Developer Environment Setup

1. **Choose an Operating System**

a.) Create Windows 11 installation Media

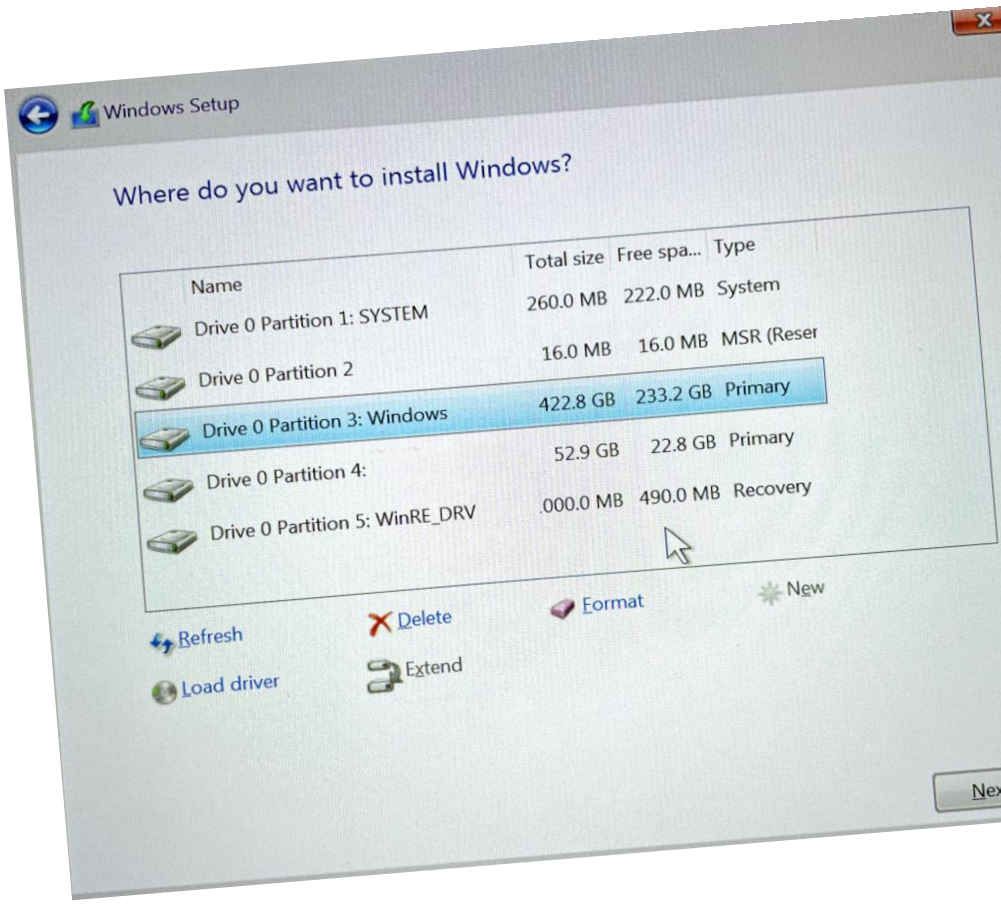
- Download the Media Creation tool:
  - i.) Go to Windows 11 download page: https://www.microsoft.com/software-download/windows11
  - ii.) On the "Create Windows 11 Installation Media" section, click "Download now"
- Run the Media Creation Tool
  - i) Open the downloaded Media creation tool executable file.
  - ii) Accept the license terms
- Set Up the Media Creation Tool:
  - i) Choose the language, edition and architecture and press next
  - ii) Select "USB flash drive" as the media to use. Alternatively, you can choose "ISO file" if you want to create a bootable DVD
- Create the Installation Media:
  - i) Insert a USB flash drive with at least 8 GB of storage
  - ii) Select the USB drive from the list and click "Next"
  - iii) The tool will donload Windows 11 and create the bootable USB drive
  - iv) After that click finish

b) Install Windows 11 using the Installation Media

- Prepare Your PC
  - i) Back up all important data
  - ii) Ensure your PC meets the windows 11 system requirements.
- Boot from the USB drive:
  - i) Insert the bootable USB drive into your PC
  - ii) Restart your PC and enter the BIOS/UEFI settings(commonly accessed by pressing a key like F2,F12,Delete, or Esc during startup)
  - iii) Change the boot order to boot from the USB drive first
- Start the Installation Process:
  - i) Save the changes and exit the BIOS/UEFI settings. Your PC should now boot from the USB drive
  - ii) The windows setup screen will appear. Select your language, time and keyboard preferences and click "Next"
  - iii) Click "Install now"
- Enter Product Key

i) If prompted, enter your Windows 11 product key. If you are upgrading from windows 10, you may skip this step as the activation should be automatic

- Select Installation Type
  - i) Choose “Custom: Install Windows only(advanced)” for a clean installation
  - ii) Choose windows type and click next
- Partition the Drive
  - i) Select the partition where you want to install Windows 11. You can delete existing partitions to create a new one, but this will erase all data on the selected partition.



c) Complete the installation

- Follow On-Screen Instructions:
  - i) Windows 11 will now be installed on your PC. The process might take some time and your PC will restart several times
- Set Up Windows 11:
  - i) After Installation, you will be guided through the initial setup process. Configure your preferences, sign in with your Microsoft account, and set up any additional settings

2. **Install an Integrated Development Environment**

Select and install a text editor or IDE suitable for your programming languages and workflow. Download and install Visual Studio Code.

