

WINDOWS 11 INSTALLATION

Option 1: Install Windows 11 on a Specific Drive During Upgrade

If you're upgrading from Windows 10 to Windows 11 and want to specify the installation drive:

1. Check Compatibility and Backup:

- Ensure your PC meets the Windows 11 requirements and back up important data.

2. Download and Start the Upgrade:

- Use Windows Update to download and start the upgrade process as described in the previous steps.

3. Choose Installation Drive:

- During the upgrade process, when prompted, you may have the option to choose where to install Windows 11.
- Select the desired drive (e.g., `C:\`) where Windows 11 should be installed.

4. Follow On-Screen Instructions:

- Continue following the on-screen instructions to complete the upgrade.
- Windows will automatically handle transferring files and settings from your current installation to the new Windows 11 installation on the selected drive.

Option 2: Clean Installation of Windows 11 on a Specific Drive

1. Create Installation Media:

- Download the Windows 11 installation media creation tool from the Microsoft website and create a bootable USB drive or download the ISO file.

2. Boot from Installation Media:

- Insert the bootable USB drive or mount the ISO file.
- Restart your PC and enter BIOS/UEFI settings to set the boot priority to boot from the installation media.

3. Start the Installation:

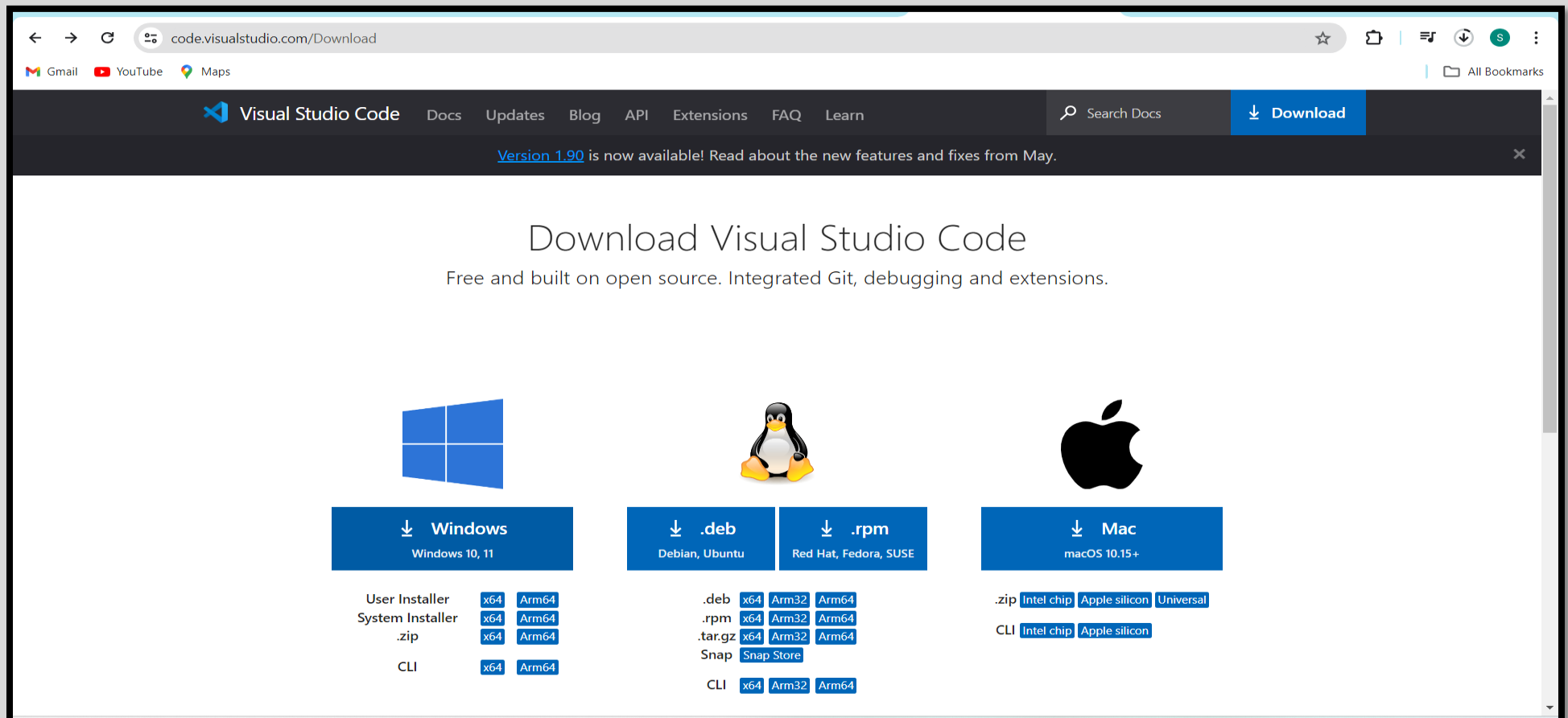
- Boot from the installation media and proceed with the installation process.
- When prompted to choose where to install Windows, select the drive where you want Windows 11 to be installed (e.g., `C:\`).

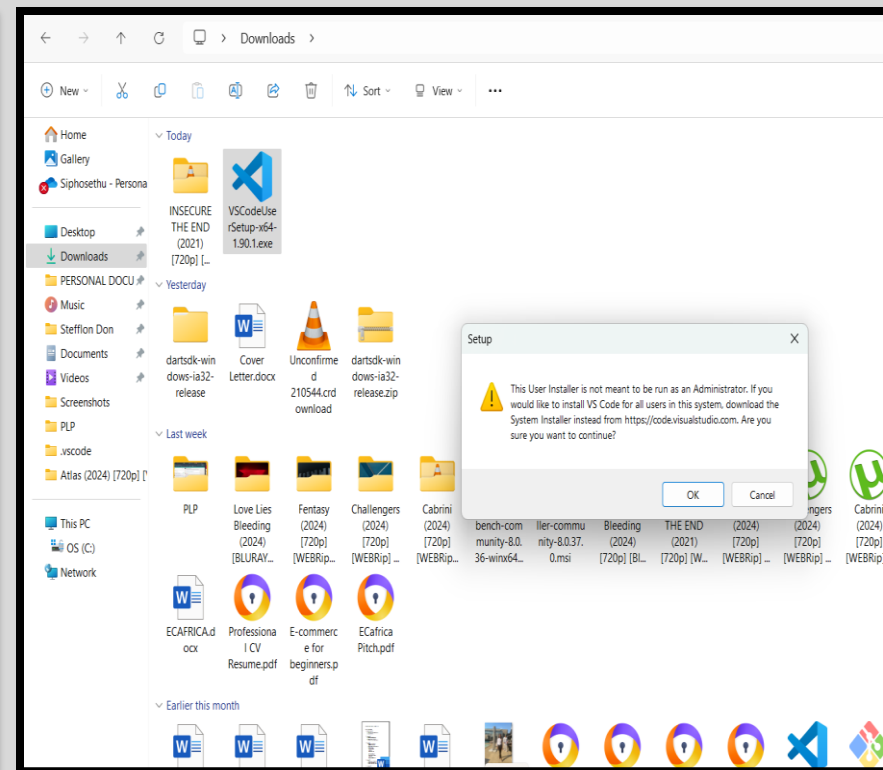
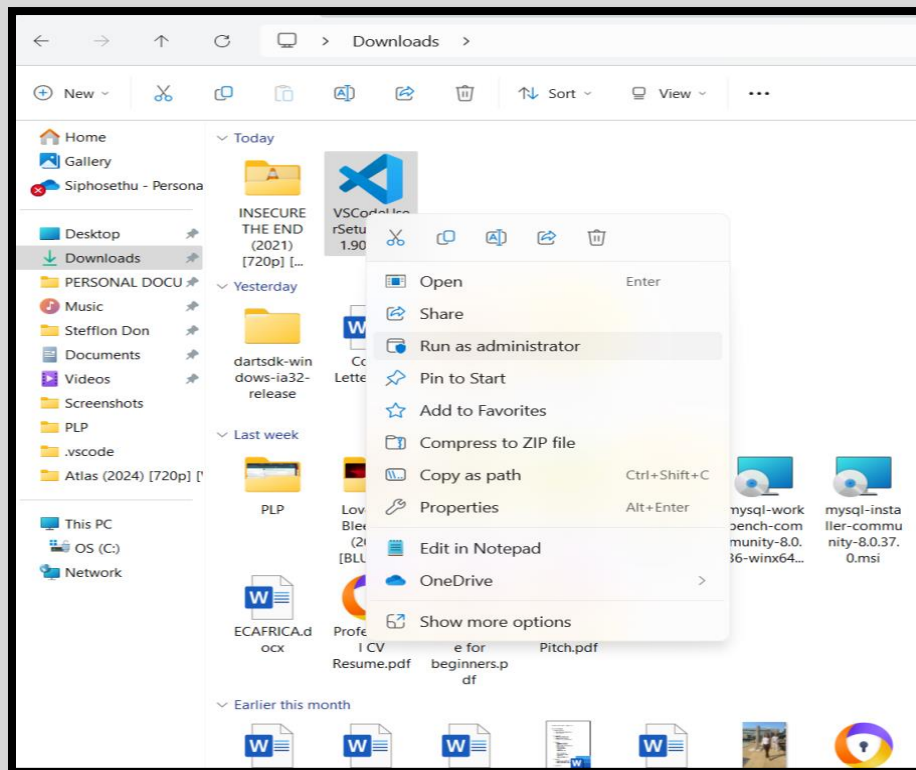
4. Complete Installation and Setup:

- Follow the on-screen instructions to complete the installation of Windows 11 on the chosen drive.
 - After installation, follow the setup prompts to configure Windows 11 settings and set up user accounts.
5. Install Drivers and Updates:
- After installation completes, install device drivers for your hardware components.
 - Check for Windows updates to ensure your system is up to date with the latest patches and features.

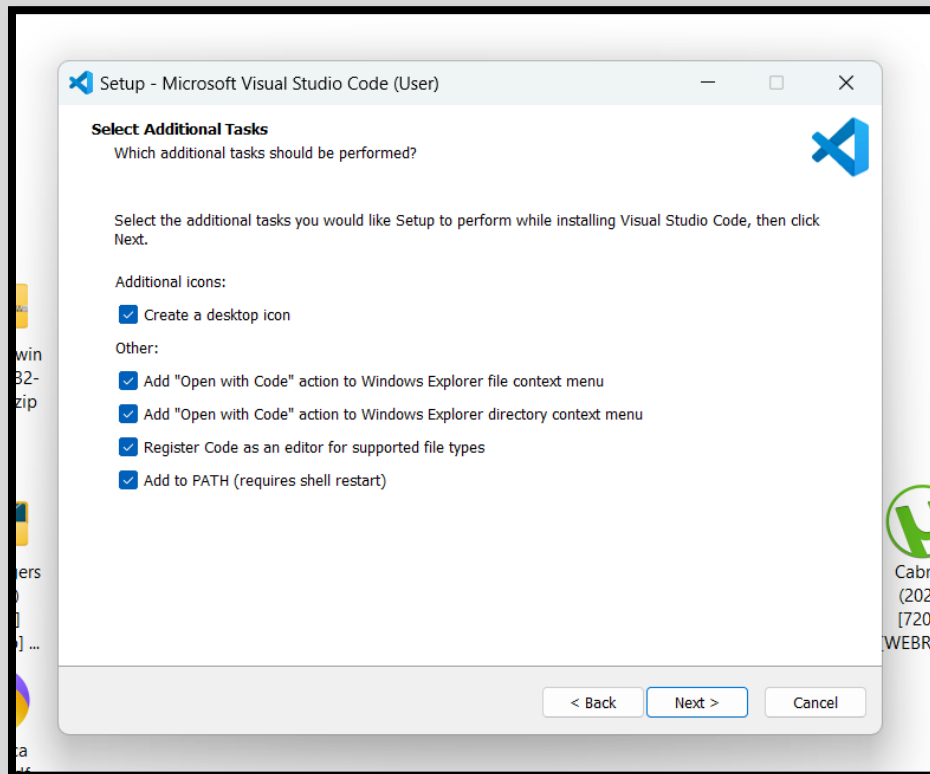
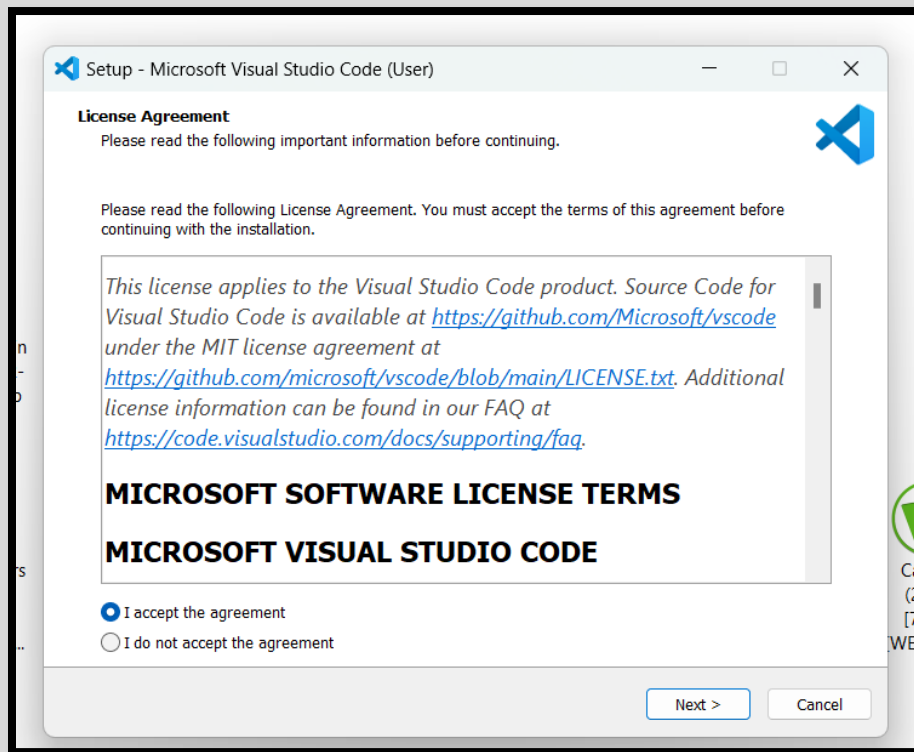
INSTALL VISUAL STUDIO CODE

