MISSION READY

DARE TO
DEVELOP

Welcome, course intro & tools

Reuben Simpson

Learning Objectives

At the successful completion of the Full Stack Development Accelerator, you will be able to:

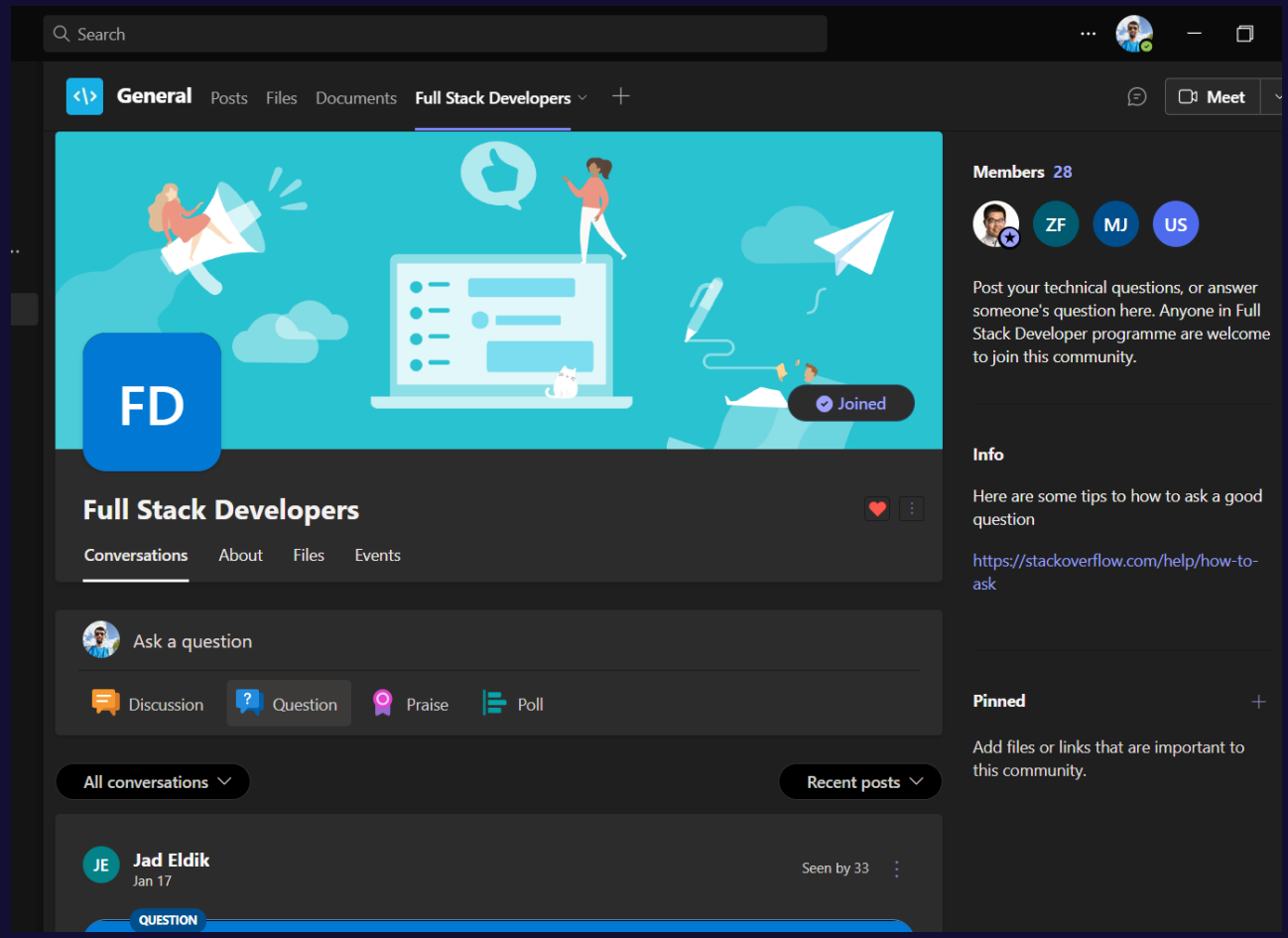
1. Analyze and select best fit technologies to develop a technology product solution
2. Develop a technology product solution
3. Apply self-directed learning and self-reflection techniques
4. Apply best practices to deliver a quality outcome
5. Collaborate to work as a high-performance team member