Visit this site: https://code.visualstudio.com/Download

1. Download VS Code:
    - Go to the Visual Studio Code download page at https://code.visualstudio.com/Download
    - Click the "Download for Windows", this will start the download of the VS Code installer
2. Run the Installer:
    - Open the downloader VS Code installer.
    - Run the VS Code installer
    - The installer wizard will appear.
3. Installation Prompt
    - Accept the license agreement and click next
    - Choose the location where you want the VS Code installation to be kept. Accept the default location and click next.
    - Accept the default Start Menu Folder and click Next.
    - Select additional tasks(optional but recommended)
    - Click on Create a Desktop icon
    - Click on Add to path(important to use the command line)
    - Click register code as an Editor for supported files.
    - Adding "Open with Code" action to the Windows Explorer context menu
    - Adding "Open with Code" to the directory context menu.
    - Click next
    - The installation will begin. Click on the install button.
    - After clicking install, it should take about one minute to install VS code on your device.
4. Finish Installation
    - After installation, a setup window will appear. Tick on Launch VS Code and click Finish

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/

1. Download and Install Git
    - Download Git for Windows at: https://git-scm.com/downloads
2. Run the Installer
    - Open the downloaded Git installer
    - Run the Git installer
    - The installer wizard will appear

- Accept the license agreement and click next
- Choose the location where you want the Git installation to be kept. Accept the default location and click next

3. Follow the Installation Wizard:
    - Choose the default options or customize the installation according to your preferences. Some key settings to note:
    - Adjusting your PATH environment
    - Choosing the HTTPS transport backend.
    - Configuring the line-ending conversions.
    - Choosing the default Git editor
4. Start folder
    - You'll be prompted to create a start folder. Leave it as it is and click next.
5. Text editor
    - Choose a text editor to use with Git. Click on the drop-down menu to pick the text editor you like to use and click next
6. In the next step choose all default options and click finish
7. Verify the installation:
    - Open a terminal(Command Prompt or git bash) and run git –version

Step 2: Configure Git

- Open a terminal or command prompt
- Set your username and email: git config –global user.name "Your Name" git config –global user.email" your email"

Step3. Create a github account

- Sign up for a github account at: https://github.com/
- Enter your information
- Click on the link to verify your email address

Step4. Initialize a Git repository

- Create a new repository on Github:
    a) Go to your Github profile page and click on your profile picture.
    b) Go to your profile
    c) Click on your repositories
    d) Click on "Create new repository"
    e) Fill in the details:
        - Repository name
        - Repository description
        - Select "Public"
        - Select "Initialize this repository with a READMER"

- Add .gitignore
- Click on “Create repository”

Step5. Cloning Git Repository

This is where you want to have a copy of your repository on your machine so you can work on it.

i) Copy the repository URL from the github page
ii) Open Git bash
iii) Run git clone **repository url**
iv) Verify the cloning with the ls command

Step6. Commit and Push Changes

i) Create a new file: test.txt
ii) Add content to the file
iii) Save and exit the editor
iv) Check the status of your repository by running the command **git status**
v) Stage the file by running **git add .**
vi) Commit the changes: git commit -m “Added a new file”
vii) Push the changes to remote repository

4. Install Necessary Programming Languages and Runtimes: Python, Dart and Flutter SDK

Install Python from http://wwww.python.org/ and install its respective compilers, interpreters or runtimes

1. Installing Python

i) Download python installer
- Go to https://www.python.org/downloads/
- Download the latest version of Python for Windows
- Select the installer that corresponds to the version of Python you want to install

ii) Run the installer
- Open the downloaded installer file.
- Run the installer
- Check the box that says “Add Python to PATH”
- Click “Install Now”

iii) Verify Installation
- Open Command Prompt or Git Bash.
- Run python –version
- Verify the installation by checking the version number.

5. **Install Package Managers:**

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

- Ensure pip is installed and up-to-date
- Install required packages – python -m pip install -r requirements.txt
- To install a package using pip – pip install package-name

6 . Configure a Database (MySQL)

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

1.) Download MySQL

- Go to MySQL Community Downloads page: https://dev.mysql.com/downloads/installer/
- Download the latest version of MySQL for windows
- Select the installer that corresponds to the version of MySQL you want to install

2.) Run the installer
- Open the downloaded .msi file.

