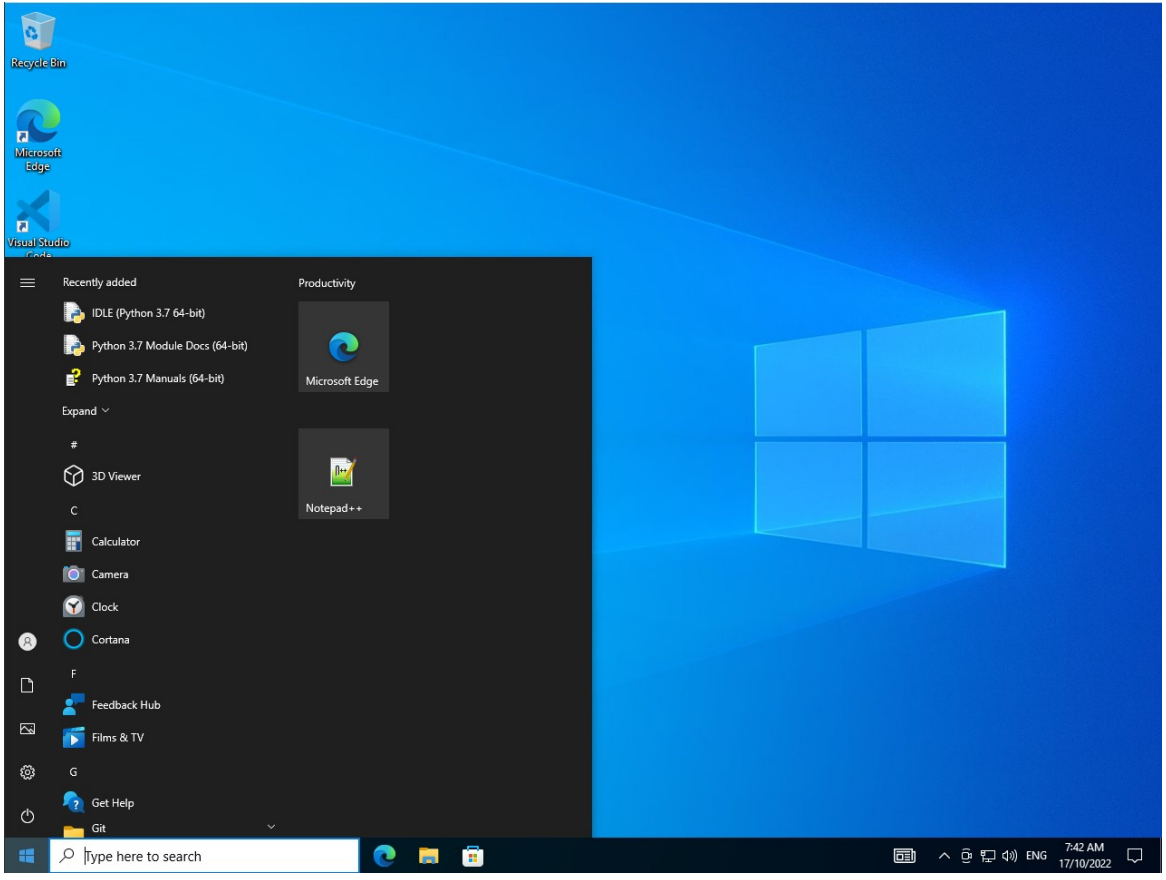
Windows Fundamentals

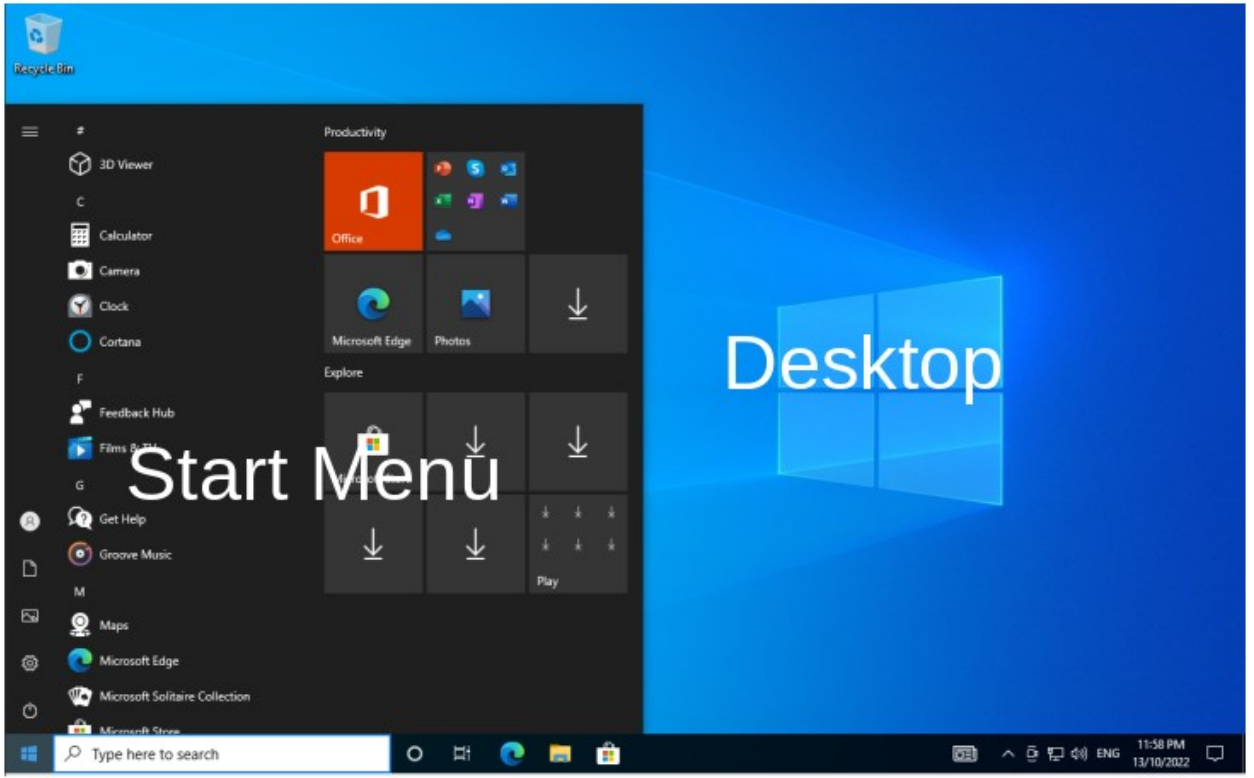
Windows Desktop

- Can you identify the important parts of the Windows interface?



Windows Desktop

- Desktop
- Start Button
- Start Menu
- Task Bar



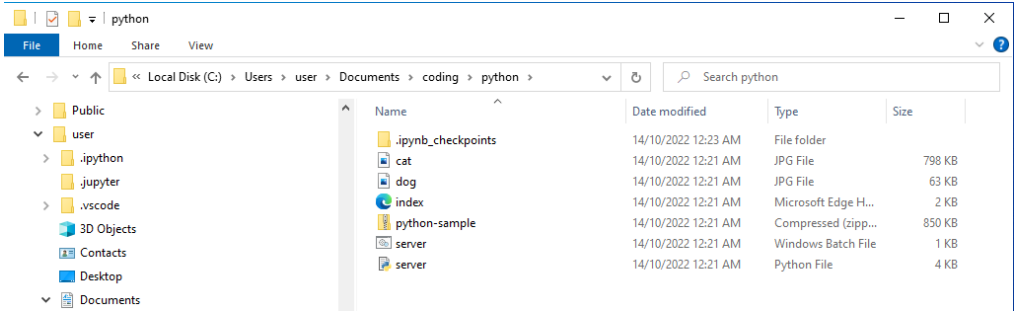
Start Button

Task Bar

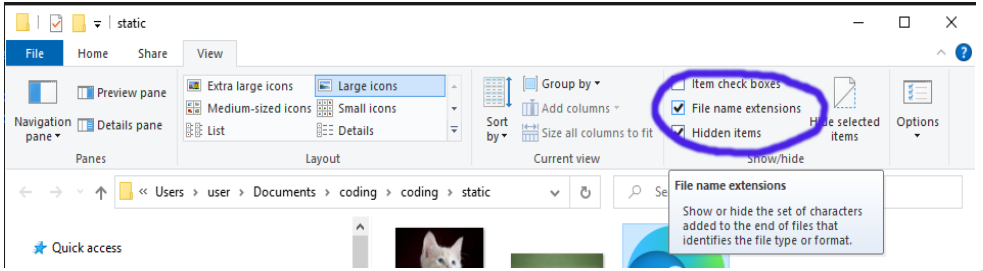
Windows File Explorer

- What is a File?
  - A file is an image, a document, a text file, etc
  - A file also has some characters after a dot at the end, which is known as the file extension. Windows Hides these by default but we want to see them!
- What is a Folder?
  - A folder is a collection of files
- What is a C:\ Drive?
  - The C drive is the ‘hard drive’ inside your computer. It stores all your files and folders

- File Explorer allows you to Navigate your C:\ drive.



