Experiment No.2
To understand Version Control System / Source Code Management, install git and create a GitHub account .
Date of Performance:
Date of Submission:

Aim : To understand Version Control System / Source Code Management, install git and create a GitHub account

Objective: Objective is installing and configuring Git, a popular VCS tool, and creating a GitHub account, thereby enabling effective collaboration, code sharing, and version tracking in software development projects.

Theory :

Version Control System or Source Code Management Tool :

Version control is a system that records changes to a file or set of files over time so that you can recall specific versions later.

Example:

The most common type is a centralized VCS, which uses a server to store all the versions of a file. Developers can check out a file from the server, make changes, and check the file back in.

A source code management system is a software tool that coordinates a software development team's coding work. It may also be called a "version control system" or a "source control system."

Example:

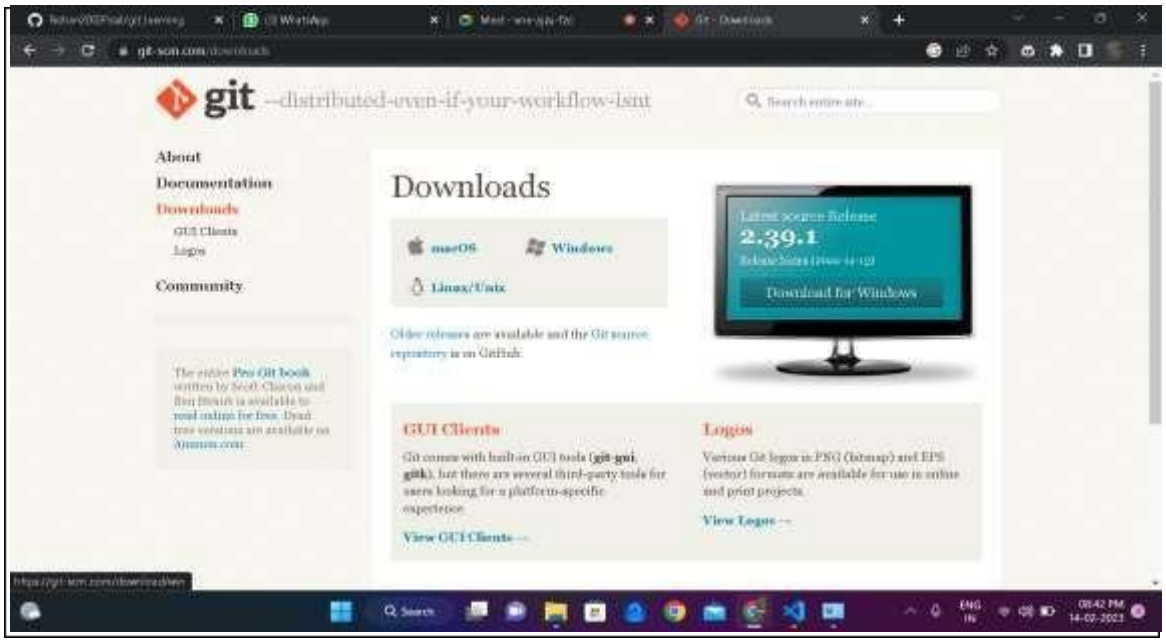
Bitbucket, IBM Rational Clearcase or open source tools such as Github and Apache Subversion

Source control (or version control) is the practice of tracking and managing changes to code. Source control management (SCM) systems provide a running history of code development and help to resolve conflicts when merging contributions from multiple sources.

How to install git?