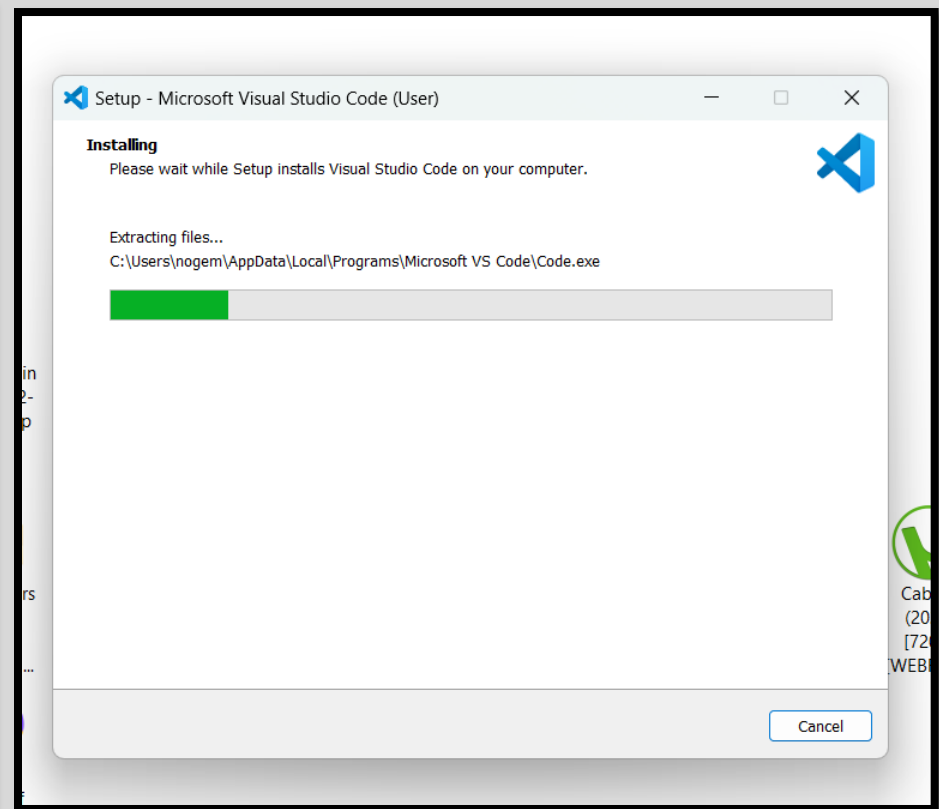
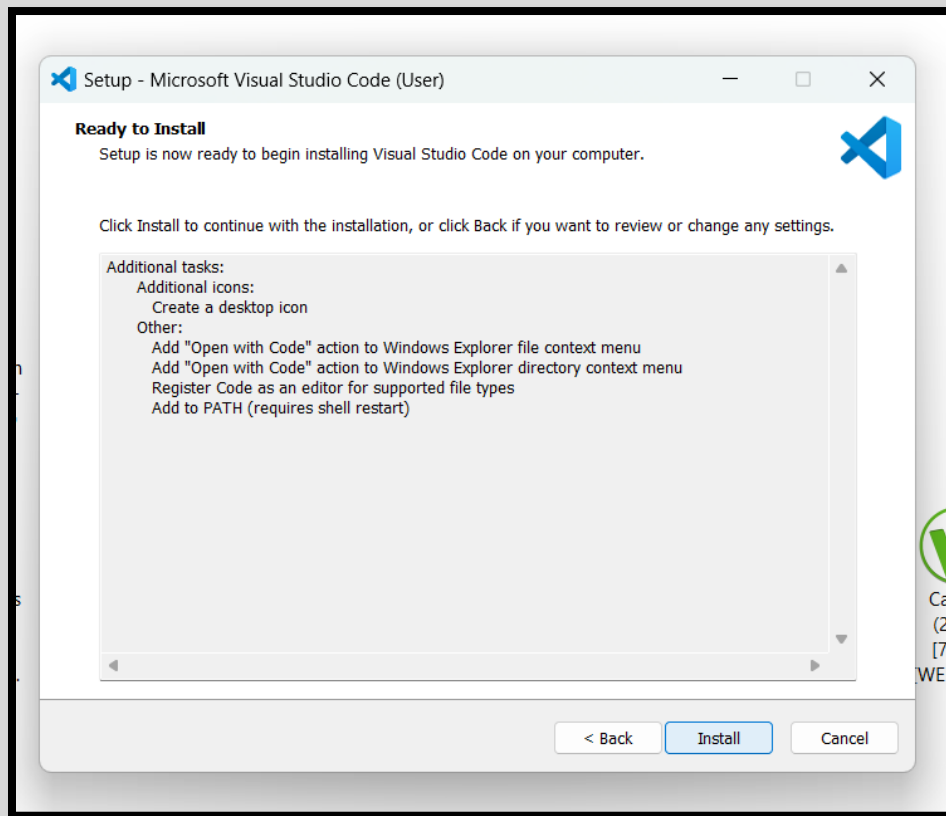
1. **Visit the Official Website:** Open Google Chrome and go to the official Visual Studio Code website.
2. **Download Visual Studio Code:** Click the "Download for Windows" button on the website to start downloading the Visual Studio Code setup file.
3. **Locate the Downloaded File:** Once the download is complete, find the file in your "Downloads" folder. The file name will typically be something like VSCodeSetup.exe.

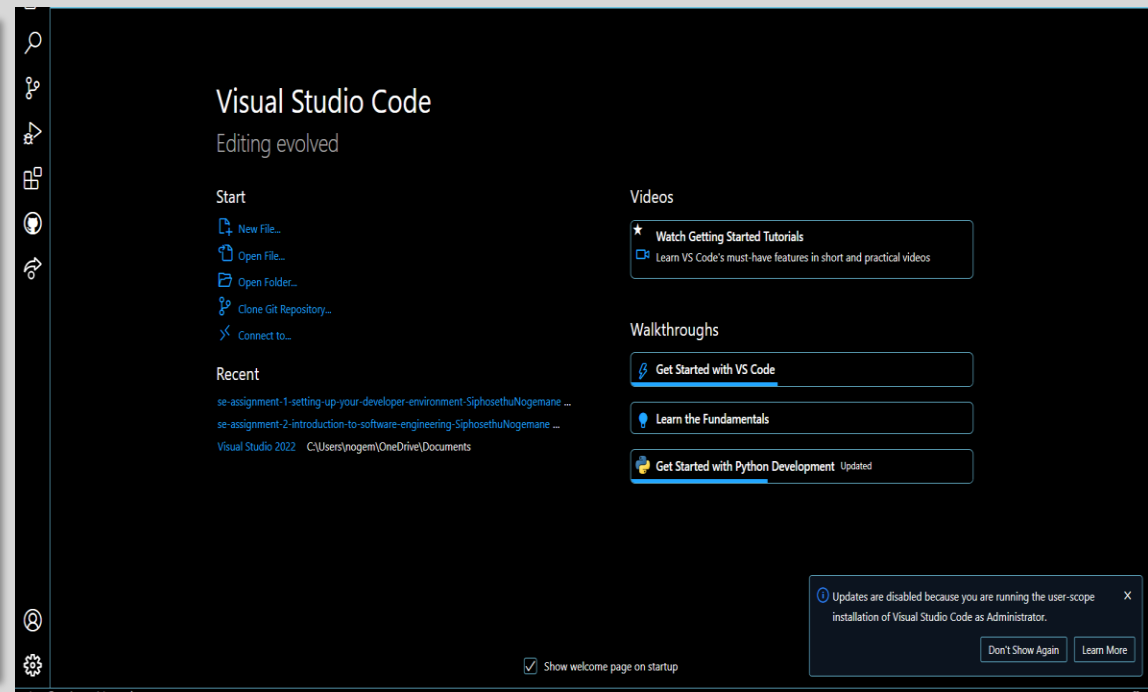
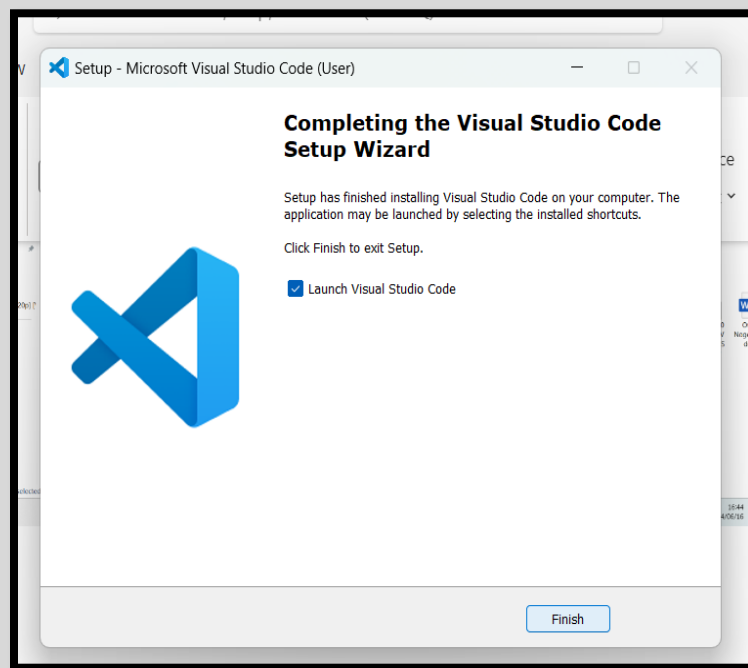




4. **Run the Installer:** Double-click on the `VSCodeSetup.exe` file to start the installation process.
5. **Accept the License Agreement:** In the setup wizard, read the license agreement. If you agree, check the box to accept the agreement and click "Next".
6. **Select Additional Tasks:** In the setup options:
 - Check the box for "Create a desktop icon".
 - Check the box for "Add 'Open with Code' action to Windows Explorer file context menu".
 - Check the box for "Add 'Open with Code' action to Windows Explorer directory context menu".
 - Check the box for "Register Code as an editor for supported file types".
 - Check the box for "Add to PATH (requires shell restart)".
7. **Install the Application:** Click "Next" to proceed. The installation process will begin.
8. **Finish Installation:** Once the installation is complete, click on "Finish". Visual Studio Code will launch automatically.