- Enable View File Name Extensions

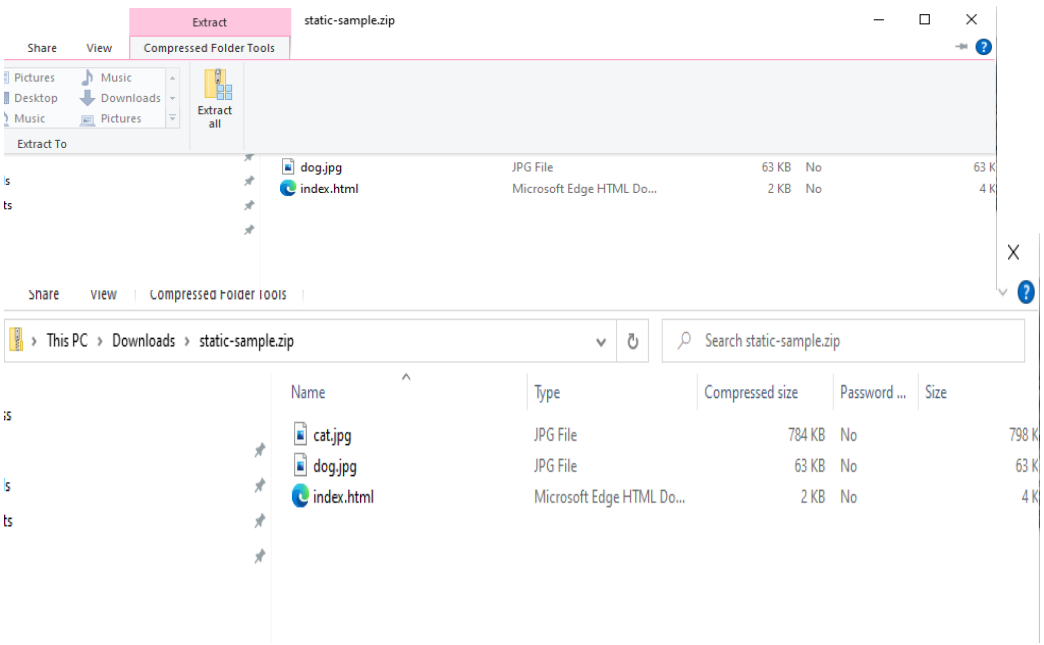


Zip Files

Imagine a ZIP file is a box with books in it, you need to unpack that box to get the books out.

- A zip file is like that, you need to unpack it to get the files out.
- The static-sample.zip from last week is an example of a zip file.

- Windows calls this Unpacking **Extract All**

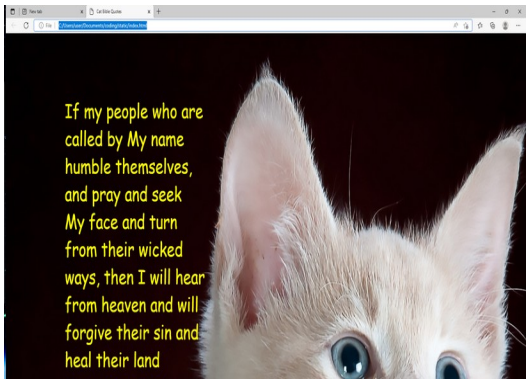


Files

- There are many types of files including:
  - Text files – these are simple files that have characters you can read, like letters, numbers and symbols
  - ZIP Files – more on those next
  - Images – PNG, JPEG, etc
  - Documents – like word, excel documents. These are files only the related application can read and understand
- Examples of text files include:
  - HTML files – for the internet
  - Javascript
  - Python
- To edit text files we use a Text Editor like Notepad++ or Visual Studio Code.

Web Browser

- A Web Browser is an application to browse the internet
- Popular browsers include:
  - Firefox
  - Chrome
  - Chromium
  - Edge
  - Safari

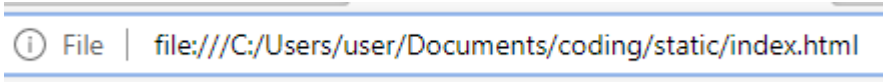


- All websites use a type of file called a HTML file
- In addition web sites are constructed using some additonal files such as:
  - Images
  - JavaScript
  - CSS
- I won't go into these here today though!