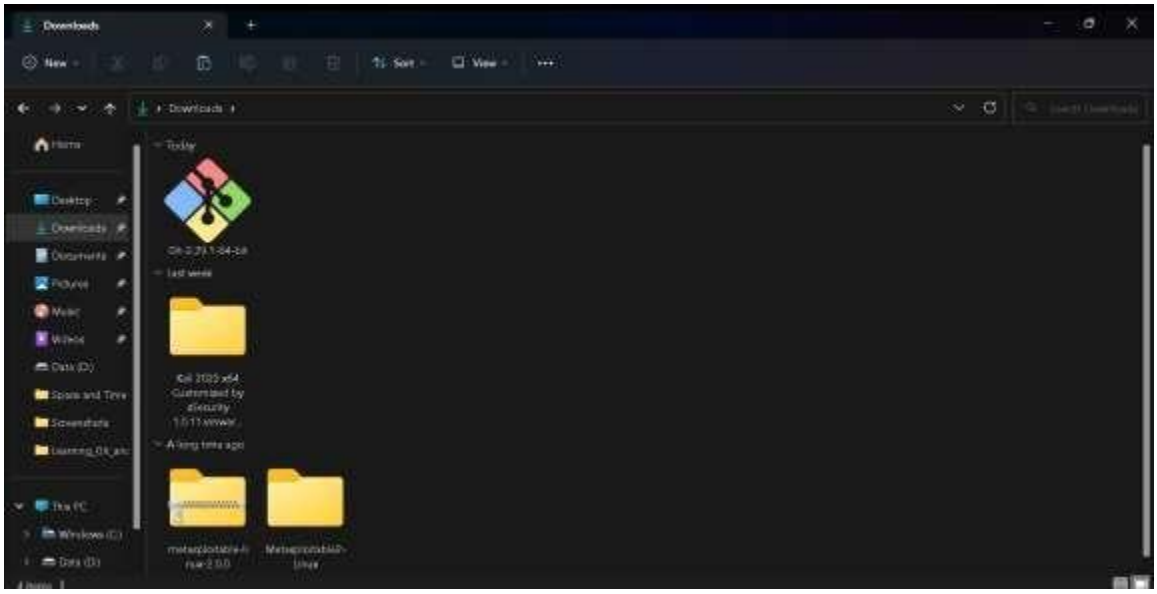
Download for Windows:

- Browse to the official Git website: https://git-scm.com/downloads
- Click the download link for Windows and allow the download to complete.



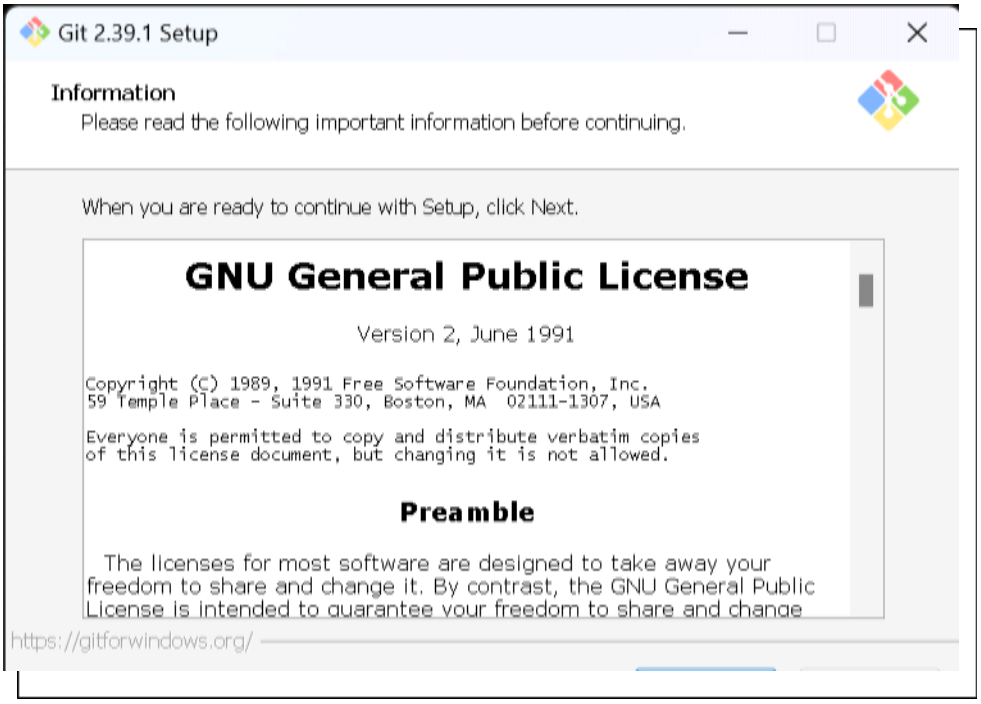
Extract and Launch:

Browse to the download location (or use the download shortcut in your browser). Double-click the file to extract and launch the installer.

