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

**Vs code**

Prerequisites:   
**Operating System**- Windows, Mac OS, or Linux  
**Internet Connection** -Required for downloading VS Code and extensions.   
  
Step 1: Download and install Visual Studio Code.   
Visit the official Visual Studio Code website (https://code.visualstudio.com/)  
Download the installer for your OS system, My case windows.

Run the installation. You can also use git bash to initialize and open vs code with **code .** as your command.

Step 2: Explore the VS Code Interface.   
Launch Visual Studio Code: After installation, launch Visual Studio Code.   
The Title Bar displays the name of the currently active file or workspace.   
Menu Bar: Allows access to a variety of commands and options.   
The Activity Bar has icons for several functionality such as Explorer, Search, Debug, and Extensions.   
Editor: The primary place where you write and modify code.   
The Side Panel displays a variety of information and features, including the Explorer, search results, debug console, and extensions.   
The Status Bar displays information about the current file, including the line number and other data.

Step 3: Install extensions.   
VS Code extensions improve functionality and support a variety of programming languages and frameworks.   
Open the Extensions view. Click the Extensions icon in the Activity Bar.   
Search for extensions: Use the search box to identify extensions that meet your development requirements.   
Install extensions: Select the relevant extensions and by this, I mean the verified ones and click the "Install" button next to them.

**Popular extensions**  
Prettier: Automatically formats code for improved readability.   
Bracket Pair Colorizer: A tool for identifying matching brackets in your code.   
Live Server: Set up a local development server to test web applications.   
GitHub Pull Requests and Issues: Access GitHub features straight from VS Code.   
Code Runner: Executes code snippets and scripts rapidly.

Python, R,

Step 4: Configure settings.

Open Settings: Navigate to "File" > "Preferences" > "Settings"

Edit the user settings: Customize VS Code with your preferred theme, font size, and language options.   
Use workplaces. Create workspaces for various projects to better organize your files and settings.

Choose auto-save your work for perfection.

Step 5: Work with files and projects.

Create a new file or project. To create new files, use the "File" menu or use the "New File" command Ctrl+N   
Open the existing files and folders: To open an existing project, use the "Open Folder" command Ctrl+Shift+P   
Navigate Files: To navigate your project files and directories, use the Explorer view.

To zoom your window ctrl + shift ++ and commenting ctr + /

Step 6: Code using VS Code

Write code: Use the editor to create code in your favorite language. Save them as Scripts  
Run and debug the code. To test and debug your code, use the "Run" or "Debug" views.

Challenges encountered

Space issue was solved by deleting some unnecessary files on my pc.

**Python**

Step 1: Install and download Python   
Visit the Python website: Go to https://www.python.org/downloads/ to obtain the most recent version (3.12.3) for Windows.  
  
Install and download-after downloading make sure it's in the required path by navigating to the environment variable and changing it from there. You can also install Python extension on vs code

Examine Python: To run Python --version, open gtbash terminal or command prompt and type it.

Step 2: Your Very First Python Application   
Make a Python file by Creating a new file in a basic text editor (such as Notepad on Windows). Use the.py extension to save it (hello.py, for example).

**Challenges**

No challenge encountered

**My SQL**

Step 1: Install and download MySQL   
Navigate to https://dev.mysql.com/downloads/mysql/ to download it.

Select the MySQL version you want to use: Choose the version (Windows).

Download and install: To install MySQL on my PC, adhere to the on-screen directions. Usually, during installation, you'll need to specify a root password.

Step 2: Install MySQL Workbench after downloading it.   
Go to the download page for Workbench: Access the workbench at https://dev.mysql.com/downloads/   
Step Three: Establish a Connection with Your MySQL Server   
Start the Workbench: On your PC, launch MySQL Workbench.   
Establish a fresh relationship: In the toolbar, select the "New Connection" icon (which resembles a plus sign).   
Put the connection information here:   
Call: Name your connection something meaningful (like "My Local MySQL").   
Hostname: Use localhost when establishing a connection with a local server.   
Usually, this is the root username.   
Password: The root password that you specified while installing MySQL.   
Port: Use the standard port, which is 3306.   
Verify the connection: To make sure everything is functioning properly, click "Test Connection".

**Challenges**

Process was confusing but managed to download it

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