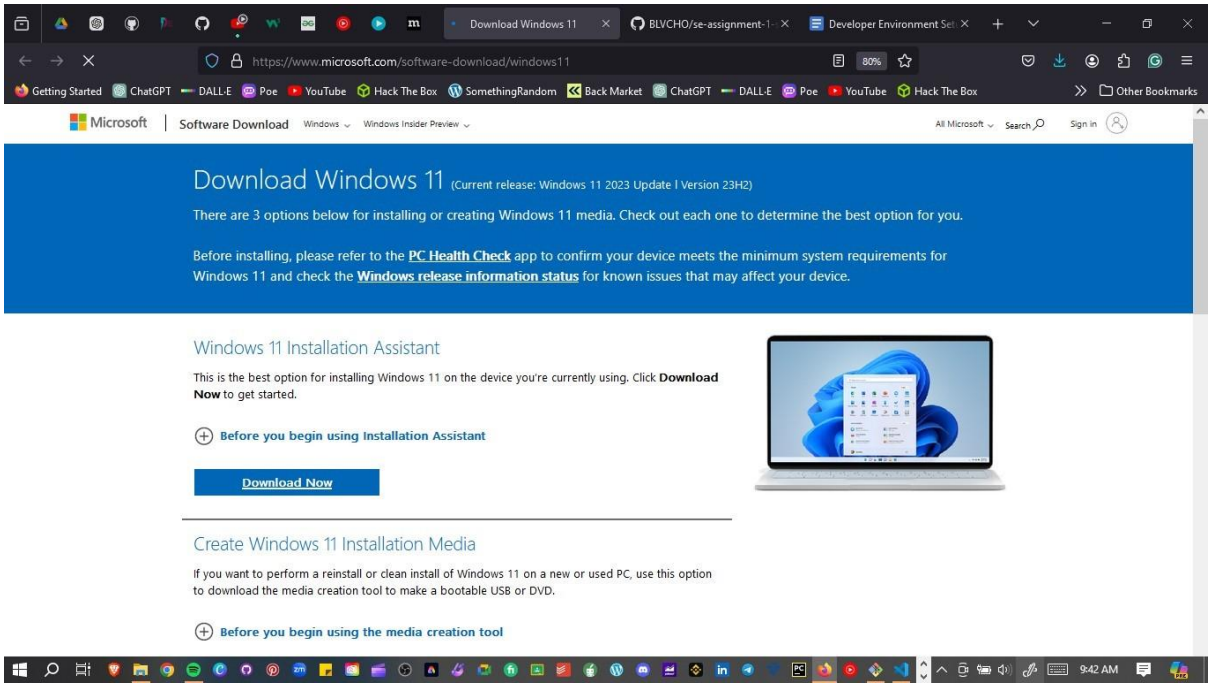
Developer Environment Setup Documentation

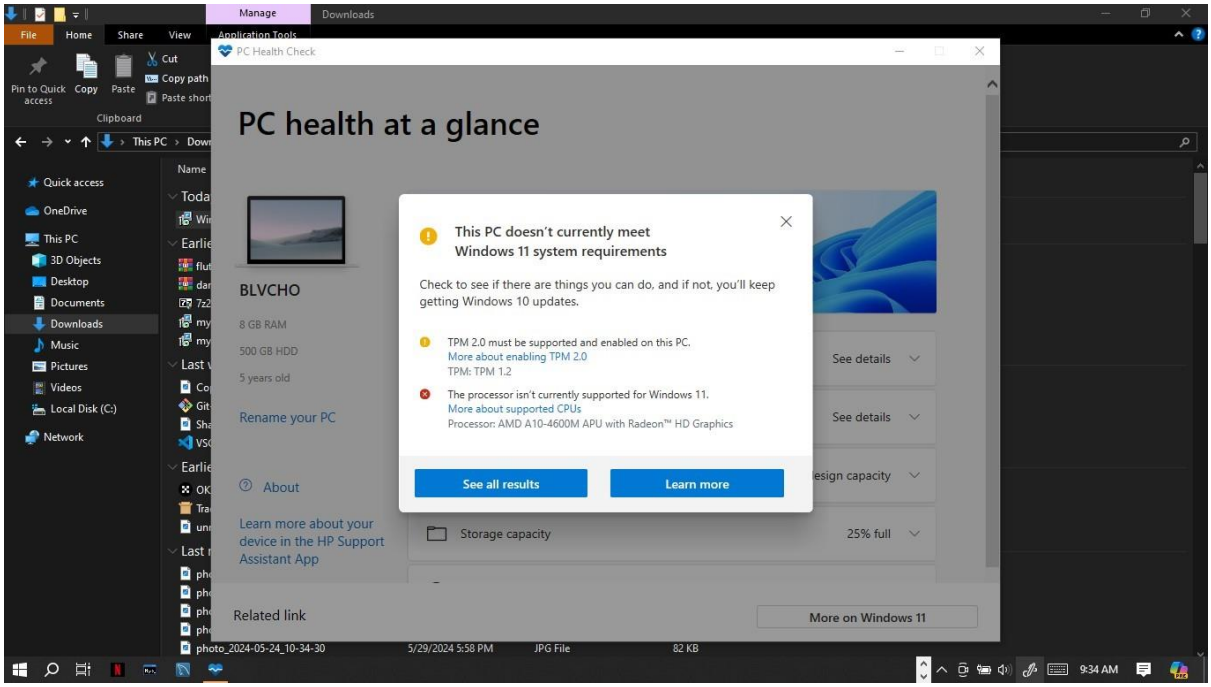
1. Operating System Installation

Steps and Screenshots of Windows 11 Installation:

1. Download Windows 11:
Visit the official Microsoft website: [Windows 11 Download](https://www.microsoft.com/software-download/windows11).
Download the Windows 11 Installation Assistant.
Run the downloaded file and follow the on-screen instructions to upgrade or install Windows 11.



