<!DOCTYPE> can only be at the top of the page and must only appear once

Unlike other elements it does not need a closing tag

<!DOCTYPE> is not case sensitive

HTML Basic Structure

```
<!DOCTYPE html>

<html>

      <body>

            <p>This will appear on the page</p>

      </body>

</html>
```

HTML Elements

An HTML element is all the content that is contained between the start tag to the end tag:

<tagID>Content goes here...</tagID>

Example: This is a paragraph

Body

The body of a webpage is the main content of the webpage

The body’s content is typically unique to a single webpage

Questions?