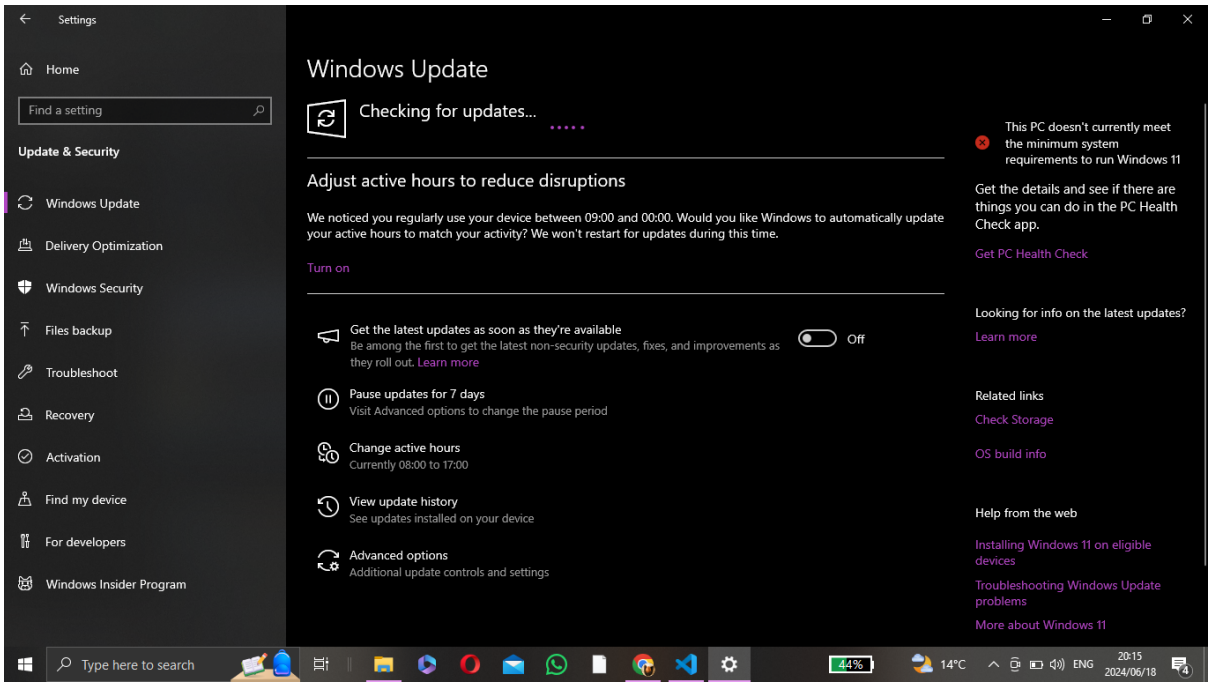
1. Select Your Operating System (OS):

Choose an operating system that best suits your preferences and project requirements. Download and Install Windows 11. https://www.microsoft.com/software-download/windows11

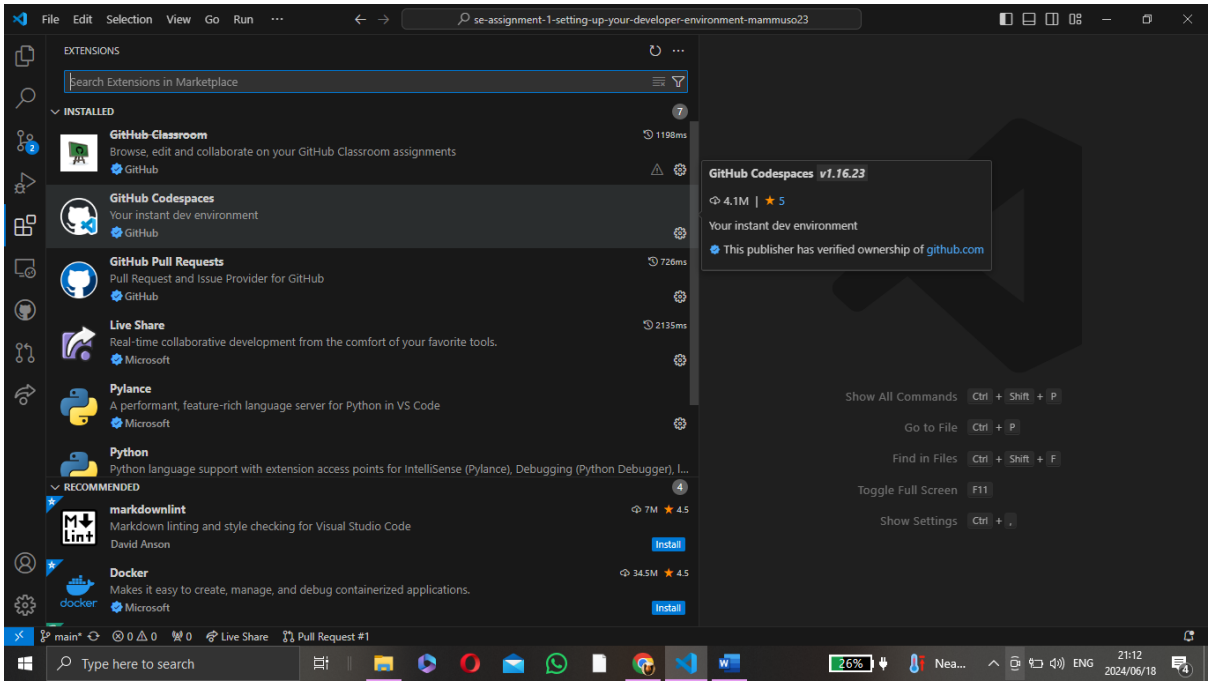
My PC does not meet the minimum requirements to run windows 11. So the OS system I will be using is Windows 10.