2. Installation Process:
- Ensure your PC meets the minimum system requirements.
- Back up your important files.
- Follow the installation steps, including selecting the installation type, partitioning your hard drive if necessary, and configuring initial settings.



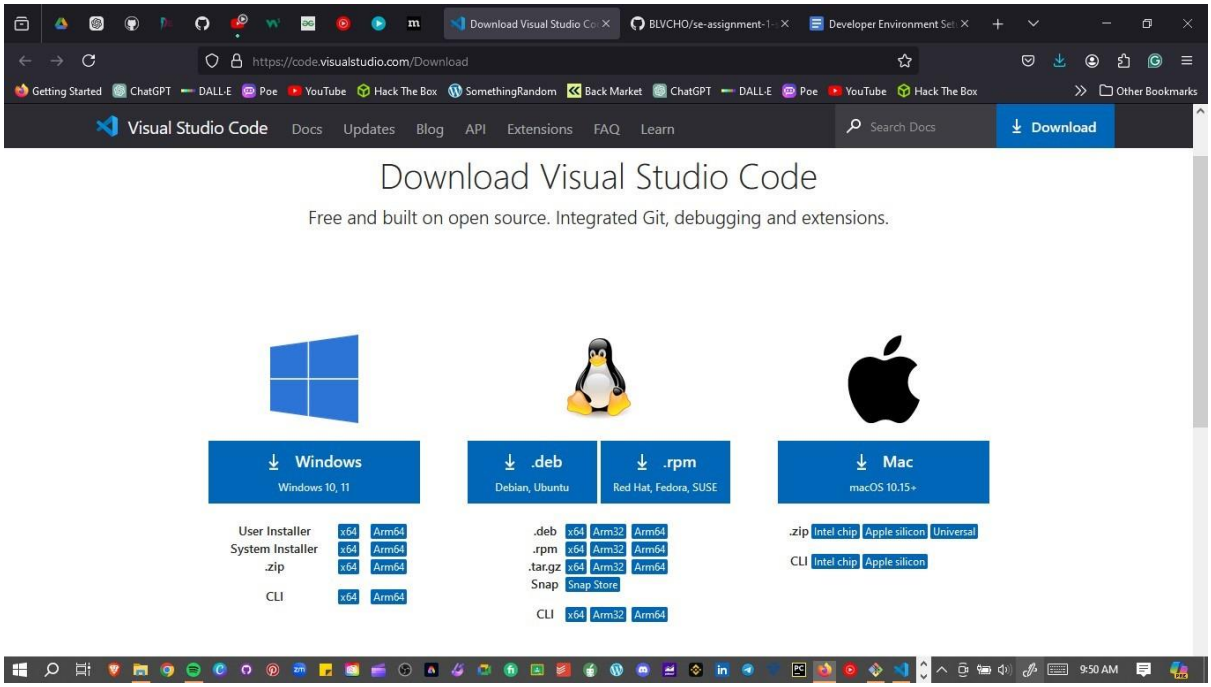
3. Post-Installation Setup:
   - Configure your user account, regional settings, and privacy settings.
   - Install necessary drivers and updates.

   NB: MY PC DOES NOT SUPPORT WINDOWS 11

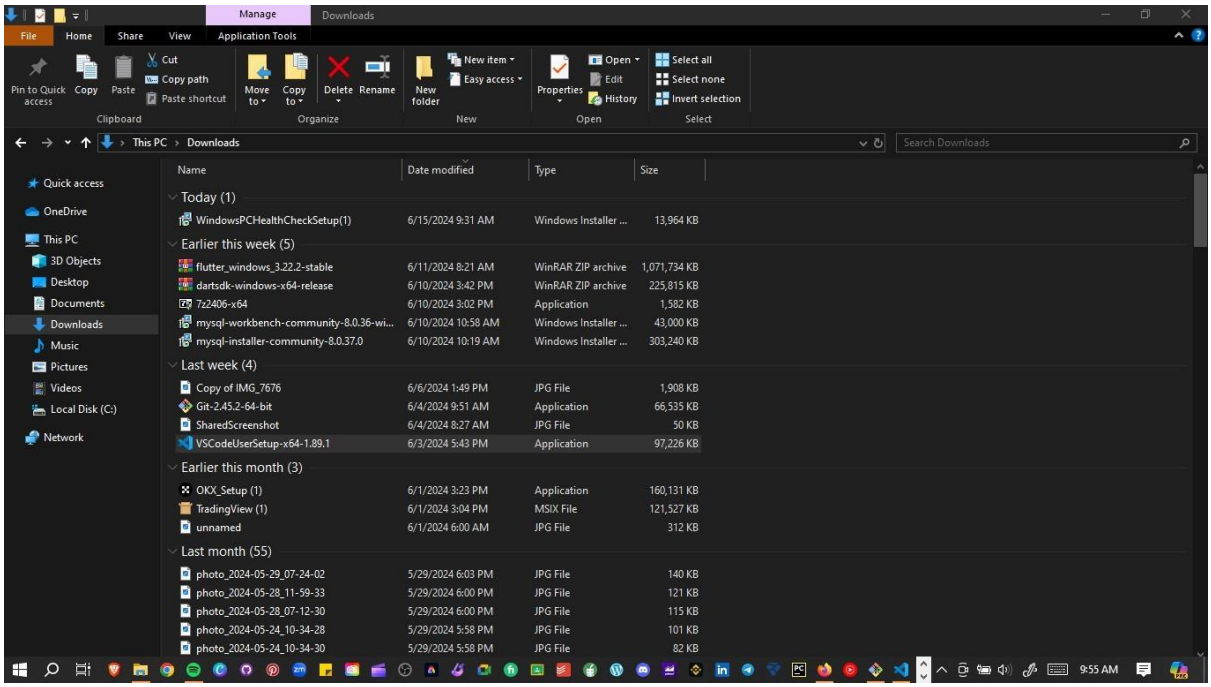
2. IDE Installation

Steps and Screenshots of Visual Studio Code Installation:

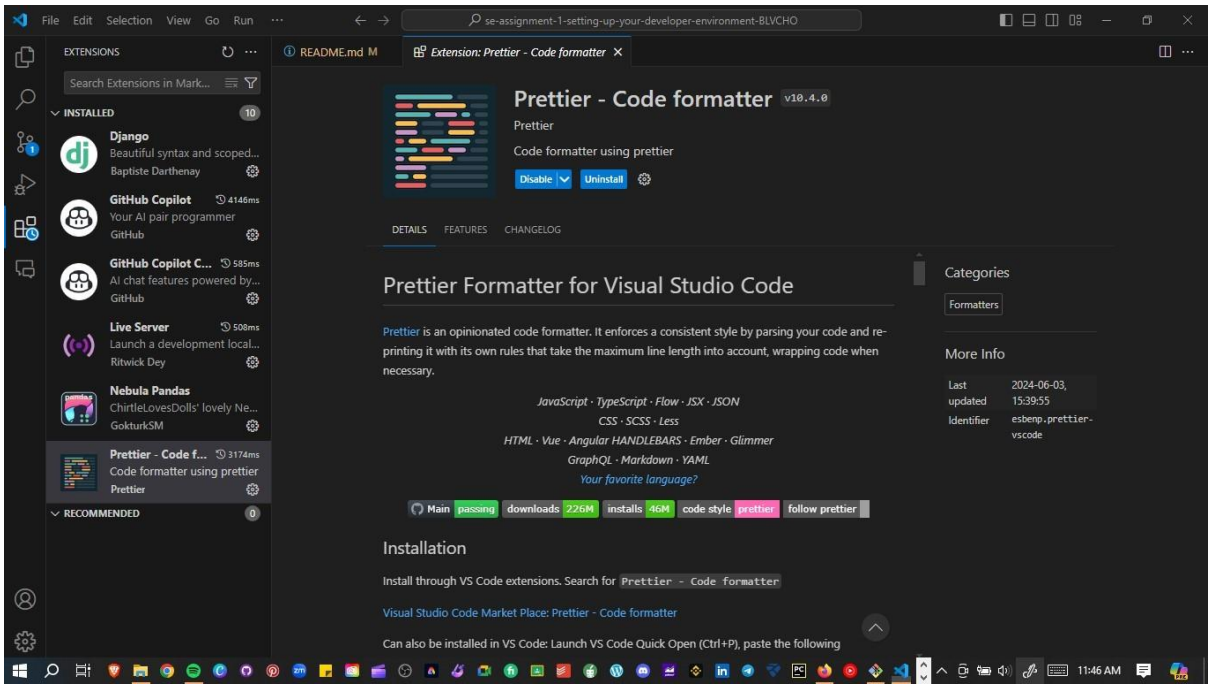
1. Download VS Code:
Visit the Visual Studio Code download page: [VS Code Download](https://code.visualstudio.com/Download).
Select the appropriate version for Windows and download the installer.



2. Installation Process:
Run the downloaded installer.
Follow the installation wizard, accepting the license agreement and choosing the installation location.
Select additional tasks such as adding to PATH and creating a desktop icon.



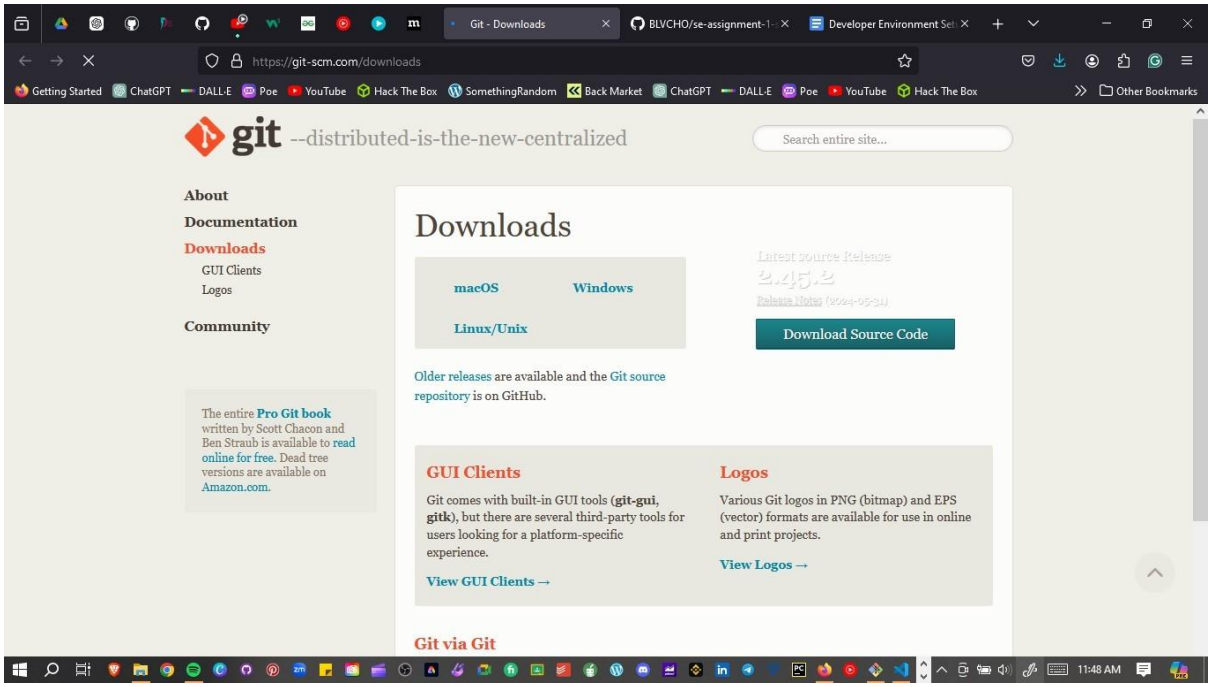
3. First Launch and Setup:
- Launch VS Code and install recommended extensions like Python, GitLens, and Docker.