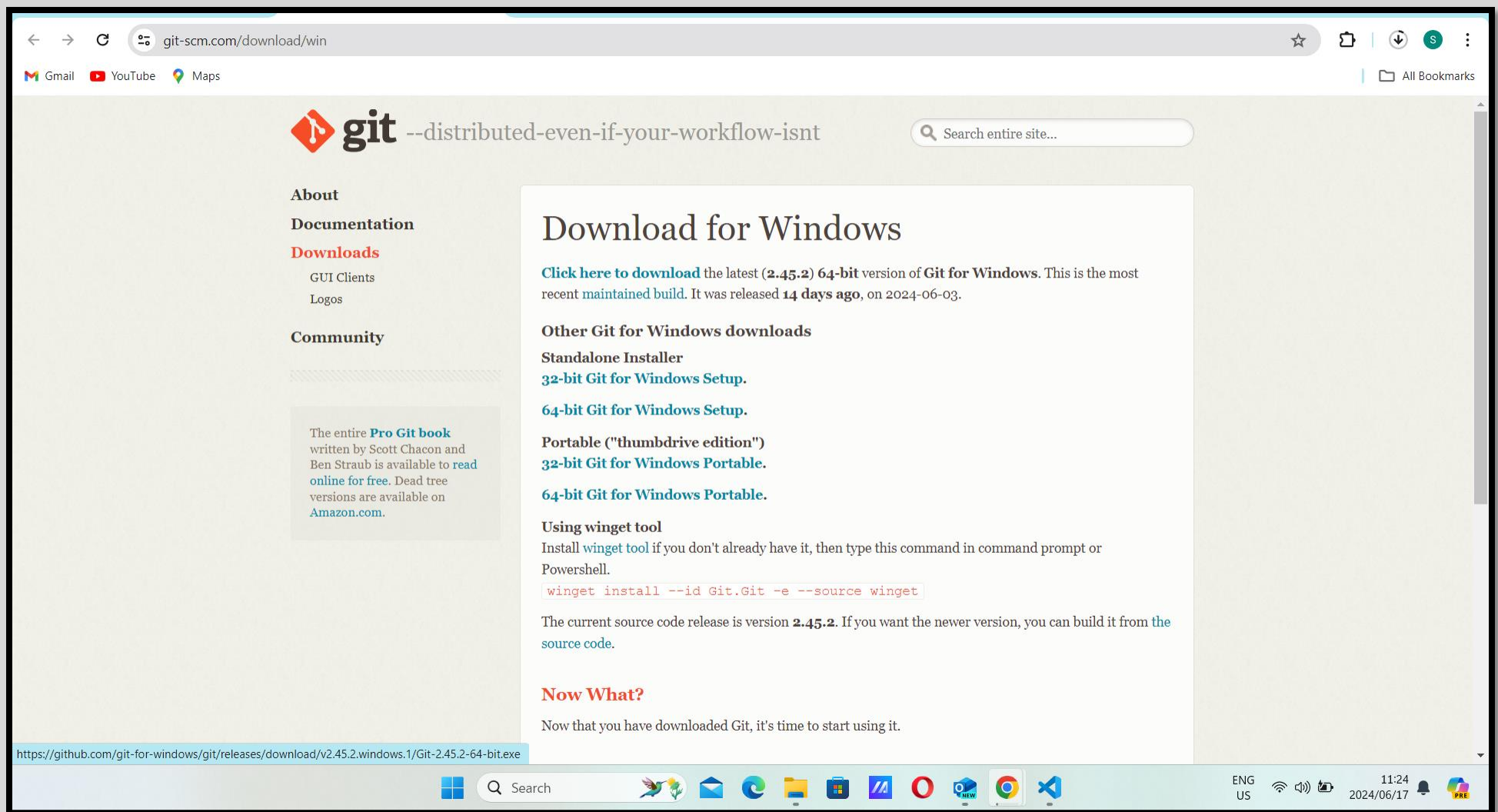




SET UP VERSION CONTROL SYSTEM

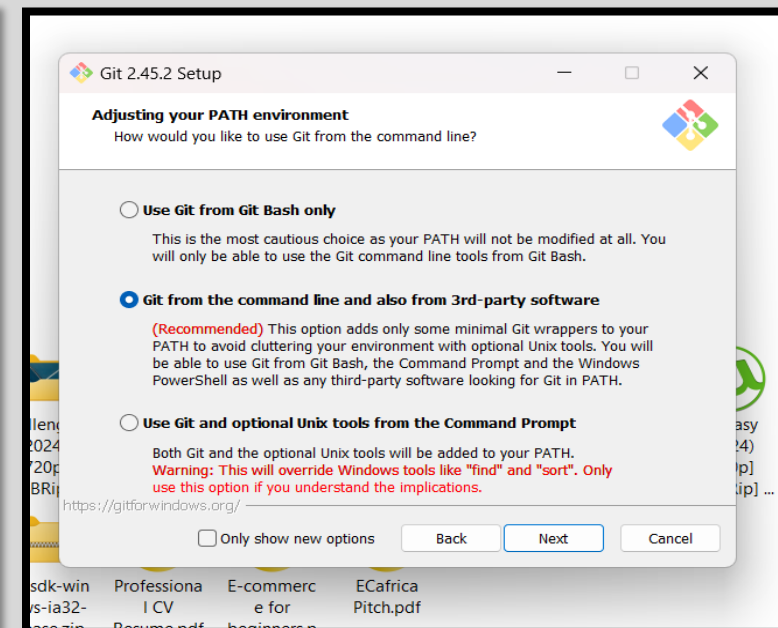
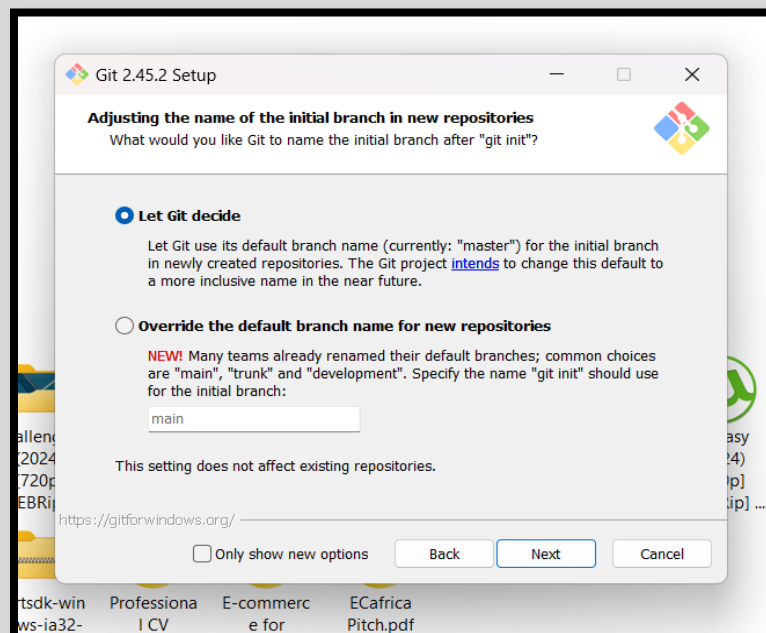
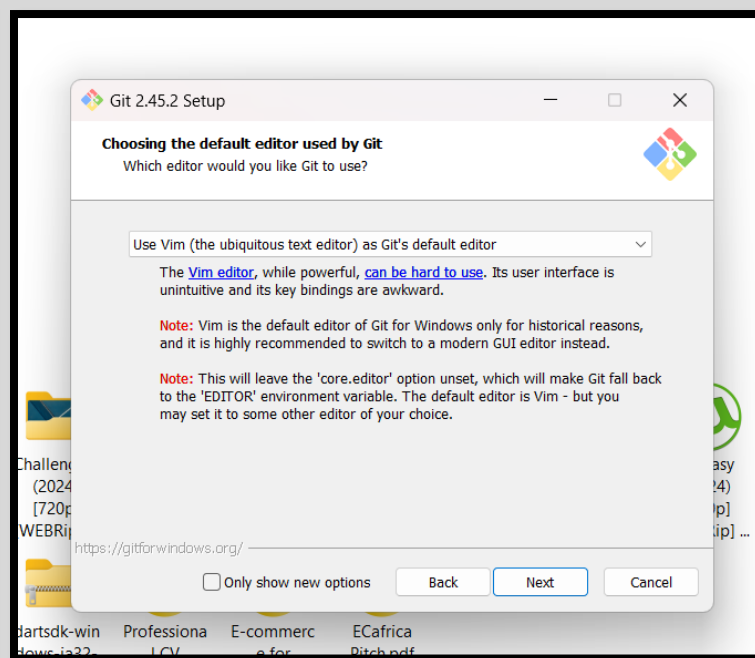
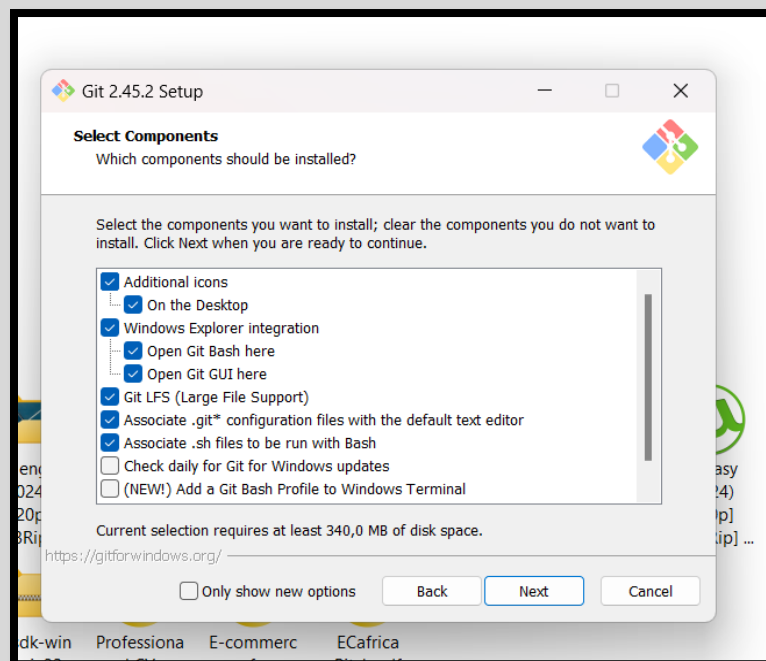
Git Installation

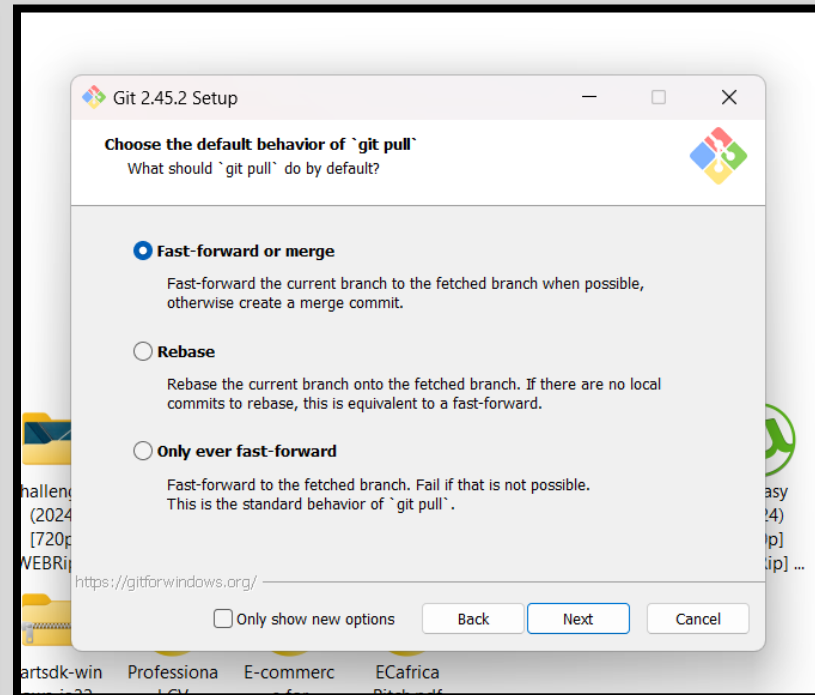
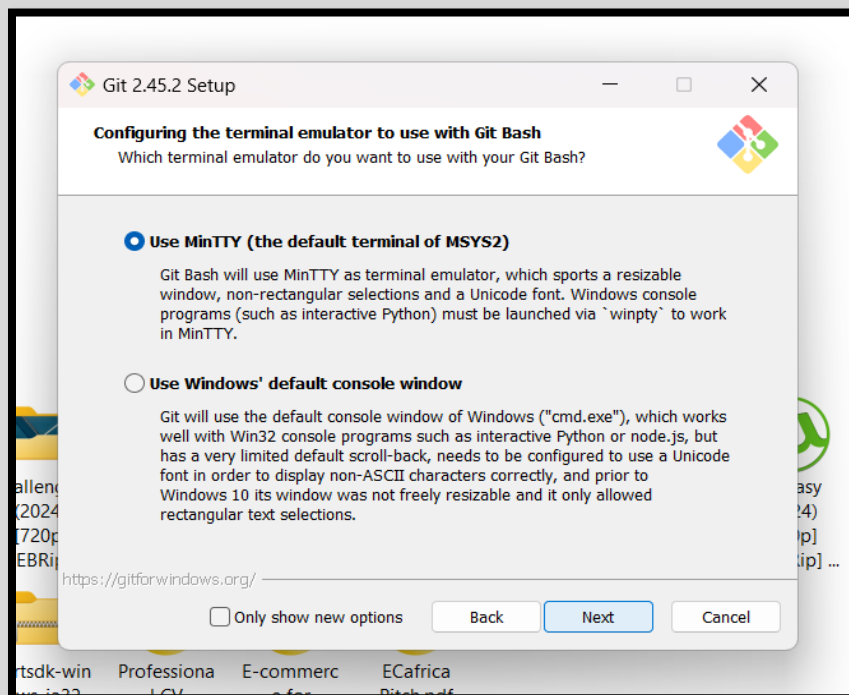
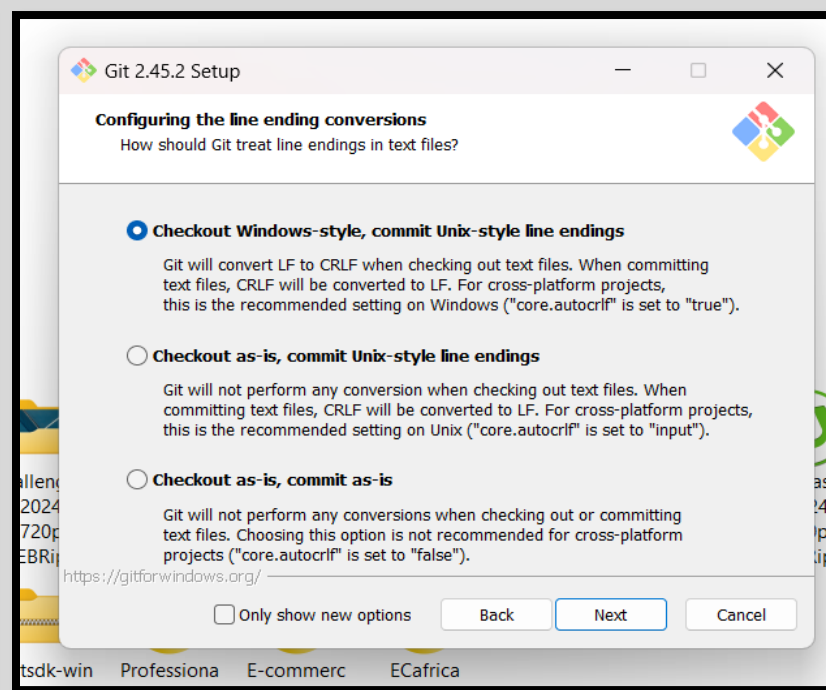
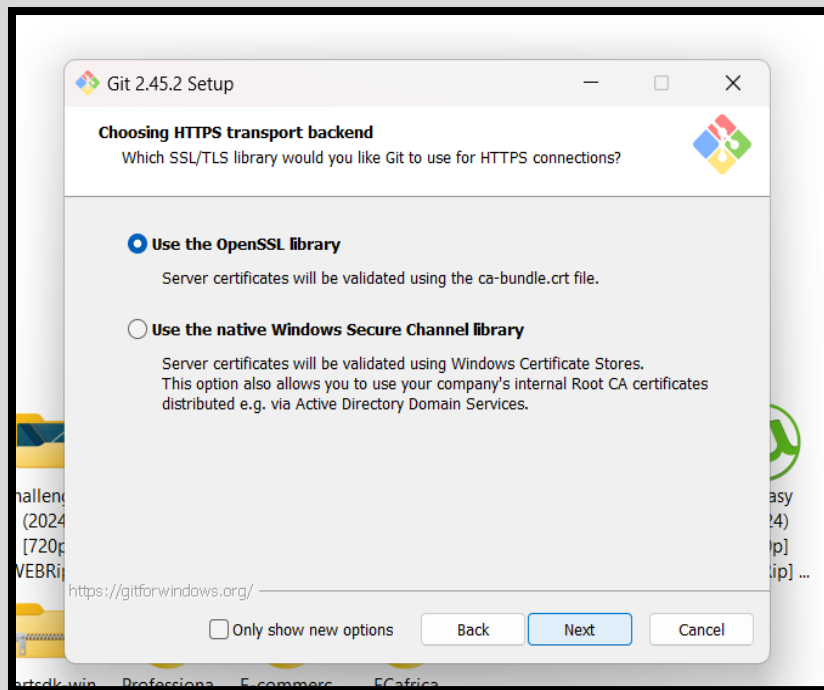
1. **Visit the Official Git Website:** Open your web browser and go to the official Git website at <https://git-scm.com/>.
2. **Download Git for Windows:** On the homepage, click the “Download” button for Windows. This will start the download of the Git installer.

