# Developer Environment Setup Documentation

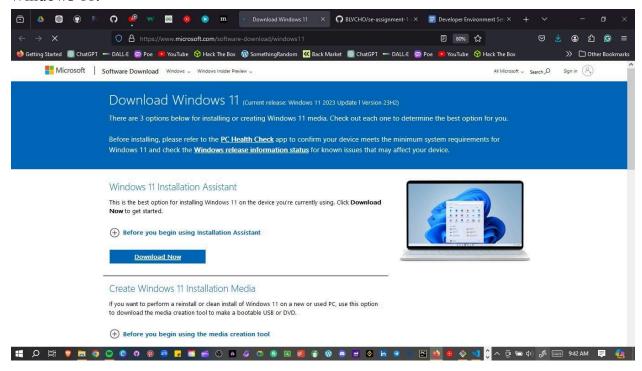
## 1. Operating System Installation

Steps and Screenshots of Windows 11 Installation:

- 1. Download Windows 11:
- Visit the official Microsoft website: [Windows 11

Download](https://www.microsoft.com/software-download/windows11).

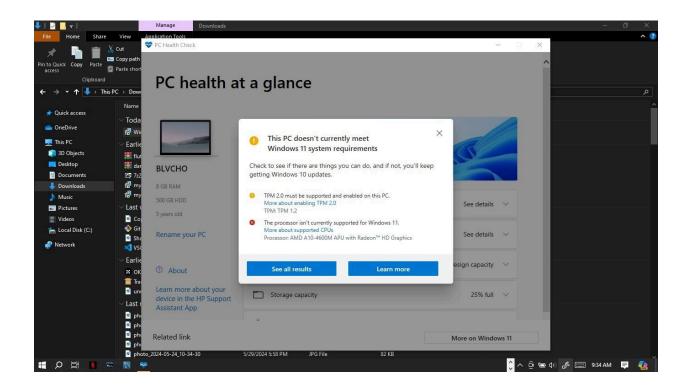
- Download the Windows 11 Installation Assistant.
- Run the downloaded file and follow the on-screen instructions to upgrade or install Windows 11.



#### 2. Installation Process:

- Ensure your PC meets the minimum system requirements.
- Back up your important files.

- Follow the installation steps, including selecting the installation type, partitioning your hard drive if necessary, and configuring initial settings.



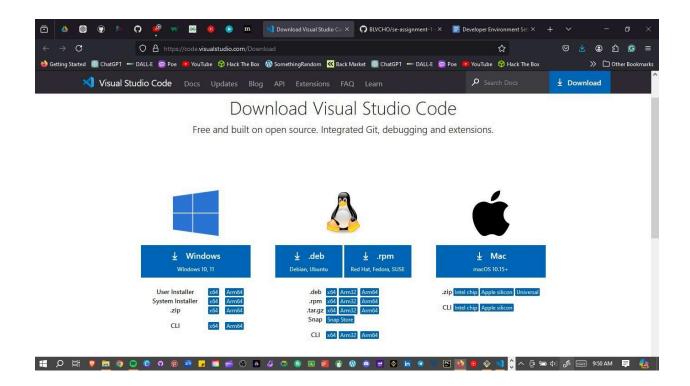
- 3. Post-Installation Setup:
  - Configure your user account, regional settings, and privacy settings.
  - Install necessary drivers and updates.



## 2. IDE Installation

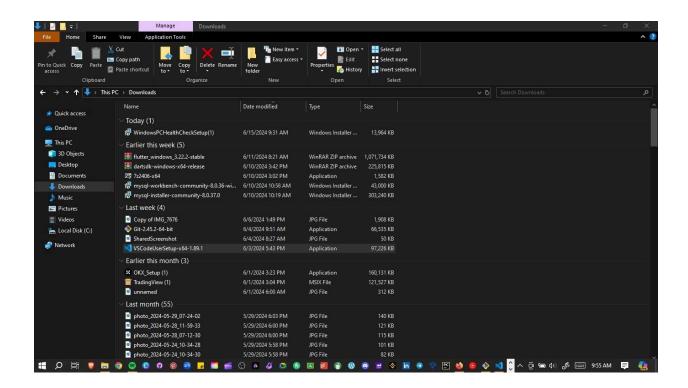
Steps and Screenshots of Visual Studio Code Installation:

- 1. Download VS Code:
- Visit the Visual Studio Code download page: [VS Code Download](https://code.visualstudio.com/Download).
  - Select the appropriate version for Windows and download the installer.



