I’m JEAN DE DIEU UWINTWALI,

In this assignment, I have set up my developer environment by choosing an operating system, installing Visual Studio Code as my IDE, and configuring Git for version control. I also installed Python, along with the necessary package managers and MySQL database. Additionally, I explored extensions to enhance my IDE's functionality and documented every step of my setup process. This thorough approach has prepared me for efficient and productive software development.

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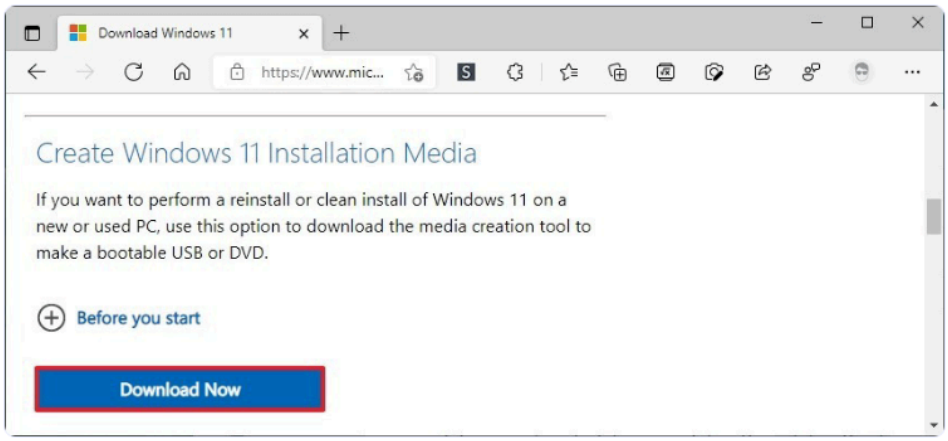
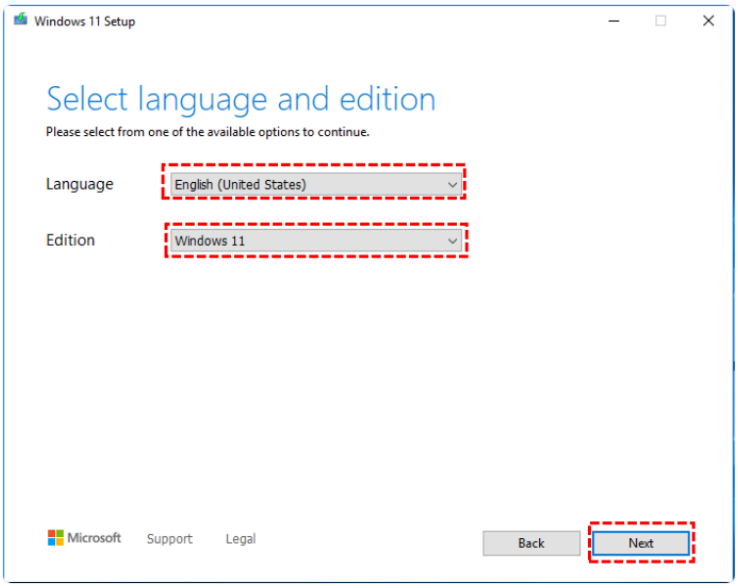
====Q1. Select Your Operating System (OS): Choose an operating system that best suits your preferences and project requirements. Download and Install Windows 11.
https://www.microsoft.com/software-download/windows11

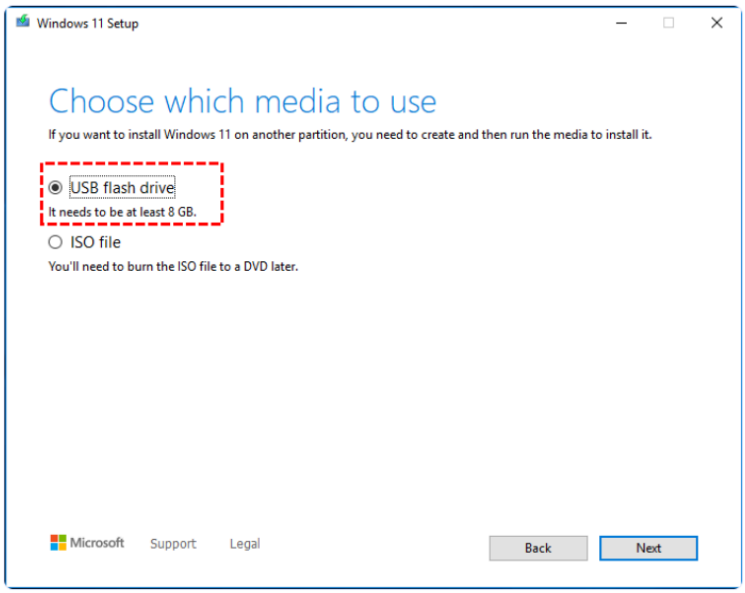
Step 1: Download the Installation Media
I started by downloading the Windows 11 installation media from the Microsoft website. I used the Media Creation Tool to create a bootable USB drive. This tool is straightforward and provides step-by-step instructions.



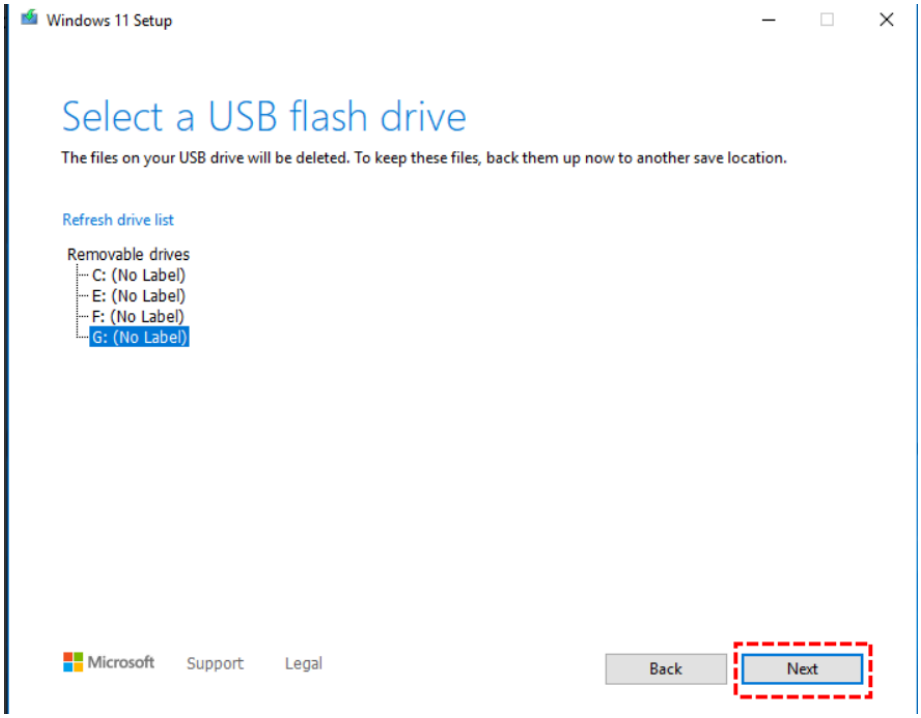
When the download is completed, launch the tool, select the language and Windows 11 edition and click "Next".



In "Windows 11 Setup" window, choose "USB flash drive" option and select "Next".



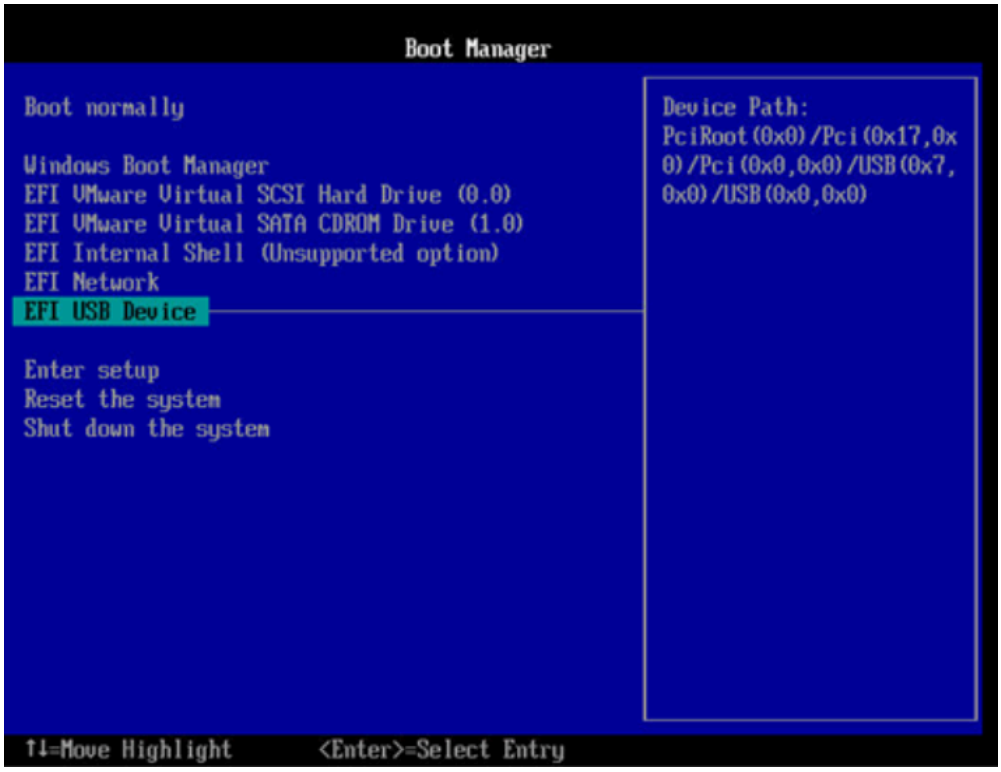
Select the USB flash drive and start the download process.