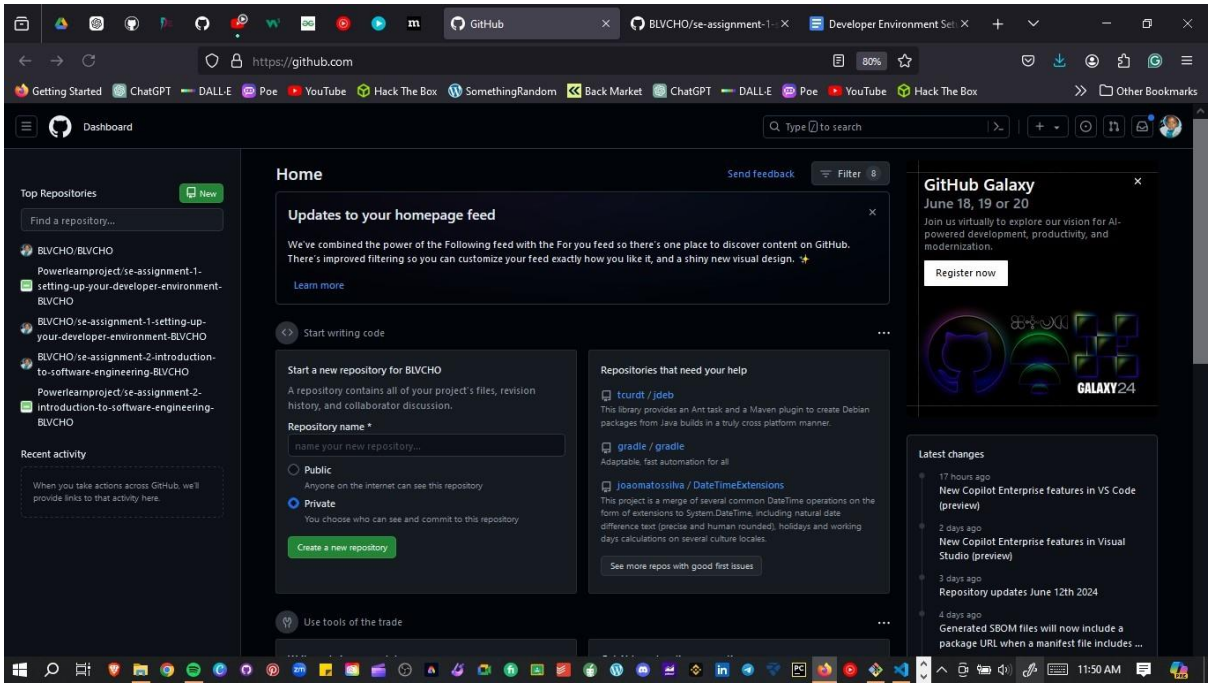
3. Version Control Setup

Steps for Installing Git, Creating a GitHub Account, Initializing a Repository, and Making the First Commit:

1. Install Git:
Download Git from the official site: [Git Download](https://git-scm.com/downloads).
Run the installer and follow the setup instructions, choosing your preferred options for PATH, line endings, and other settings.



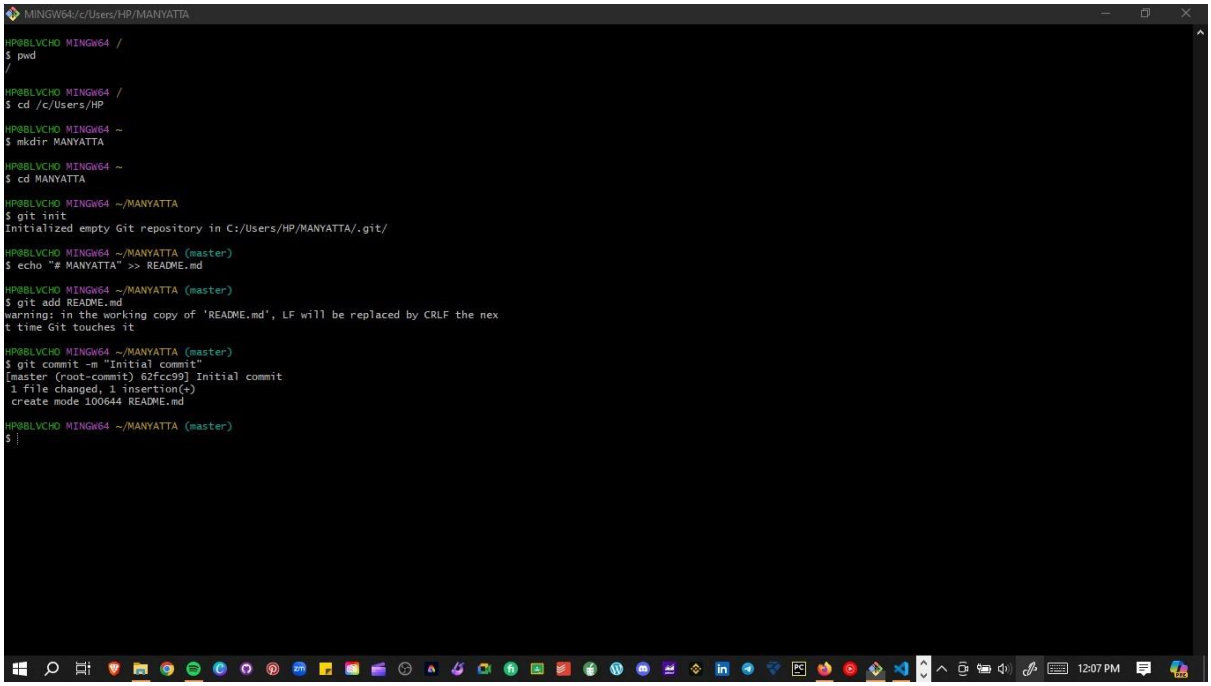
2. Create a GitHub Account:
Visit [GitHub](https://github.com) and sign up for a new account if you still need to get one.