Communication Platforms

- We use tools used by the industry
- Office365 Account
  - ***@missionreadyhq.com*** email address
  - Access to Microsoft Office applications online, via www.office.com
  - Login using your Mission Ready email address and password (should be in your personal email).
- Microsoft Teams
  - Class, questions, missions, recordings, slides, contact us
  - Download Microsoft Teams App at https://www.microsoft.com/en-nz/microsoft-teams/download-app
  - Access using the same login as Office365
  - Keep your mic's off (unless you're talking) and camera's on during the session.

Communication Platforms

- Viva Engage (Yammer)
  - Online technical community
  - Ask technical questions
  - Help answering questions
  - Inside Office365 https://www.office.com
  - https://web.yammer.com/main/groups/eyJfdHlwZSI6Ikdyb3VwIiwiaWQiOiI3ODMwOTQzMzM0NCJ9/all



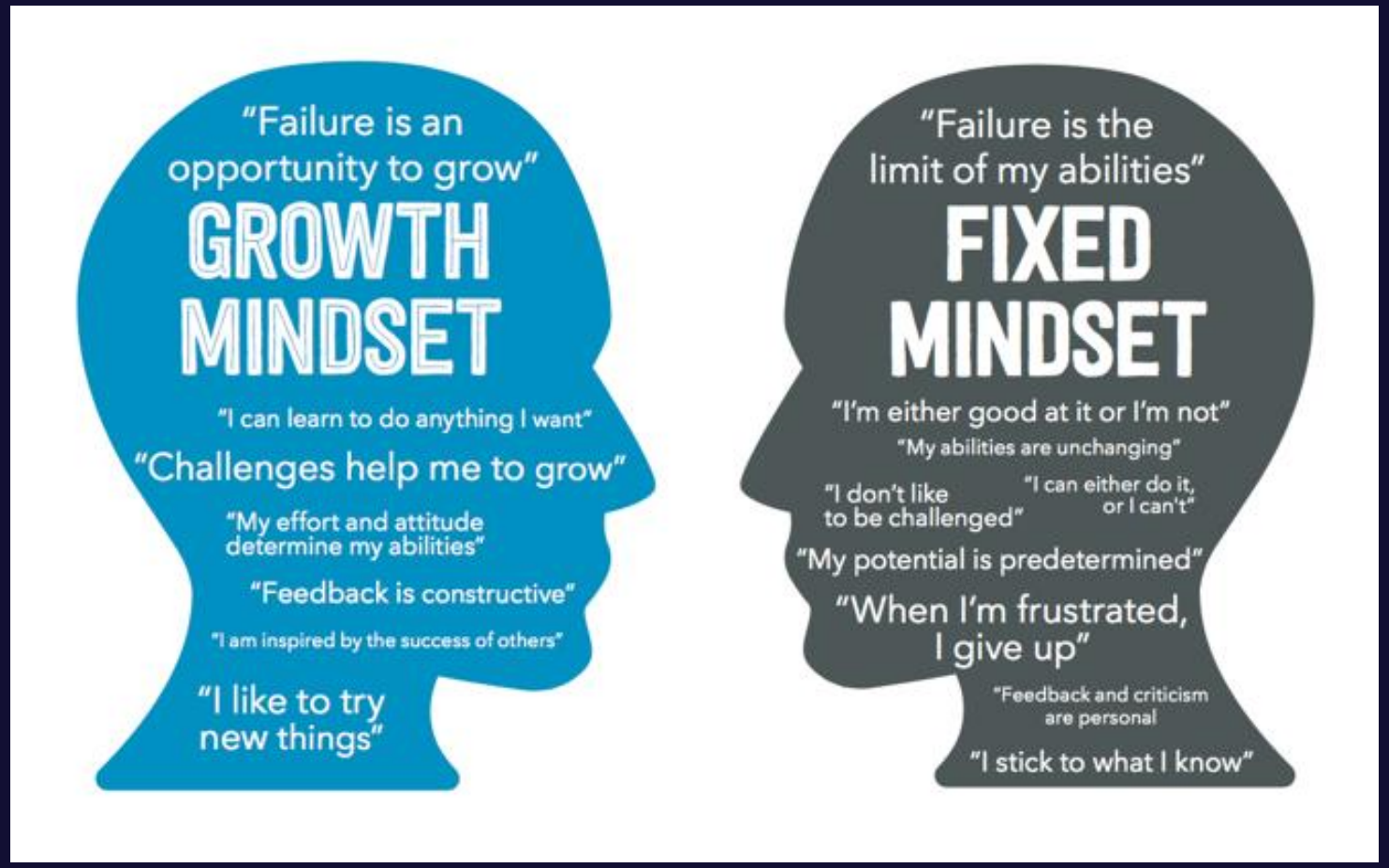
Attendance

- 2 steps
  - Scan QR Code
  - Login using your Mission Ready email/password

Resilience Mindset

“Whether you think you can, or you think you can't – you're right,” – Henry Ford

Fixed vs Growth Mindset



https://www.its.vic.edu.au/blog-post/growth-mindset-vs-fixed-mindset-which-one-are-you/

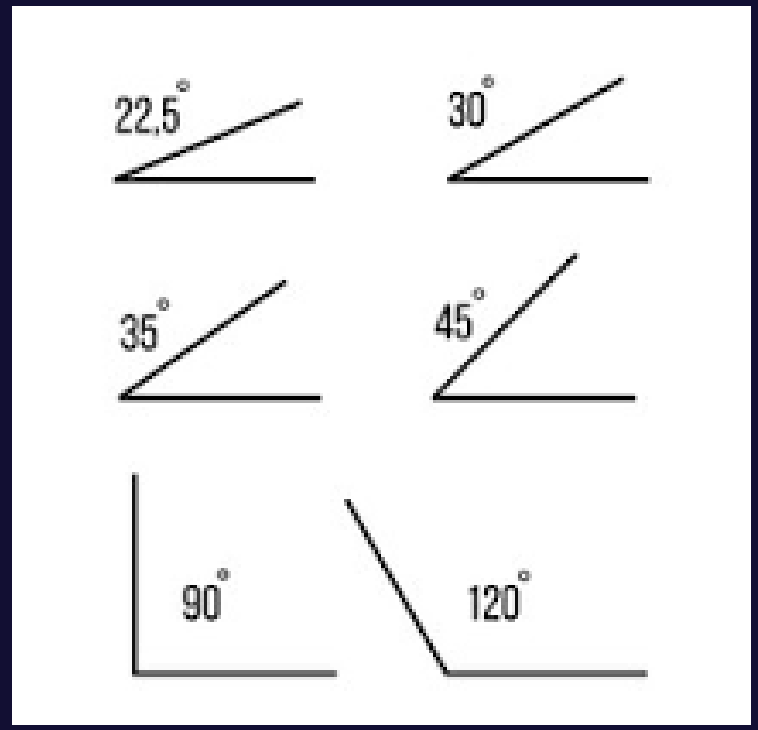
What is Programming

- Programming => Giving instructions to computers to achieve a task
- Computers are dumb - it will do exactly what you said, but you need to say it the right way
- Give step-by-step instructions using building blocks
- Also called:
  - Coding
  - Software development

