

Setting up your developer environment.

Submitted by: Jemima Maina

Tasks:

#Deliverables:

Document detailing the setup process with step-by-step instructions and screenshots where necessary.

1. 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>
 - Download Win 11 installation assistant
 - Select Run. You need to be an administrator to run this tool.
 - Once the tool confirms the device hardware is compatible, you will be presented with the license terms. Select Accept and Install.
 - Once the tool is ready, click the Restart Now button to complete installation on your computer.
 - It might take some time to install Windows 11, and your PC will restart a few times. Make sure you don't turn off your PC.
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. <https://code.visualstudio.com/Download>
 - Download the Visual Studio Code installer for Windows.
 - Once it is downloaded, run the installer (VSCodeUserSetup-{version}.exe). This will only take a minute.
 - By default, VS Code is installed under C:\Users\{Username}\AppData\Local\Programs\Microsoft VS Code .
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. <https://github.com>
 - Download the latest version of Git and choose the 64/32 bit version.
 - After the file is downloaded, install it in the system.

- Once installed, select Launch the Git Bash, then click on finish. The Git Bash is now launched.
4. Install Necessary Programming Languages and Runtimes: Instal Python from <http://www.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.

To install Python:

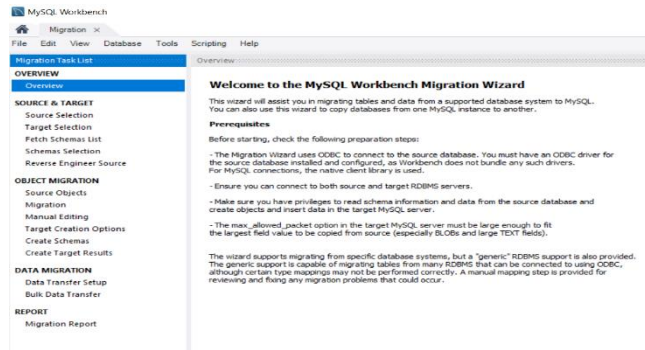
- Step 1: Select Python Version.
 - Step 2: Download Python Executable Installer.
 - Step 3: Run Executable Installer.
 - Step 4: Add Python to Path (Optional)
 - Step 5: Verify Python Was Installed on Windows.
 - Step 6: Verify PIP Was Installed.
 - Step 7: Install virtualenv (Optional)
5. Install Package Managers: If applicable, install package managers like pip (Python).

To install Django in python:-

- Verify python version
- Visit Django documentation download page
- Run command to install Django i.e in windows, run `py -m pip install Django`
- To verify if Django has been successfully installed, check as shown below

```
PS C:\Users\User\projects\pyprojects> py -m django --version
5.0.6
```

6. Configure a Database (MySQL): Download and install MySQL database. <https://dev.mysql.com/downloads/windows/installer/5.7.html>
- Select MySQL Installer for Windows.
 - Choose the desired installer and click on download.
 - Follow installation steps and launch mysql workbench to start creating databases and tables



7. 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.
8. 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.
9. Document Your Setup: Create a comprehensive document outlining the steps you've taken to set up your developer environment. Include any configurations, customizations, or troubleshooting steps encountered during the process.
10. A GitHub repository containing a sample project initialized with Git and any necessary configuration files (e.g., .gitignore).
 - <https://github.com/jemimamaina/calculator>
11. A reflection on the challenges faced during setup and strategies employed to overcome them.
 - I faced challenges when upgrading from win 10 to Win 11 because I was missing Windows 10 license. I overcame it by getting the license key.