3.) Choose Setup Type
- Choose a setup type(Developer Default, Server only, etc) and click next

4.) Check for Requirements:
- The installer will check for and install the necessary dependencies

5.) Installation
- Click Execute to install the selected MySQL products

6.) Configuration:
- Next, you need to configure the MySQL server, click “Next”

7.) Standalone MySQL Server
- Select the “Standalone MySQL Server/Classic MySQL Replication” item and click “Next”

8.) Type and Networking
- Next, in the “Config Type” parameter, select “Server Computer” and click next

9.) Password and authentication
- Select “Use Strong Password Encryption for Authentication” and click “Next”

10.) Accounts and roles:
- In the next window, you need to set a password for the root user(administrator). After you enter the password, click “Next”

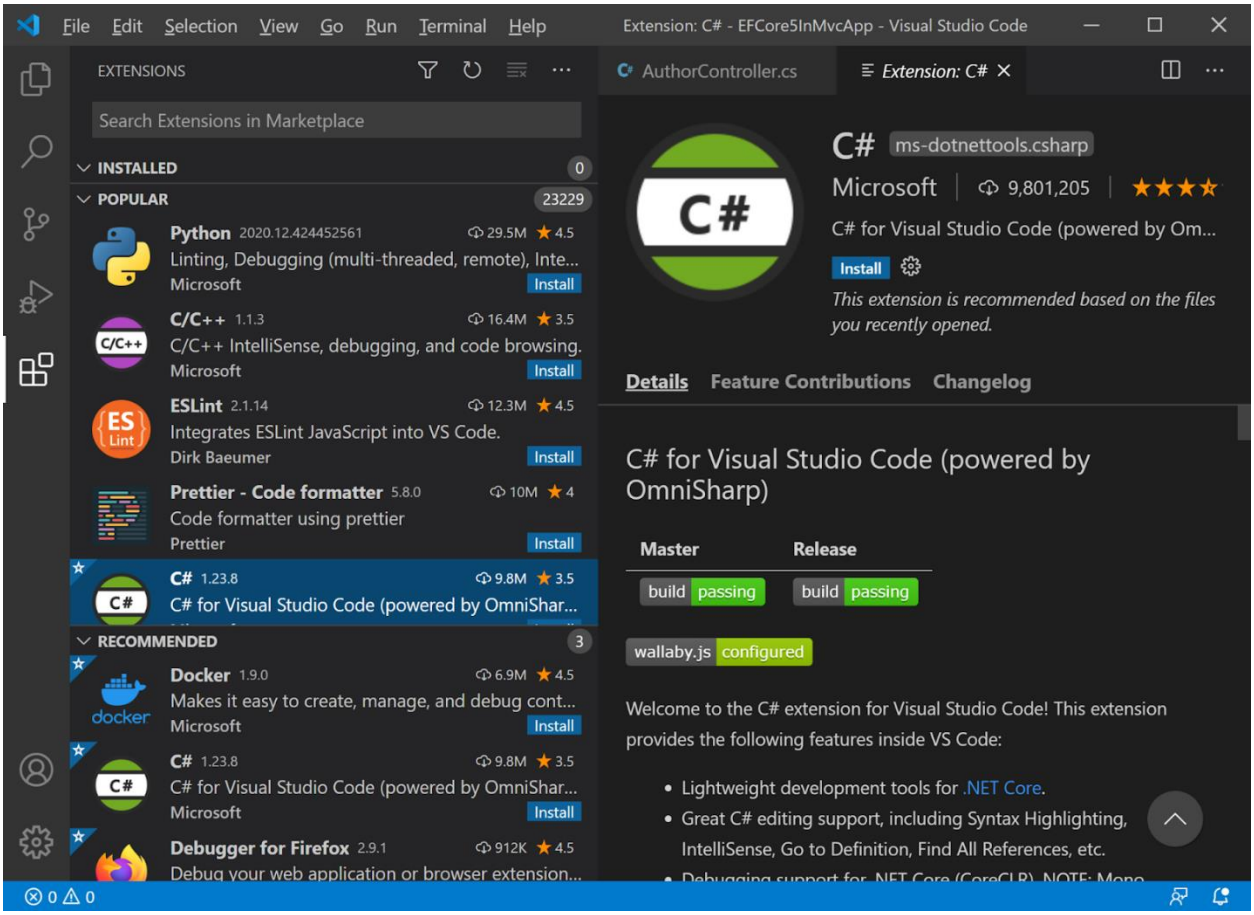
11.) At the next step, we leave all the default setting, and click “Next”

12.) MySQL server settings:
- Next you need to apply the MySQL server settings by clicking “Execute”

13.) Finish. Click the “Finish” to complete installation

7.) Explore Extensions and Plugins:

Explore available extensions, plugins, and add-ons for your chosen IDE to enhance functionality such as syntax highlighting, linting, code formatting and version control integration.



Here are some of the important extensions that I added:

- Python: Provides IntelliSense, linting, and debugging for Python files
- Pylance: Enhances Python language support
- ESLint: Detects and fixes linting issues in Javascript and TypeScript files.
- Stylelint: Detects and fixes style issues in CSS and SCSS files
- Prettier: Formats code automatically based on defined rules
- GitLens: Visualizes and provides Git integration
- SQLTools: Interacts with databases directly from VS Code
- Live Server: Launches a local server with live reload for static and dynamic pages