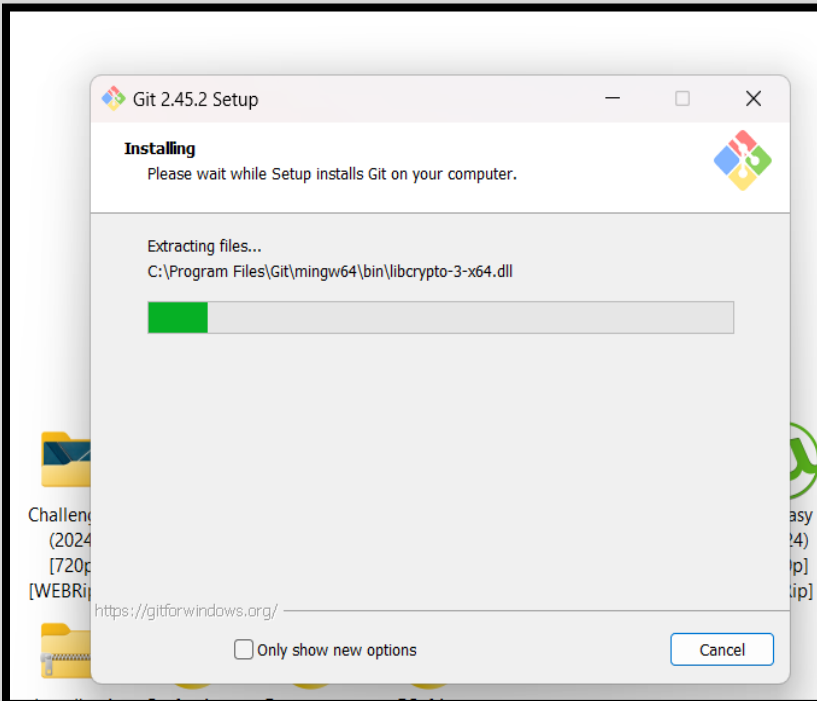
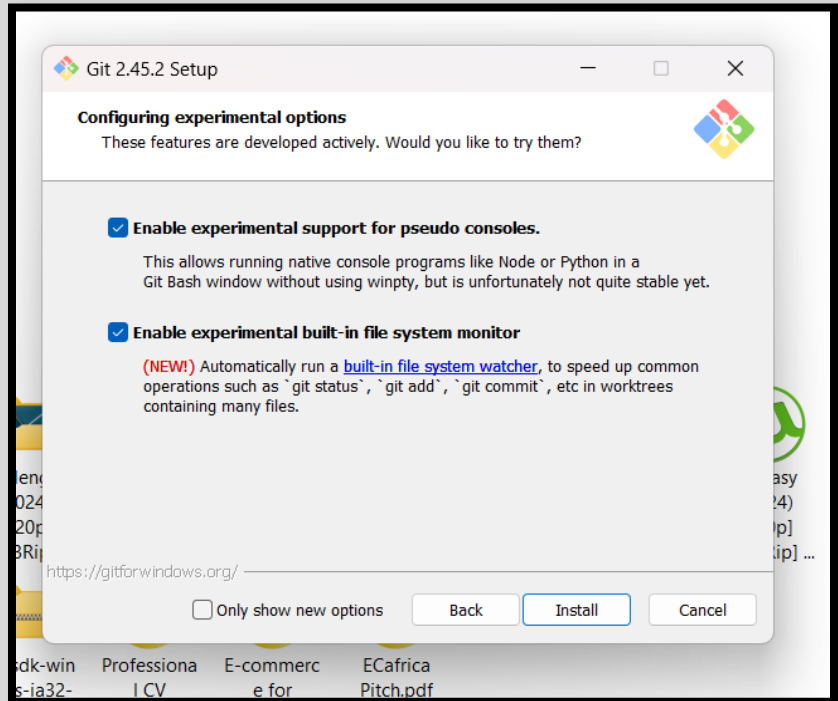
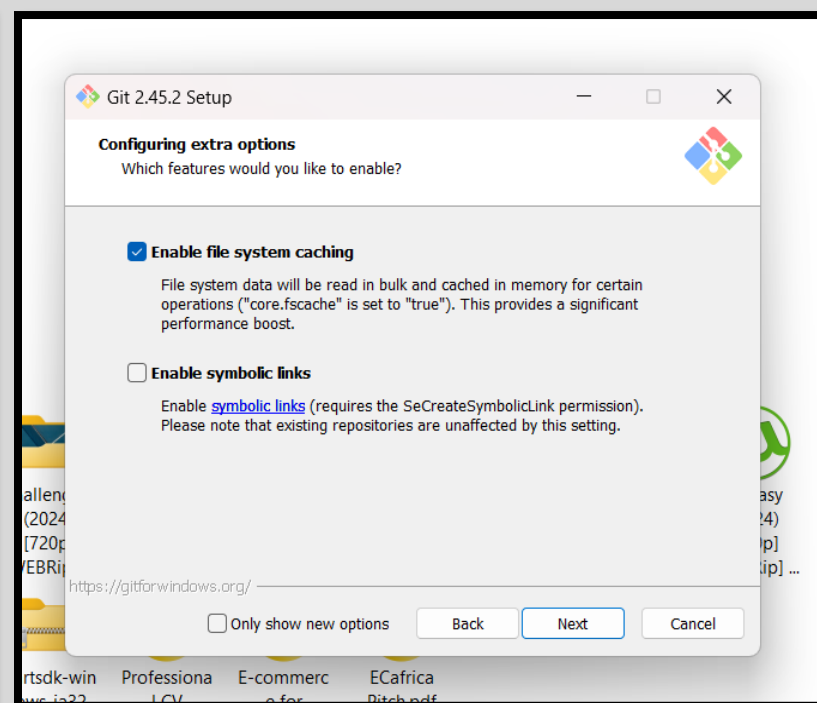
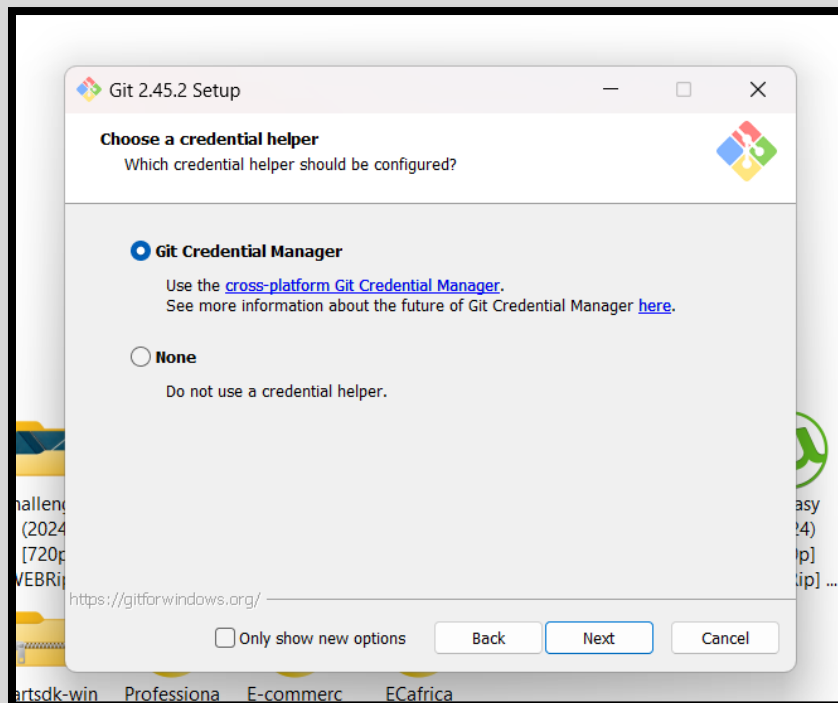


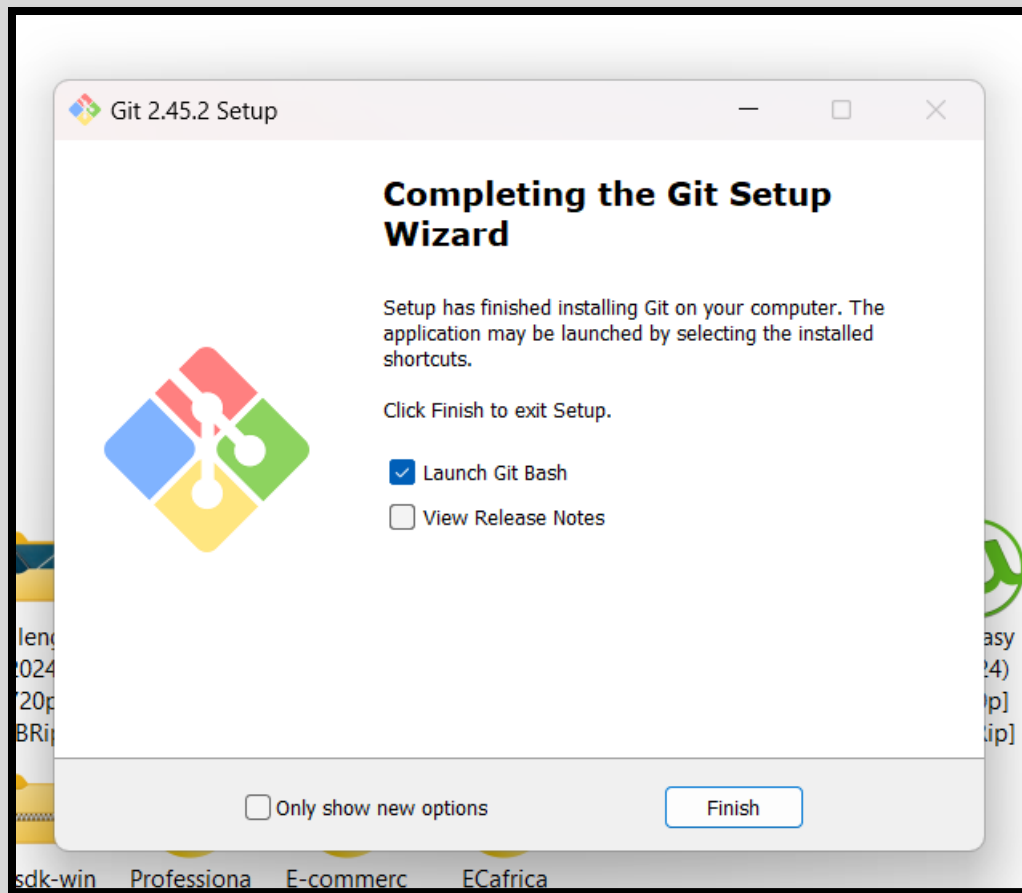
3. **Locate the Downloaded File:** Once the download is complete, find the file in your "Downloads" folder. The file name will typically be something like `Git-2.x.x-64-bit.exe` or `Git-2.x.x-32-bit.exe` depending on your system architecture.
4. **Run the Installer:** Double-click on the downloaded `Git-2.x.x-64-bit.exe` (or `32-bit`) file to start the installation process.
5. **Accept the License Agreement:** In the setup wizard, read the license agreement. If you agree, click "Next".