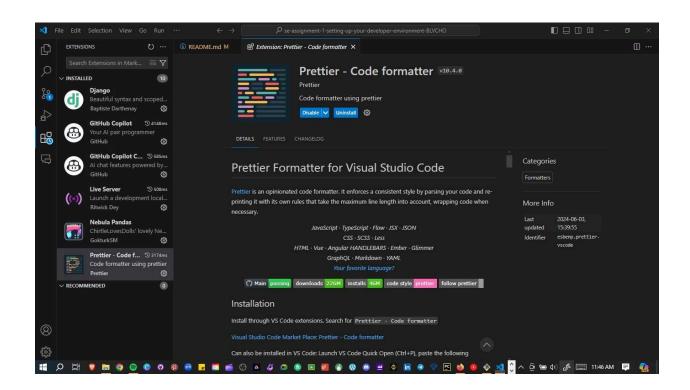
#### 2. Installation Process:

- Run the downloaded installer.
- Follow the installation wizard, accepting the license agreement and choosing the installation location.
  - Select additional tasks such as adding to PATH and creating a desktop icon.



### 3. First Launch and Setup:

- Launch VS Code and install recommended extensions like Python, GitLens, and Docker.

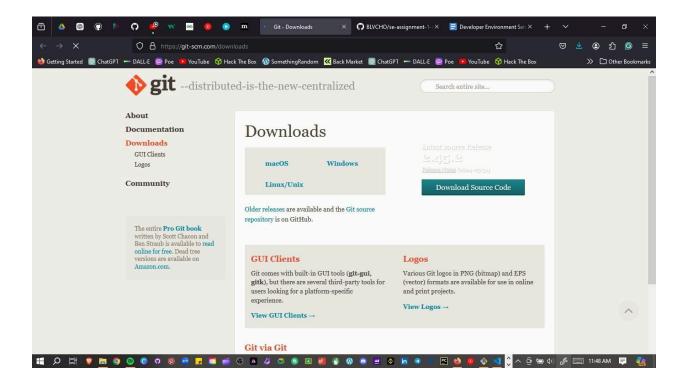


3. Version Control Setup	3.	Version	Control	Setur
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Steps for Installing Git, Creating a GitHub Account, Initializing a Repository, and Making the First Commit:

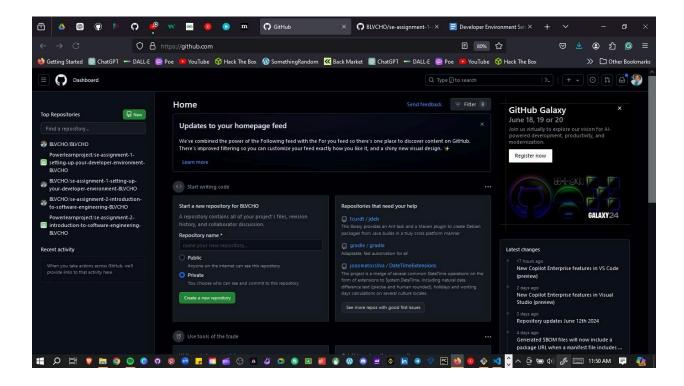
### 1. Install Git:

- Download Git from the official site: [Git Download](https://git-scm.com/downloads).
- Run the installer and follow the setup instructions, choosing your preferred options for PATH, line endings, and other settings.



#### 2. Create a GitHub Account:

- Visit [GitHub](https://github.com) and sign up for a new account if you still need to get one.