Step 2: Prepare the BIOS

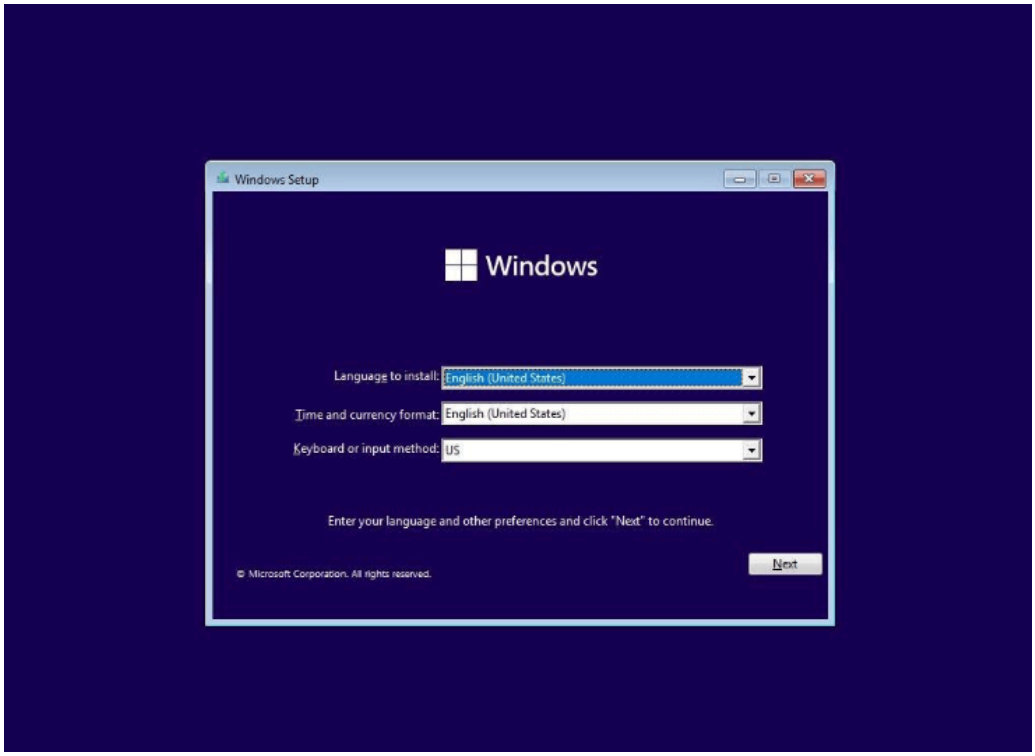
I restarted my computer and accessed the BIOS/UEFI settings by pressing F2, F12 during startup. In the BIOS menu, I ensured that the boot order was set to boot from the USB drive first.

Insert the USB to you computer and restart it. When entering the BIOS/UEFI interface, move the USB to the first in the boot sequence list.



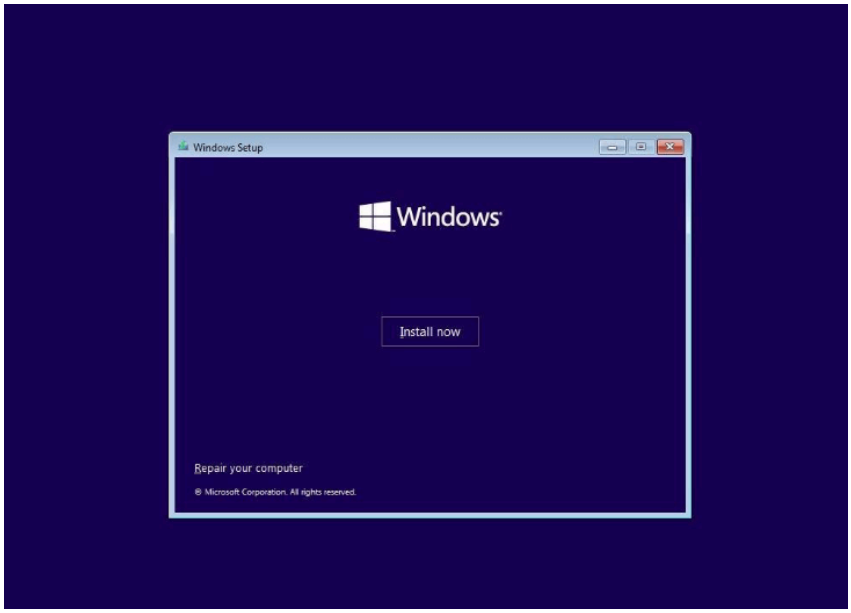
Step 3: Boot from USB

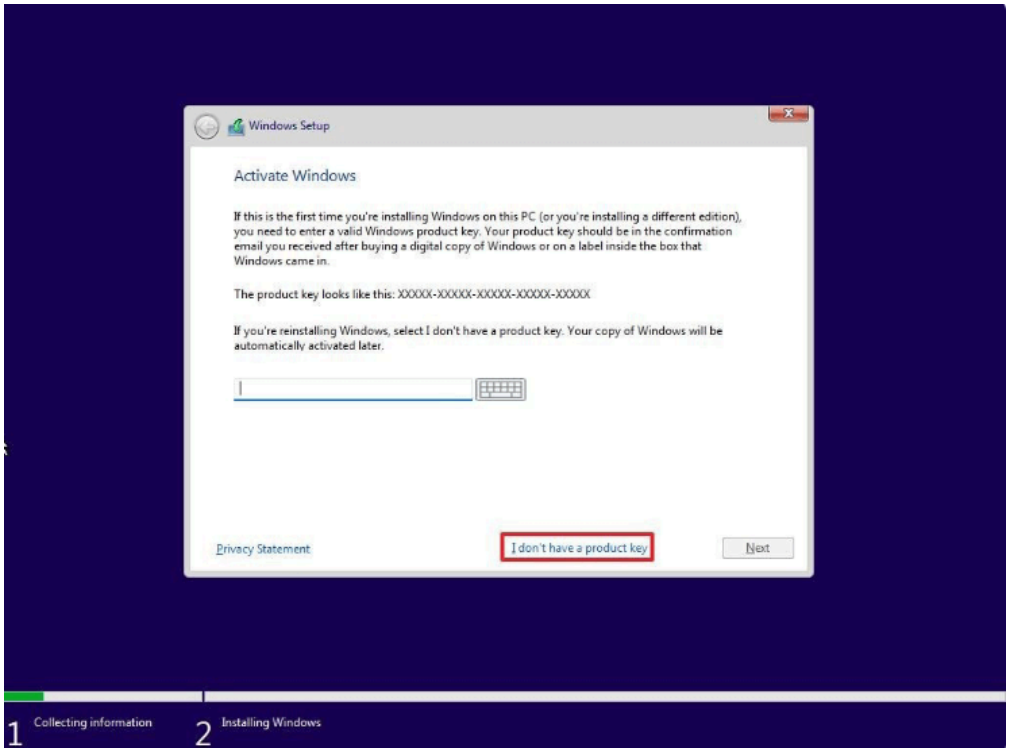
With the USB drive inserted, I restarted the computer again. It booted from the USB, and I selected the language, time, and keyboard preferences.



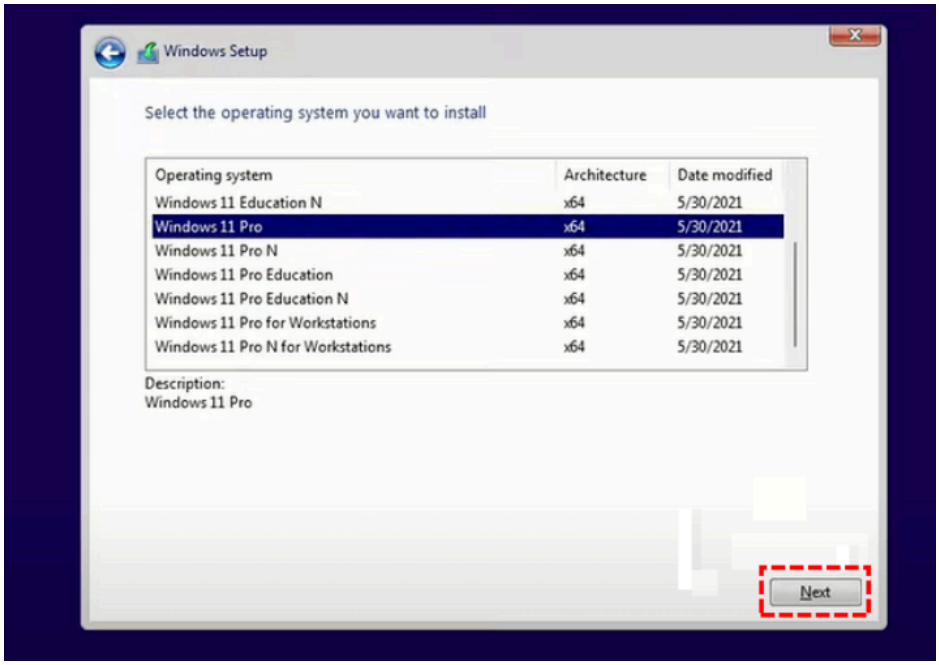
Step 4: Install Windows 11

I clicked "Install now" on the setup screen and entered the product key. I chose the Windows 11 version that matched my license.

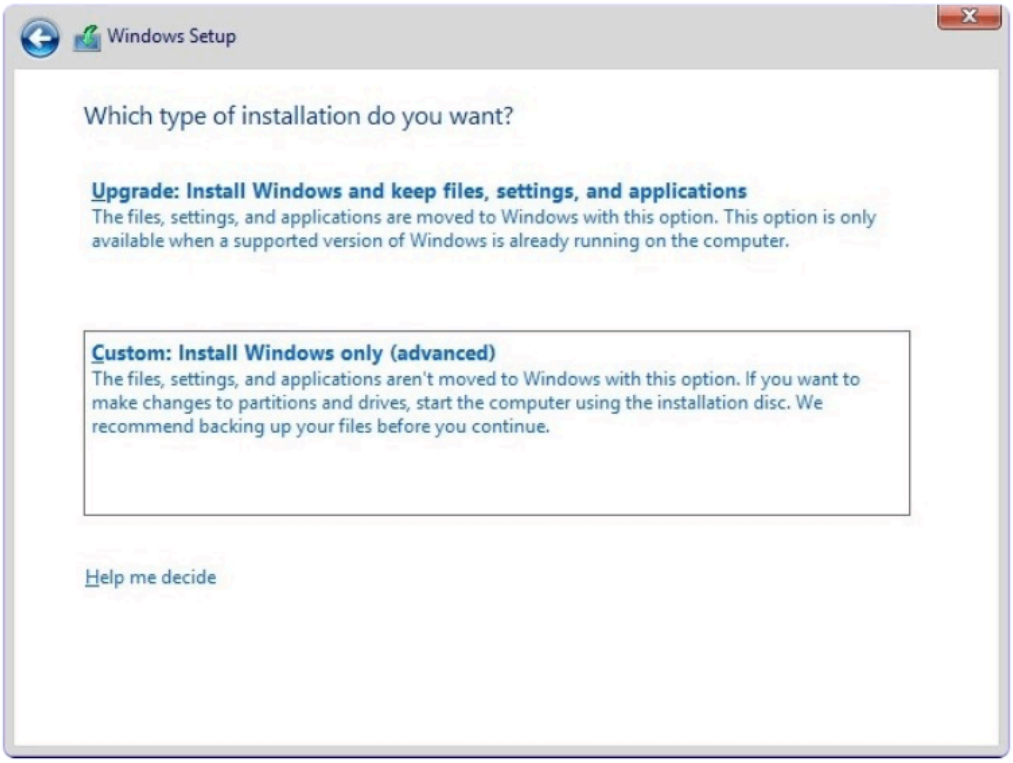




Step 5: Select an edition you plan on installing and hit "Next".