3. Initialize a Git Repository:
Open Git Bash or the terminal in VS Code.
Navigate to your project directory or create a new one:
```bash
```

mkdir my_project
cd my_project
```

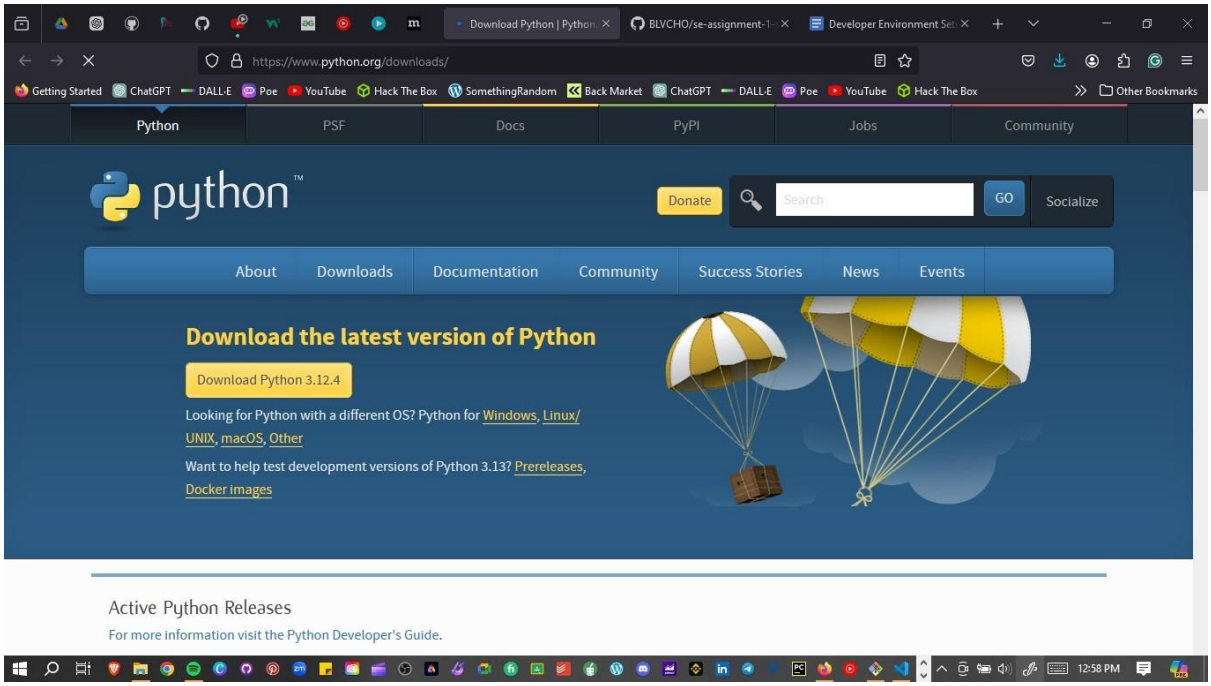
- Initialize a Git repository:
```bash
git init
```
- Create a README file:
```bash
echo "# My Project" >> README.md
```
- Add the README file to the staging area:
```bash
git add README.md
```
- Commit the changes:
```bash
git commit -m "Initial commit"
```