6. **Select Destination Location:** Choose the destination location where you want Git to be installed. The default path is usually fine. Click "Next".
7. **Select Components:** In this step, choose the components you want to install. Select all components except for:
 - "Check daily for Git for Windows updates"
 - "Add a Git Bash profile to Windows Terminal". Then click "Next".
8. **Choosing the Default Editor Used by Git:** Select "Use Vim (the ubiquitous text editor)" as Git's default editor. Click "Next".
9. **Adjusting the Name of the Initial Branch in New Repositories:** Select "Let Git decide". Click "Next".
10. **Adjusting Your PATH Environment:** Select "Git from the command line and also from 3rd-party software". Click "Next".
11. **Choosing the HTTPS Transport Backend:** Select the default option "Use the OpenSSL library". Click "Next".
12. **Configuring the Line Ending Conversions:** Choose "Checkout Windows-style, commit Unix-style line endings". Click "Next".
13. **Configuring the Terminal Emulator to Use with Git Bash:** Select "Use MinTTY (the default terminal of MSYS2)". Click "Next".
14. **Choosing the Default Behavior of 'git pull':** Select "Fast-forward or merge". Click "Next".
15. **Choosing Credential Helper:** Select the default option "Git Credential Manager Core". Click "Next".
16. **Configuring Extra Options:** Select "Enable file system caching". Click "Next".
17. **Choosing Experimental Options:** Select both "Enable experimental support for pseudo consoles" and "Enable experimental built-in file system monitor". Click "Next".
18. **Install the Application:** Click "Install" to start the installation process.
19. **Finish Installation:** Once the installation is complete, click "Finish". Git is now installed on your system and ready for use.









GIT ACCOUNT CREATION

1. Visit GitHub's Website: Open your web browser and go to <https://github.com/>

2. Sign Up for a New Account:

- On the GitHub homepage, click on the "Sign up" button located in the upper-right corner of the page.
- You will be redirected to the sign-up page.

3. Enter Your Information:

- Email Address: Enter a valid email address that you have access to. This email will be used for account verification and notifications.
- Password: Create a strong password. GitHub will display the strength of your password as you type.
- Username: Enter a unique username. GitHub will check the availability of the username as you type.

4. Complete the CAPTCHA: To verify that you're not a robot, complete the CAPTCHA challenge if prompted.

5. Verify Your Email Address:

- GitHub will send a verification email with a code to the email address you provided.
- Check your email inbox for the verification message from GitHub.
- Enter the verification code from the email into the provided boxes on the GitHub website to verify your email address.

6. Set Up Your Profile:

- Once your account is verified, you can set up your GitHub profile.
- Click on your profile picture in the upper-right corner of the GitHub interface.
- Select "Settings" from the dropdown menu.
- In the Settings page, navigate to "Profile" settings.
- Here, you can add a profile picture, bio, and other optional information to personalize your GitHub profile.

7. Explore GitHub:

- After setting up your profile, you can start exploring GitHub.
- Create new repositories to store your projects.
- Follow other developers to stay updated on their activities.
- Star repositories you find interesting to bookmark them.

- Contribute to open-source projects by submitting pull requests and participating in discussions.

8. Secure Your Account:

- For added security, it is recommended to enable two-factor authentication (2FA).
- To enable 2FA, go to "Settings" from your profile menu.
- Navigate to "Security" settings.
- Follow the instructions provided to set up 2FA using an authentication app or SMS.

PYTHON INSTALLATION

1. Download Python Installer:

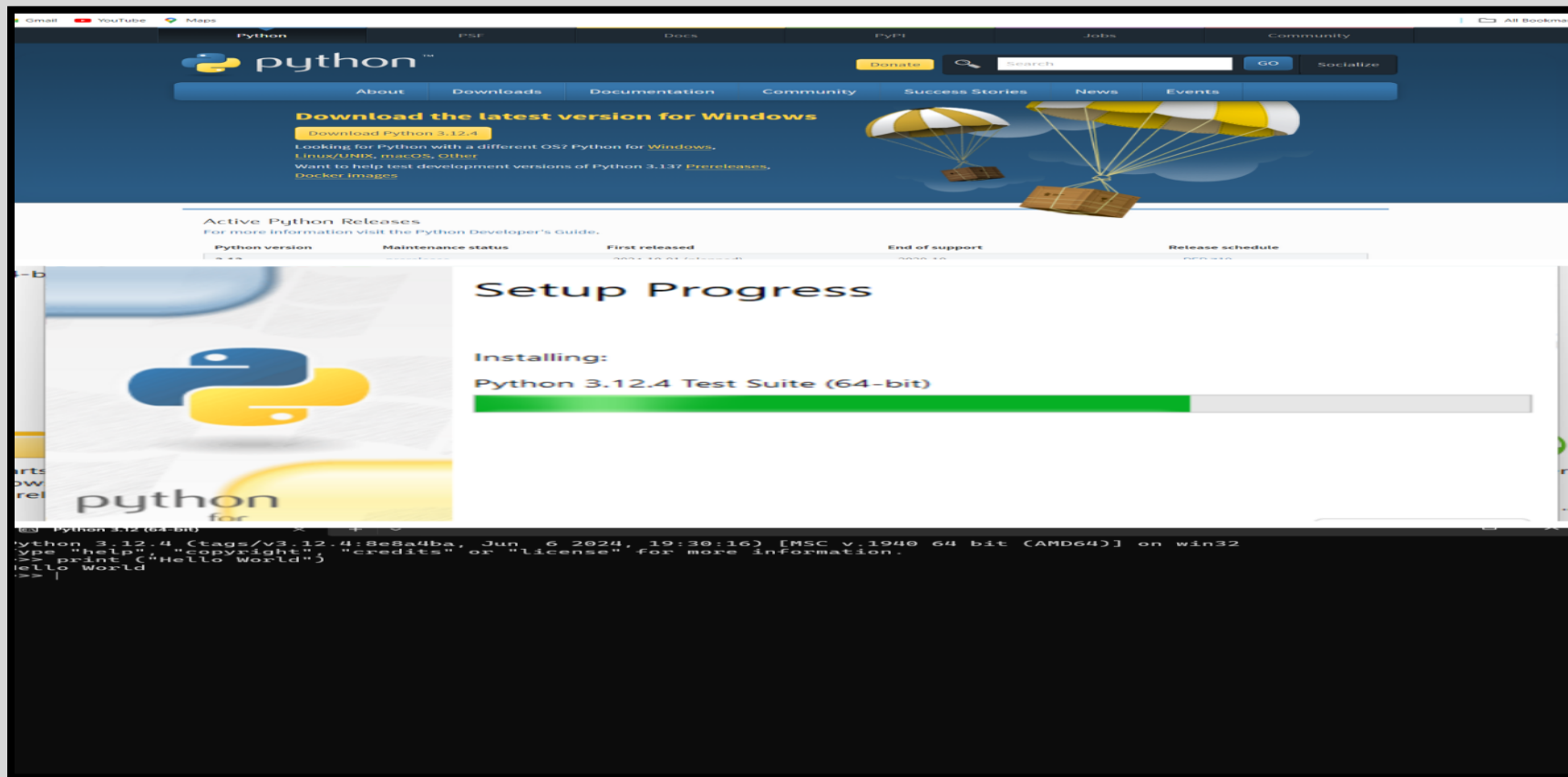
- Go to the official Python website: <https://www.python.org/downloads/>
- Click on the "Download Python" button that corresponds to the latest stable release

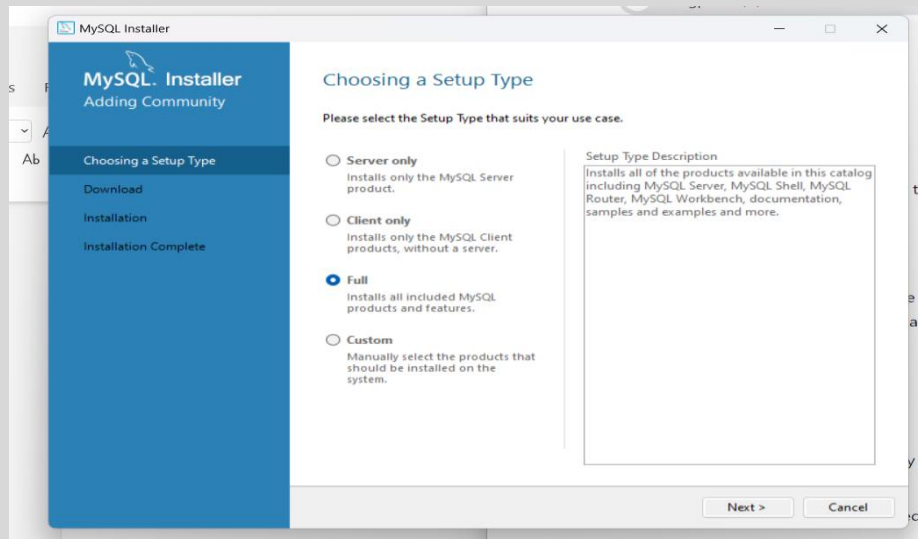
2. Run the Installer:

- Once the download completes, run the installer file
- Check the box that says "Add Python x.x to PATH" during the installation process.
- Click "Install Now" to start the installation.

3. Verify Installation:

- Open Command Prompt (cmd.exe).
- Type `python --version` and press Enter. This is to confirm the installed Python version.





MYSQL INSTALLATION

Step 1: Go to the MySQL Website Open your preferred web browser.

Navigate to the MySQL Downloads page.

Step 2: Download MySQL Installer

On the MySQL Downloads page, click on the MySQL Installer for Windows.

Choose the installer type that best fits your needs (typically the Windows (x86, 32-bit), MSI Installer).

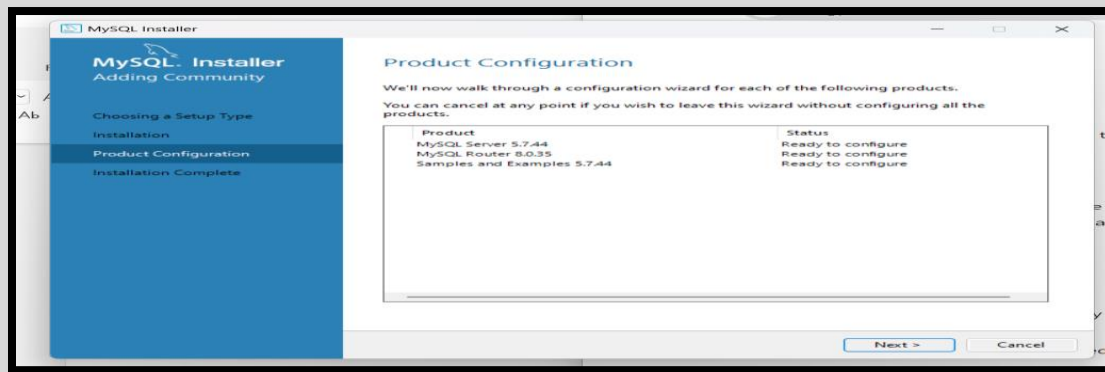
Click the Download button next to the appropriate installer version.

Step 3: Open the Installer

Once the download is complete, locate the installer file in your downloads folder.

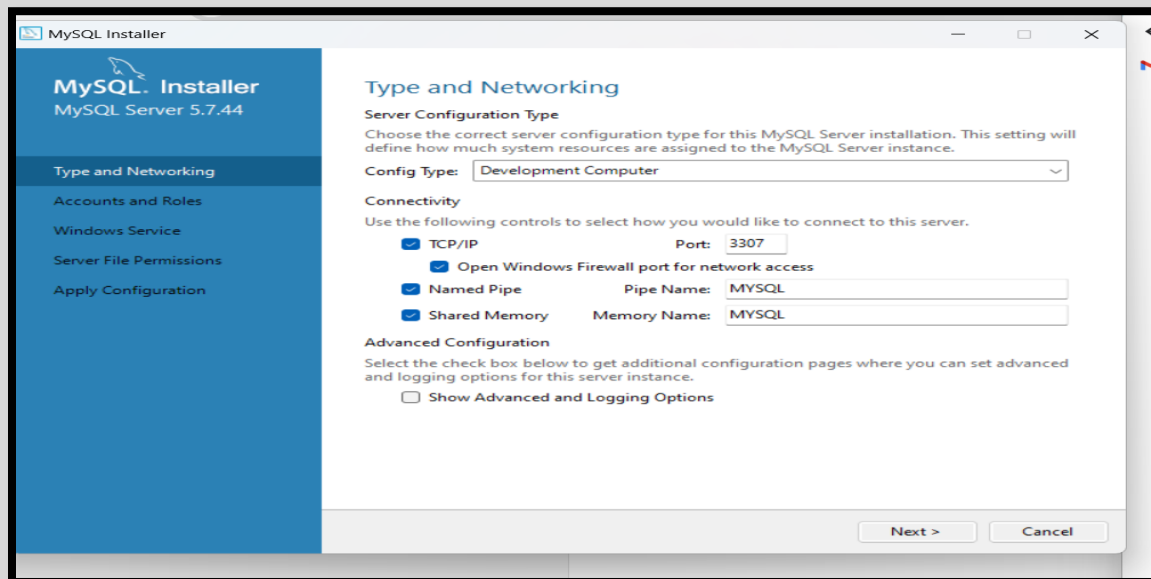
Step 4: Setup Type

The MySQL Installer will open. On the Choosing a Setup Type page, select Full to install all available MySQL products and features. Click Next. Double-click the installer file to run it.



