Installation Guide for Windows

(Precursor to Building a Facial Recognition-Based Attendance System for Beginner in AI)

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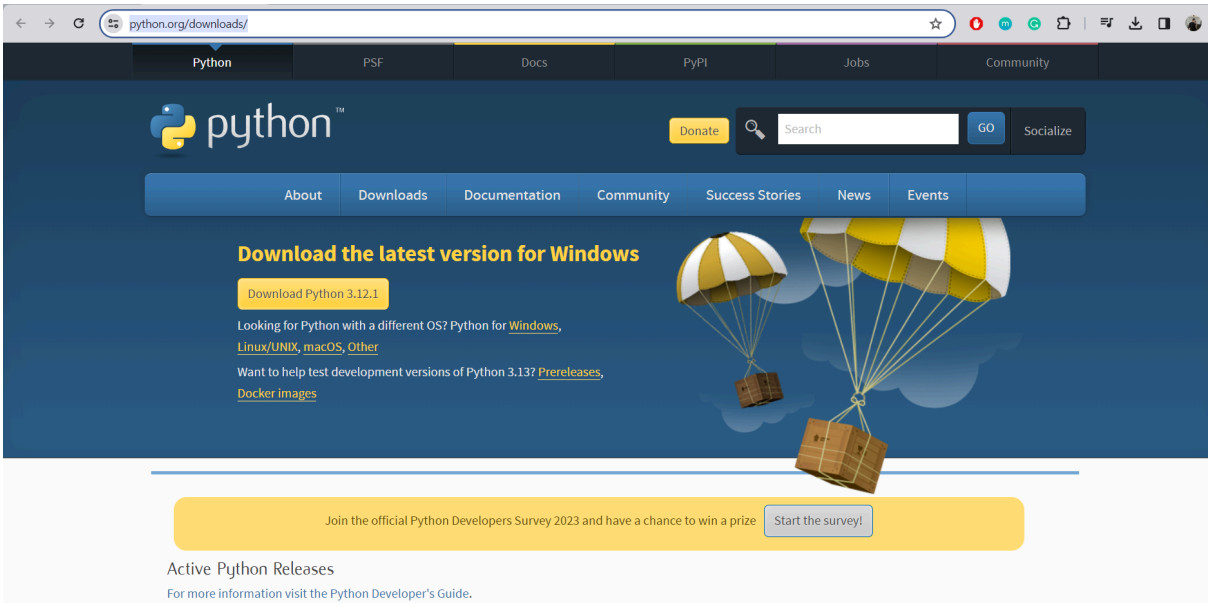
Quick Access