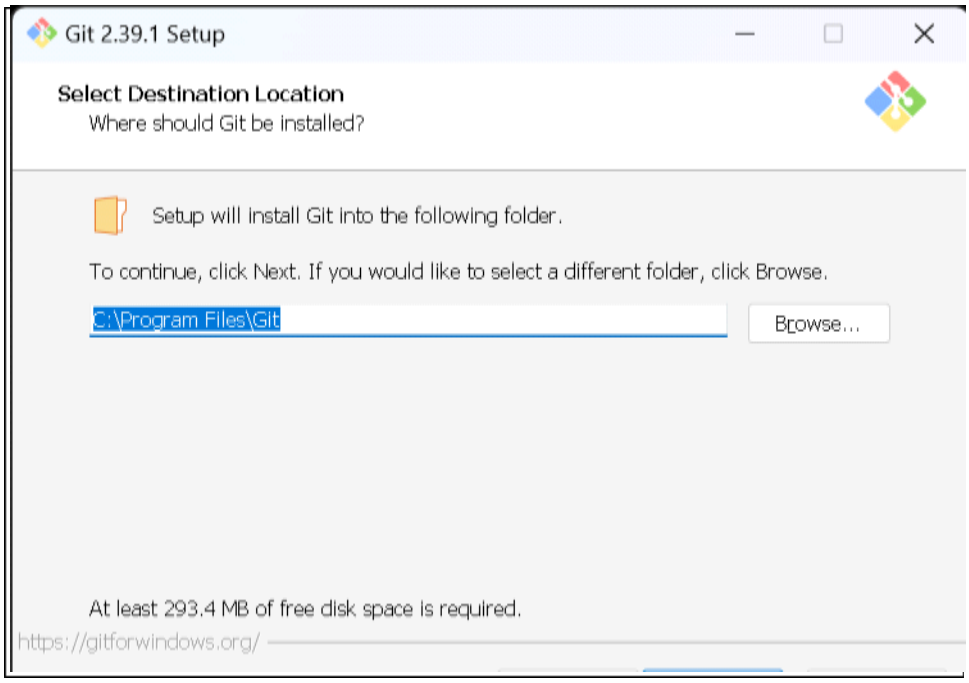


Allow the app to make changes to your device by clicking Yes on the User Account Control dialog that opens.

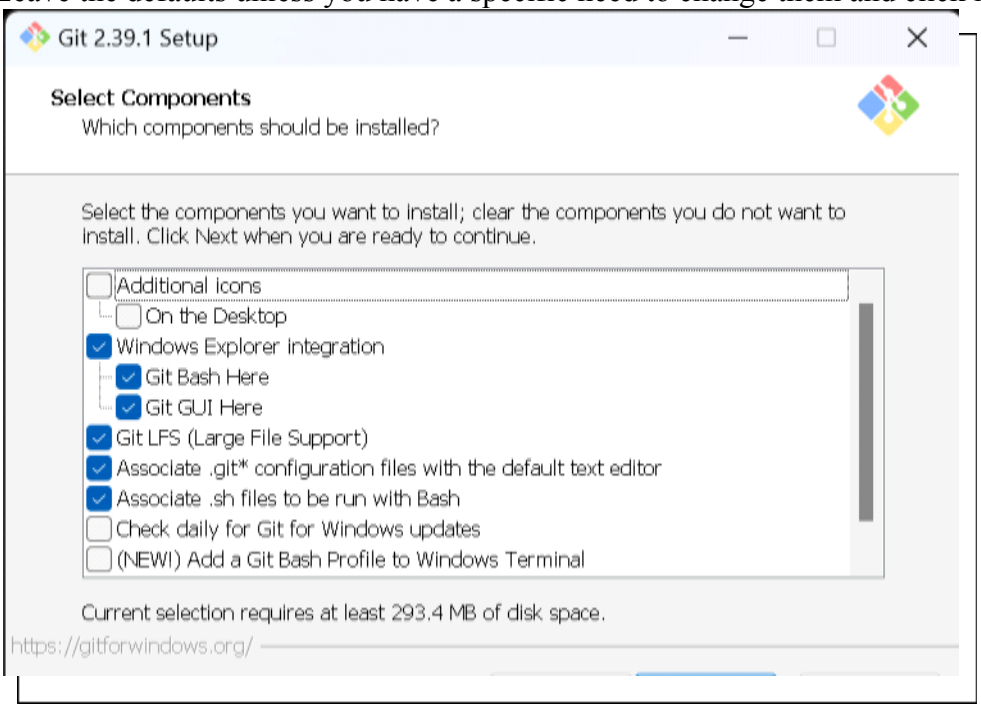
Review the GNU General Public License, and when you're ready to install, click Next.