2. Install a Text Editor or Integrated Development Environment (IDE):

Select and install a text editor or IDE suitable for your programming languages and workflow. Download and Install Visual Studio Code. https://code.visualstudio.com/Download

- By going to the vs code downloader page, you should click the download link for windows and download the installer file ending with exe.
- Once the download is complete open the file and start the installation process. Accept the license agreement and select the location where you want to install it. Then you can finally install after choosing to add path and creating a desktop icon.
- When the installation is complete, launch the VS code.
- Install the extensions and customize your settings accordingly.



3. Set Up Version Control System:

Install Git and configure it on your local machine. Create a GitHub account for hosting your repositories. Initialize a Git repository for your project and make your first commit.
https://github.com

- Go the git download page and click on the Windows button. Download .exe file, install and the run installer.
- Go through the setup wizard and accept the default options. Adjust your PATH environment.
- Finish the installation and launch Git Bash.

Configuring Git Bash

- Open and launch Git Bash from the desktop shortcut.
- Set your username and email: these details will be used for commits

```
Mammuso@LAPTOP-CQRFQSUU MINGW64 ~
$ git config --global user.name "Mammuso Mokoena"

Mammuso@LAPTOP-CQRFQSUU MINGW64 ~
$ git config --global user.mail "mammuso@icloud.com"
```