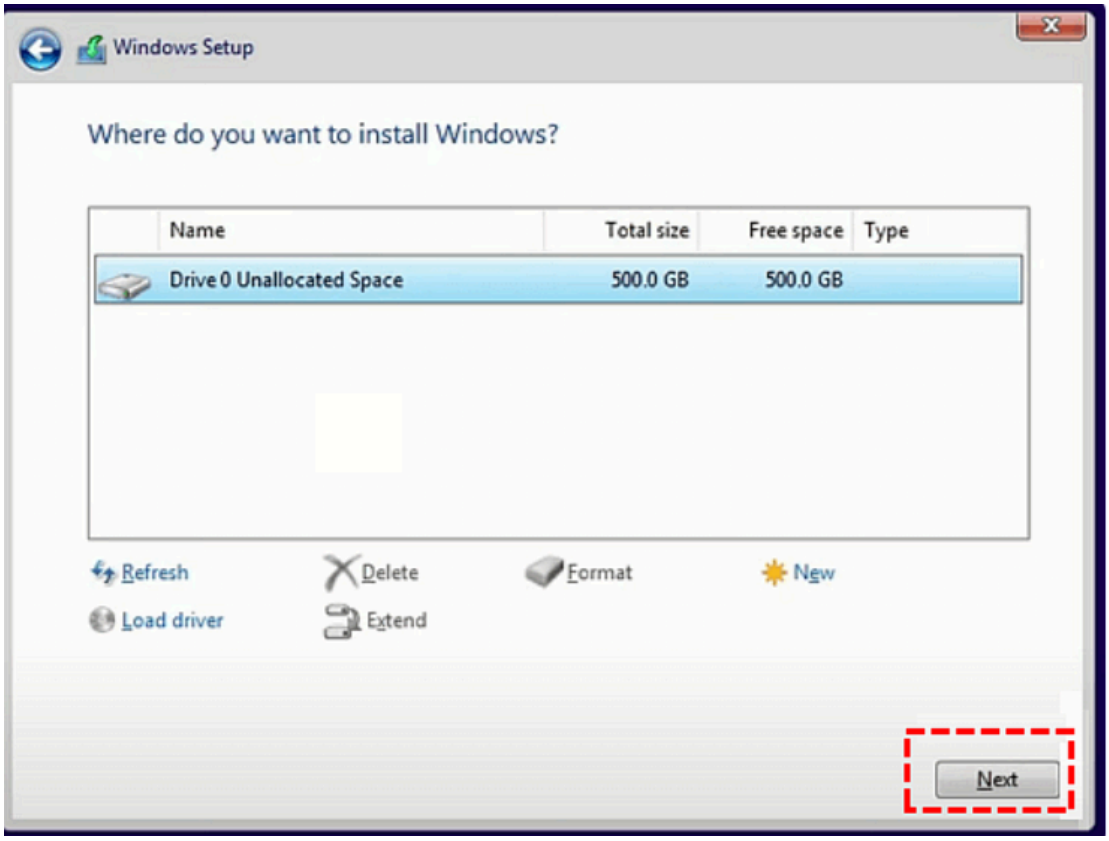


Step 6: Choose Installation Type
I selected "Custom: Install Windows only (advanced)" to perform a clean installation. This option is best for starting fresh.



Step 7: Select Partition

I chose the partition where I wanted to install Windows 11. I formatted the partition to ensure a clean install and clicked "Next."



Step 8: Copying Files
The installation process began copying Windows files to the selected partition. The PC restarted several times during this process.

Step 9: Name Your PC
I was prompted to name my PC. I chose a name that was recognizable and easy to remember.

Step 11: Connect to Network
I connected to my Wi-Fi network to continue with the setup. This step is essential for downloading updates and completing the installation.

Step 12: Install Updates
Windows checked for updates and installed them before proceeding. I allowed this process to complete to ensure my system was up-to-date

Step 13: Set Up Account
I created a local account for privacy reasons, although there's an option to use a Microsoft account. I set up a username and password and configured security questions for account recovery.

Step 14: Create a PIN
For easier access, I created a PIN. This step is optional but recommended for convenience.

Step 15: Restore Settings
If this wasn't my first Windows device, I could restore settings from a previous device. However, I opted for a fresh setup.

Step 16: Privacy Settings
I adjusted the privacy settings according to my preferences, choosing what data to share with Microsoft.

Windows 11 was now installed and ready to use. I personalized my settings further and installed necessary applications.

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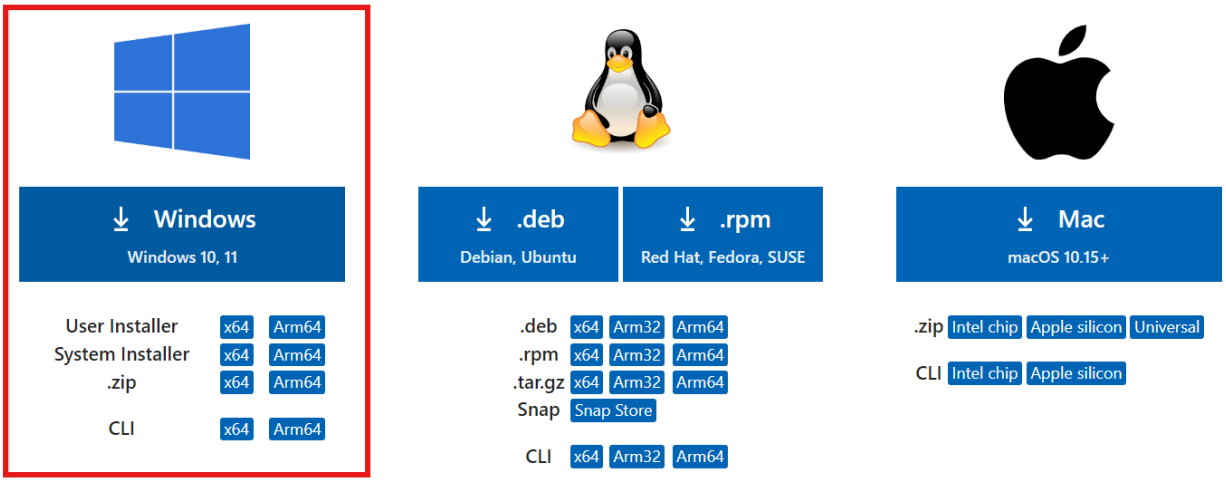
Q2. Install a Text Editor or Integrated Development Environment (IDE): Select and install a text editor or IDE suitable for your programming languages and workflow. Download and Install Visual Studio Code. https://code.visualstudio.com/Download

Install a Text Editor or IDE

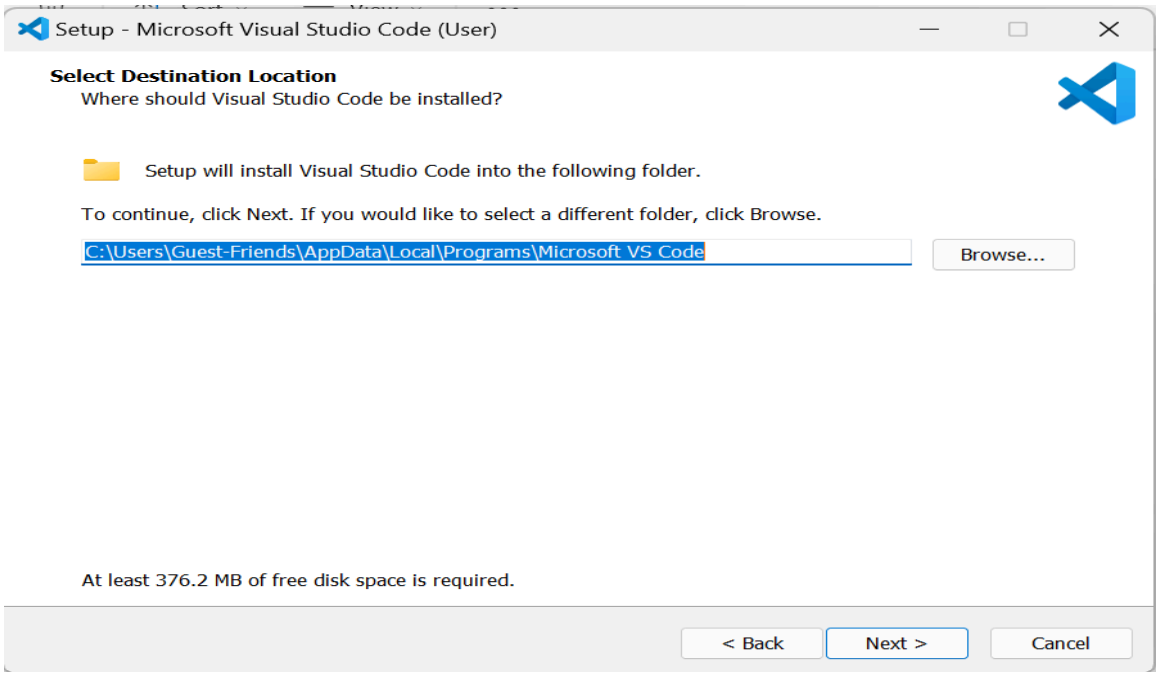
1. Select a text editor or IDE
I selected Visual Studio Code as my text editor and IDE. Visual Studio Code is a free, open-source, and cross-platform code editor developed by Microsoft. It supports a wide range of programming languages and has a vast ecosystem of extensions and plugins.