Giving instructions

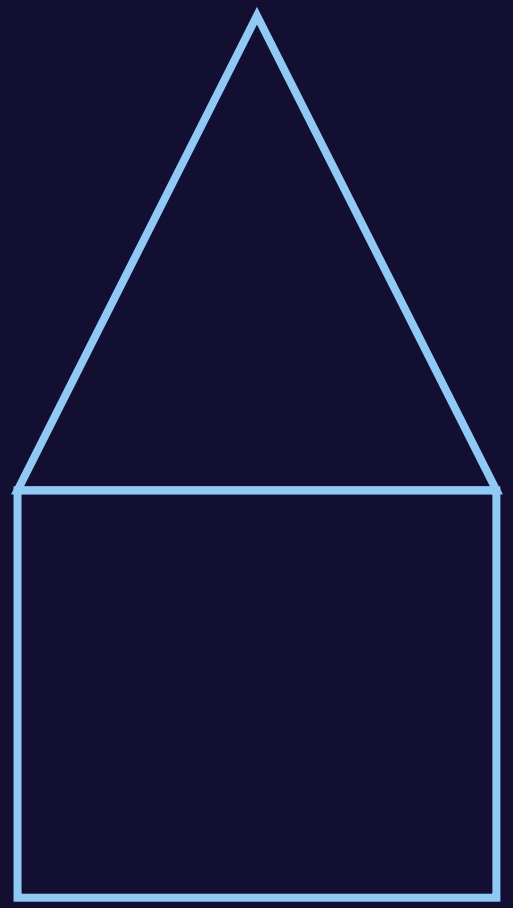
https://www.calormen.com/jslogo/

- The turtle is like a pen that will move around to draw lines based on your command
- Commands:
  - fd 100 = go forward 100 steps
  - rt 30 = right turn 30 degrees
- How would you draw:



```
rt 30 repeat 3 [fd 100 rt 120]
```

How do you draw this?



```
clearscreen
rt 30
repeat 3 [fd 100 rt 120]
rt 150
repeat 3 [fd 100 lt 90]
```

Some logo commands

Command	***Abbr.***	***Output***	***Example***
FORWARD	`fd`	Moves turtle forward for number of times specified	`forward 100 or fd 100`
BACK	`bk`	Moves turtle back for number of times specified	`back 100 or bk 100`
RIGHT	`rt`	Turns turtle right for number of degrees specified	`right 228 or rt 228`
LEFT	`lt`	Turns turtle left for number of degrees specified	`left 228 or lt 228`
CIRCLE		Makes a circle repeat 360 [FD (desired length in number of pixels divided by 360) RT or LT 1]	`circle`

Programming Language

- A language that the computer will understand
- There are many languages
- Programming language (compiled) - C#, Java, C++, Swift
- Scripting language (interpreted) - JavaScript, Python, Ruby, PHP
- Keyword + Syntax

Language	Example program

"C"	`#include <stdio.h>`
	`void main() {`
	`  printf("Hello World");`
	`}`

C++	`#include <iostream>`
	`int main() {`
	`  cout << "Hello World";`
	`  return 0;`
	`}`

Pascal	`program helloworld (output);`
	`begin`
	`  writeln('Hello World');`
	`end.`

Oracle PL/SQL	`CREATE OR REPLACE PROCEDURE helloworld AS`
	`BEGIN`
	`  DBMS_OUTPUT.PUT_LINE('Hello World');`
	`END;`

Java	`class helloworld {`
	`  public static void main (String args []) {`
	`  System.out.println ("Hello World");`
	`  }`
	`}`

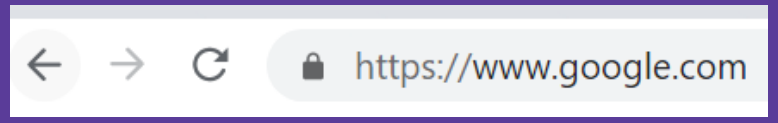
Perl	`#!/usr/local/bin/perl -w print "Hello World";`
Basic	`print "Hello World"`

http://holowczak.com/programming-concepts-tutorial-programmers

What does full stack mean?

