Assignment : Setting Up Development Setup
Tasks:

1. Select Your Operating System (OS): Choose an operating system that best suits your preferences and project requirements. My Operating System Is :
    - Distributor ID: Ubuntu
    - Description: Ubuntu 22.04.4 LTS
    - Release: 22.04
    - Codename: jammy

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. The Text Editor that suits my programming languages and workflow that i installed is version :
    - 1.90.1
    - 611f9bfce64f25108829dd295f54a6894e87339d
    - x64

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, The commit is set by
    - *git commit -m "**putting message committed"***
    - My commit will be ***"First Commit"***

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.

- In Ubuntu I installed ***python version 3.10.12*** through terminal and using the following commands :
    - **sudo apt update** - To update the package lists.
    - **sudo apt install python3** - To Install the recommended version.
    - **python3 --version** - This command is to verify the installation if it's successful or not.

5. Install Package Managers: If applicable, install package managers like pip (Python). After installing python here are it's packages like numPy, pandas, matplotlib, pip and etc. Here is how to install pip on ubuntu OS :
    - **sudo apt update** - To update the package lists.
    - **sudo apt install python3-pip** - To Install the recommended version.
    - **pip3 --version** - This command is to verify the installation if it's successful or not.

6. 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. *In my Ubuntu OS I installed VirtualBox.*

1. **The following are the process i used to install VirtualBox as Virtual Environment :**
2. **sudo apt upgrade** - Updating system.
3.
4. **I. To Add Oracle's GPG Form**
5. *wget -q https://www.virtualbox.org/download/oracle_vbox_2016.asc -O-* | *sudo apt-key add -*
6. *wget -q https://www.virtualbox.org/download/oracle_vbox.asc -O-* | *sudo apt-key add -*
7.
8. **II. Adding VirtualBox Repository**
9. su*do add-apt-repository "deb http://download.virtualbox.org/virtualbox/debian $(lsb_release -cs) contrib"*
10.
11. **III. sudo apt install virtualbox-6.1** - Installing VirtualBox
12.
13. **IV. sudo usermod -aG vboxusers $USER** - Adding user to the vboxusers Group
14.
15. **V. vboxmanage --version -** Verifying Installation
16.

7. Configure a Database (MySQL):
The following are the steps i did to install and configure mySQL in Ubuntu OS :

I .sudo apt update & sudo apt upgrade - To update ubuntu system
II .sudo apt install mysql-server - To install mySQL server package
III .sudo systemctl start mysql & sudo systemctl enable mysql - To start and enable mySQL
IV.sudo mysql_secure_installation - To run secure installation script

Secure Installation Steps

1. **Validate Password Plugin:**
    - Test password strength: low, medium, or strong.
2. **Change Root Password:**
    - Set a strong password if prompted.
3. **Remove Anonymous Users:**
    - Remove anonymous users.
4. **Disallow Root Login Remotely:**
    - **D**isallow remote root login.
5. **Remove Test Database:**
    - Remove the test database and access.
6. **Reload Privilege Tables:**
    - Apply all changes.

17.

18.
19.