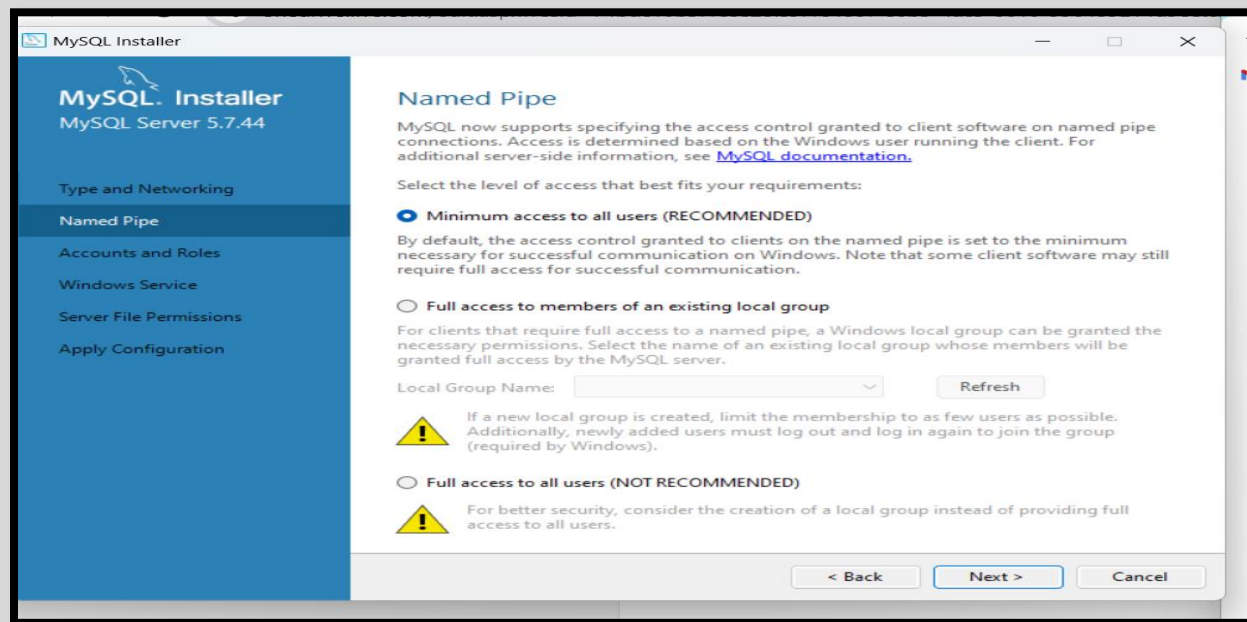
Step 5: Product Configuration

- On the **Select Products and Features** page, ensure that all desired products are selected.



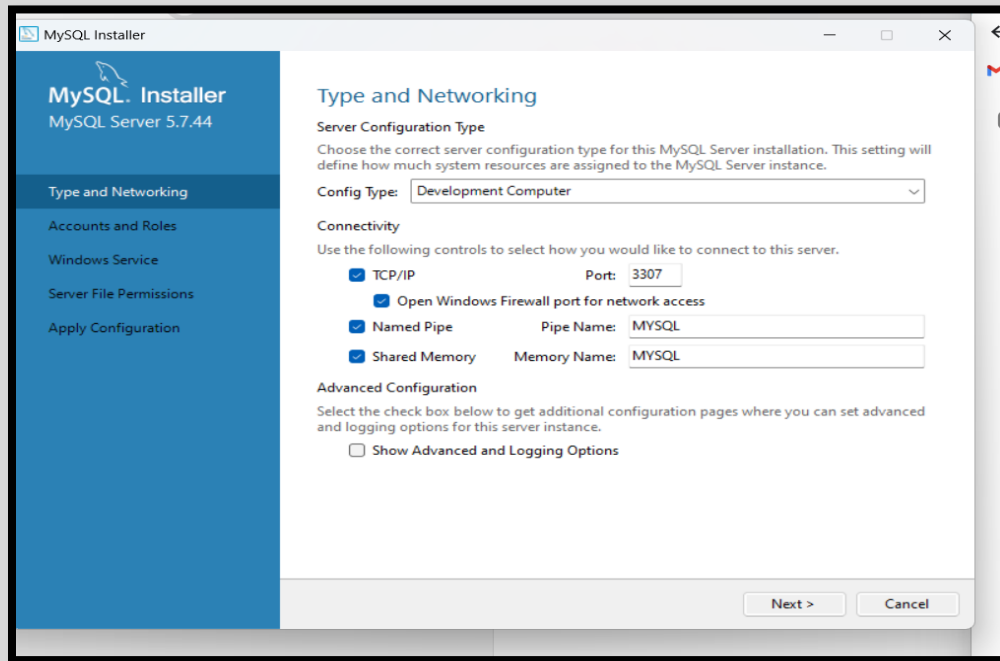
Step 6: Type of Network

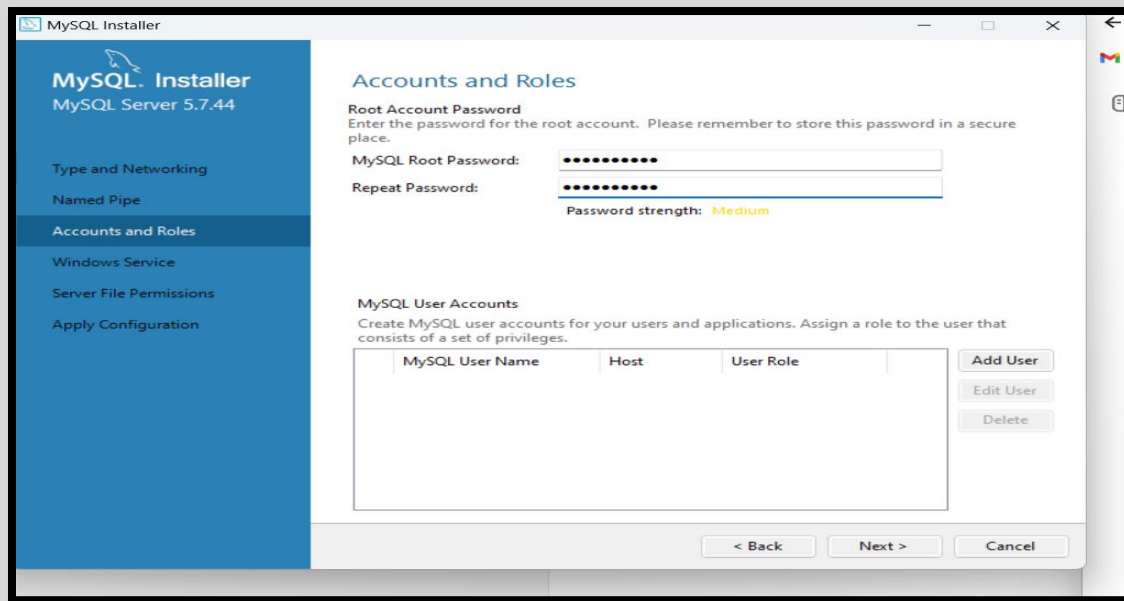
- On the **Type and Networking** page, select **Development Machine**. This setting is optimized for developers and provides a balanced setup.
- Under **Connectivity**, select **Open Windows Firewall port for network access**. This ensures MySQL can communicate through your firewall.
- Check the **Named Pipe** option. This allows local clients to connect to the server using a named pipe.
- Check the **Shared Memory** option. This allows local connections using shared memory.
- Click **Next**.



Step 7: Named Pipe Configuration

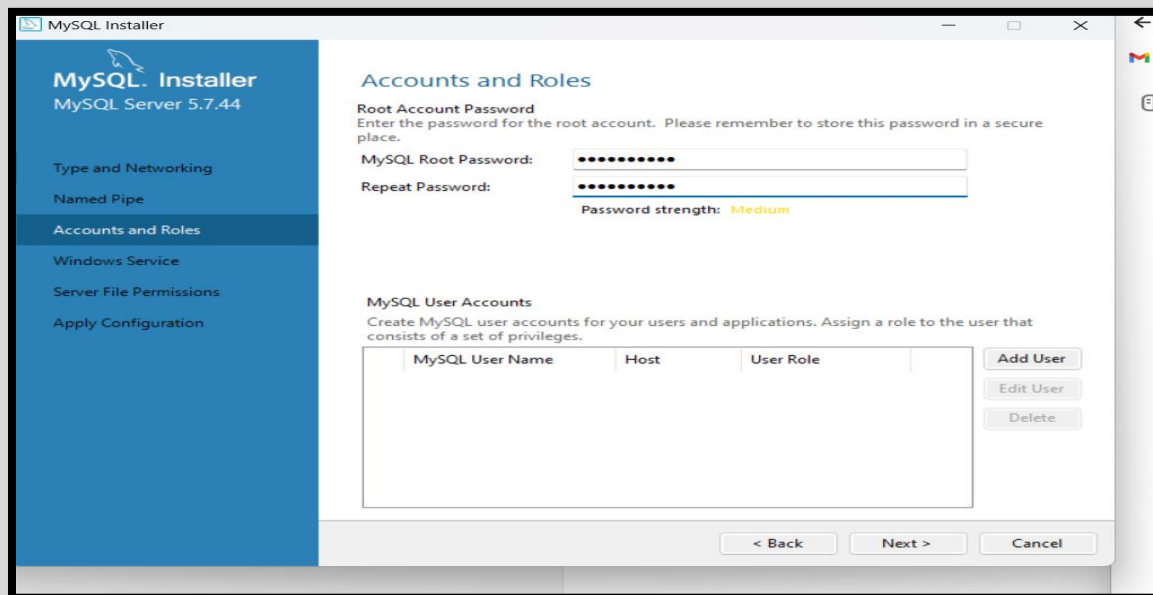
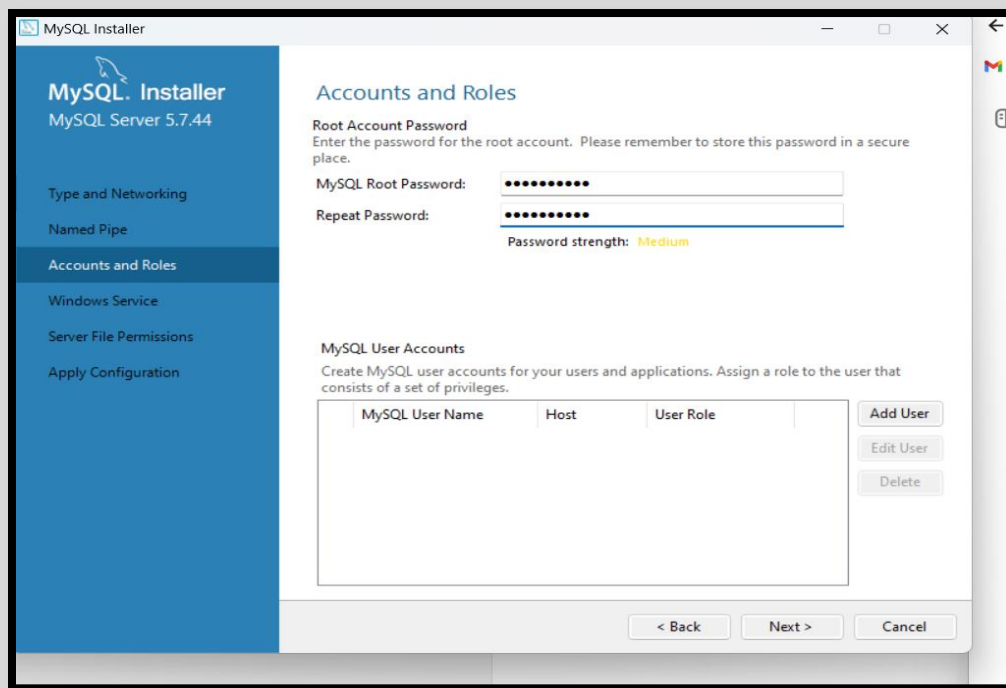
- On the Authentication Method page, leave the default options selected.
- Click Next.