How you see your webpage – Frontend

1



2

I want this web page

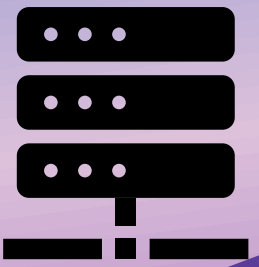
REQUEST
www.google.com

DNS

DN www.google.com = IP 142.250.80.14

Here is the file

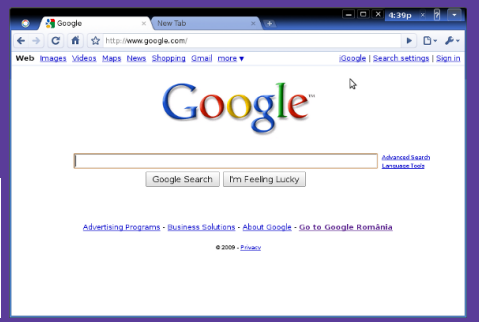
RESPONSE



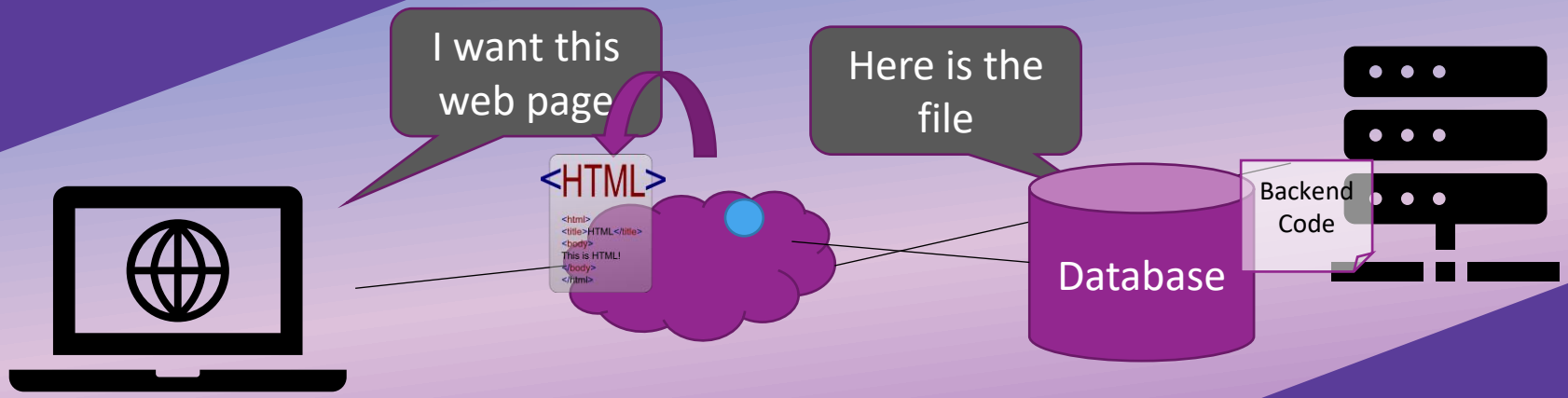
I know where it is

I know how to show the file as a webpage

3



How you see your webpage - Backend



Full-Stack Development

- What does full stack mean?
- A full stack web developer is a person who can develop both front-end and back-end applications
- It includes mastering:
  - Programming a page to be rendered by a browser (like using HTML, CSS, JavaScript, jQuery, React or Vue)
  - Programming a server (like using PHP, ASP, Python, or NodeJS)
  - Programming a database (like using SQL, SQLite, or MongoDB)

Other Tools of the Trade

Google Chrome

- If you haven’t installed, make sure you install it
- Set it as your default browser (optional)

Download & Install Visual Studio Code

- Throughout the course we will use Visual Studio Code (VS Code) as the tool to write code.
- Download from https://code.visualstudio.com/Download
- If you have Windows 7 or above, you should go with User Installer 64-bit version
- Once it is downloaded you can double click and follow prompts to install – just use all default options

Integrated Development Environment

- You can write code using pretty much any text editor, but…
- An integrated development environment (IDE) is a software application that provides ***comprehensive facilities*** to software developers for software development.
- An IDE normally consists of at least:
  - A source code editor – where you type code
  - Compile/build automation tools
  - A debugger

Visual Studio Code

- Install Visual Studio Code
- Quick tour:
  - GUI Overview https://youtu.be/S320N3sxinE
  - Customising https://youtu.be/4wVF4w_53hs
  - Editing Code, syntax highlighting, autocomplete, and file types

    https://code.visualstudio.com/docs/
    - .htm (HTML), .js (JavaScript), .cs (C#), .py (Python), .java (Java)

Taking screenshots

Mac

- Cmd + Shift + 4 to save to device
- Cmd + Shift + Ctrl + 4 to save to clipboard
- Cmd + v to paste

PC

- Shift + Win + S to take the screenshot
- Ctrl + V to paste

Write your first webpage

1. On your laptop, create a Folder called “Mission Ready”
2. Run Visual Studio Code, within Visual Studio Code, open “Mission Ready” folder