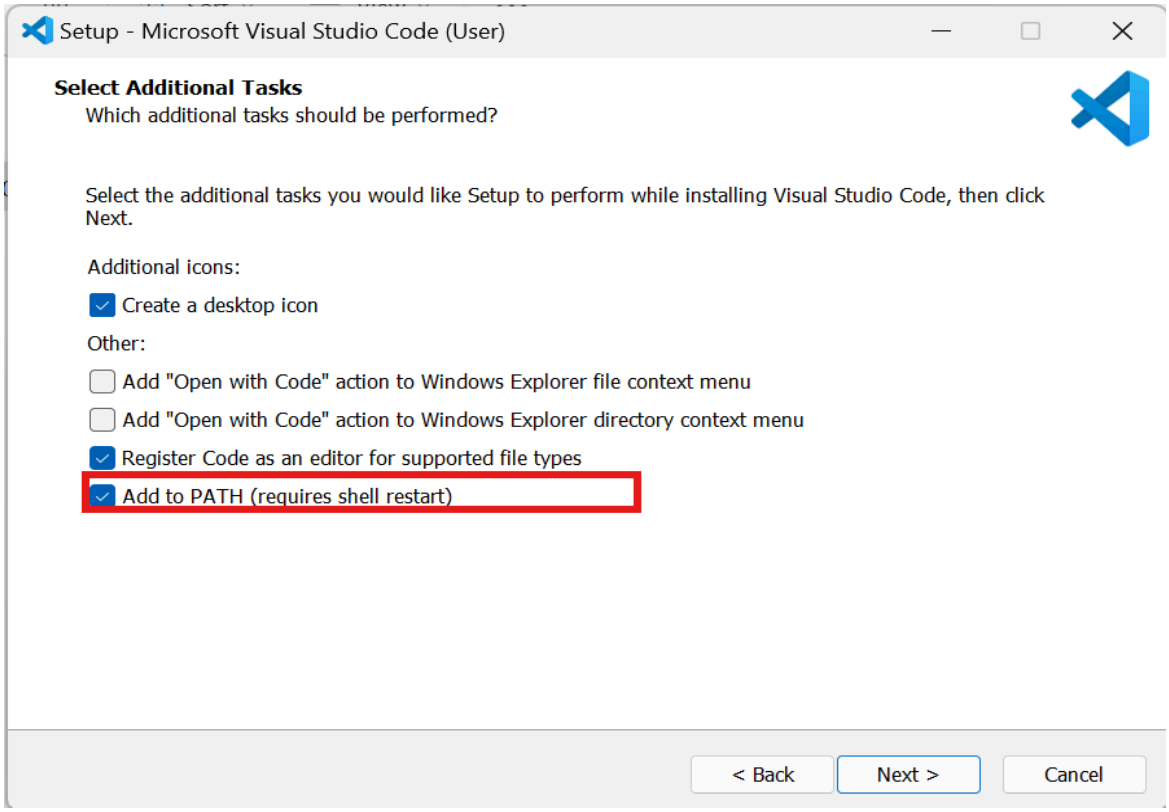
2. Download Visual Studio Code
I went to the official Visual Studio Code website (https://code.visualstudio.com/Download) and downloaded the appropriate version for my operating system.

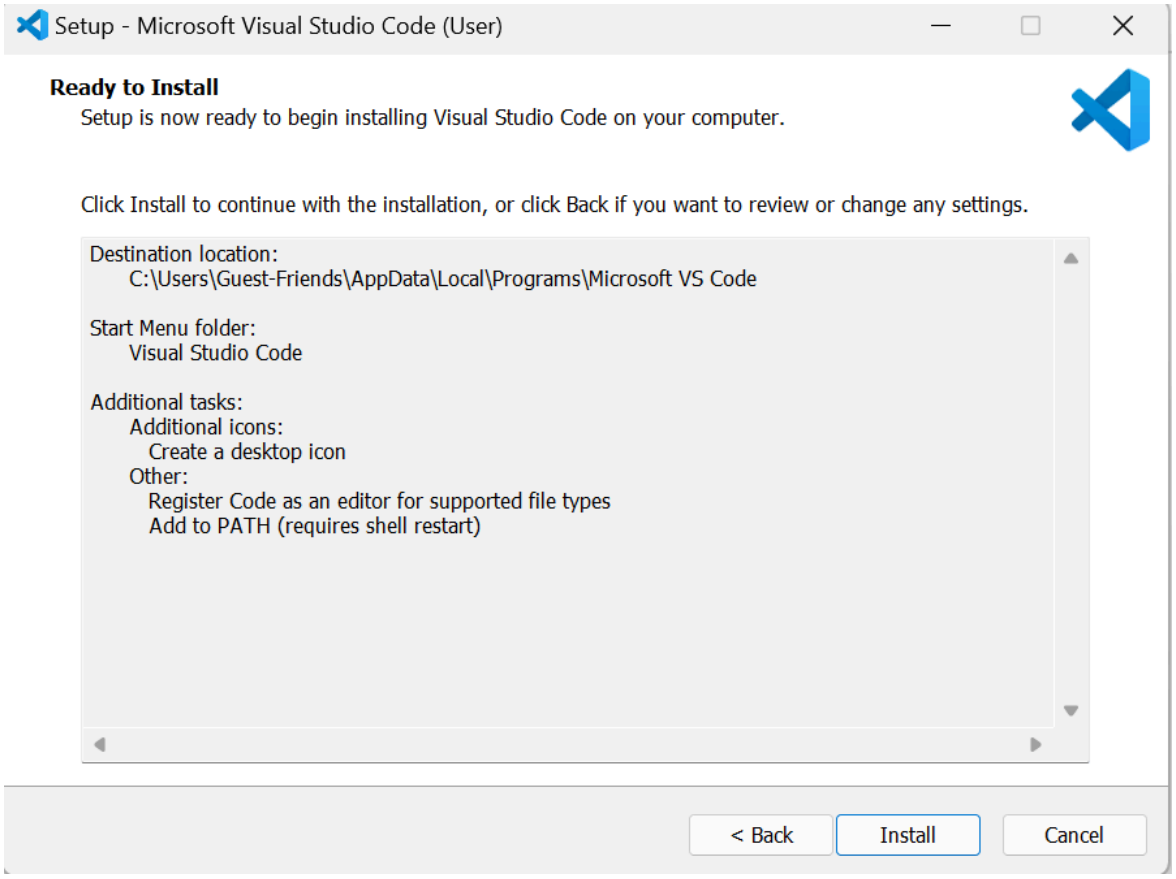


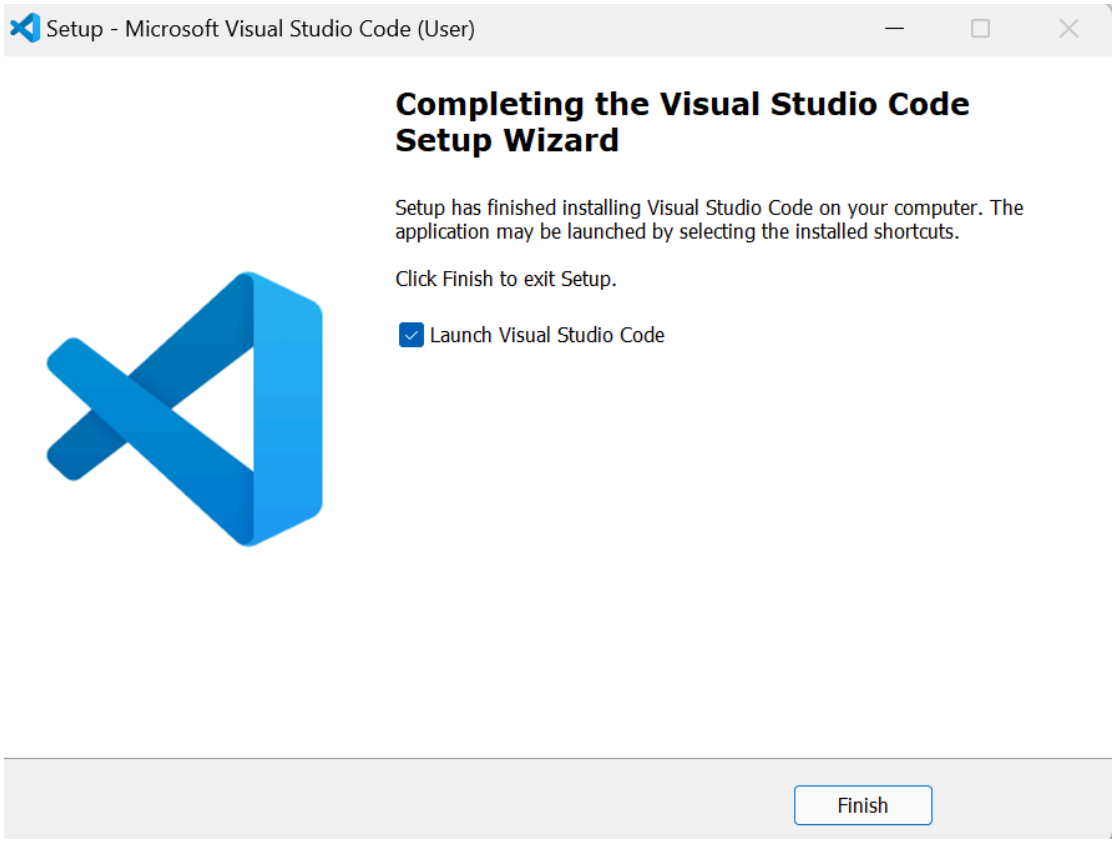
3. Install Visual Studio Code

I ran the downloaded installer and followed the on-screen instructions to install Visual Studio Code on my computer. The installation process was straightforward and guided me through the necessary steps.




Setup - Microsoft Visual Studio Code (User)
Select Additional Tasks
Which additional tasks should be performed?
Select the additional tasks you would like Setup to perform while installing Visual Studio Code, then click Next.
Additional icons:
Create a desktop icon
Other:
Add "Open with Code" action to Windows Explorer file context menu
Add "Open with Code" action to Windows Explorer directory context menu
Register Code as an editor for supported file types
Add to PATH (requires shell restart)
< Back
Next >
Cancel


Setup - Microsoft Visual Studio Code (User)
Ready to Install
Setup is now ready to begin installing Visual Studio Code on your computer.
Click Install to continue with the installation, or click Back if you want to review or change any settings.
Destination location:
C:\Users\Guest-Friends\AppData\Local\Programs\Microsoft VS Code
Start Menu folder:
Visual Studio Code
Additional tasks:
Additional icons:
Create a desktop icon
Other:
Register Code as an editor for supported file types
Add to PATH (requires shell restart)
< Back
Install
Cancel



4. Customize Visual Studio Code
After the installation, I took some time to customize Visual Studio Code to suit my preferences. I explored the settings, installed additional extensions, and adjusted the appearance and keyboard shortcuts to match my workflow.