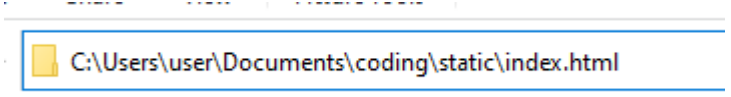
File Paths and File URLs

- File Explorer and Browsers have different ways of referencing local files and folders.
- A browser uses a File URL
- File Explorer uses a File path

- A File URL looks a lot like a File Path, except the slashes are different!
- The File URL:



- The File Path:



Browser URLs

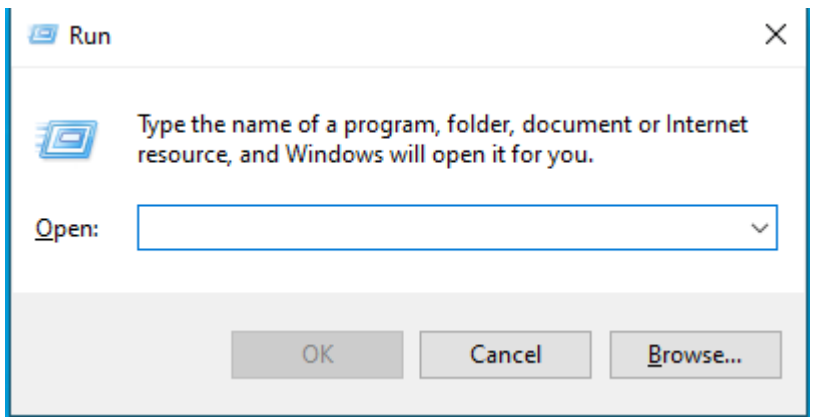
- Browsers use URLs for the internet too
- They look a bit different to File URLs though.
- There are few important parts to a URL:
  - The Domain Name
  - The Path
  - Query Parameters

https://gbc.pellcorp.com/installers/?type=vege&name=carrot

- The important parts are:
  - **gbc.pellcorp.com** is the domain name
  - **/installers** is the path
  - **type=vege&name=carrot** is the query string, and its everything past the ? Of the URL.
- Urls can have ports too:
  - http://localhost:8080/quote?type=vege&name=carrot
  - **localhost** is the domain
  - **8080** is the port
  - **/quote** is the path

Windows Run Command

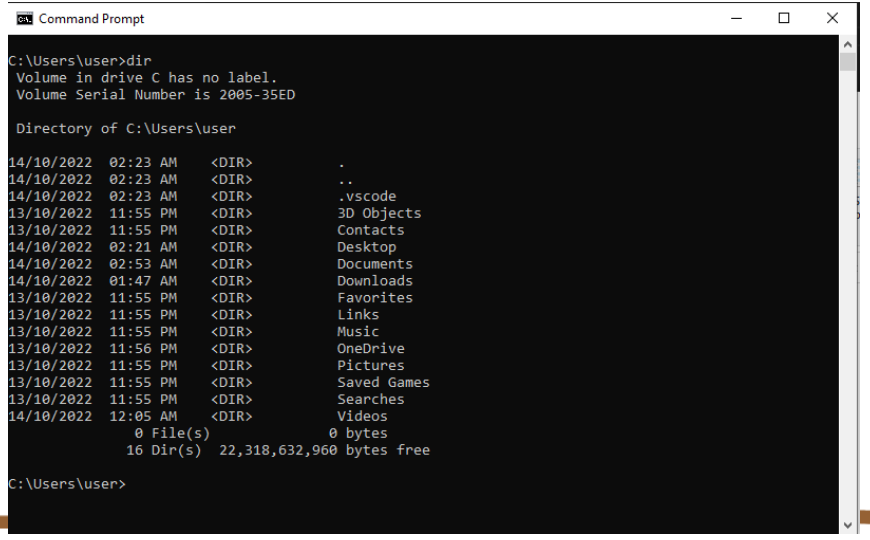
- Remember the Windows Key?
- Windows Key and the R key give you a Run Command window



- You can use it to run applications if you know their name.
- Lets start Notepad using the Run Command.
- Type ‘notepad’ into the Run window and hit the Enter / Return key to start notepad

Windows Terminal

- The CMD terminal is where you can run applications by typing their name
- Use the Run Command window, type ‘cmd’ and hit enter.