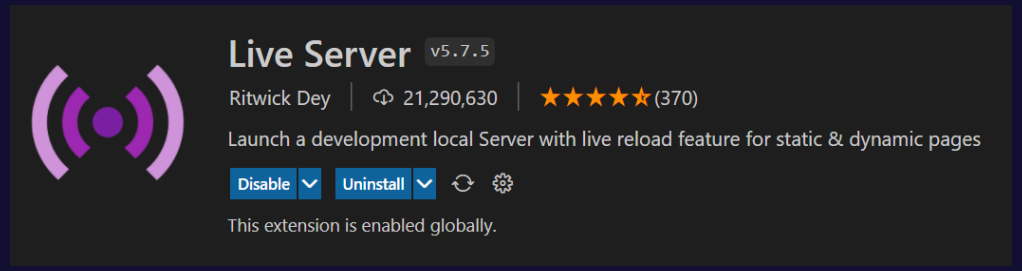
3. Create a New File in Visual Studio Code
4. Save your new file as “helloworld.html”
5. Add this code to your file:

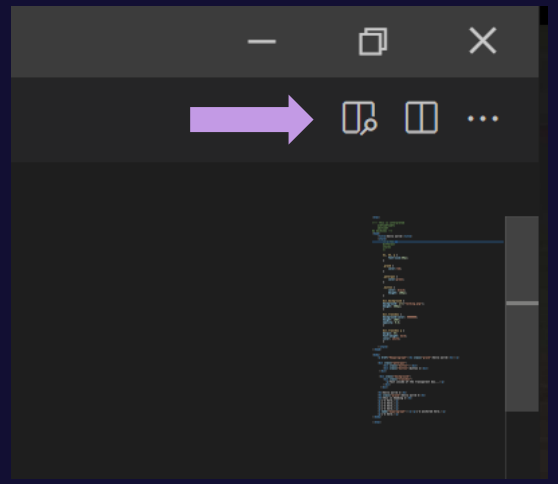
```
<html>
    <h1>Hello World</h1>
    <p>This is my first web page</p>
</html>
```

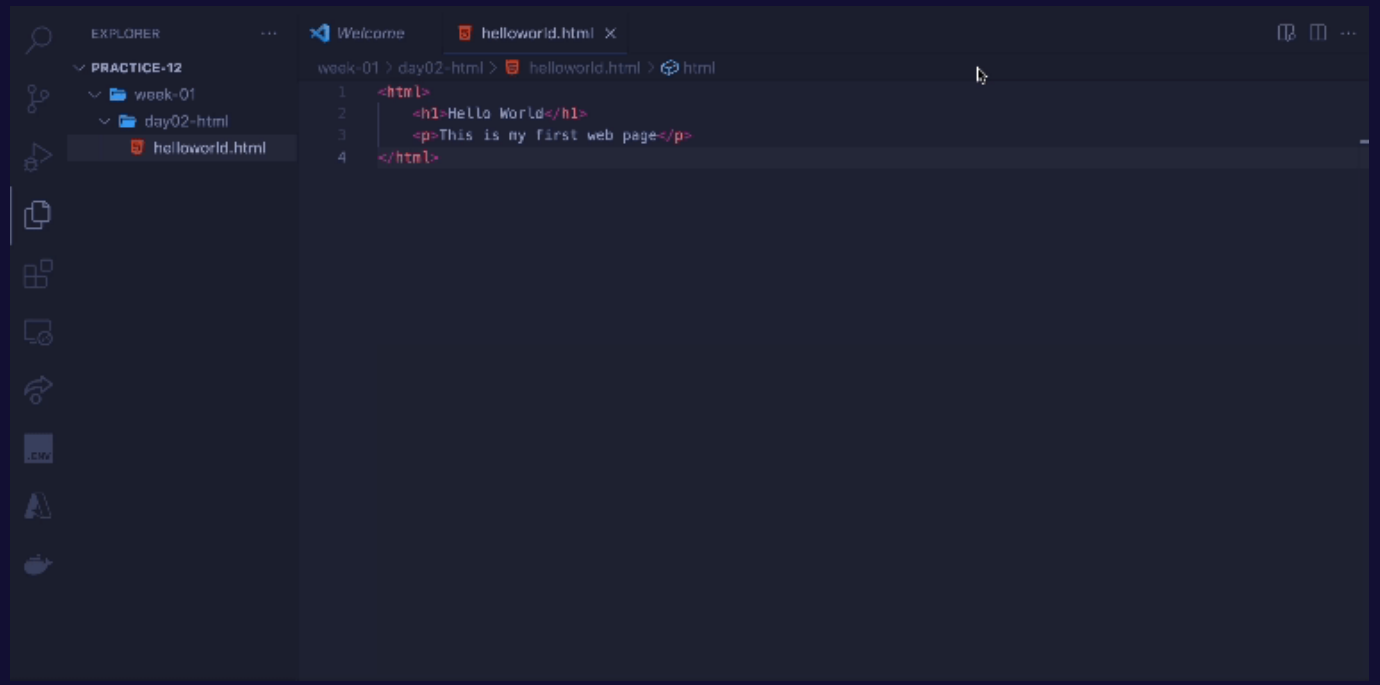
6. Save your code
7. Double click the “helloworld.html” file on your laptop to see your results