Windows Installation Guide

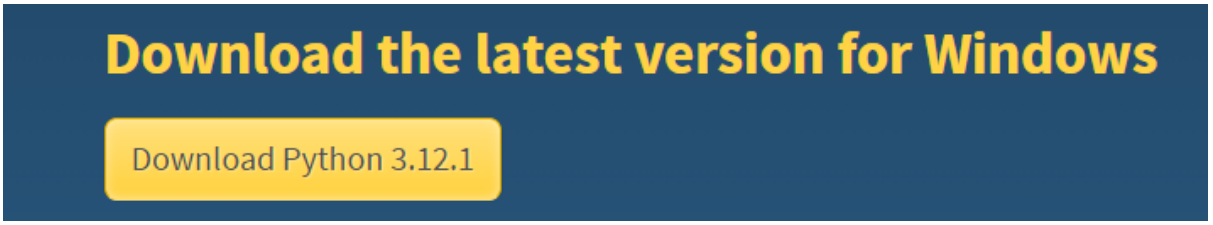
Python Installation

1. Visit this page for Python Downloads (https://www.python.org/downloads/)



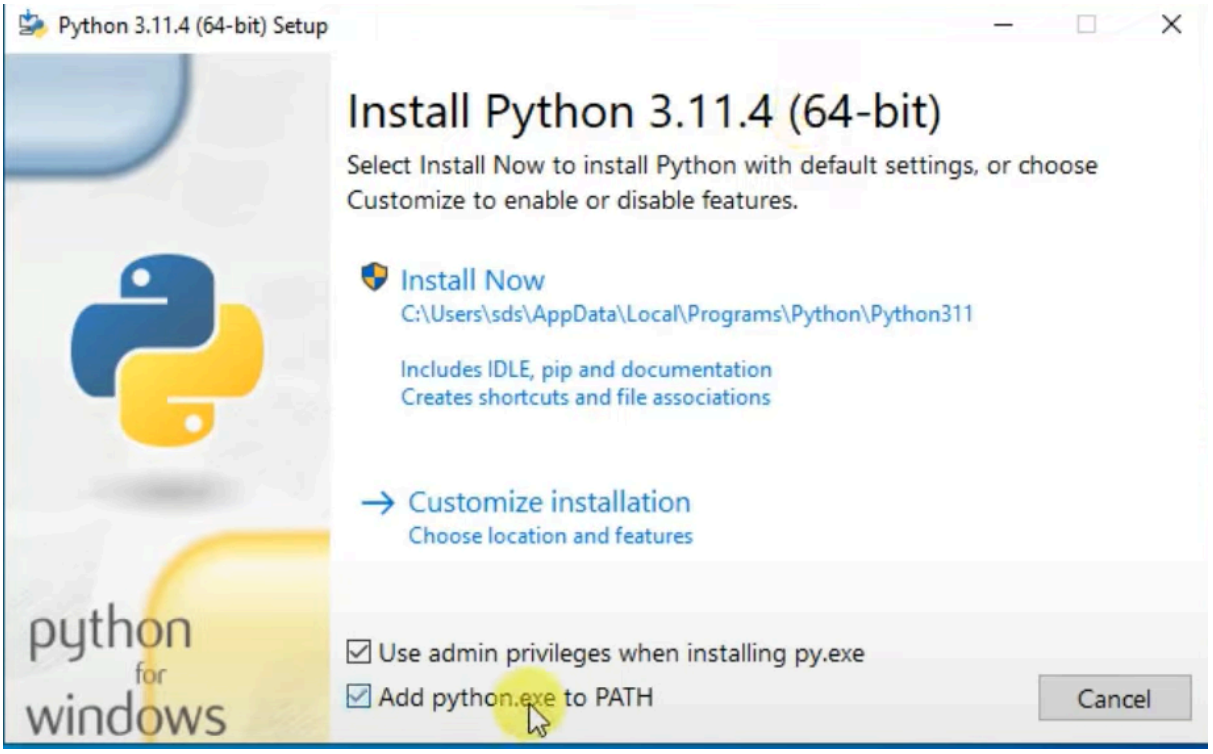
You will be redirected to this page

2. Click on Download Python 3.12.1



Wait for it to finish downloading

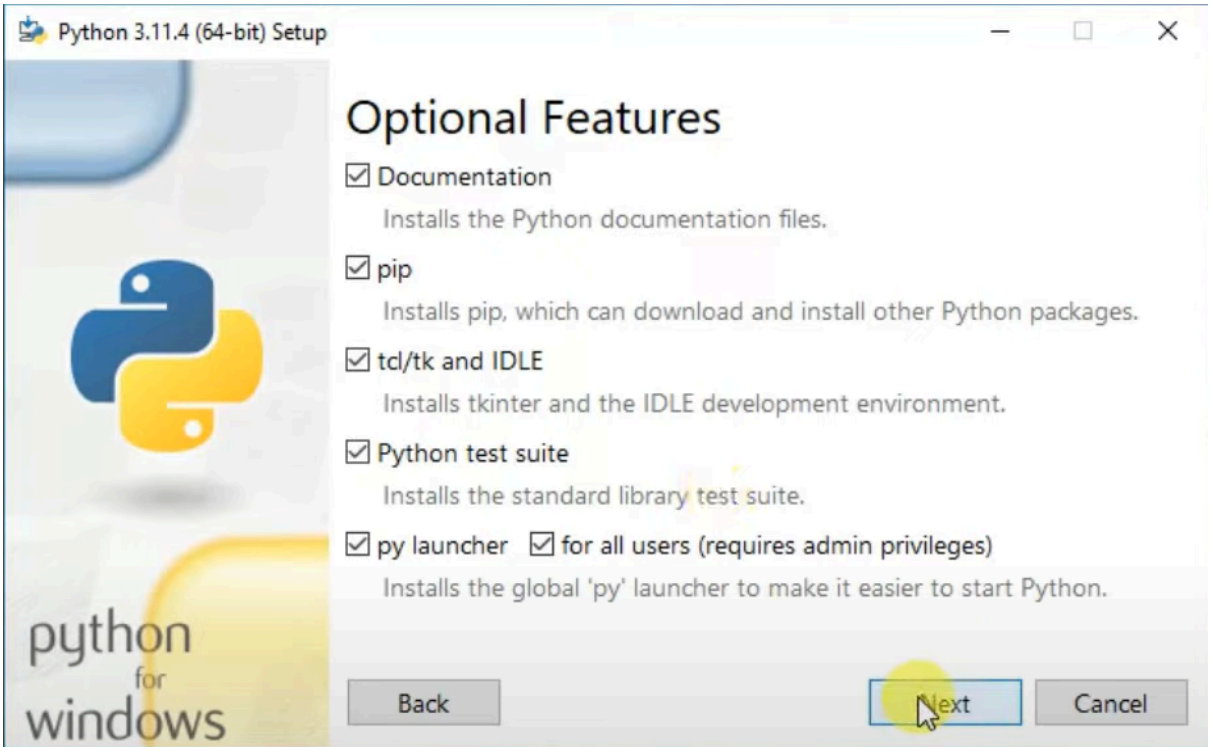
3. Click on the downloaded file



Check both boxes

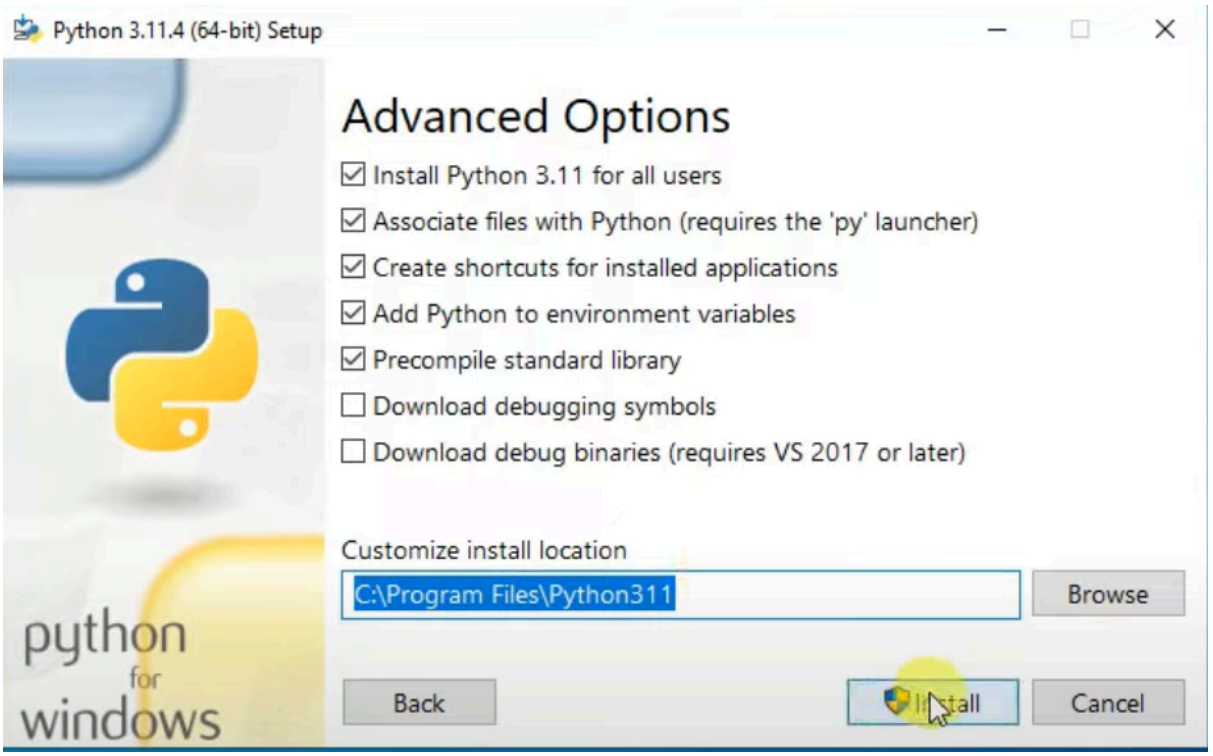
4. Customize your installation

5. Check all optional features

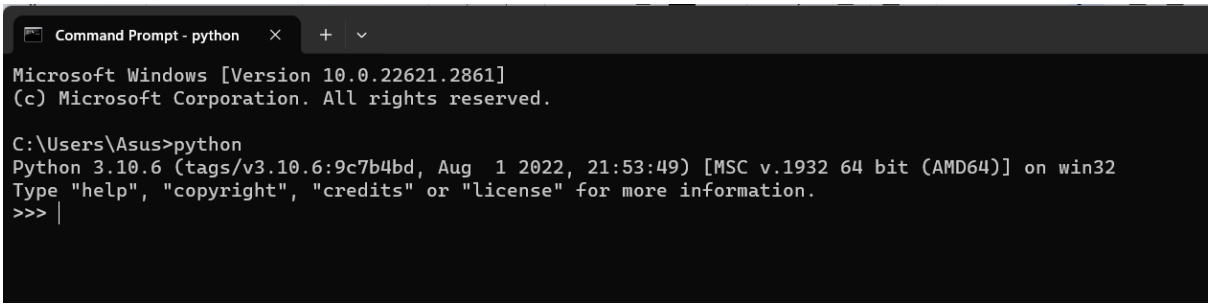


Click Next

6. Install Python for all users