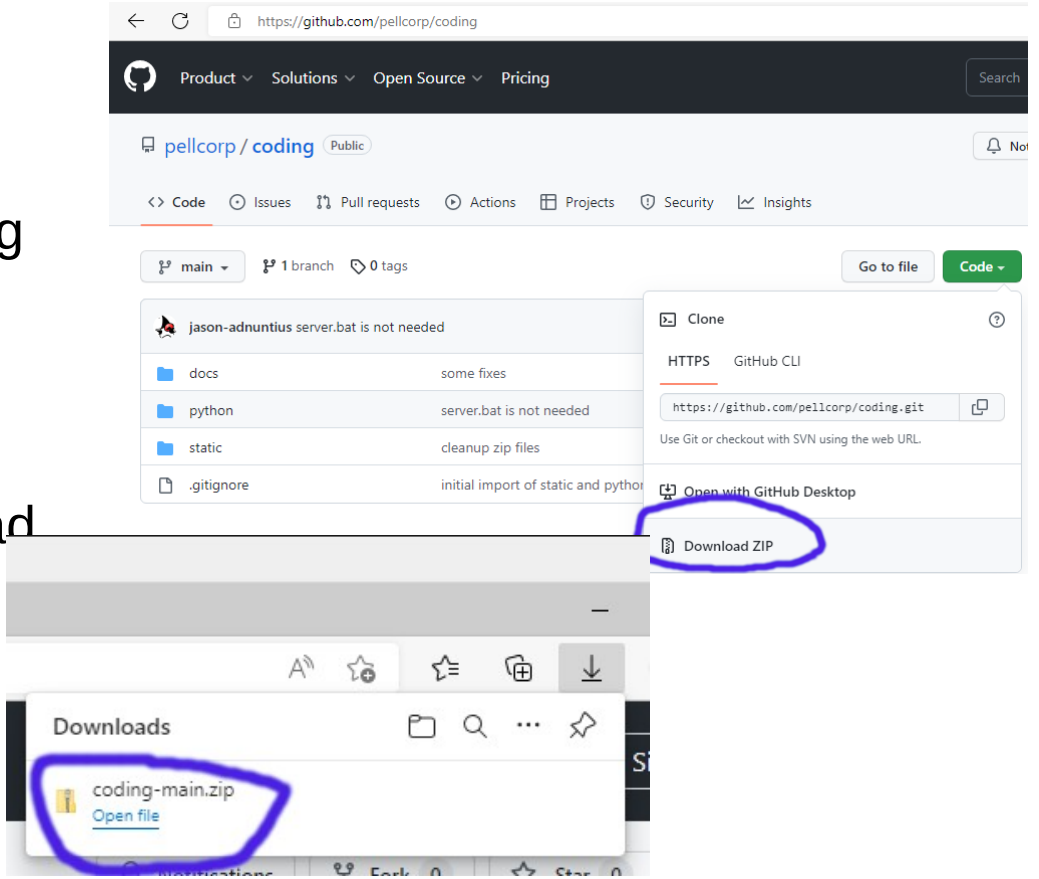
- With Terminal you can navigate your C:\ drive just like with File Explorer
- Some common commands include:
  - dir – to display folder contents (give it a try, type ‘dir’ by itself)
  - cd <folder name> to change to a different folder
  - type <filename> - to display what is inside a file

Windows Terminal Cont.

- Exercises
  - change to c:\windows
  - Display a list of the files in the c:\windows folder
  - List all files in c:\windows that have a .exe extension (this might be tricky for some of you, google might help)
  - Display the contents of the win.ini file
  - Change to your home folder
  - Display a list of all files in your home folder

