Setup Development Environment

#Assignment: Setting Up Your Developer Environment

#Objective:

This assignment aims to familiarize you with the tools and configurations necessary to set up an efficient developer environment for software engineering projects. Completing this assignment will give you the skills required to set up a robust and productive workspace conducive to coding, debugging, version control, and collaboration.

#Tasks:

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>

Check system requirements and ensure your device meets the minimum system requirements for windows 11

Create a bootable USB drive and set the USB as the first boot option.

The windows setup wizard will start automatically.

Follow the on screen prompts to set up the language, time zone and keyboard layout.

Create a new partition for windows 11 or format and existing partition.

Select the partition and click install then wait for install. (It may take some time)

Once the installation is complete, configure your user account, taskbar preferences and other settings.

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>

Visit the official website.

Click download for Windows, macOS or Linux.

Once the download is complete, navigate to your downloads folder and double click the downloaded VS Code installer.

Read the license agreement that’s on the floating menu and click ‘I Agree’ to proceed.

You can choose to create a desktop shortcut or add VS Code to your system PATH

Click install to begin the installation process.

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>

Git installation.

Download the latest Git from the official git website <https://www.git-scm.com/downloads> and make sure to select the appropriate installer for your system(32-bit or 64-bit)

Once downloaded double click the downloaded installer.

Follow the on screen instructions

Once git is installed you’ll need to configure some basic settings.

Set username and email

You can also set default text editor(Optional)

Try to create a new directory and initialize a git repository.

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.

Go to the

5. Install Package Managers:

   If applicable, install package managers like pip (Python).

6. Configure a Database (MySQL):

   Download and install MySQL database. <https://dev.mysql.com/downloads/windows/installer/5.7.html>

Visit the official website and select your preferred version

You’ll be provided with option for signing up for MySQL Community, if not interested proceed to select ‘NO thanks, just start my download’

Once the download is complete you can execute the MySQL installer file from the downloader folder.

Accept the oracle license agreement terms.

The next window will require you to choose a setup type and advised to choose “Server only” then click next.

Installation window will pop up next and click the latest version then click “Execute”

The MySQL is now ready to configure, initiate the process by clicking “Next”

The first configuration process is High Availability and on this window ensure you choose the Standalone MySQL Server/ Classic MySQL Replication the click “Next”

The second one is Type and Networking Choose the Dedicated Computer option on the configure type then ensure to tick the box to show advanced and logging options the click “Next”

Thirdly, it’s the Authentication Method and leave it with the default settings and click “Next”

Fourth, Accounts and Roles. Key in your password that you’ll remember then click “Next”

Fifth, Window service and ensure to tick the configure MySQL Server as a Window Server box and also the Start the MySQL Server at system Startup box.

Sixth, Logging options (this is an optional step) Ensure to tick the Slow Query log and Bin Log box then click “Next”

Advanced options is optional.

Finally Apply configuration Just click “Execute” and then Next to continue the process.

Complete the procedure by ensuring that the configuration is complete then click “Next” and your MySQL Installation is complete.

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.

#Deliverables:

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

- A GitHub repository containing a sample project initialized with Git and any necessary configuration files (e.g., .gitignore).

- A reflection on the challenges faced during setup and strategies employed to overcome them.

#Submission:

Submit your document and GitHub repository link through the designated platform or email to the instructor by the specified deadline.

#Evaluation Criteria:\*\*

- Completeness and accuracy of setup documentation.

- Effectiveness of version control implementation.

- Appropriateness of tools selected for the project requirements.

- Clarity of reflection on challenges and solutions encountered.

- Adherence to submission guidelines and deadlines.

Note: Feel free to reach out for clarification or assistance with any aspect of the assignment.