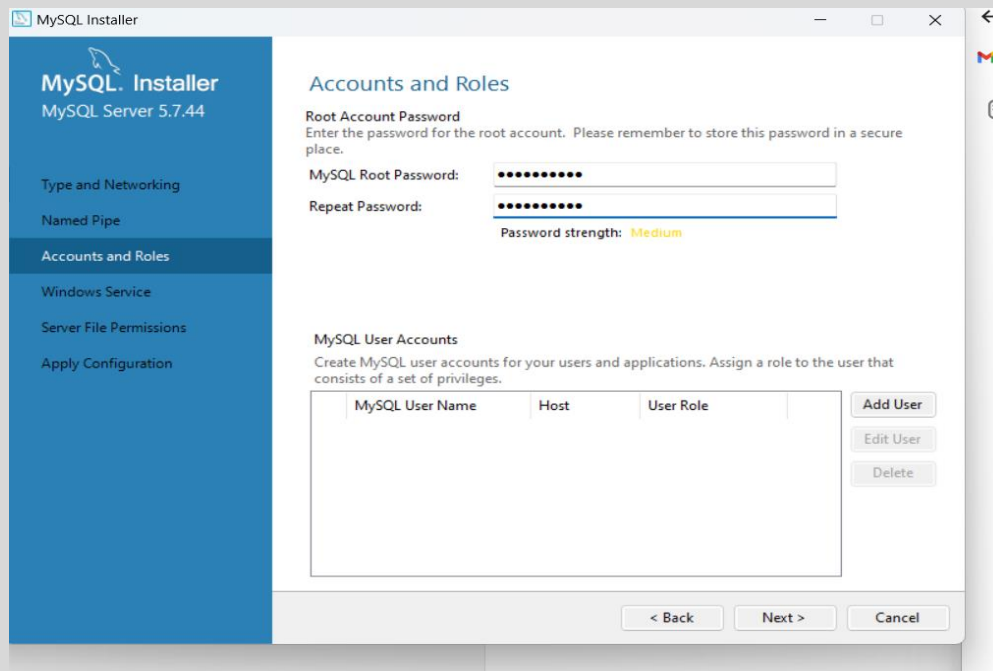




Step 8: Accounts and Roles

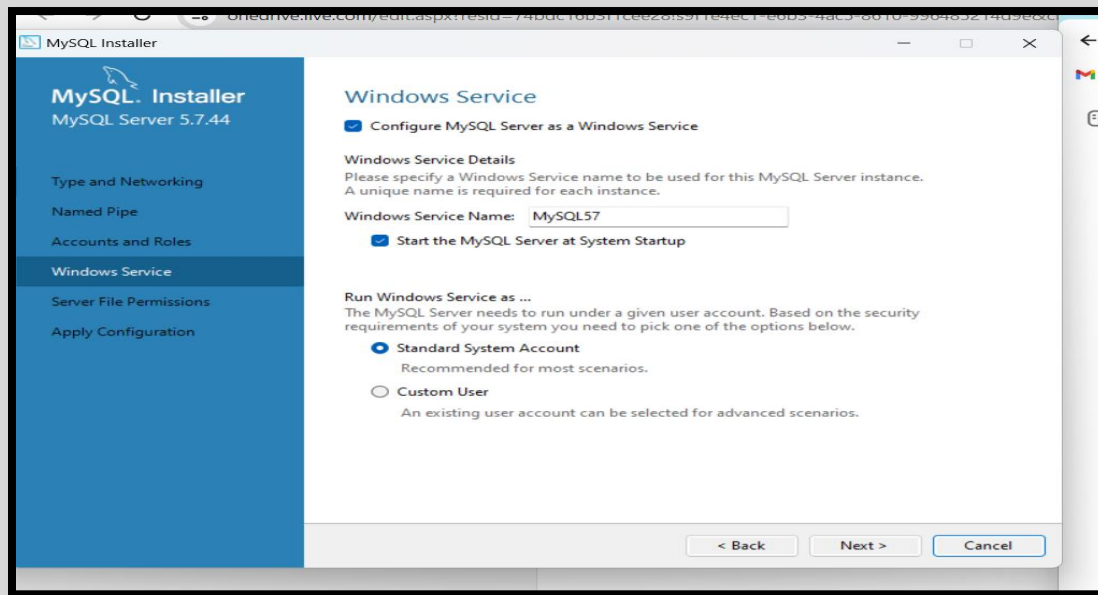
- On the **Accounts and Roles** page, enter a secure password for the root account in the **Root Password** and **Confirm Password** fields. This password will be used to access the MySQL server.
- Optionally, you can create additional MySQL user accounts and roles here, but it's not required.
- Click **Next**.





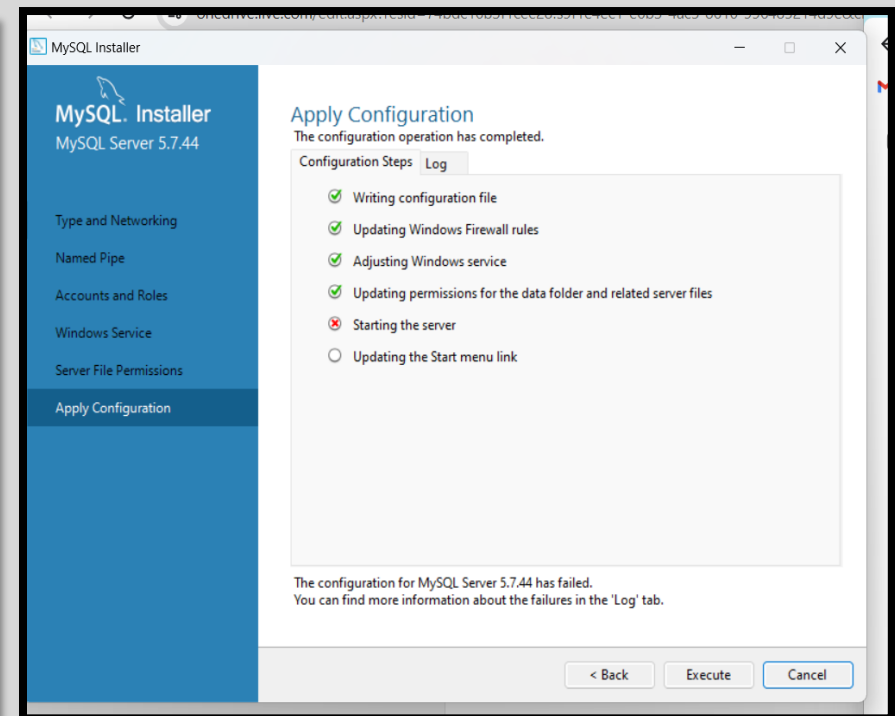
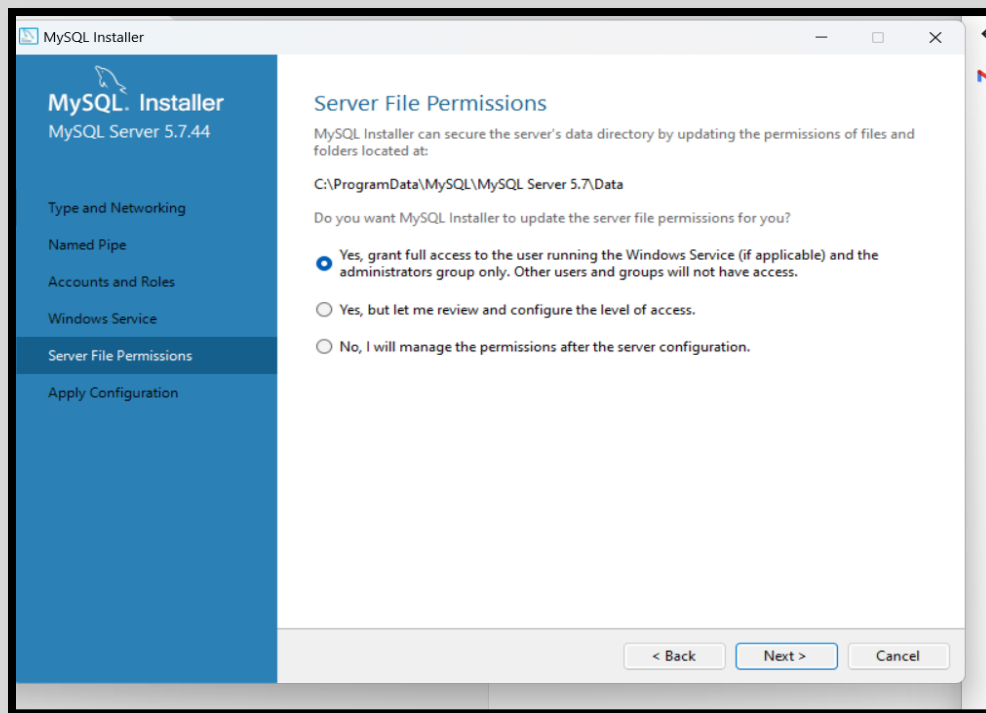
Step 9: Windows Services

- On the **Windows Service** page, check the box **Start the MySQL Server at System Startup** to ensure MySQL starts automatically when your computer boots up.
- Select **Standard System Account** to run the MySQL service with standard system privileges.
- Click **Next**.



Step 10: Server File Permissions

- On the **Server File Permissions** page, select **Yes** to allow the MySQL service user full access to the MySQL server files. This is important for proper server operation and management.
- Click **Next**.



Step 11: Apply Configuration

- On the **Apply Configuration** page, review your settings.
- Click **Execute** to apply the configuration. This step will configure MySQL according to the options you selected.
- Once the configuration is complete, click **Finish**.

VIRTUALBOX INSTALLATION

Step 1: Go to the VirtualBox Website

- Open your preferred web browser.
- Navigate to the [VirtualBox downloads page](<https://www.virtualbox.org/wiki/Downloads>).

Step 2: Download VirtualBox

- On the downloads page, find the section for 'VirtualBox platform packages'.
- Choose the appropriate installer for your operating system:
 - 'Windows hosts': Click the link for Windows.
 - 'OS X hosts': Click the link for macOS.
 - 'Linux distributions': Follow the instructions for your specific Linux distribution.
- Click the link to download the installer.

Step 3: Open the Installer

- Once the download is complete, locate the installer file in your downloads folder.
- Double-click the installer file to run it.

Step 4: Start the Installation Process

- The VirtualBox Installer window will open. Click 'Next' to begin the installation process.

Step 5: Choose Install Location

- On the 'Custom Setup' page, you can choose the installation location. By default, it will install in `C:\Program Files\Oracle\VirtualBox\` (on Windows). If you wish to change the location, click 'Browse' and select a new location.
- Click 'Next'.

Step 6: Select Features

- On the 'Custom Setup' page, you can select which features to install. The default options are usually sufficient.
- Click 'Next'.

Step 7: Create Shortcuts

- On the 'Create Shortcuts' page, you can choose to create shortcuts in the Start Menu and on the desktop.
- Select the desired options and click 'Next'.

Step 8: Network Interfaces Warning

- You will receive a warning about network interfaces being reset temporarily during the installation process. This is normal.
- Click 'Yes' to proceed.

Step 9: Ready to Install

- On the 'Ready to Install' page, review your settings.
- Click 'Install' to begin the installation process.

Step 10: User Account Control

- If prompted by User Account Control (UAC), click 'Yes' to allow the installation to proceed.

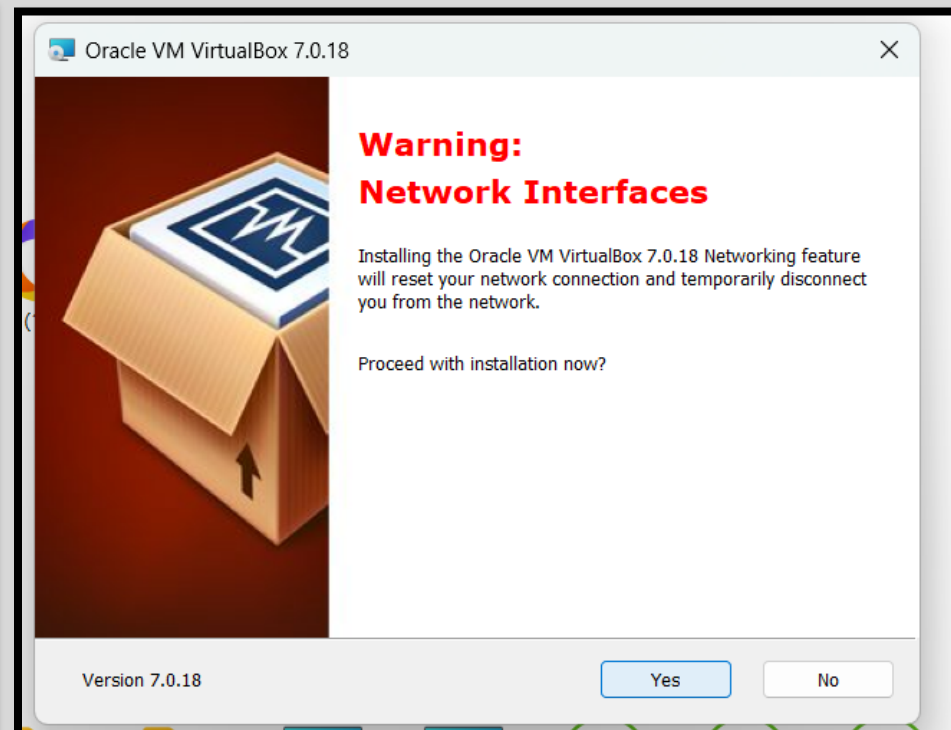
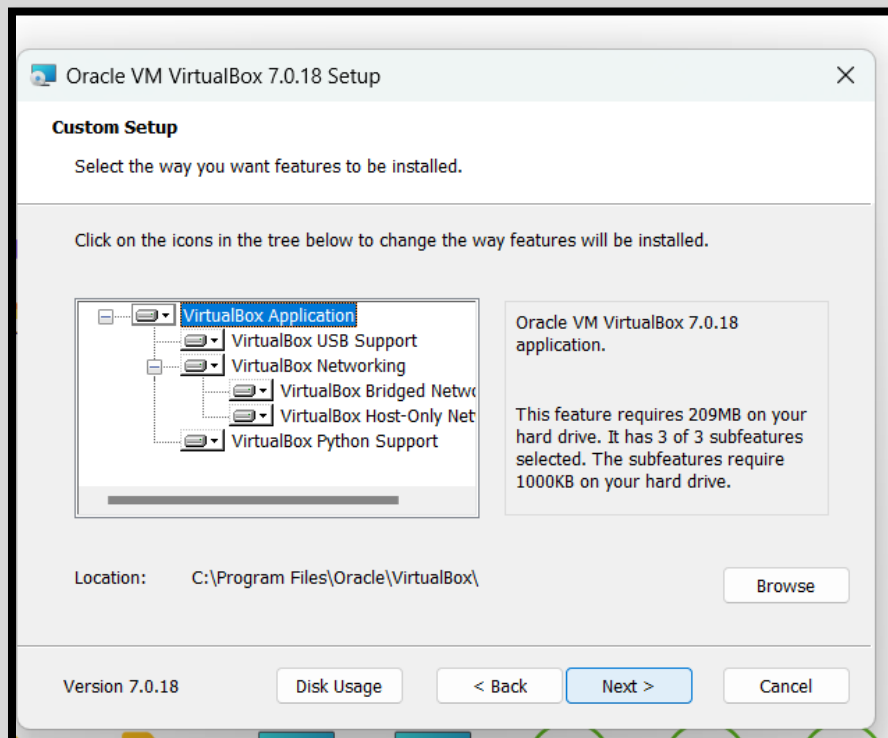
Step 11: Complete Installation