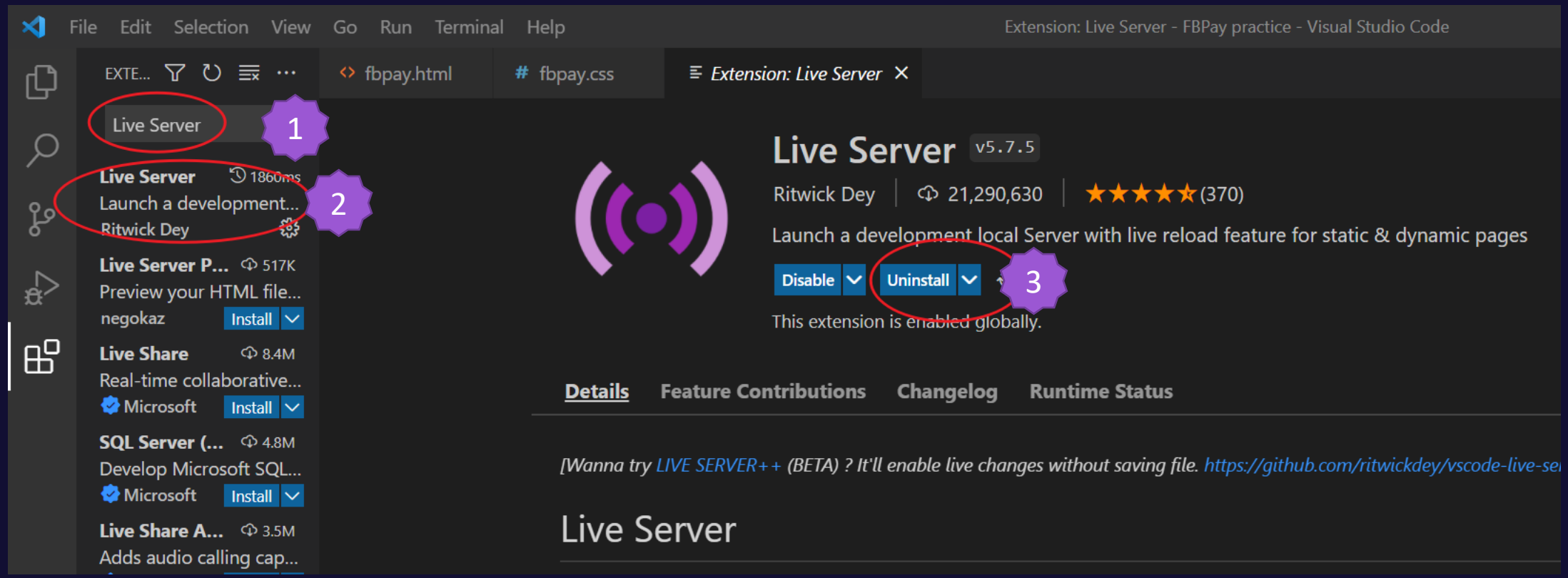
Install Extensions to make your life easier

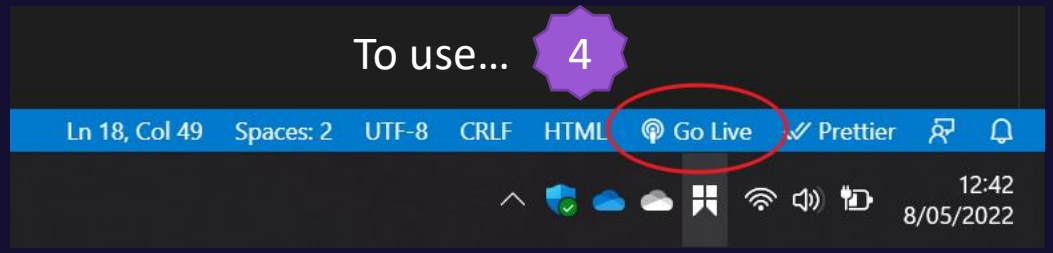
1. Install extensions (don’t go overboard)
    - Add “Live Server” extension