5. Start using Visual Studio Code
With Visual Studio Code installed and configured, I was ready to start using it for my programming tasks. I opened the application, created new files and projects, and began writing and editing code using the various features and tools provided by the IDE.

By following these steps, I was able to successfully install and set up Visual Studio Code as my preferred text editor and IDE. This has greatly improved my programming productivity and workflow.

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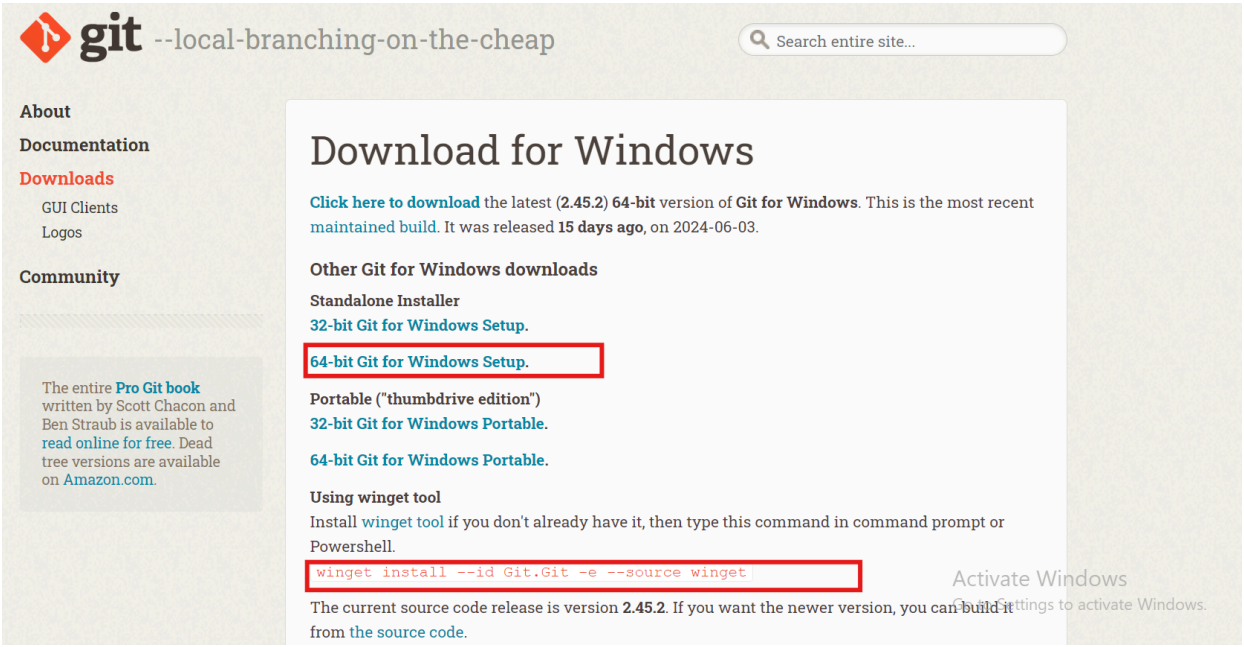
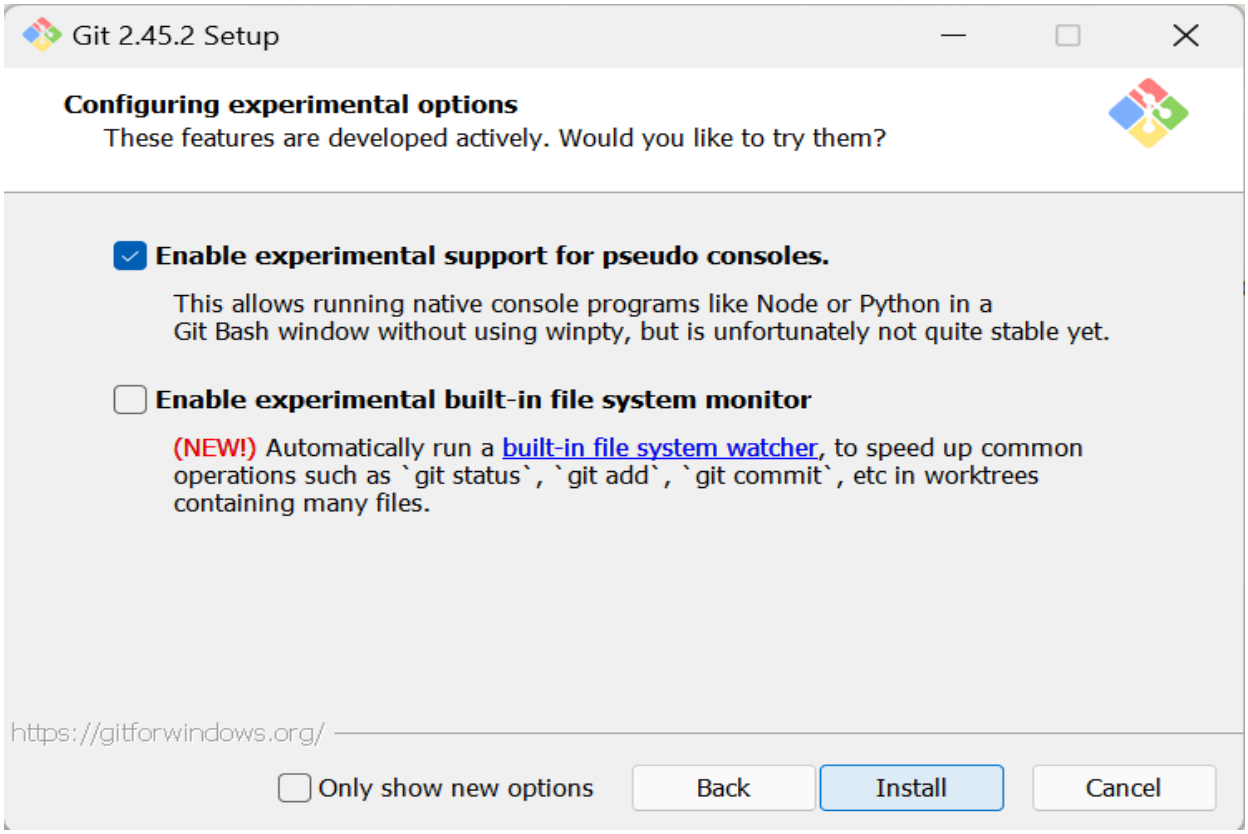
Q3. Set Up Version Control System: Install Git and configure it on your local machine. Create a GitHub account for hosting your repositories. Initialize a Git repository for your project and make your first commit. https://github.com

Here are the steps to set up a version control system using Git and GitHub:
Set Up Version Control System
1. Install Git

I installed Git on my local machine by downloading and running the installer from the official Git website (https://git-scm.com/downloads). The installation process was straightforward and guided me through the necessary steps.





2. Create a GitHub Account

I created a GitHub account by going to the official GitHub website (https://github.com) and following the sign-up process. I provided the required information and created a username and password for my account.

3. Initialize a Git Repository

I initialized a Git repository for my project by navigating to the project directory in the terminal or command prompt and running the command git init. This created a new Git repository in the current directory.

4. Configure Git

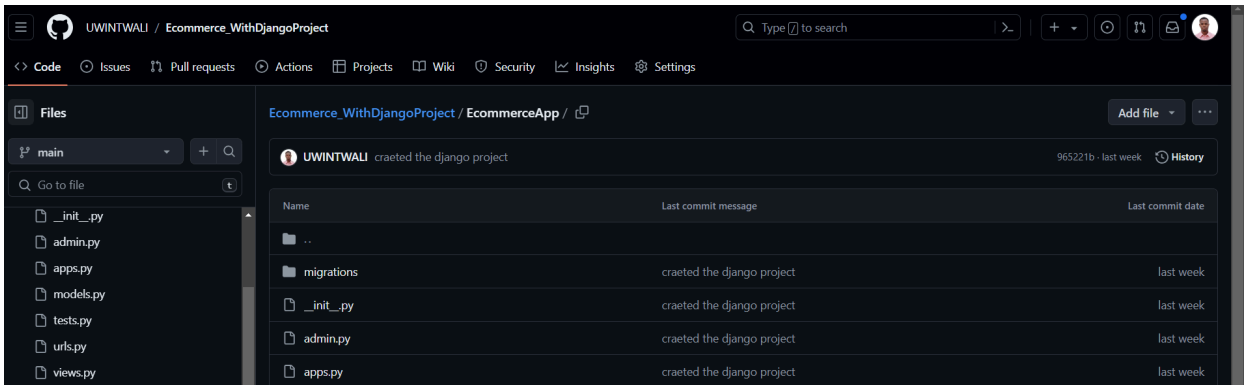
I configured Git by setting my username and email address using the commands git config --global user.name "Your Name" and git config --global user.email "your_email@example.com". This ensures that my commits are properly attributed to me.

5. Make First Commit

I made my first commit by adding all the files in my project directory to the Git repository using the command git add ., and then committing them using the command git commit -m "Initial Commit". This created a new commit in my local repository.

6. Link to GitHub

I linked my local Git repository to my GitHub account by creating a new repository on GitHub and then linking it to my local repository using the command git remote add origin https://github.com/your_username/your_repository_name.git. This allowed me to push my local commits to GitHub.



By following these steps, I successfully set up a version control system using Git and GitHub. This allows me to track changes to my code, collaborate with others, and manage different versions of my project.