- 3. Initialize a Git Repository:
  - Open Git Bash or the terminal in VS Code.
  - Navigate to your project directory or create a new one:

```
```bash
mkdir my_project
cd my_project
```

- Initialize a Git repository:

```
```bash
git init
```

- Create a README file:

```
```bash
echo "# My Project" >> README.md
```

- Add the README file to the staging area:

```
```bash
git add README.md
```

- Commit the changes:

```
```bash
git commit -m "Initial commit"
```

```
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```

4. Programming Languages and Runtimes

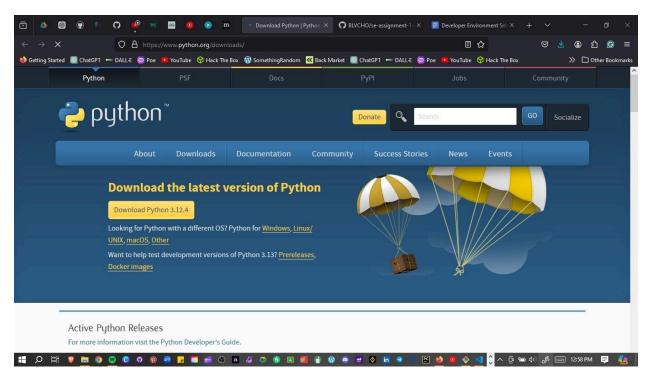
## Steps for Installing Python:

## 1. Download Python:

- Visit the official Python website: [Python

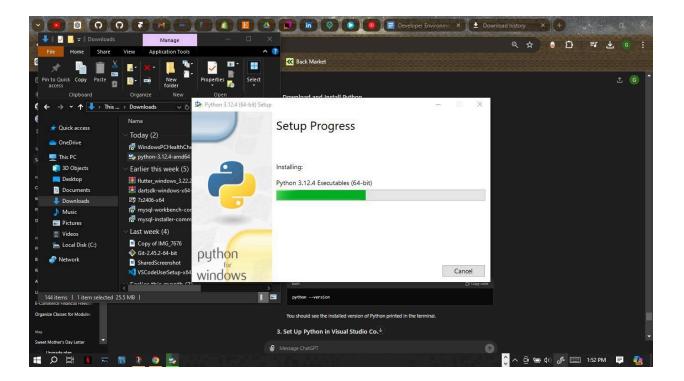
Download](https://www.python.org/downloads/).

- Download the latest version of Python for Windows.



#### 2. Installation Process:

- Run the installer, ensure you check the option to add Python to PATH.
- Follow the installation wizard.



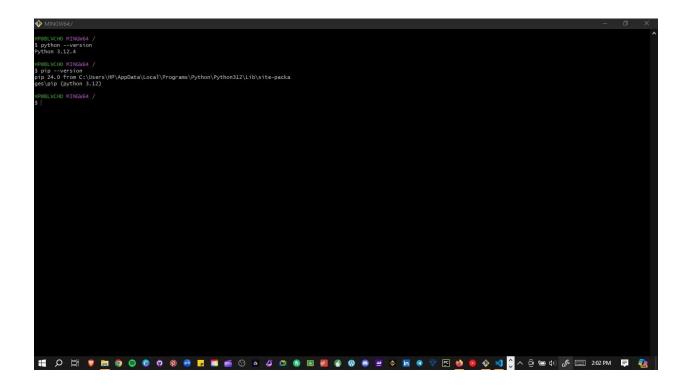
## 3. Verify Installation:

- Open Command Prompt and type:

```
```bash
python --version
```

- Verify pip installation:

```
```bash
pip --version
```



# 5. Package Managers

Verification of pip Installation:

```
1. Verify pip:
```

- Open Command Prompt and type:

```
```bash
pip --version
```

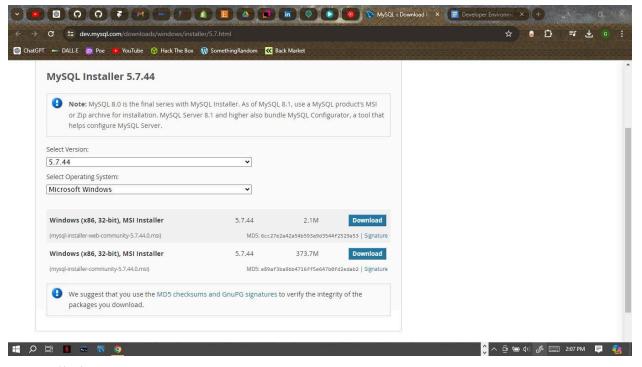
# 6. Database Configuration

Steps for Installing MySQL:

- 1. Download MySQL:
  - Visit the MySQL download page: [MySQL

Download](https://dev.mysql.com/downloads/windows/installer/5.7.html).

- Download the MySQL Installer for Windows.

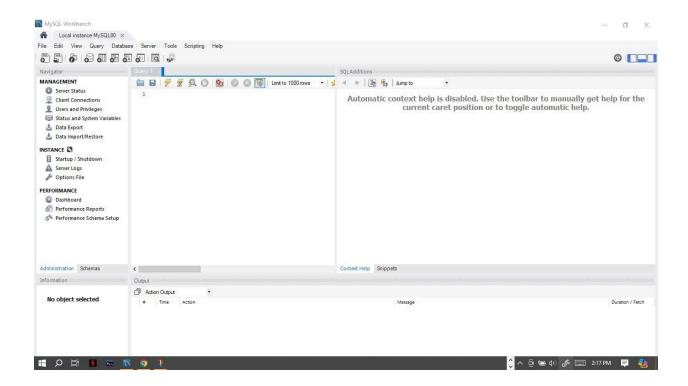


#### 2. Installation Process:

- Run the MySQL Installer and follow the setup wizard.
- Choose the setup type (e.g., Developer Default).
- Configure MySQL Server settings, including the root password.

### 3. Verify Installation:

- Open MySQL Workbench or MySQL Shell and connect to your MySQL server.



7. Development Environments and Virtualization (Optional)

Optional Steps for Installing and Setting Up Docker:

- 1. Download Docker:
- Visit the Docker Desktop download page: [Docker Download](https://www.docker.com/products/docker-desktop).
  - Download and run the Docker Desktop installer.

![Docker Download](images/docker-download.png)

- 2. Installation Process:
  - Follow the installation instructions.
  - Start Docker Desktop and follow the setup wizard.

3. Verify Installation:

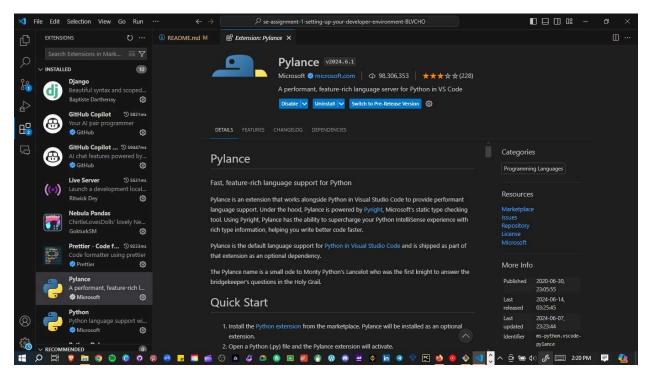
- Open Command Prompt or PowerShell and type:

```
```bash docker --version
```

# 8. Extensions and Plugins

List of Installed Extensions for VS Code:

- 1. Install Extensions:
  - Open VS Code.
  - Go to the Extensions view (`Ctrl+Shift+X`).
  - Search for and install the following extensions:
    - Python
    - GitLens Git supercharged
    - Docker
    - Prettier Code formatter
    - ESLint
    - MySQL



## 9. Challenges and Solutions

- 1. Challenge: Installing MySQL and Configuring the Root Password
- Solution: Followed a step-by-step tutorial and used the official MySQL documentation for troubleshooting.
- 2. Challenge: Initializing a Git Repository and Making the First Commit
- Solution: Used Git documentation and GitHub guides to understand the commands and workflow.

## Deliverables

- 1. Setup Documentation:
  - This document with detailed steps and screenshots.
- 2. GitHub Repository: <a href="https://github.com/BLVCHO/sample-repository.git">https://github.com/BLVCHO/sample-repository.git</a>
- 3. Reflection:
  - Included in the Challenges and Solutions section.