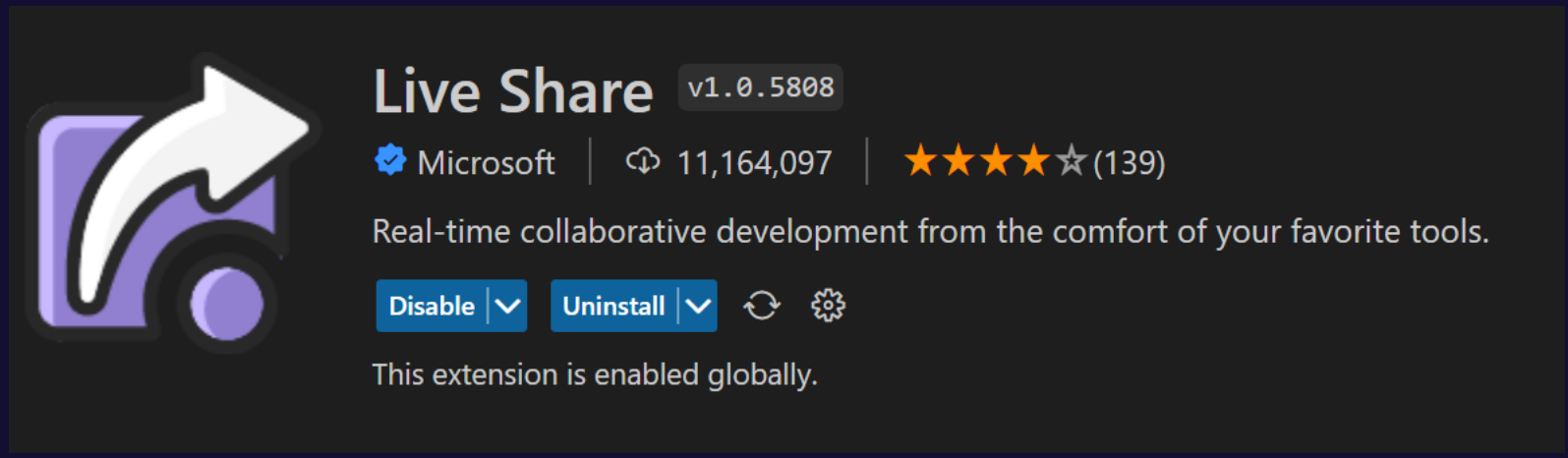

File Edit Selection View Go Run Terminal Help
Extension: Live Server - FBPay practice - Visual Studio Code
EXTE...
fbpay.html
fbpay.css
Extension: Live Server
Live Server
1
Live Server 1860ms
Launch a development...
Ritwick Dey
2
Live Server P... 517K
Preview your HTML file...
negokaz Install
Live Share 8.4M
Real-time collaborative...
Microsoft Install
SQL Server (... 4.8M
Develop Microsoft SQL...
Microsoft Install
Live Share A... 3.5M
Adds audio calling cap...
Live Server v5.7.5
Ritwick Dey 21,290,630 ★★★★★(370)
Launch a development local Server with live reload feature for static & dynamic pages
Disable Uninstall
3
This extension is enabled globally.
Details Feature Contributions Changelog Runtime Status
[Wanna try LIVE SERVER++ (BETA) ? It'll enable live changes without saving file. https://github.com/ritwickdey/vscode-live-se
Live Server


To use...
4
Ln 18, Col 49 Spaces: 2 UTF-8 CRLF HTML Go Live Prettier
12:42
8/05/2022

Install an extension to share work with others

1. Install extensions
   - Add “Live Share” extension from Microsoft
2. Restart Visual Studio Code
3. To learn more about Live Share, go to

https://code.visualstudio.com/learn/collaboration/live-share



MISSION READY

www.missionreadyhq.com

DARE TO DEVELOP

Thank you | Reuben Simpson