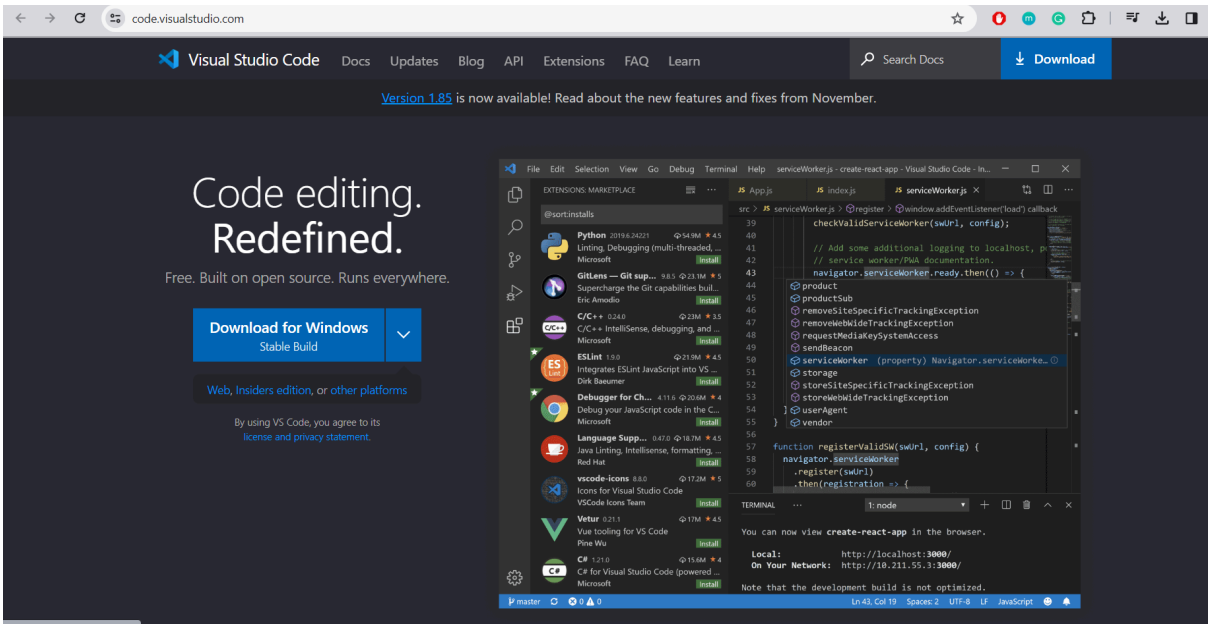
7. Open your windows command prompt and type ‘Python’



If it the result shows your Python version, it means that it’s installed correctly

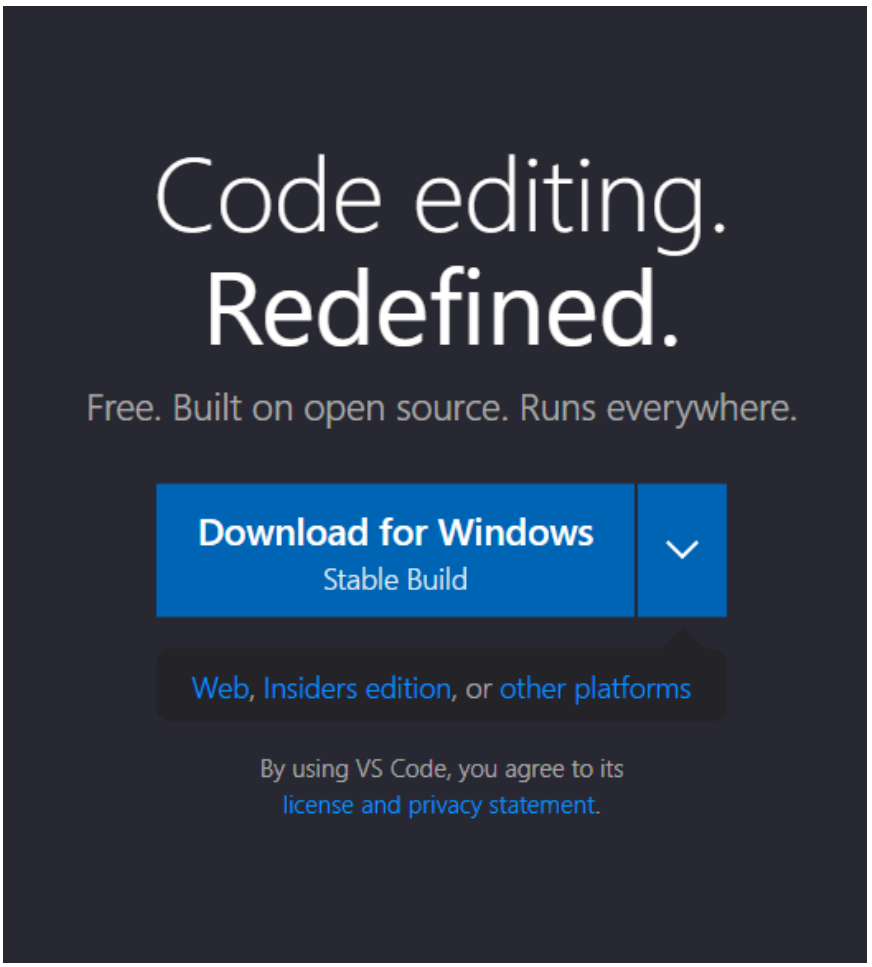
IDE installation: Visual Studio Code

1. Visit [this](https://code.visualstudio.com/)page for downloading Visual Studio Code (https://code.visualstudio.com/)



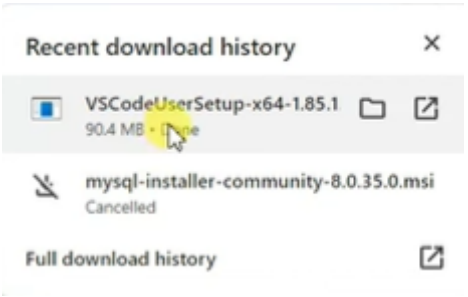
You should be redirected to this page

2. Click on Download for Windows (Stable Build)



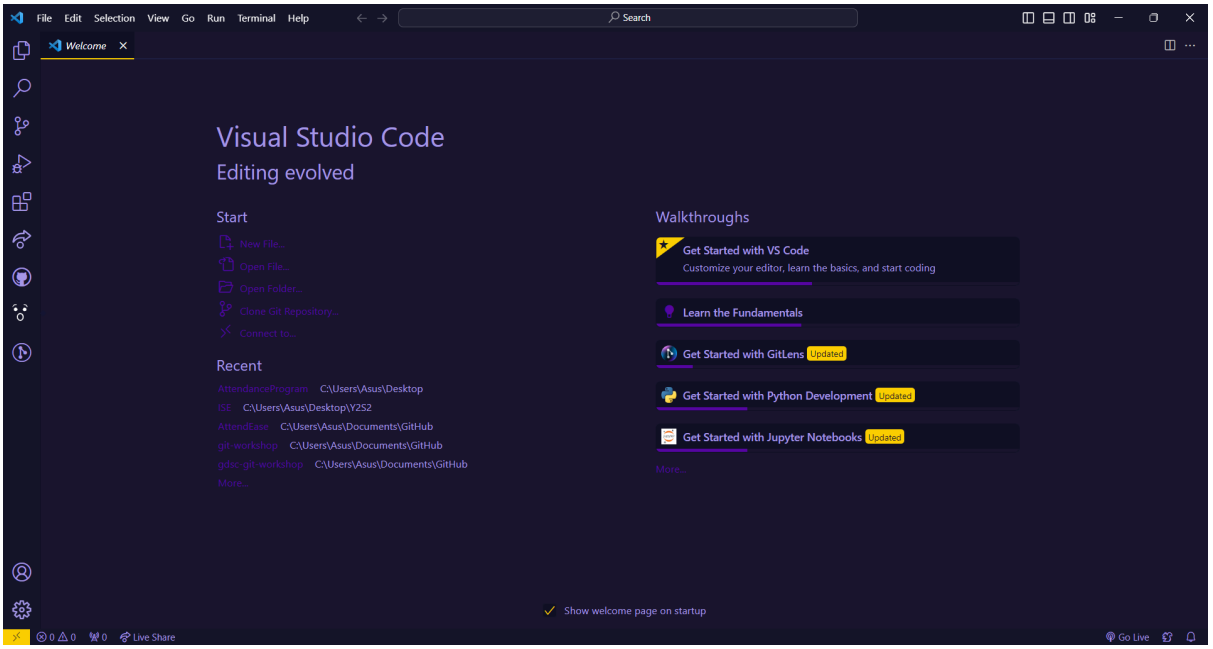
This will start the download for the VSC file