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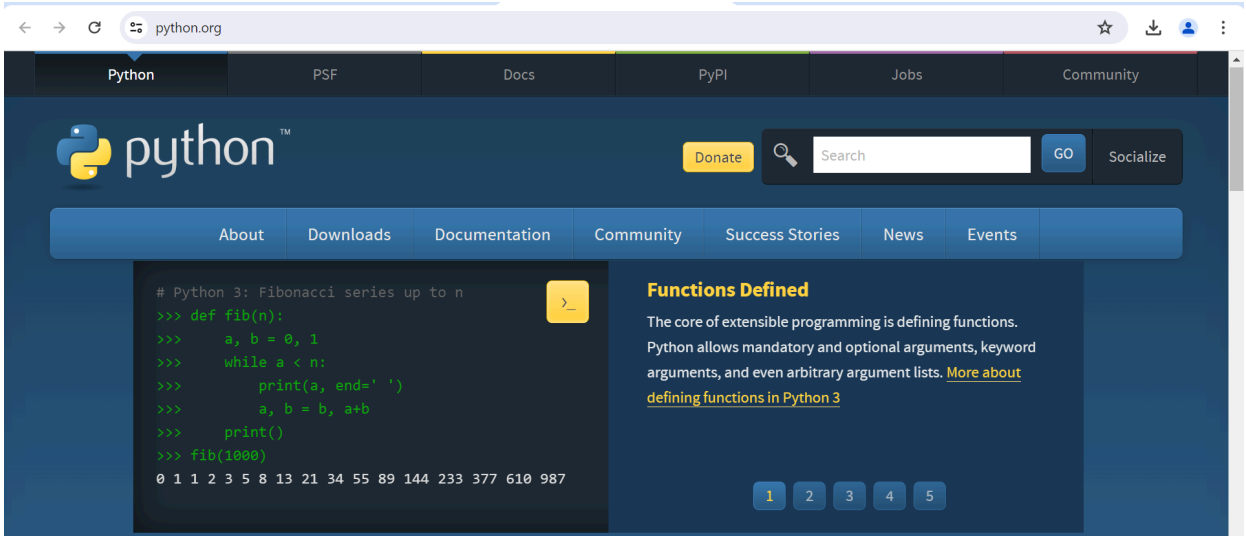
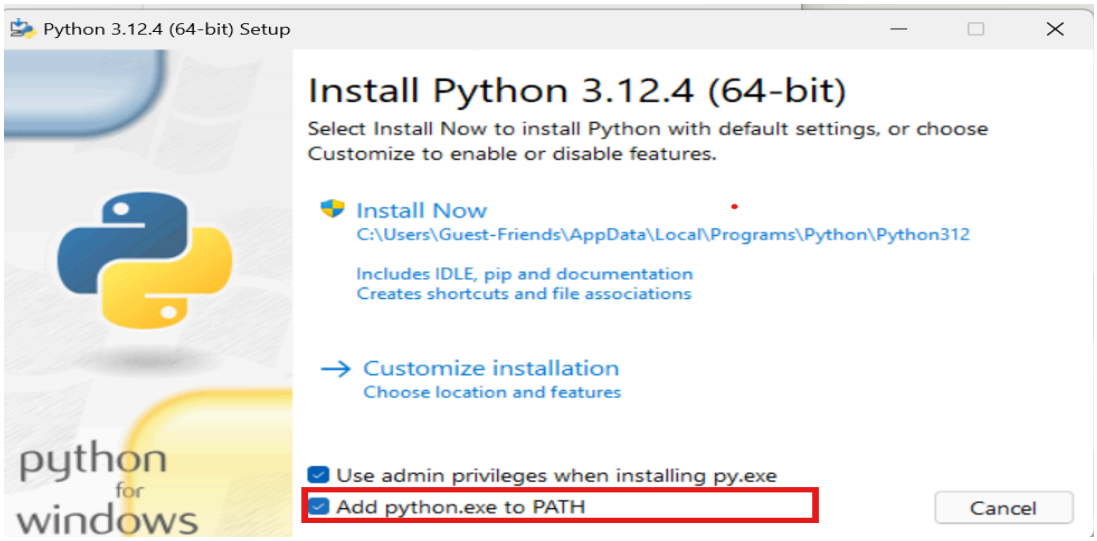
Q4. **Install Necessary Programming Languages and Runtimes: Instal Python from** http://wwww.python.org **programming language required for your project and install their respective compilers, interpreters, or runtimes. Ensure you have the necessary tools to build and execute your code.**

Install Python

I went to the official Python website (http://www.python.org) and downloaded the latest version of Python for my operating system.



I ran the installer and followed the on-screen instructions to install Python on my computer. The installation process was straightforward and guided me through the necessary steps.



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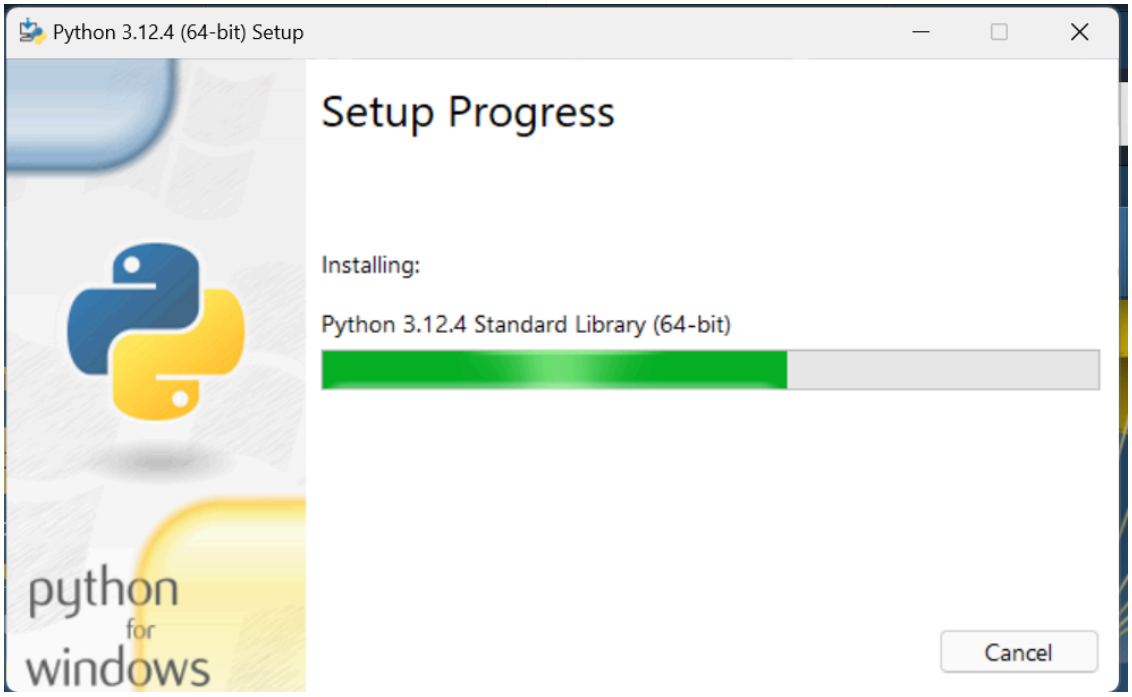

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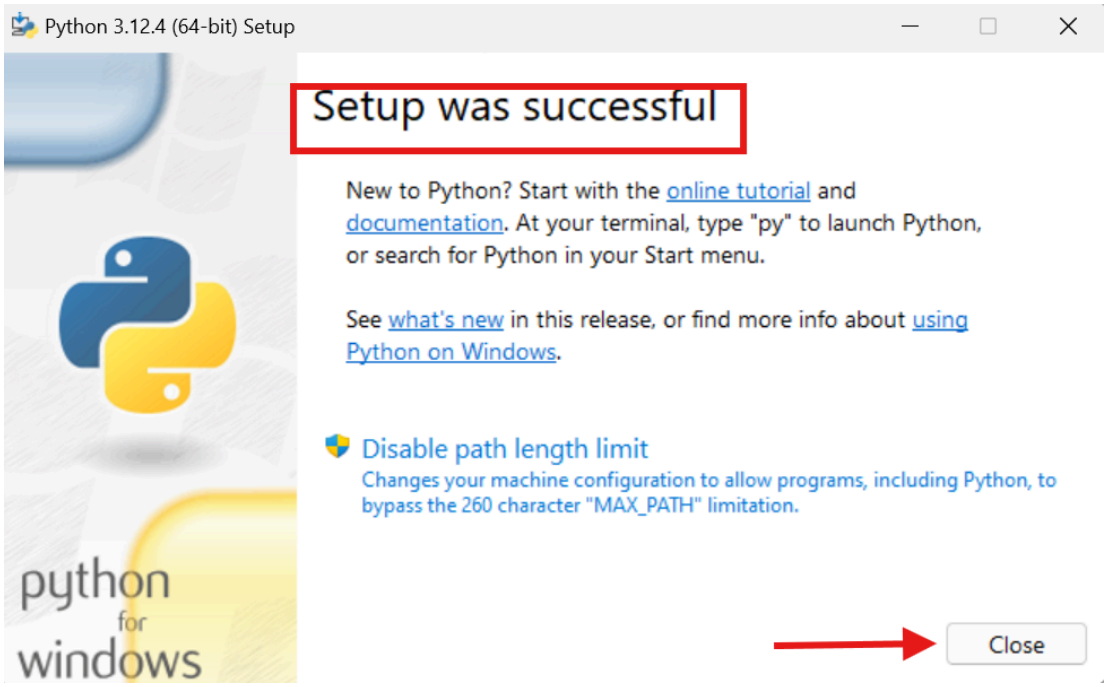

3

After the installation, I verified that Python was properly installed by opening the command prompt or terminal and running the command python --version. This confirmed that Python was successfully installed and accessible from the command line.

```
C:\Windows\System32>python --version
Python 3.12.4
```

By following these steps, I was able to install Python and any other necessary programming languages and runtimes required for my project. This ensures that I have the proper tools to build and execute my code.

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Q5. Install Package Managers: If applicable, install package managers like pip (Python).