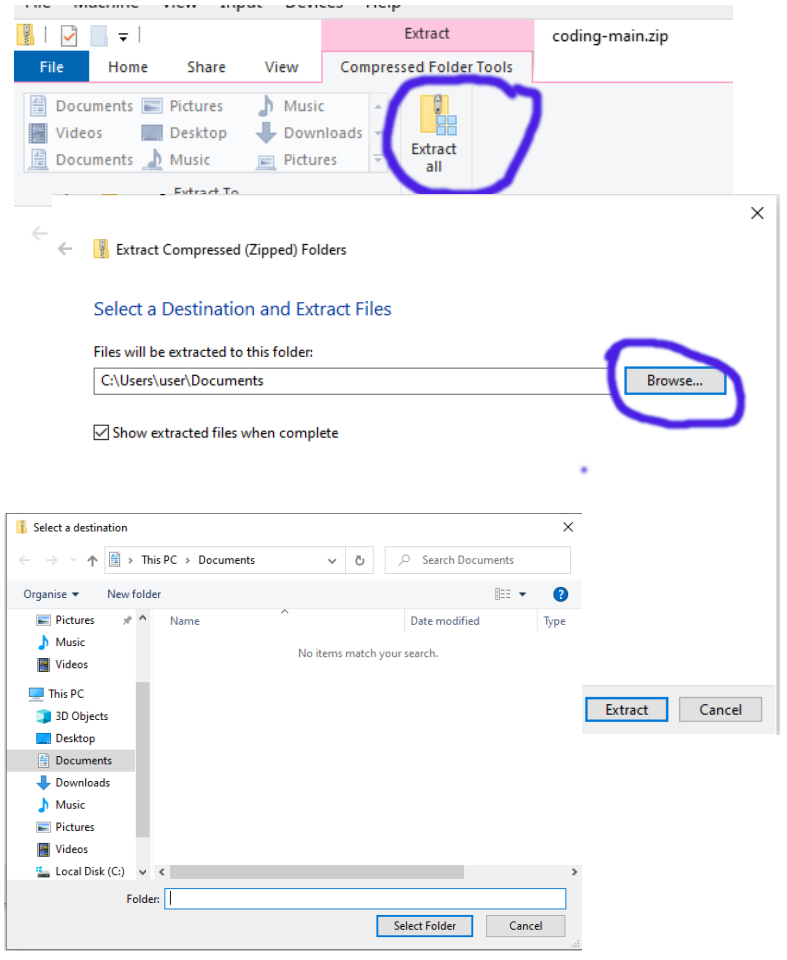
Getting the Sample Code

- Open Chrome or Edge and navigate to: https://github.com/pellcorp/coding
- Click the *green* **Code** button and then the **Download ZIP** button
- Click **open file** for **coding-main.zip** in the browser download window.



Getting the Sample Code Cont.

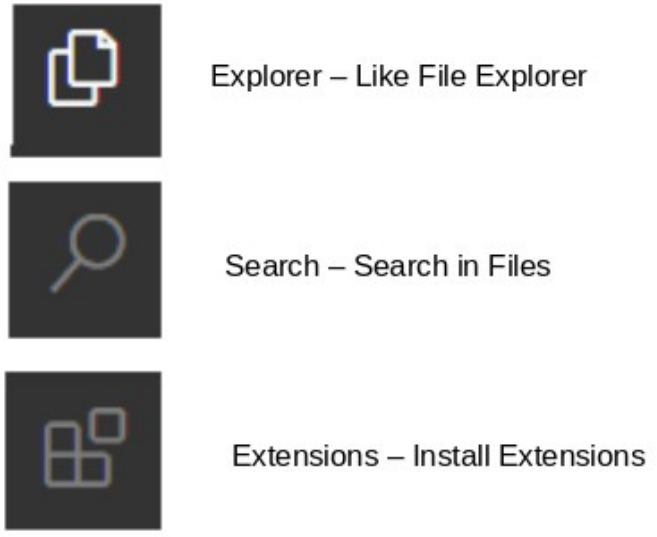
- Click the Extract all button
- When Prompted to **Select a Destination and Extract Files**, click the **Browse…** button
- And choose your *School Drive* Folder
- Click Extract



Visual Studio Code (VSC)

- Visual Studio Code is also a text editor
- But it also makes it easy to run our python scripts directly.
- There a few important parts of Visual Studio Code you should familiarise yourself with.

