**Select Your Operating System (OS)**

* **Operating System:** Windows 11
* **Download and Install Windows 11:** [Download Windows 11](https://www.microsoft.com/software-download/windows11)
  1. Go to the link and download the Windows 11 installation media.
  2. Follow the on-screen instructions to create a bootable USB or directly upgrade your system.
  3. Install Windows 11 by booting from the USB or running the upgrade tool.

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

* **Text Editor/IDE:** Visual Studio Code
* **Download and Install Visual Studio Code:** [Download Visual Studio Code](https://code.visualstudio.com/Download)
  1. Go to the link and download the installer for your OS.
  2. Run the installer and follow the setup instructions.

**3. Set Up Version Control System**

* **Version Control System:** Git
* **Git Installation:**
  + **Download Git:** [Download Git](https://git-scm.com/downloads)
    1. Go to the link and download the Git installer for Windows.
    2. Run the installer and follow the setup instructions.
* **Configure Git:**
  + Open Git Bash.
  + Configure your username and email:

bash

git config --global [user.name](http://user.name/) "Your Name"

git config --global user.email "[your.email@example.com](mailto:your.email@example.com)"

* **Create a GitHub Account:** [Sign Up for GitHub](https://github.com/join)
* **Initialize a Git Repository:**
  + Create a new repository on GitHub.
  + Clone the repository to your local machine:

bash

git clone <https://github.com/yourusername/your-repo.git>

cd your-repo

* + Make your first commit:

bash

echo "# My Project" >> README.md

git add README.md

git commit -m "Initial commit"

git push origin main

**4. Install Necessary Programming Languages and Runtimes**

* **Programming Language:** Python
* **Install Python:** [Download Python](https://www.python.org/)
  1. Go to the link and download the installer for Windows.
  2. Run the installer and check "Add Python to PATH" during the setup.
  3. Verify the installation:

bash

python --version

**5. Install Package Managers**

* **Package Manager:** pip (comes with Python)
  1. Verify pip installation:

bash

Copy code

pip --version

**6. Configure a Database (MySQL)**

* **Database:** MySQL
* **Download and Install MySQL:** [Download MySQL](https://dev.mysql.com/downloads/windows/installer/5.7.html)
  1. Go to the link and download the MySQL installer.
  2. Run the installer and follow the setup instructions to install MySQL server and MySQL Workbench.

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

* **Virtualization Tool:** Docker
* **Download and Install Docker:** Download Docker Desktop
  1. Go to the link and download Docker Desktop for Windows.
  2. Run the installer and follow the setup instructions.

**8. Explore Extensions and Plugins**

* **Visual Studio Code Extensions:**
  + **Python Extension:** [Download](https://marketplace.visualstudio.com/items?itemName=ms-python.python)
  + **GitLens:** [Download](https://marketplace.visualstudio.com/items?itemName=eamodio.gitlens)
  + **Prettier - Code Formatter:** [Download](https://marketplace.visualstudio.com/items?itemName=esbenp.prettier-vscode)
  + **Docker Extension:** [Download](https://marketplace.visualstudio.com/items?itemName=ms-azuretools.vscode-docker)

**9. Document Your Setup**

* **Documentation:**
  1. Open a new document in Visual Studio Code.
  2. Outline the steps taken to set up your developer environment.
  3. Include any configurations, customizations, or troubleshooting steps encountered during the process.
  4. Save the document as Setup\_Documentation.md.

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