Verify pip Installation:

I checked if pip was installed by running the command pip --version. If pip was not installed, I would have installed it by running the command python -m ensurepip.

```
C:\Windows\System32>pip --version
pip 24.0 from C:\Users\Mucyo\AppData\Local\Programs\Python\Python312\Lib\site-packages\pip (python 3.12)
```

Upgrade pip: I upgraded pip to the latest version by running the command pip install --upgrade pip.(already satisfied)

```
C:\Windows\System32>pip install --upgrade pip
Requirement already satisfied: pip in c:\users\mucyo\appdata\local\programs\python\python312\lib\site-packages (24.0)
```

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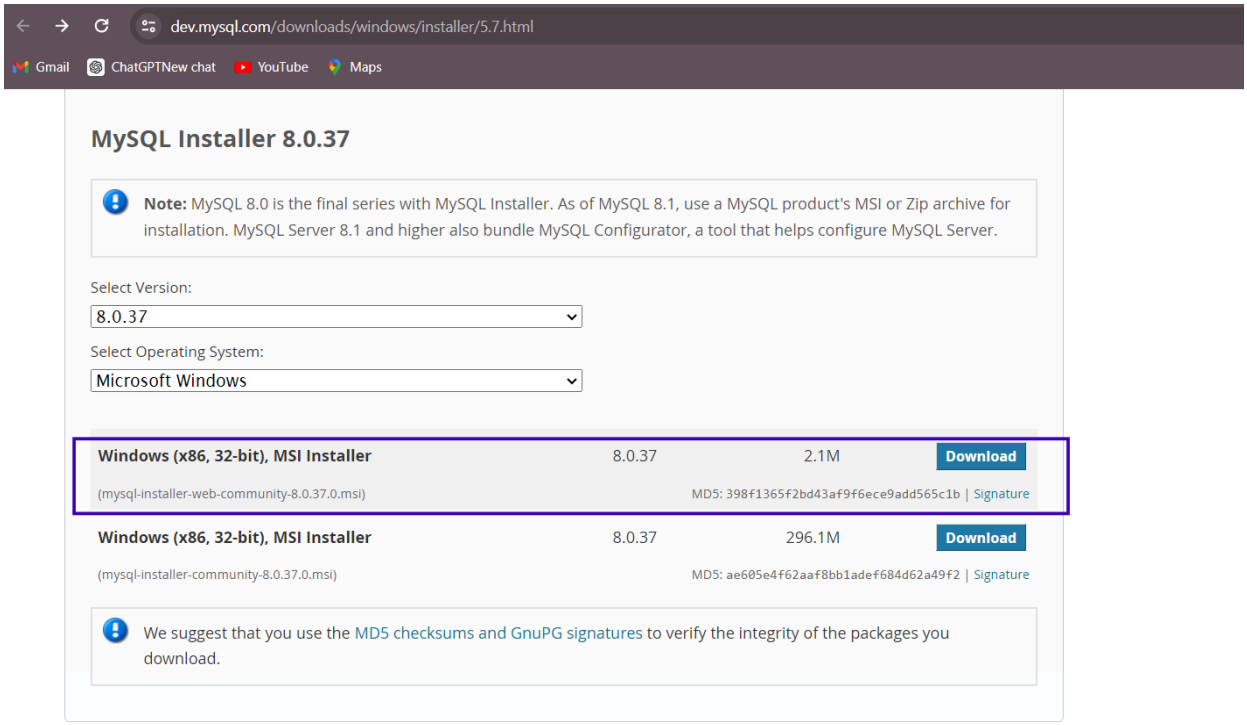
Q6. Configure a Database (MySQL): Download and install MySQL database.
https://dev.mysql.com/downloads/windows/installer/5.7.html

Here are the steps to download and install MySQL database:

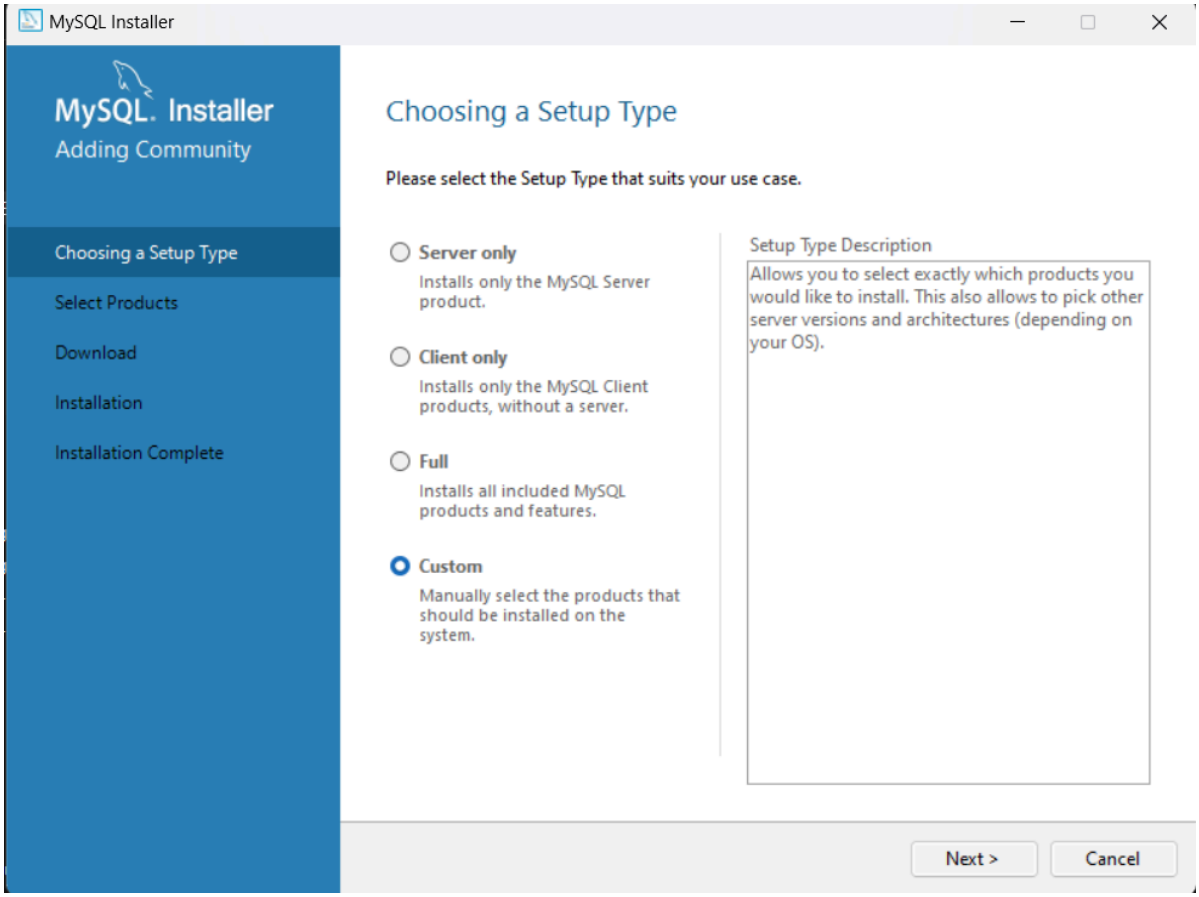
Download MySQL Installer
Visit the MySQL Download Page: I visited the MySQL download page and selected the MySQL Installer for Windows.
Choose the Installer: I chose the Full MySQL Package (B) which contains all MySQL Windows products, including the MySQL Server.

Download the Installer: I selected the option to download the installer and clicked Download.

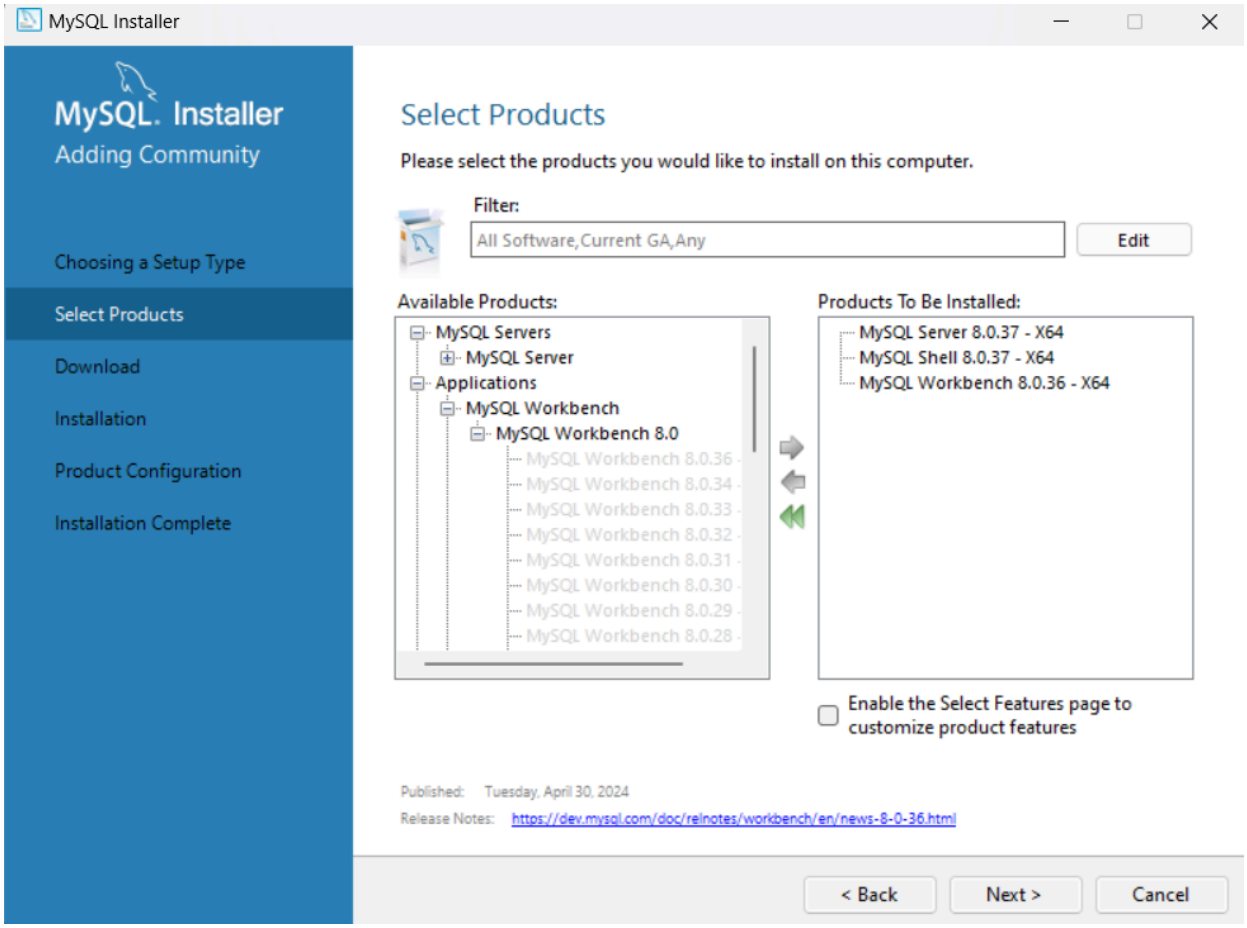


Run the Installer: After the download completes, I ran the installer by double-clicking on the file.
Set Up MySQL Installer

Accept License Agreement: I accepted the Oracle license agreement terms. I also selected custom installation to be able to lead the process of installation of the only necessary tools.



Choose Setup Type: I selected the Server, shell and workbench options to install an instance of the MySQL Server and forgo other MySQL products.



Configure MySQL Server: I clicked Next to begin the configuration process.

Configure Network: I selected the Development Computer option and clicked Next.