3. Click on the downloaded .exe to install it locally on your system



Configure the installation accordingly depending on your preferences (I personally checked everything loll)

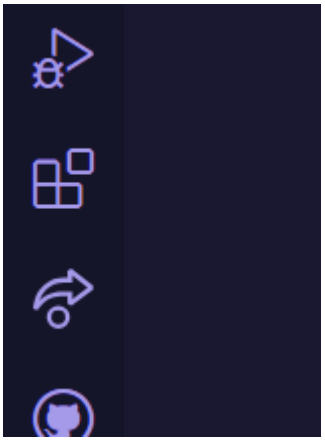
4. Launch Visual Studio Code



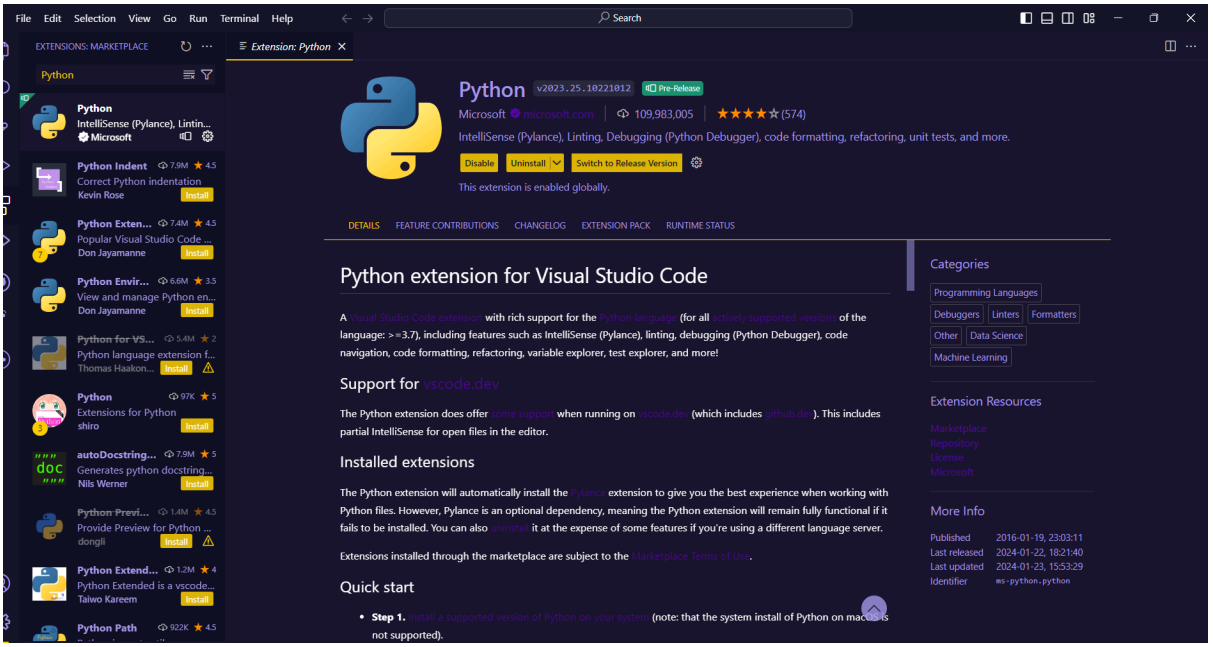
My Visual Studio Code likely looks different from yours cause I have already changed my theme and default font.

5. Install the needed extensions to run Python

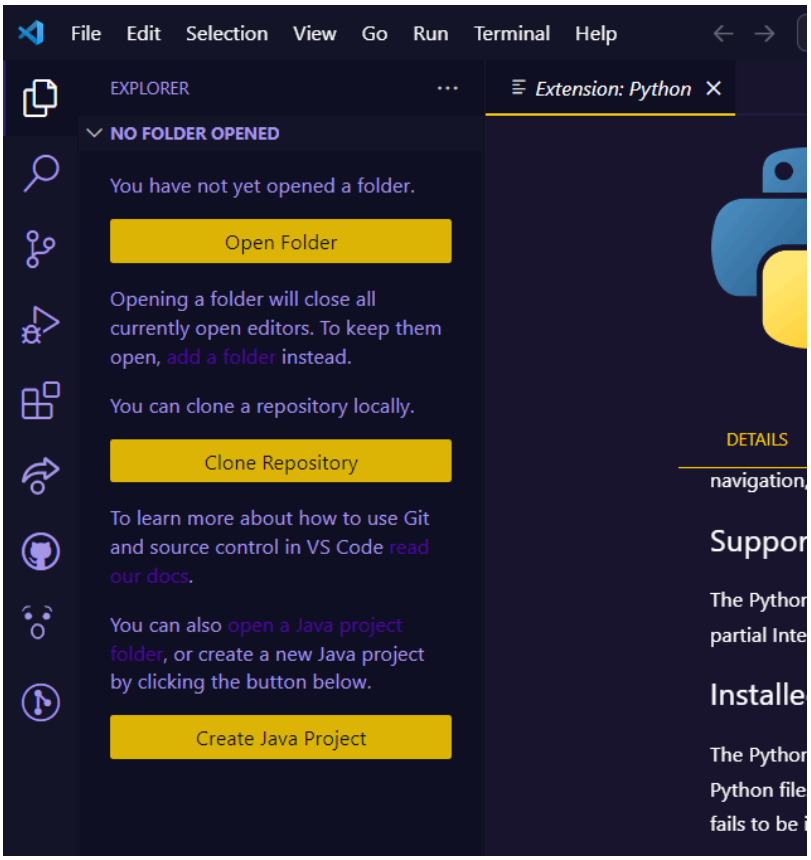
Although you already have VSC, it doesn't mean that you can run Python already



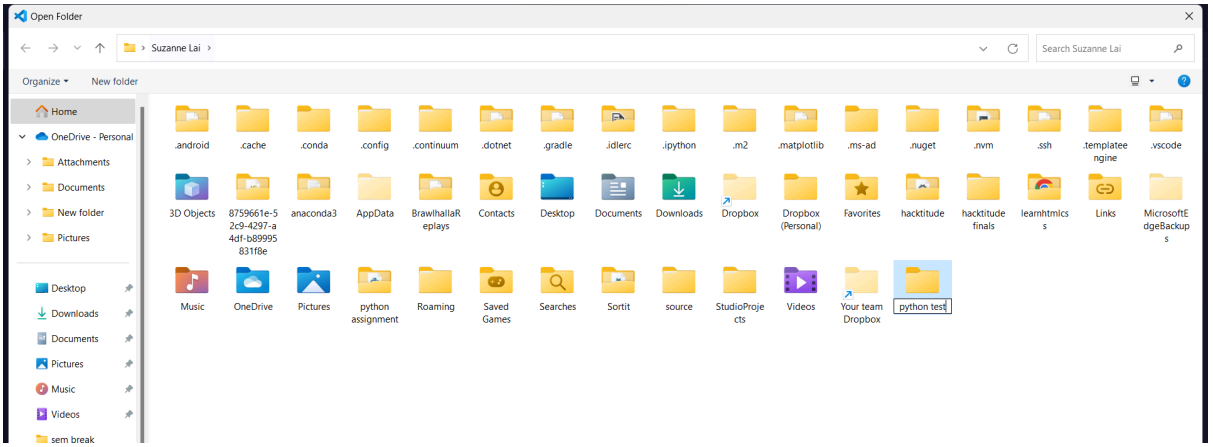
On the left panel, click on what looks like one block is being added to three other and it'll lead you to the **extensions** marketplace



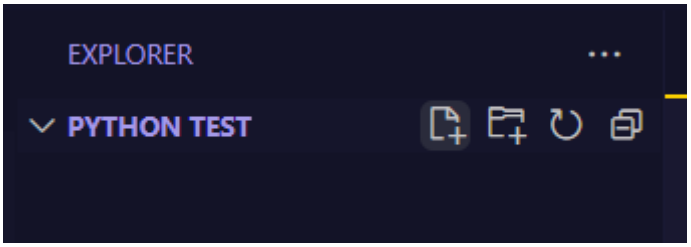
Search for Python in the search bar, then click the first option and **INSTALL** it.