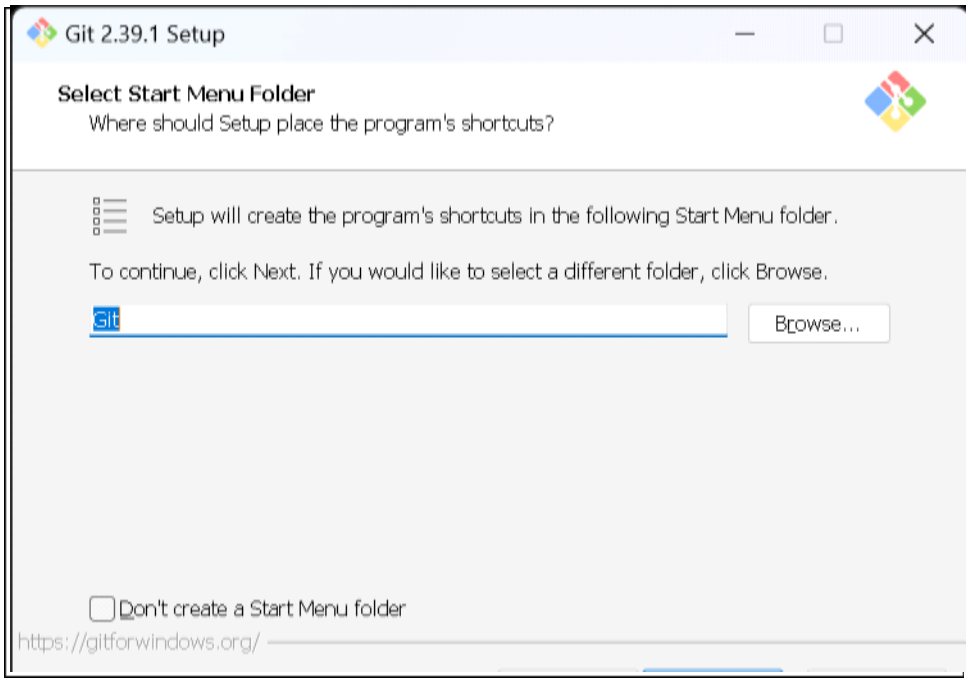
The installer will ask you for an installation location. Leave the default, unless you have reason to change it, and click Next.



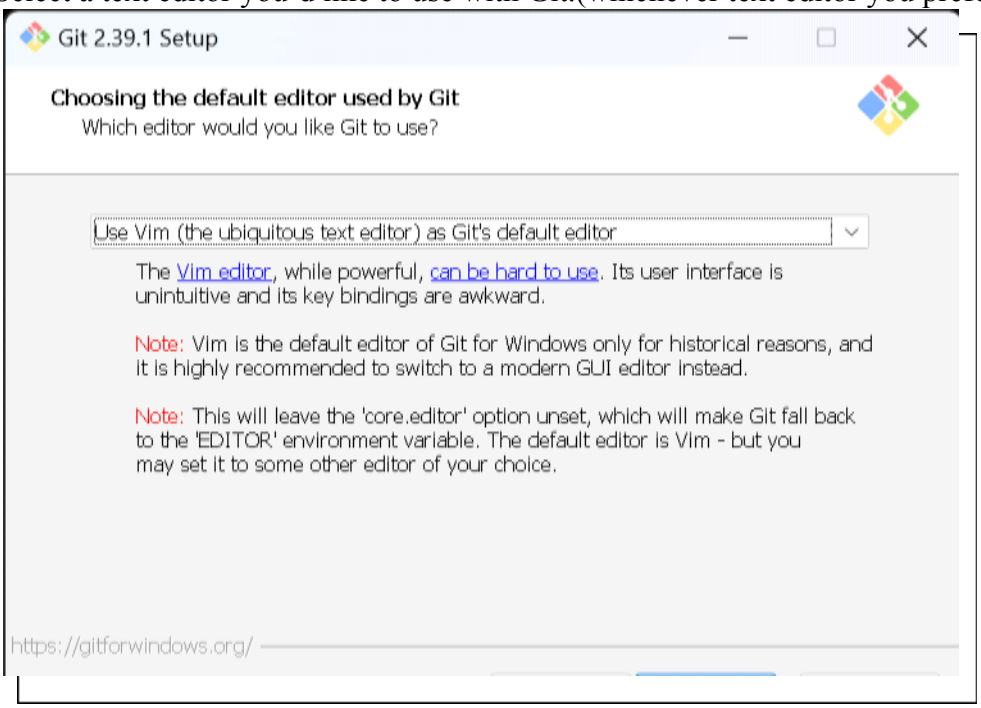
Leave the defaults unless you have a specific need to change them and click Next.