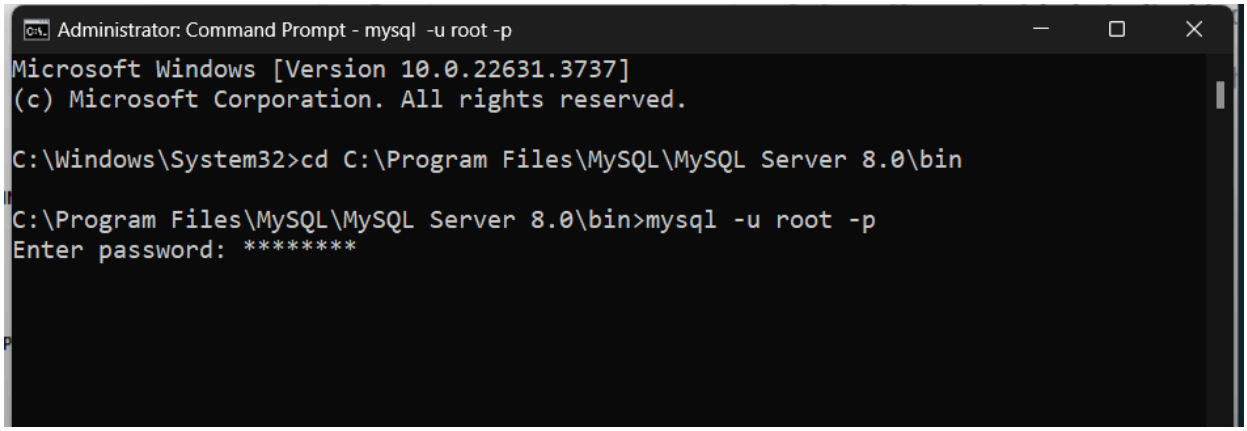
Configure Authentication: I selected the recommended option and clicked Next.

Create Root Account: I set a strong password for the root account and clicked Next.

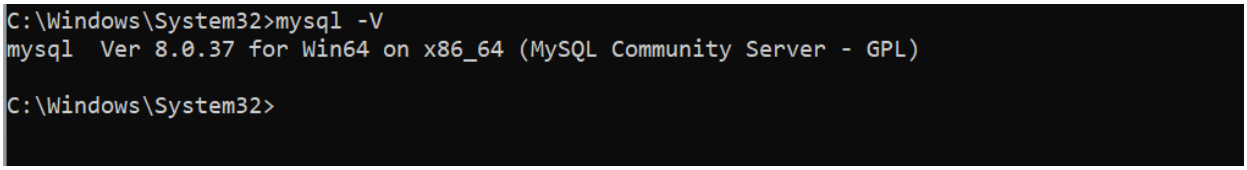
Configure Windows Service: I selected the default options for the Windows service details and clicked Next.

Apply Configuration: I clicked Execute to apply the configuration.
Configure MySQL Server

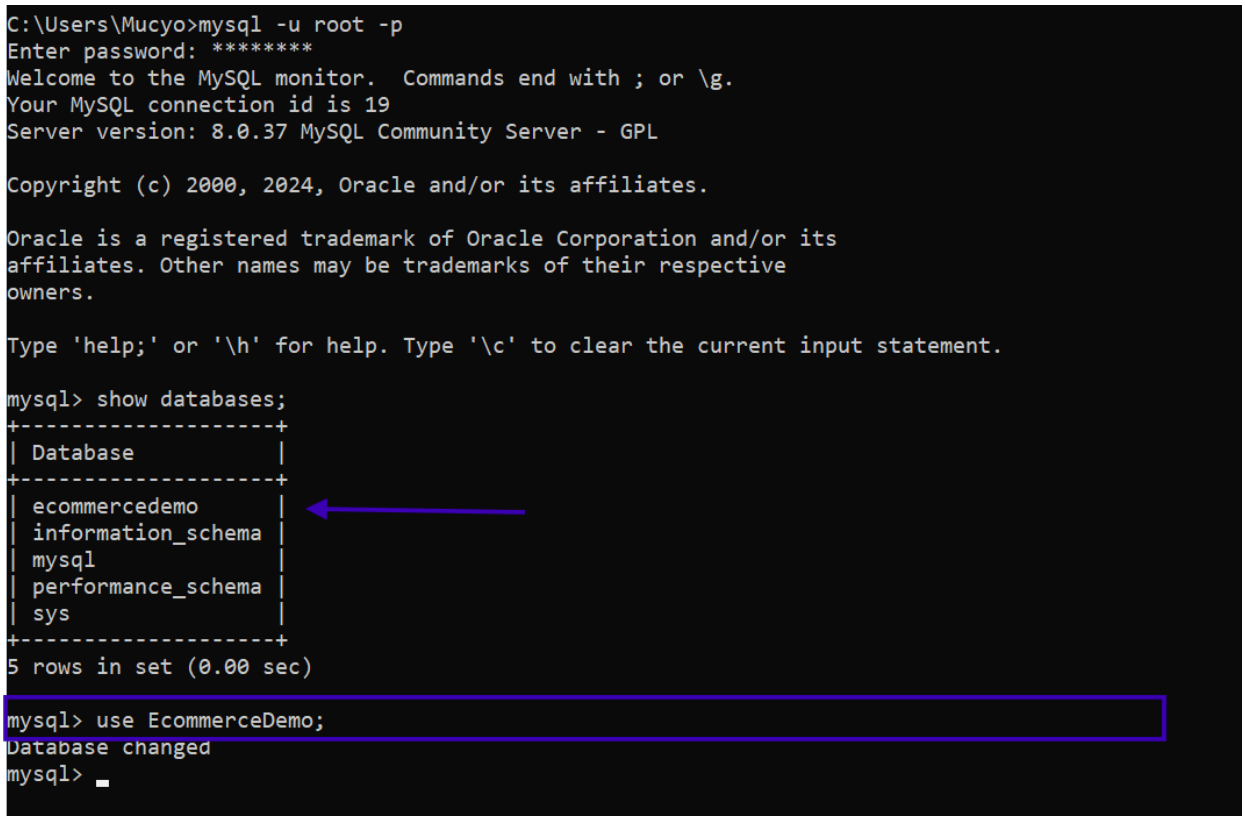
Start MySQL Server: I started the MySQL Server by running the command mysql -u root -p in a Command Prompt window.



Verify Installation: I verified that MySQL was properly installed by running the command mysql -V in a Command Prompt window.



By following these steps, I successfully downloaded and installed MySQL database on my Windows system. And I created my first Database called “EcommerceDemo”



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Q8. 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.

Accessed the Extensions View:

I clicked on the Extensions icon in the Activity Bar on the side of the window. This icon looks like four squares. Alternatively, I used Ctrl+Shift+X (or Cmd+Shift+X on macOS) to open the Extensions view.

Searched for Extensions:

In the Extensions view, I used the search bar at the top to search for extensions. I typed keywords related to the functionality I wanted to add, such as "syntax highlighting," "linting," "code formatting," or "version control integration."

Installed Extensions:

I browsed the search results and found the extensions that met my needs. I clicked on an extension to view its details, including a description, features, and user reviews. To install an extension, I clicked the green "Install" button.

Managed Installed Extensions:

After installation, the extensions appeared under "Enabled" in the Extensions view. I managed my extensions from this list, enabling or disabling them as needed. I clicked on the gear icon next to an extension to access additional settings and options.

Configured Extensions:

Some extensions required additional configuration. I followed the documentation provided by the extension to set it up properly. This involved adjusting settings in my settings.json file or following specific instructions provided by the extension developer.

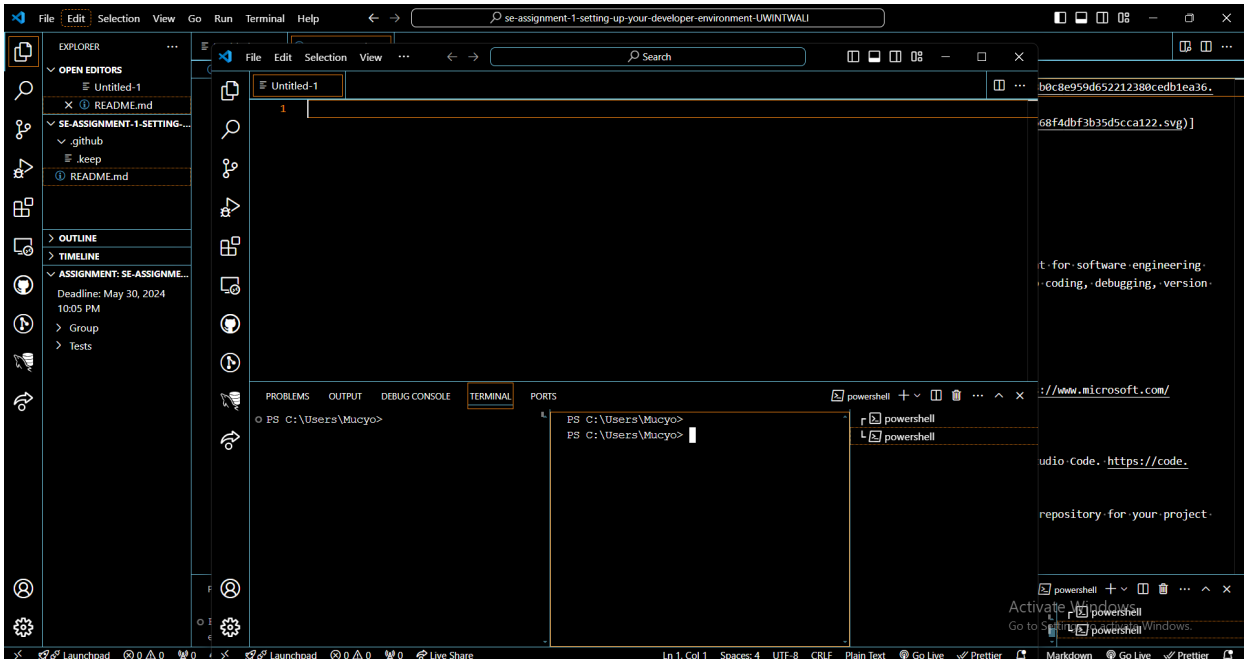
Explored Popular Extensions:

I explored popular extensions commonly used by developers, such as:

Prettier: A code formatter.

ESLint: A linting tool for JavaScript.
Python: Python language support.
GitLens: Git supercharged.
Docker: Docker support.
Updated Extensions:

I kept my extensions up to date. VS Code notified me of available updates for installed extensions. I updated them from the Extensions view by clicking the "Update" button.



By following these steps, I enhanced the functionality of my VS Code environment with extensions and plugins tailored to my development workflow.

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