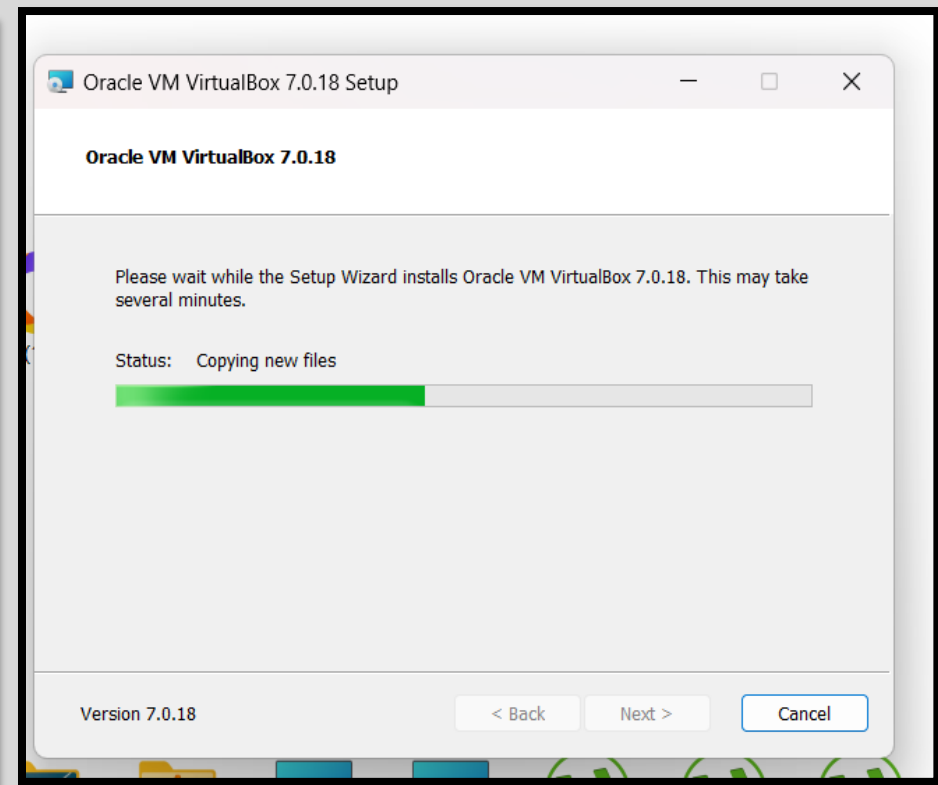
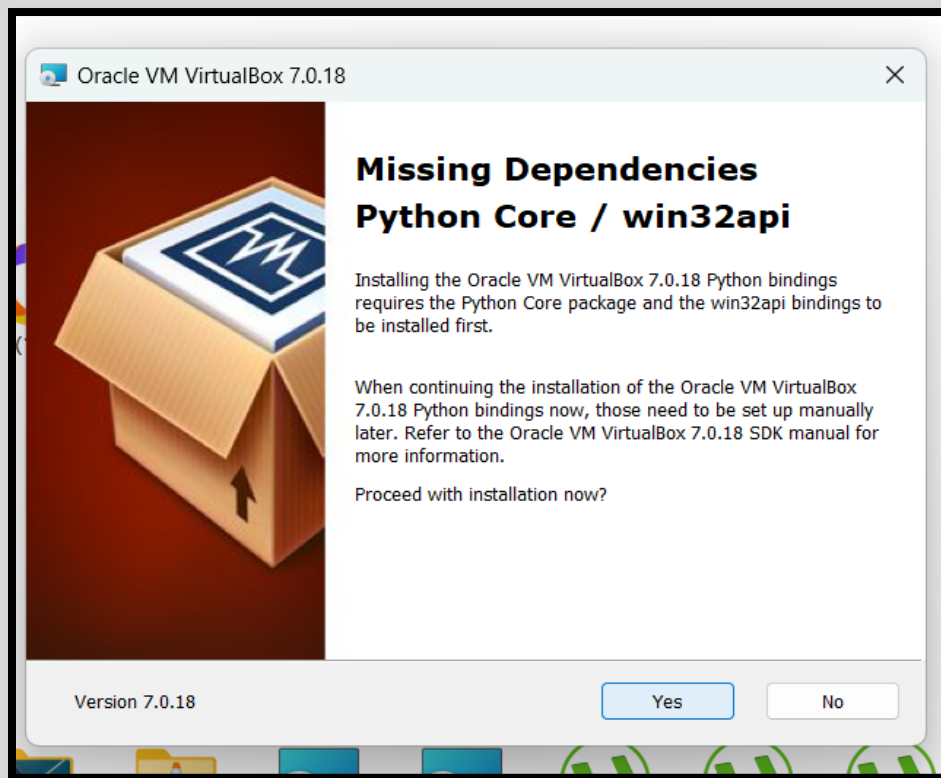
- Once the installation is complete, you will see the 'Installation Complete' page.
- Ensure that the option 'Start Oracle VM VirtualBox after installation' is checked if you want to launch VirtualBox immediately.
- Click 'Finish'.

Step 12: Launch VirtualBox

- If you didn't choose to launch VirtualBox immediately, you can start it from the Start Menu (Windows) or Applications folder (macOS).
- Once VirtualBox is open, you can start creating and managing virtual machines.

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EXTENSIONS INSTALLED

1. **GitLens:** Enhances my workflow by providing detailed insights into my repository right within VS Code. I can easily see who made changes to specific lines of code, navigate through commit histories, and even compare branches effortlessly. It's a must-have for anyone working with Git repositories.
2. **Pylance/PyScript:** Pylance supercharges VS Code with advanced Python language support, including intelligent code completion (IntelliSense), real-time error checking, and helpful suggestions for refactoring. It helps me write cleaner and more efficient Python code, improving my overall productivity.


3. **Markdownlint:** Markdown, Markdownlint automatically checks my Markdown files for formatting inconsistencies and adherence to best practices. This ensures that my documentation is well-structured and easy to read, maintaining a high standard of clarity and consistency.
4. **Python Extension for Visual Studio Code:** This extension provides a rich Python development experience in VS Code. It includes a powerful Python debugger that allows me to set breakpoints, inspect variables, and step through my code to debug issues efficiently. It also offers features like code refactoring, unit testing support, and integration with Jupyter notebooks, making it essential for my Python projects.
5. **Tabulate:** When I need to present data in a clear and structured way, Tabulate will be my go-to extension. It formats Python data into neat tables directly within VS Code, supporting various output formats such as plain text, Markdown, HTML, and more. This makes it easy to visualize and share tabular data without leaving the editor.



GitLens — Git supercharged v15.1.0

GitKraken [gitkraken.com](#) | 32,709,886 | ★★★★★ (803)

Supercharge Git within VS Code — Visualize code authorship at a glance via Git blame annotations and CodeLens, seamle...

Installing 

★ This extension is recommended because you have Git installed.

DETAILS FEATURES CHANGELOG

GitLens — Supercharge Git in VS Code

Supercharge Git and unlock **untapped knowledge** within your repository to better **understand, write, and review** code. Focus, collaborate, accelerate.

GitLens is a powerful **open-source** extension for **Visual Studio Code**.

GitLens supercharges your Git experience in VS Code. Maintaining focus is critical, extra time spent context switching or missing context disrupts your flow. GitLens is the ultimate tool for making Git work for you, designed to improve focus, productivity, and collaboration with a powerful set of tools to help you and your team better understand, write, and review code.

Categories

SCM Providers


Resources

Marketplace
Issues
Repository
License
GitKraken

More Info

PROBLEMS OUTPUT DEBUG CONSOLE **TERMINAL** PORTS COMMENTS




PS C:\Users\nogem\github-classroom\Powerlearnproject\se-assignment-1-setting-up-your-developer-environment-SiphosethuNogemane>



pyscript v0.1.1

Hardeep Singh | 42,658 | ★★★★★ (5)

Code Highlighter for PyScript

Disable  Uninstall  

Disable this extension

DETAILS FEATURES CHANGELOG

PyScript extension for Visual Studio Code

Beautiful syntax and scoped snippets for pyscript

```
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <title>PyScript VS Code Extension</title>
5     <meta charset="UTF-8">
6     <meta name="viewport" content="width=device-width, initial-scale=1">
7     <link href="css/style.css" rel="stylesheet">
8     <link rel="stylesheet" href="https://pyscript.net/alpha/pyscript.css">
9     <script defer src="https://pyscript.net/alpha/pyscript.js"></script>
```

Categories


Programming Languages
Snippets

Resources

Marketplace
Issues
Repository
License
Hardeep Singh

PROBLEMS OUTPUT DEBUG CONSOLE **TERMINAL** PORTS GITLENS COMMENTS

PS C:\Users\nogem\github-classroom\Powerlearnproject\se-assignment-1-setting-up-your-developer-environment-SiphosethuNogemane>




markdownlint

v0.55.0

David Anson | 7,044,490 | ★★★★★ (74) | Sponsor

Markdown linting and style checking for Visual Studio Code

Installing 

★ This extension is recommended based on the files you recently opened.

DETAILSFEATURESCHANGELOG

markdownlint

Markdown/CommonMark linting and style checking for Visual Studio Code

Introduction

The [Markdown](#) markup language is designed to be easy to read, write, and understand. It succeeds - and its flexibility is both a benefit and a drawback. Many styles are possible, so formatting can be inconsistent. Some constructs don't work well in all parsers and should be avoided. For example, [here are some common/troublesome Markdown constructs](#).

markdownlint is an extension for the [Visual Studio Code editor](#) that includes a library of rules to encourage

CATEGORIES

LintersFormatters


RESOURCES

MarketplaceIssuesRepositoryLicenseDavid Anson

MORE INFO

PROBLEMSOUTPUTDEBUG CONSOLETERMINALPORTSGITLENSCOMMENTS

PS C:\Users\nogem\github-classroom\Powerlearnproject\se-assignment-1-setting-up-your-developer-environment-SiphosethuNogemane>




Pylance

v2024.6.1

Microsoft | microsoft.com | 98,331,542 | ★★★★★ (228)

A performant, feature-rich language server for Python in VS Code

DisableUninstallSwitch to Pre-Release Version

DETAILSFEATURESCHANGELOGDEPENDENCIES

Pylance

Fast, feature-rich language support for Python

Pylance is an extension that works alongside Python in Visual Studio Code to provide performant language support. Under the hood, Pylance is powered by [Pyright](#), Microsoft's static type checking tool. Using Pyright, Pylance has the ability to supercharge your Python IntelliSense experience with rich type information, helping you write better code faster.

Pylance is the default language support for [Python in Visual Studio Code](#) and is shipped as part of that extension as an optional dependency.

The Pylance name is a small ode to Monty Python's Lancelot who was the first knight to answer the bridgekeeper's

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Python Debugger

v2024.6.0

Microsoft [microsoft.com](#) | 33,309,994 | ★★★★★ (5)

Python Debugger extension using debugpy.

Disable

Uninstall

Switch to Pre-Release Version

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Python Debugger extension for Visual Studio Code

A [Visual Studio Code extension](#) that supports Python debugging with debugpy. Python Debugger provides a seamless debugging experience by allowing you to set breakpoints, step through code, inspect variables, and perform other essential debugging tasks. The debugpy extension offers debugging support for various types of Python applications including scripts, web applications, remote processes, and multi-threaded processes.

Note:

- The Python extension offers the python debugger extension as an optional installation, including it during the setup process.
- This extension is supported for all [actively supported versions](#) of the Python language (i.e., Python >= 3.7).

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powerShell + - [] [X] ... ^ X

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Tabulate

v0.5.0

a5hk | 7,128 | ★★★★★

Tabulates Javascript objects

Disable

Uninstall

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Tabulate

Tabulates Javascript objects. There are five commands `Tabulate`, `Tabulate Right`, `Un-Tabulate`, `Re-Tabulate` and `Re-Tabulate Right`.

Tabulate

To left align values:

Tabulate Right

To right align values:

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powerShell + - [] [X] ... ^ X

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a5hk

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REFLECTION ON INSTALLATION CHALLENGES

Challenge 1: Lack of Installation Disk for Windows

One of the initial challenges I faced was the absence of a physical disk or installation media required for installing Windows. This was a significant hurdle as it is typically necessary to have installation media to proceed with a clean installation or reinstallation of the operating system.

Strategy to Overcome:

To address this challenge, I opted to update my existing Windows installation instead of performing a clean installation. I accessed the Windows Update feature, which allowed me to download and install the latest updates and features directly from the internet. This approach ensured that my system was up-to-date and mitigated the need for physical installation media. By updating Windows, I was able to proceed with the installation process without any further issues.

Challenge 2: MySQL Configuration Failure

Another challenge arose during the installation of MySQL. After completing the initial setup steps, I encountered an error indicating that the configuration for MySQL had failed. This was a critical issue as it prevented the MySQL server from being properly set up and ready for use.

Strategy to Overcome:

To overcome this issue, I took the following steps:

1. **Re-running the MySQL Installer:** I decided to re-run the MySQL installer. During the re-run, I carefully reviewed each configuration step to ensure that all settings were correct and no errors were overlooked.
2. **Checking for Conflicting Software:** I ensured that no other software or services were conflicting with the MySQL installation. Sometimes, other database services or network configurations can interfere with the MySQL setup.
3. **Reviewing Error Logs:** I reviewed the error logs generated during the failed configuration attempt. These logs provided detailed information about what went wrong and helped me pinpoint the exact cause of the failure.
4. **Adjusting Configuration Settings:** Based on the insights from the error logs, I adjusted the configuration settings accordingly. This included checking port availability, ensuring proper permissions, and verifying network settings.