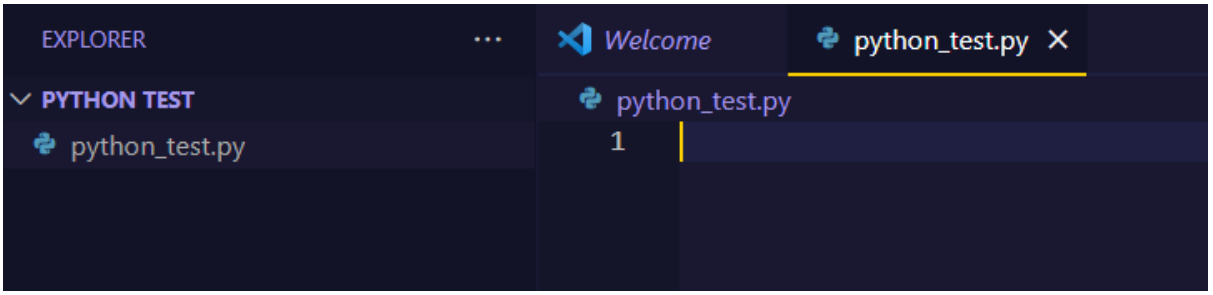
Now, we wanto test if we can run Python. Go to your Explore (the first icon on the left panel which looks like a file) and click on Open Folder



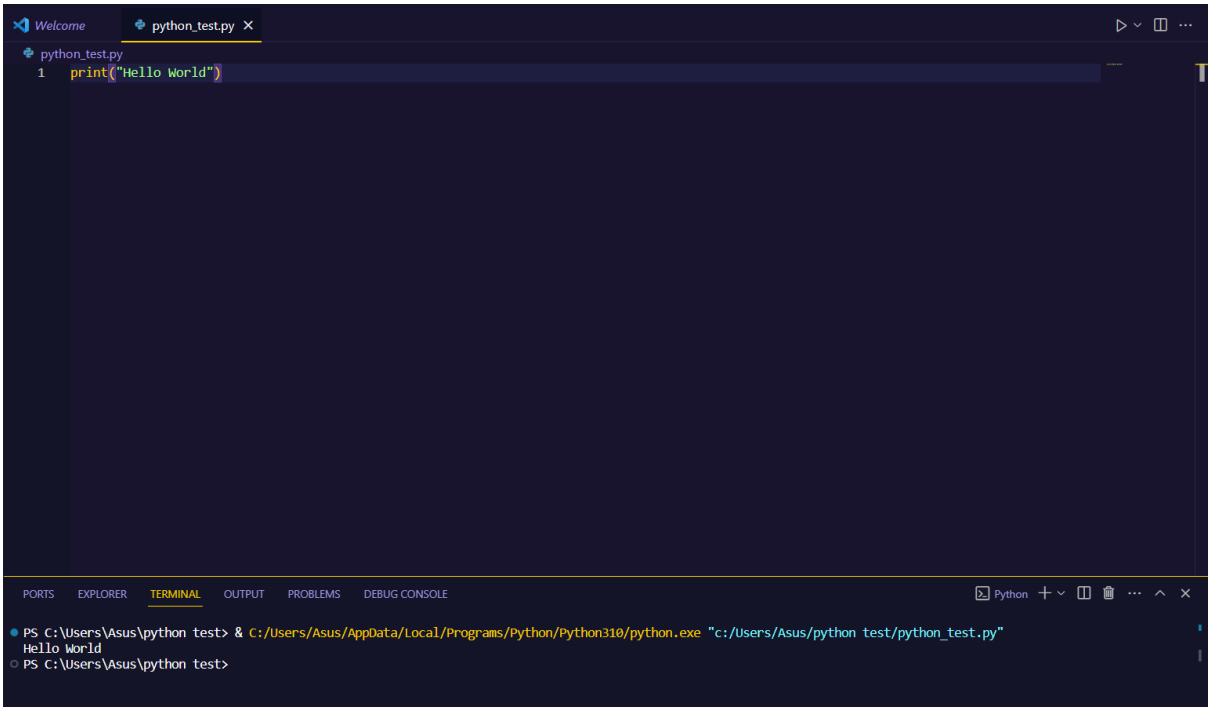
You can either use a pre-existing folder or create a new one. In my case, I created one called python test



It will now appear in your Explorer tab! When you're **hovering over** Python Test, the add icons will appear next to its name. Click on the first one to open your first Python file!



Name it python_test.py



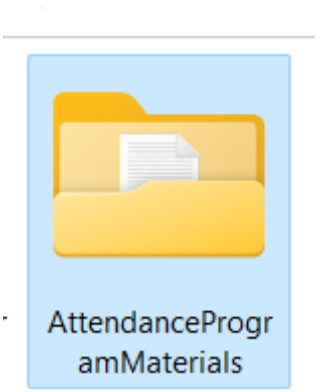
Typing print(“Hello World” and click the upper right icon that looks like the YouTube play button to “run” your program. Now, you’ll see in your terminal that Hello World has been printed

Congrats! You can run Python on VSC now

Libraries Installation

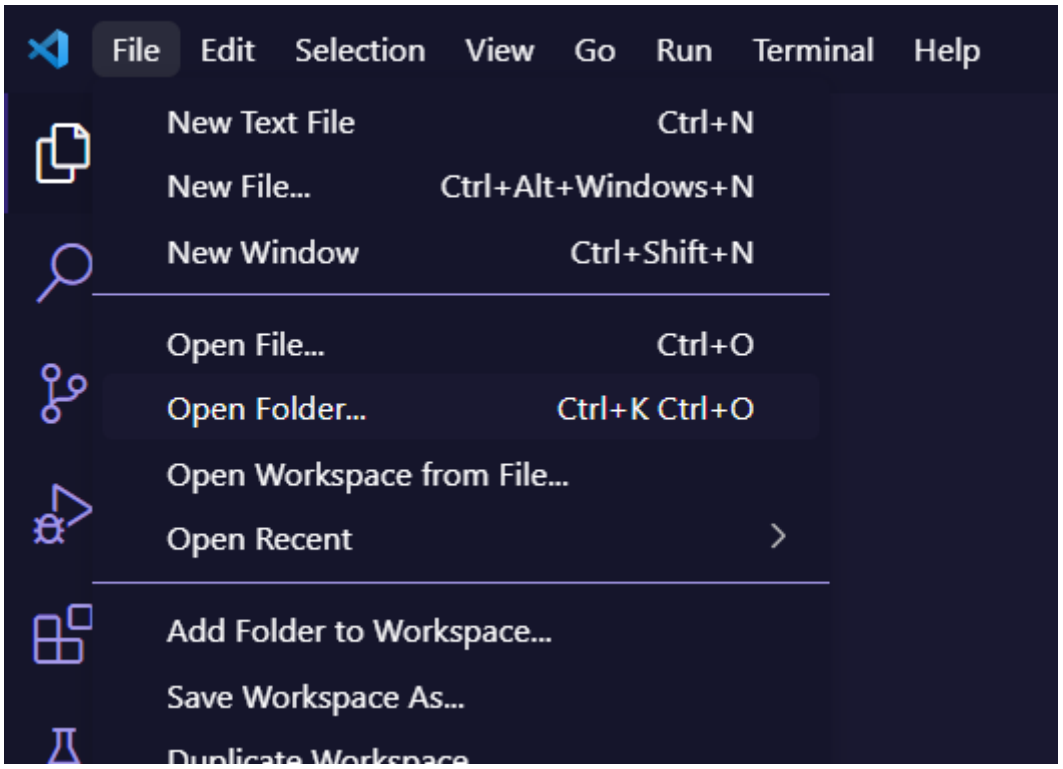
1. Download the folder AttendanceProgramMaterials that you can find and download here