```

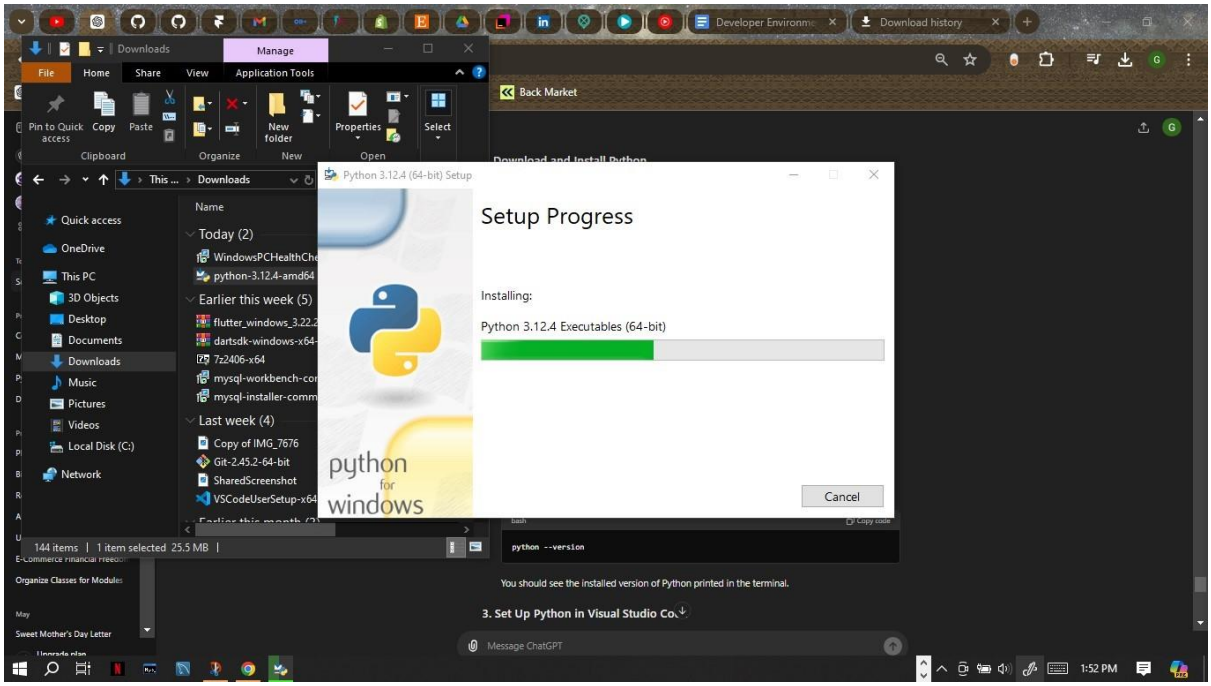
4. Programming Languages and Runtimes

Steps for Installing Python:

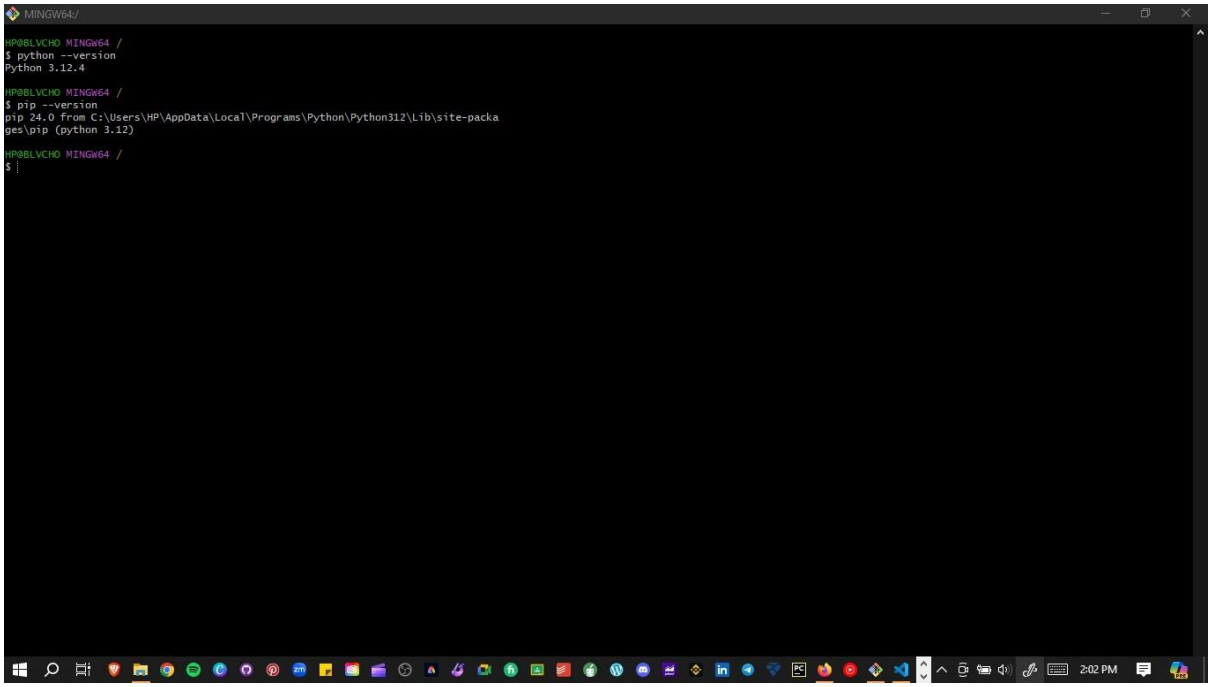
1. Download Python:
   - Visit the official Python website: [Python Download](https://www.python.org/downloads/).
   - Download the latest version of Python for Windows.



2. Installation Process:
   - Run the installer, ensure you check the option to add Python to PATH.
   - Follow the installation wizard.



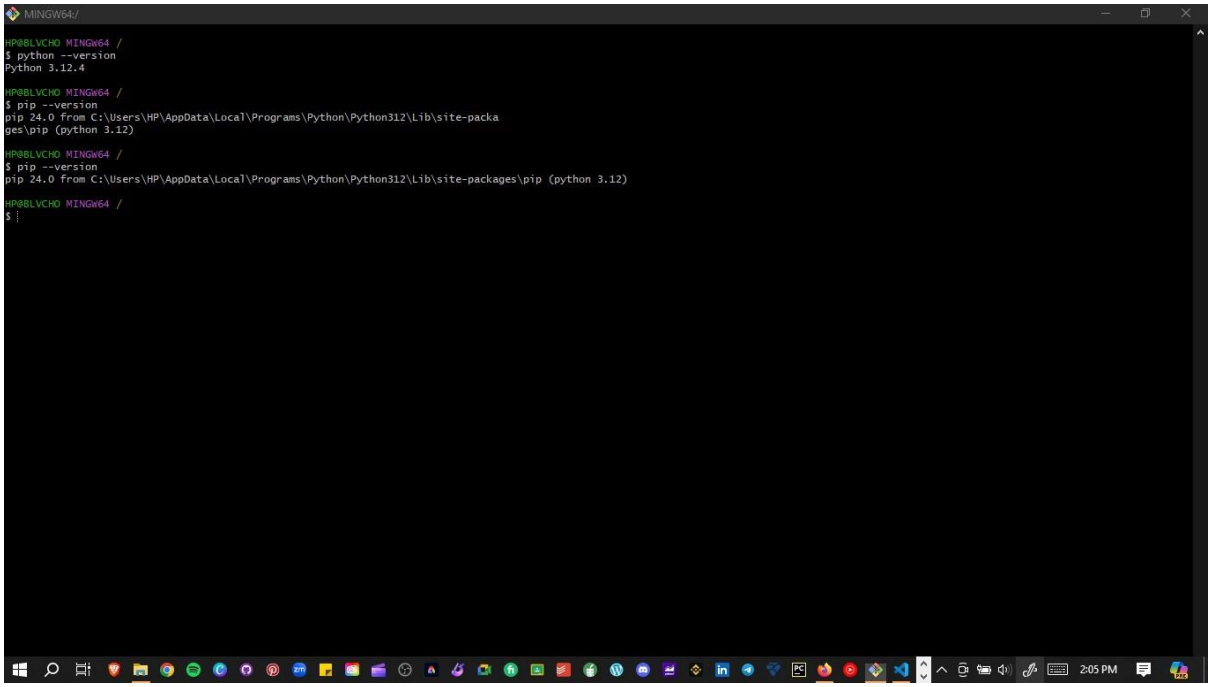
3. Verify Installation:
   - Open Command Prompt and type:
     ```bash
     python --version
     ```
   - Verify pip installation:
     ```bash
     pip --version
     ```