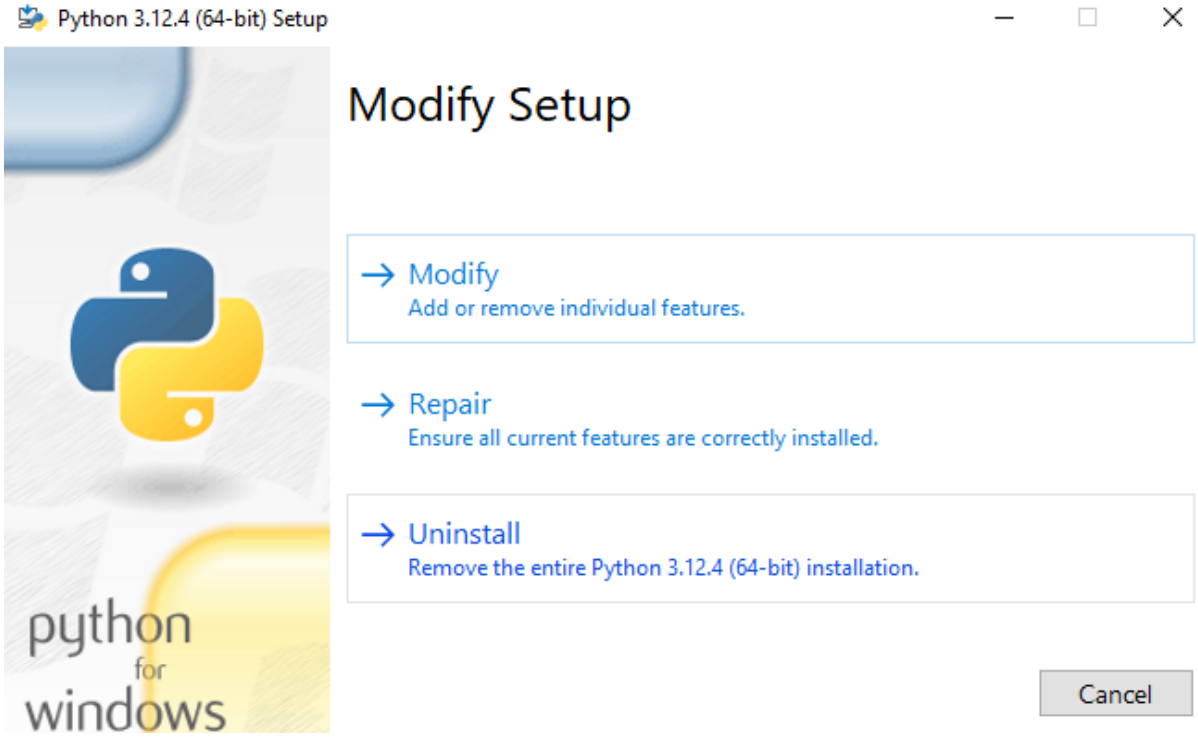
Create a Github account

- Go to GitHub, open your browser and sign up. "Sign up" and follow the instructions to create a new account. Put in your email and create a password, then sign in. Check your email for a verification link from GitHub and click it to verify your account.

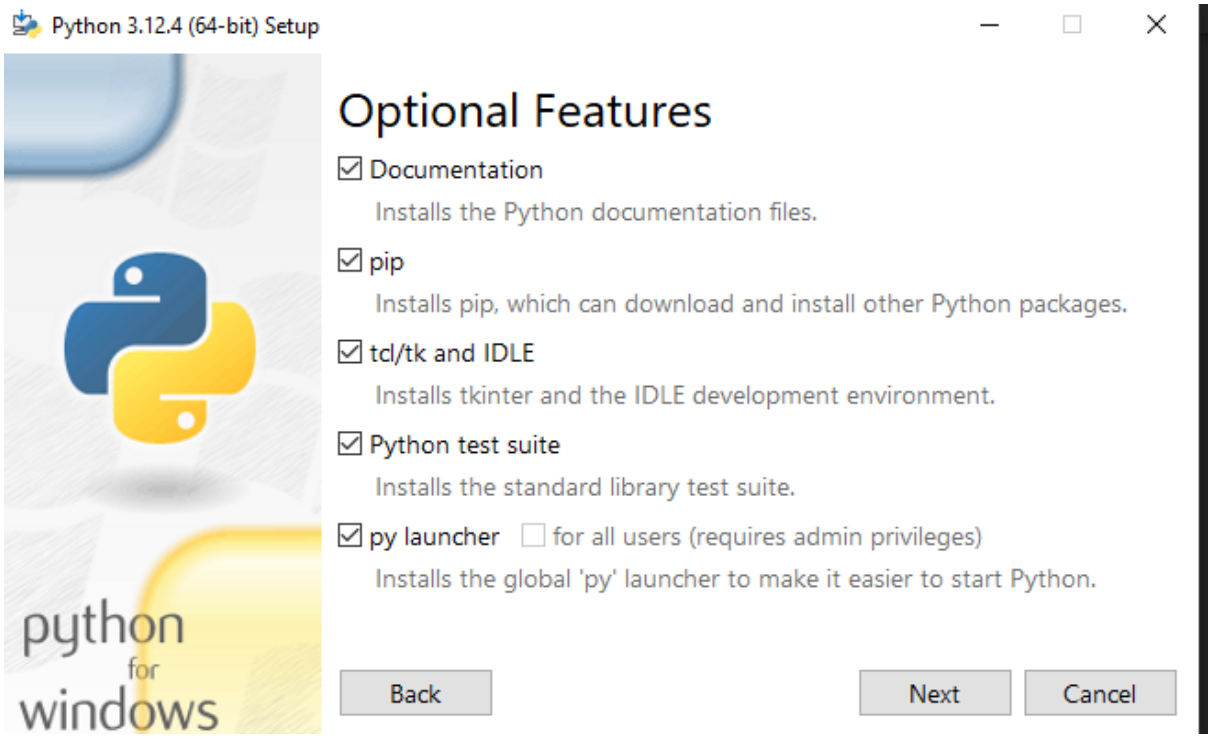
4. Install Necessary Programming Languages and Runtimes:

Instal Python from http://wwww.python.org programming language required for your project and install their respective compilers, interpreters, or runtimes. Ensure you have the necessary tools to build and execute your code.

- Go to the python installer and download the python application for your OS.



- Open the downloaded application and run the file. Modify and customize your installation.