   Alternatively, you can scan the QR code below and find the same materials for download



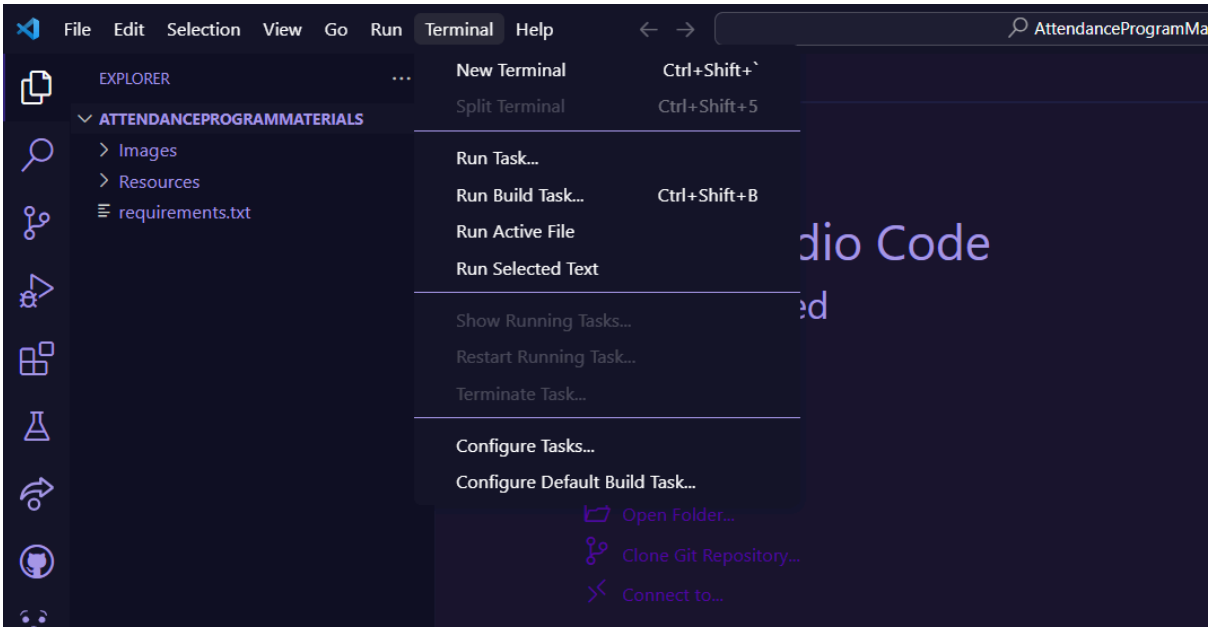
Remember where you put your downloaded folder!

2. Open up your IDE (Visual Studio Code) again



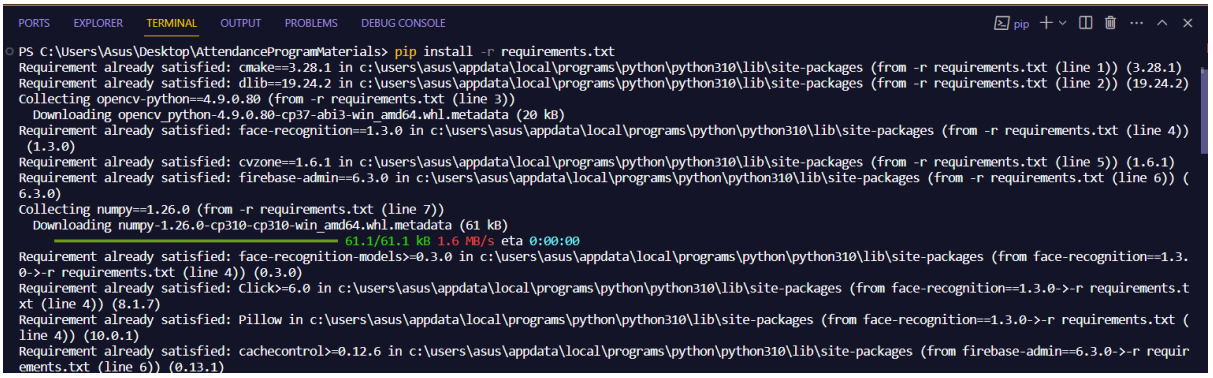
Click on Open Folder and select the folder AttendanceProgramMaterials to open it in VSC

3. Open your Terminal



Click on Terminal and then New Terminal

4. Install requirements.txt

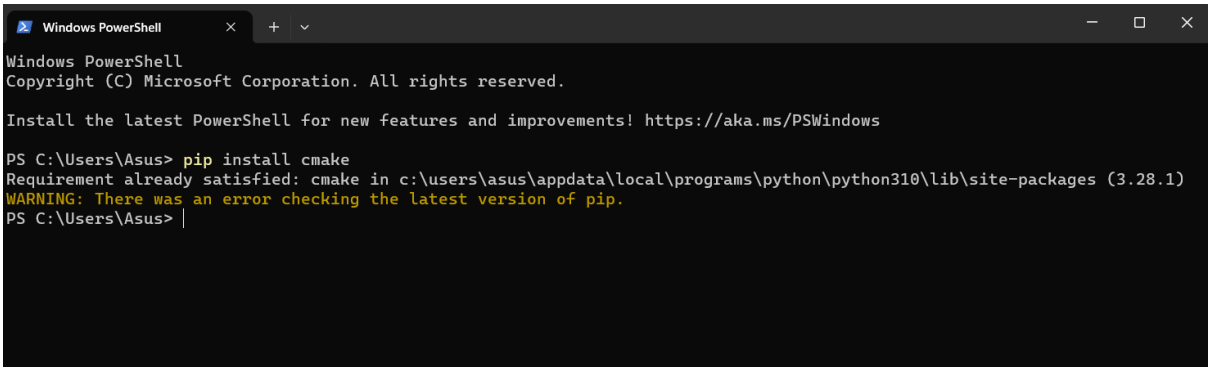


In your terminal, type in **pip install -r requirements.txt** and hit enter and all your required libraries will start installing automatically

Remember to use this folder to **write and build your attendance program later on in, since this is where you installed all the libraries**

<u>Alternatively</u>...
You can actually install these libraries globally and use them anywhere!

