Setting up a comprehensive development environment involves several key steps, from choosing the right tools to documenting the setup process. Below is a structured guide on how I achieve this;

Step-by-Step Guide to Setting Up Your Development Environment

## 1. Operating System: Windows 11

I downloaded and installed Windows 11 Operation Software by:

- Visiting the Microsoft's Windows 11 download page (https://www.microsoft.com/software-download/windows11).

- Followed the on-screen instructions to download and install Windows 11.

## 2. Text Editor or IDE: Visual Studio Code

To Download and Install Visual Studio Code:

- I went to Visual Studio Code's official download page below (https://code.visualstudio.com/Download)

- I downloaded the installer suitable for Windows computer.

- I run the installer and follow the installation instructions.

## 3. Version Control System: Git and GitHub

❖ **Git**

I first install Git by

- Downloading Git from their website [git-scm.com](https://git-scm.com/download/win).

- Runed the installer and follow the installation steps.

- To Configure Git with your name and email using the code below:

  git config --global user.name "Your Name"

  git config --global user.email your.email@example.com

### ❖ GitHub Setup

- I created a GitHub account at [github.com](https://github.com).

- Initialized a Git repository for your project using the command below:

  git init

- Make your first commit:

  git add .

  git commit -m "Initial commit"

- Create a repository on GitHub and push your local repository to GitHub:

  git remote add origin <repository_URL>

  git push -u origin master

## 4. Programming Languages and Runtimes: Python

- To Install Python:

  - Download Python from [python.org](https://www.python.org/downloads/windows/).

  - I run the installer and make sure to check "Add Python to PATH" during installation.

## 5. Database: MySQL

- To Install MySQL:

  - Download MySQL Installer from [dev.mysql.com](https://dev.mysql.com/downloads/windows/installer/).

  - Then I follow the installer instructions to install MySQL Server and other necessary components.

## 6. Package Manager: pip

- I install pip:

  - Python includes pip by default. To Make sure it's up-to-date I run this command below:

    python -m pip install --upgrade pip

## 7. Development Environments and Virtualization: Docker (Optional)

I Install Docker:

  - I downloaded Docker Desktop for Windows from [docker.com](https://www.docker.com/products/docker-desktop).

  - Installed Docker by running the downloaded installer and following the setup instructions.

## 8. Extensions and Plugins: Visual Studio Code

- To Explore the Extensions:

  - Open Visual Studio Code.

  - Navigate to the Extensions view (Ctrl+Shift+X).

  - Search and install extensions like Python, MySQL, Docker, etc., depending on my needs.

By following these steps, you'll have a well-configured development environment ready for your projects. Thank you