5. Package Managers

Verification of pip Installation:

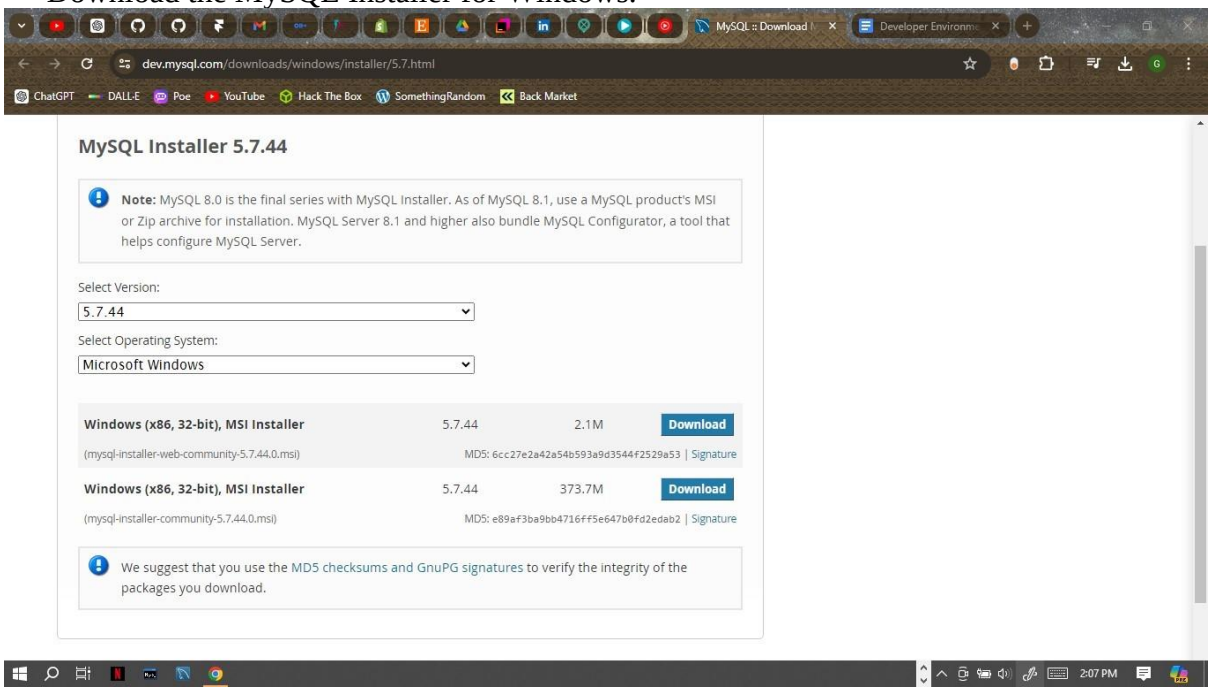
1. Verify pip:
   - Open Command Prompt and type:
     ```bash
     pip --version
     ```



6. Database Configuration

Steps for Installing MySQL:

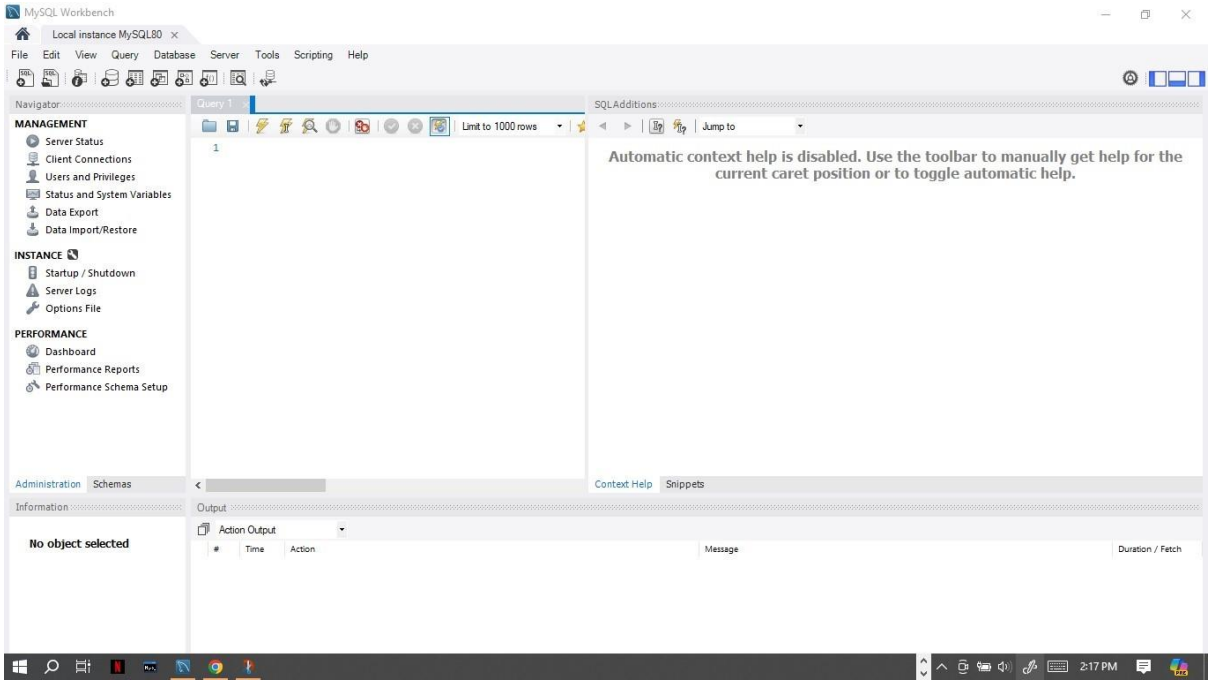
1. Download MySQL:
Visit the MySQL download page: [MySQL Download](https://dev.mysql.com/downloads/windows/installer/5.7.html).
- Download the MySQL Installer for Windows.