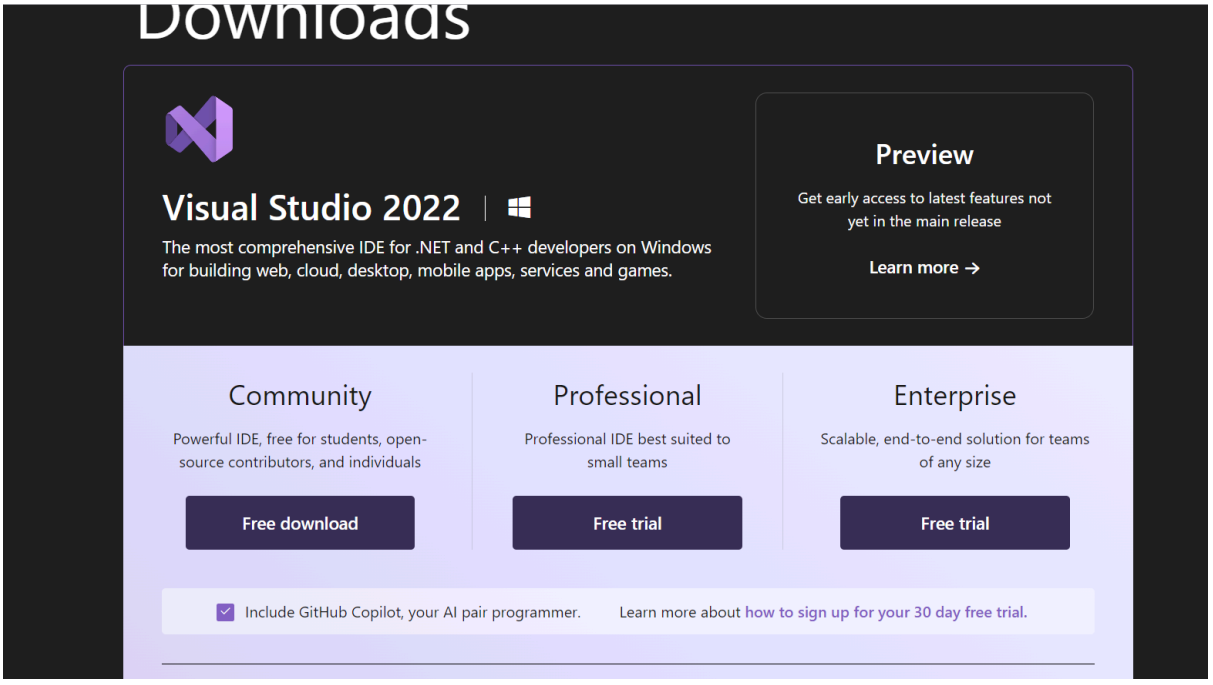
1. Open up your WINDOWS terminal and type:
   pip install ____ for all the libraries in requirements.txt



- pip install cmake
- pip install dlib
- pip install opencv-python
- pip install face-recognition
- pip install cvzone
- pip install firebase-admin
- pip install numpy

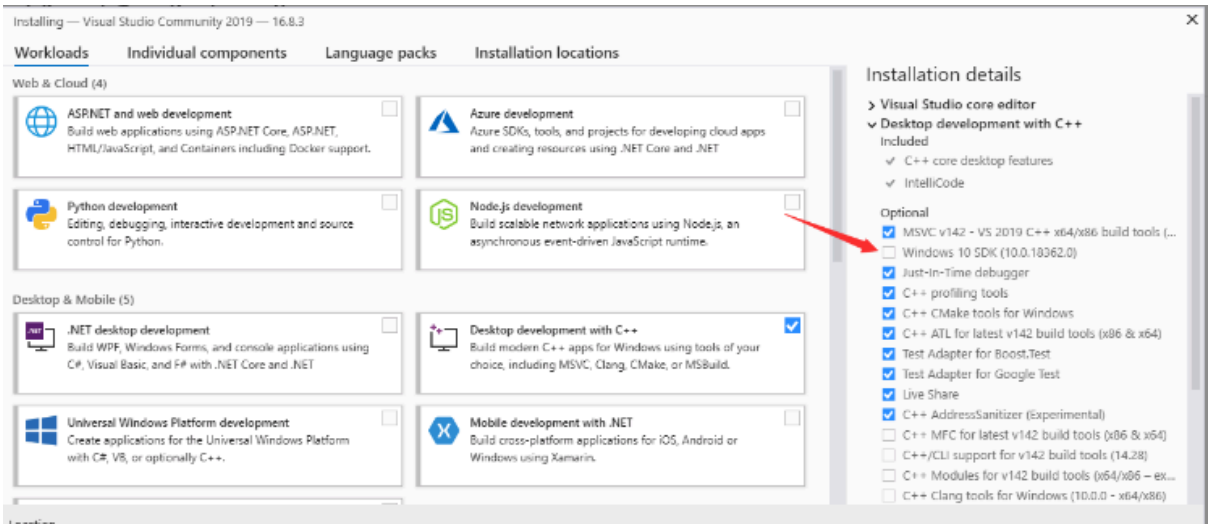
Install C++ compiler

1. The easiest way to install a C++ compiler is to install **Visual Studio** the same way you installed Visual Studio Code. You can access the download link [here](https://visualstudio.microsoft.com/downloads/) (https://visualstudio.microsoft.com/downloads/)



Download and Install Visual Studio as you would any other program. When you're configure your installation, make sure you insall the C++ compiler by checking Desktop