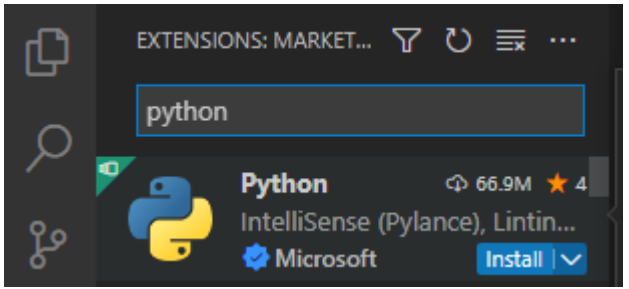
- Important buttons:



- Don’t worry too much about the others for now

Add the Python Extension

- Start up Visual Studio Code
- Click the Extensions button
- Search for **python** and click the install button

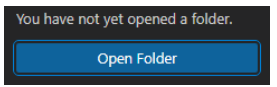


And then Wait for it to finish *installing*

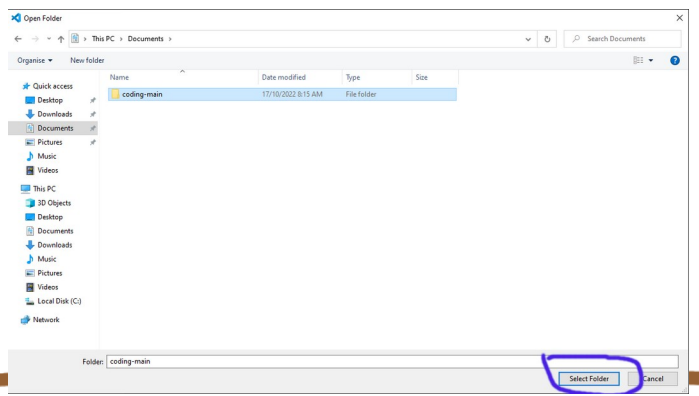
And that is it, once its done we will be able to do some python coding!

Getting the Sample Code

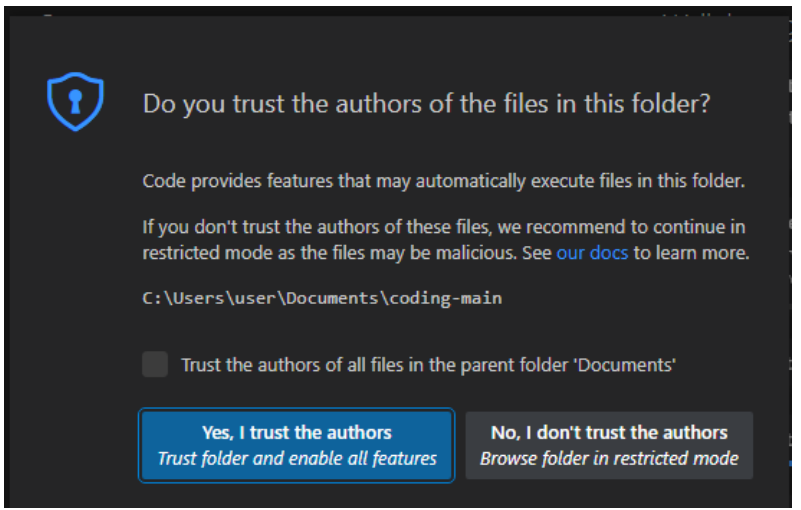
- Click the Explorer button
- Click the Open Folder button



- Navigate to the **coding-main** folder you extracted earlier into your *School Drive* Folder
- Click **Select Folder**

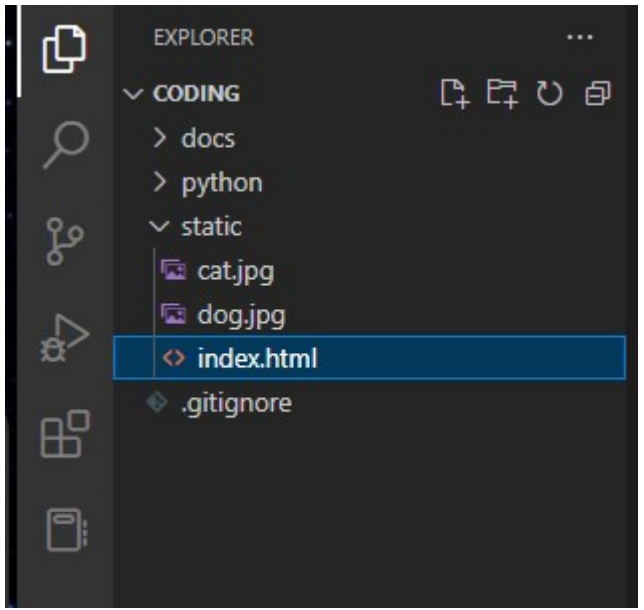


- In the next window, Click the Yes, I trust the authors button.



The Sample Code

- You should see this now:



- A handy feature of VSC is to Reveal in File Explorer.
- Right click on the static index.html and click **Reveal in File Explorer**