5. Install Package Managers:

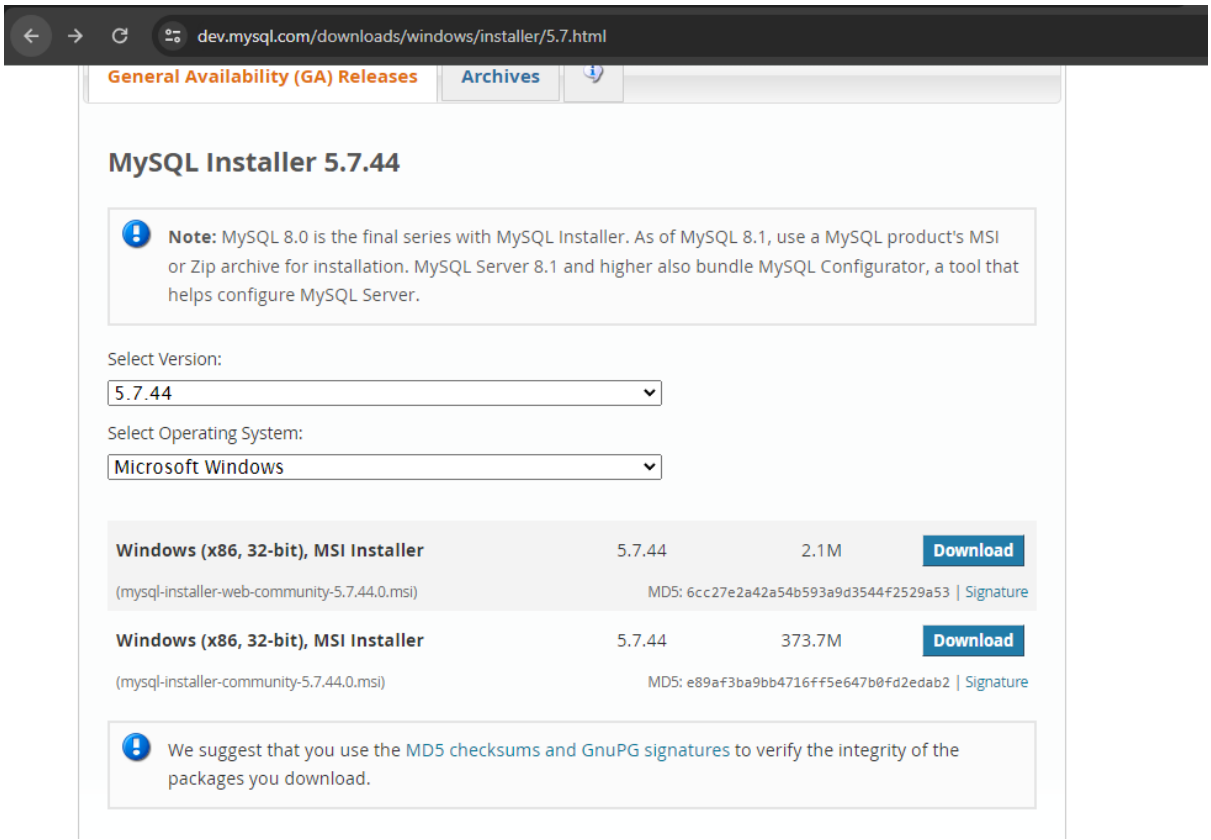
If applicable, install package managers like pip (Python).

Pip is automatically installed from the optional features.

6. Configure a Database (MySQL):

Download and install MySQL database.
https://dev.mysql.com/downloads/windows/installer/5.7.html

- Navigate to the MySQL installer and download the installer.



- Configure your My SQL, choose the configuration type, set up your password, 'configure it as a Windows' check, apply the configuration, and finish the installation.
- To verify the installation, open the command prompt and type this prompt:
  mysql -u root -p

  Enter the root password you had set during the installation.

7. Set Up Development Environments and Virtualization (Optional):

Consider using virtualization tools like Docker or virtual machines to isolate project dependencies and ensure consistent environments across different machines.

8. Explore Extensions and Plugins:

Explore available extensions, plugins, and add-ons for your chosen text editor or IDE to enhance functionality, such as syntax highlighting, linting, code formatting, and version control integration.

9. Document Your Setup:

Create a comprehensive document outlining the steps you've taken to set up your developer environment. Include any configurations, customizations, or troubleshooting steps encountered during the process.

A GitHub repository

https://github.com/mammuso23/sample_project

#Deliverables:

- Document detailing the setup process with step-by-step instructions and screenshots where necessary.

- A GitHub repository containing a sample project initialized with Git and any necessary configuration files (e.g., .gitignore).

- A reflection on the challenges faced during setup and strategies employed to overcome them.

#Submission:

Submit your document and GitHub repository link through the designated platform or email to the instructor by the specified deadline.

#Evaluation Criteria:**

- Completeness and accuracy of setup documentation.

- Effectiveness of version control implementation.

- Appropriateness of tools selected for the project requirements.

- Clarity of reflection on challenges and solutions encountered.

- Adherence to submission guidelines and deadlines.

Note: Feel free to reach out for clarification or assistance with any aspect of the assignment.