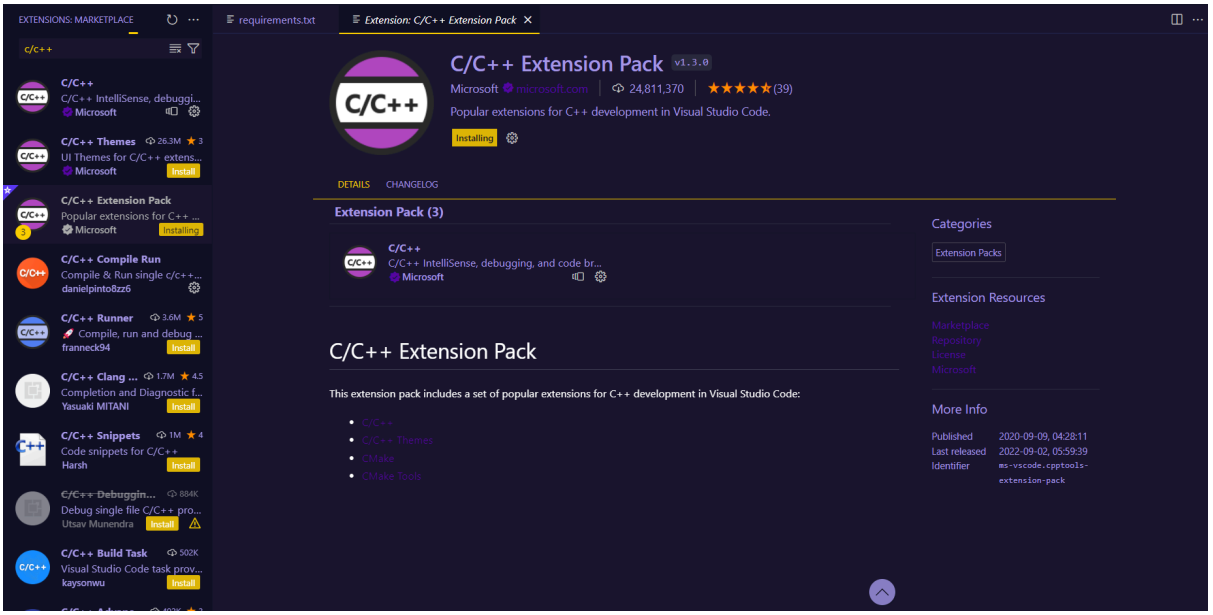
Development with C++



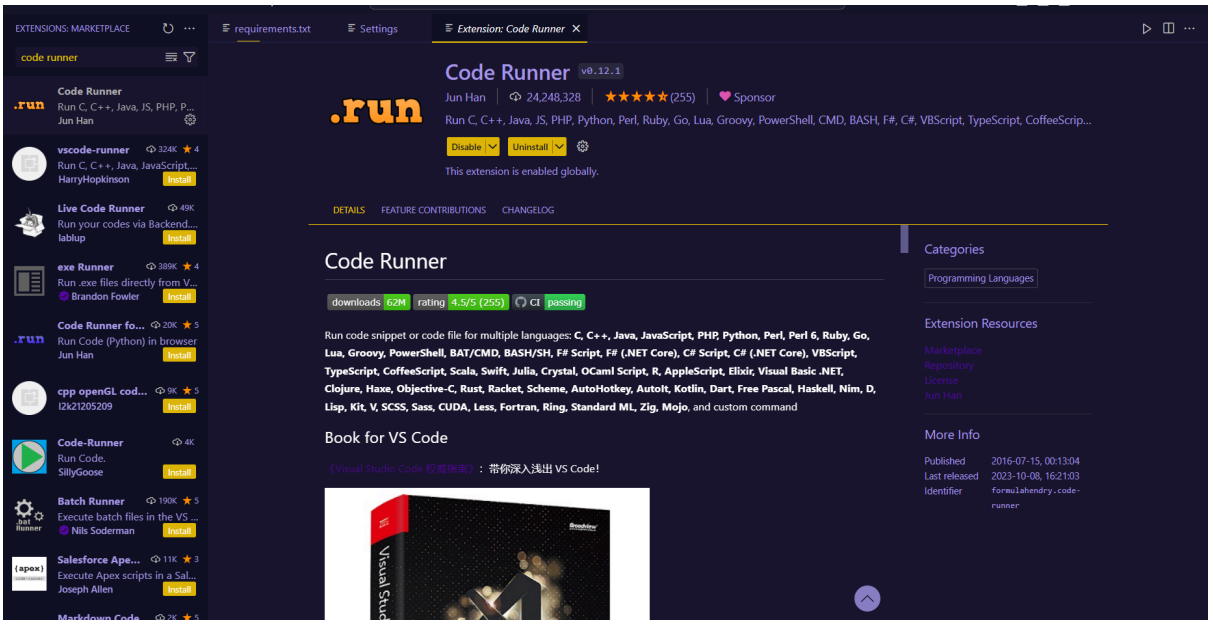
However, installing Visual Studio does take a lot of time so you can do this instead:

1. Install the C/C++ extension from visual studio code

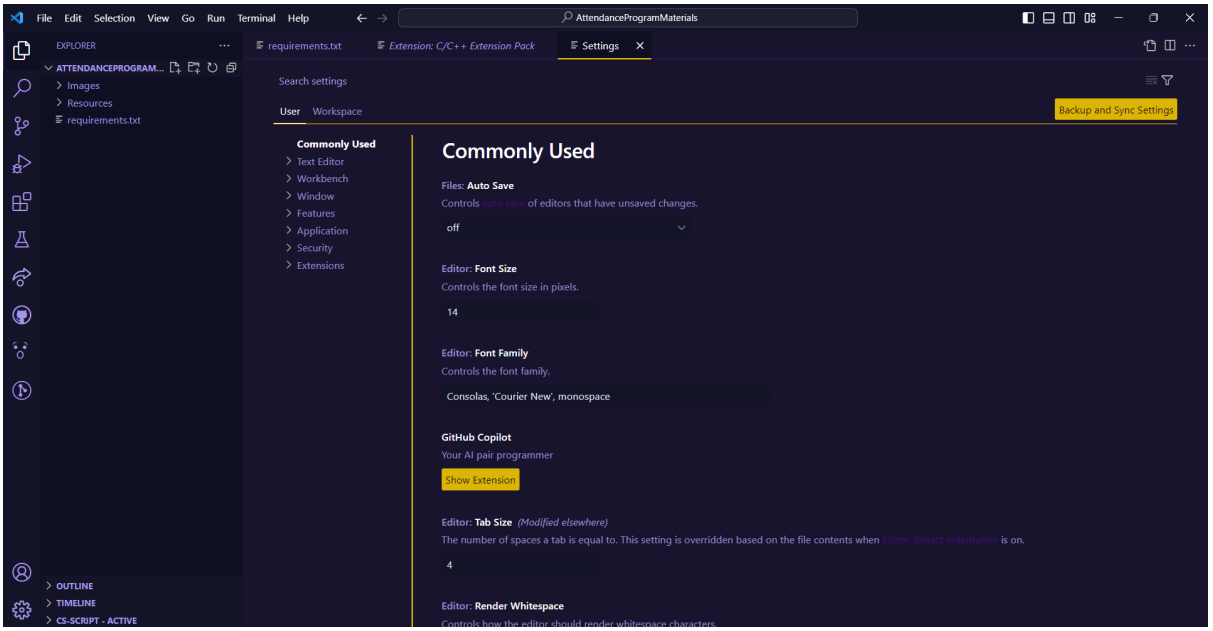
2. Install C/C++ Extension Pack



3. Install the Code Runner extension

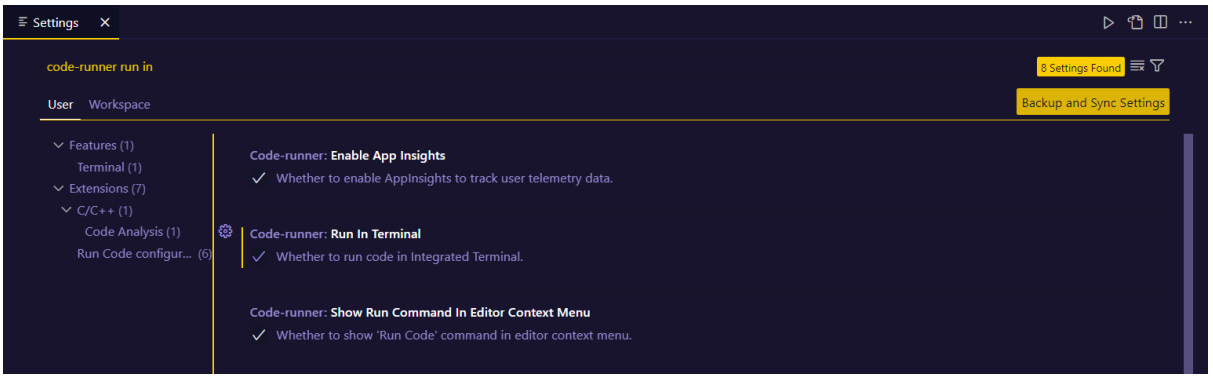


4. Open up VSC Settings page



The settings icon should be on the bottom left of the page (gear icon)

5. Search for code-runner run in terminal



Check the option for Code-runner: Run In Terminal

6. Search for code-runner save file before run