2. Installation Process:
Run the MySQL Installer and follow the setup wizard.
Choose the setup type (e.g., Developer Default).
Configure MySQL Server settings, including the root password.

NOTE: MYSQL IS ALREADY CONFIGURED WITH PASSWORD

3. Verify Installation:
Open MySQL Workbench or MySQL Shell and connect to your MySQL server.



7. Development Environments and Virtualization (Optional)

Optional Steps for Installing and Setting Up Docker:
1. Download Docker:
Visit the Docker Desktop download page: [Docker Download](https://www.docker.com/products/docker-desktop).
Download and run the Docker Desktop installer.

![Docker Download](images/docker-download.png)

2. Installation Process:
- Follow the installation instructions.
- Start Docker Desktop and follow the setup wizard.

NB:NOT OPTED FOR

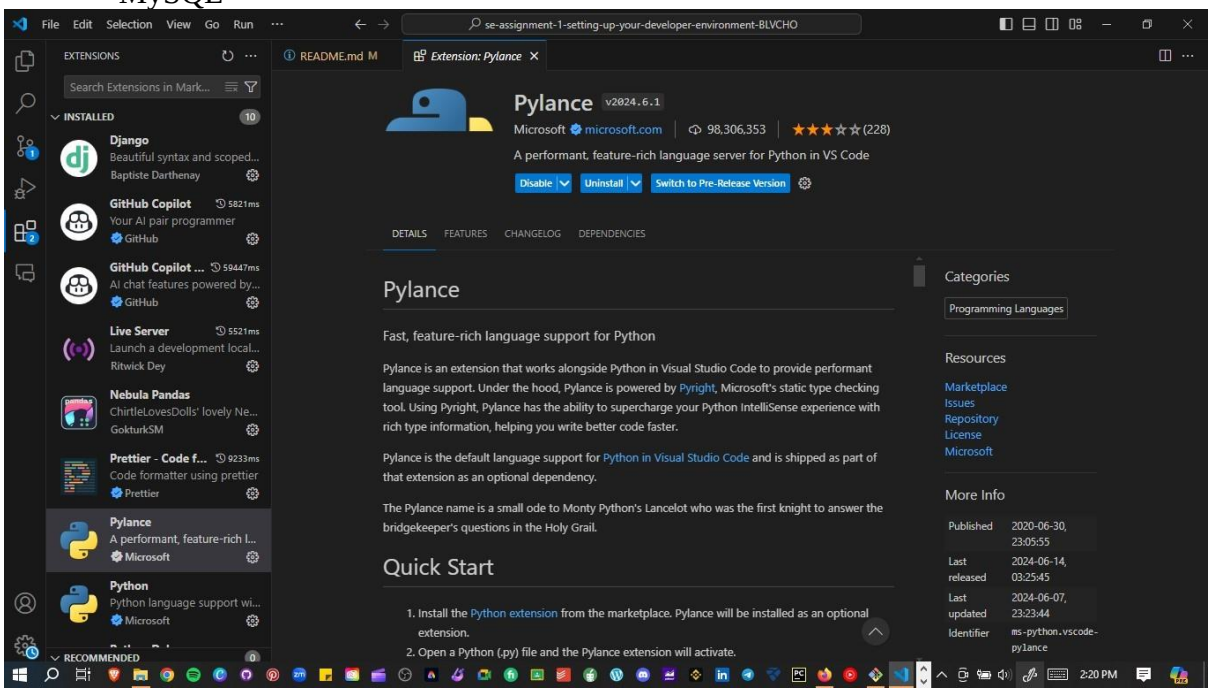
3. Verify Installation:
- Open Command Prompt or PowerShell and type:
    ```bash
    docker --version
    ```

NB:NOT OPTED FOR

8. Extensions and Plugins

List of Installed Extensions for VS Code:

1. Install Extensions:
   - Open VS Code.
   - Go to the Extensions view (`Ctrl+Shift+X`).
   - Search for and install the following extensions:
        - Python
        - GitLens — Git supercharged
        - Docker
        - Prettier - Code formatter
        - ESLint
        - MySQL



9. Challenges and Solutions

1. Challenge: Installing MySQL and Configuring the Root Password
   - Solution: Followed a step-by-step tutorial and used the official MySQL documentation for troubleshooting.

2. Challenge: Initializing a Git Repository and Making the First Commit
   - Solution: Used Git documentation and GitHub guides to understand the commands and workflow.

Deliverables

1. Setup Documentation:
   - This document with detailed steps and screenshots.

2. GitHub Repository:

3. Reflection:
   - Included in the Challenges and Solutions section.