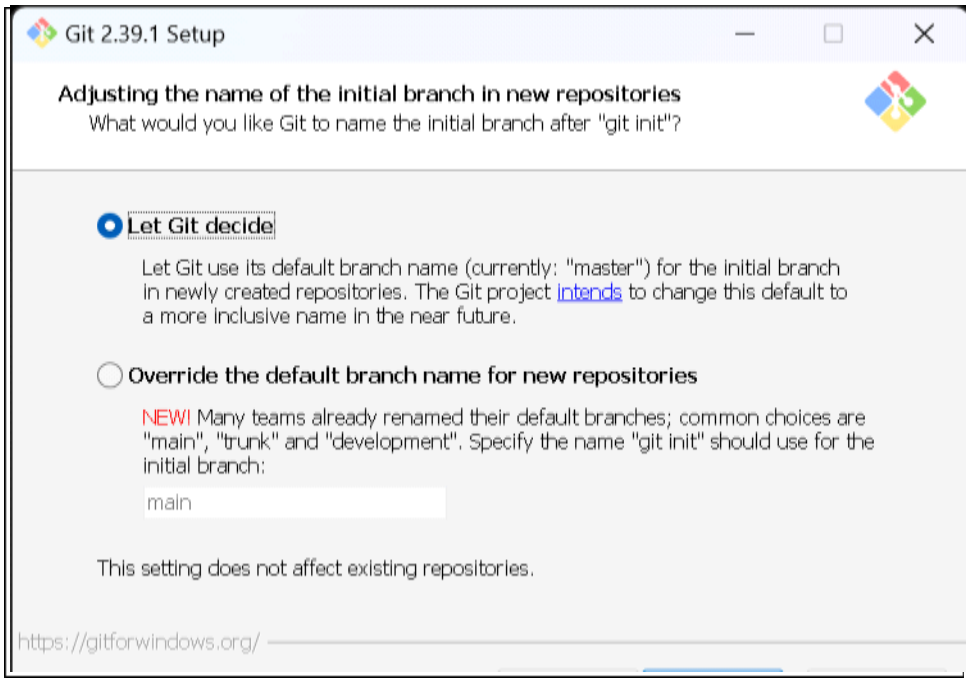
Simply click Next.



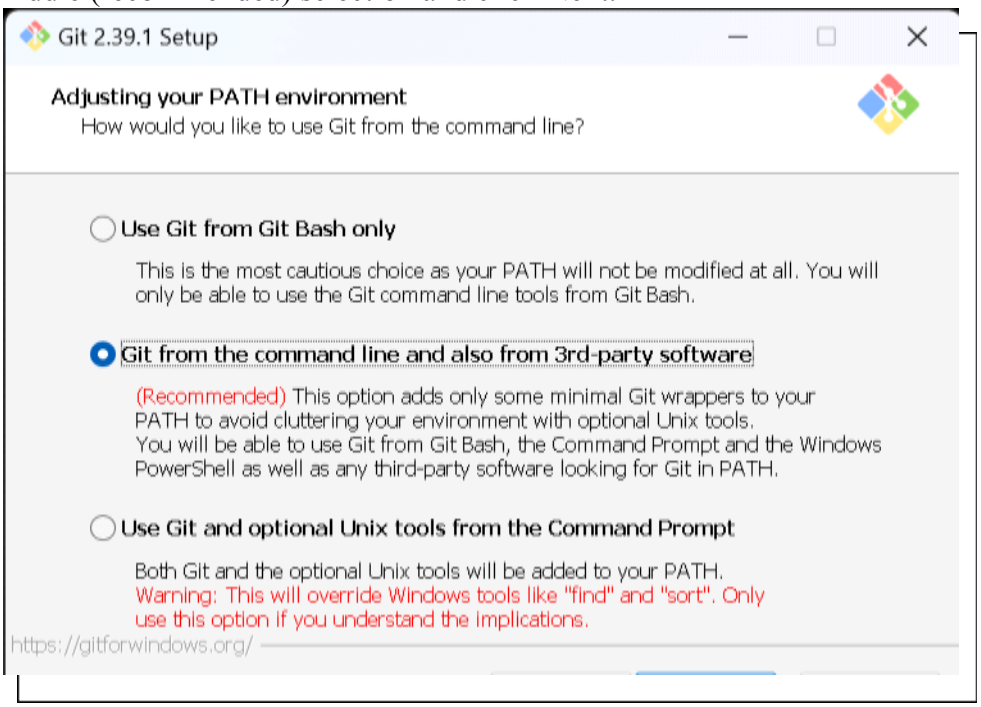
Select a text editor you'd like to use with Git.(whichever text editor you prefer) and click Next



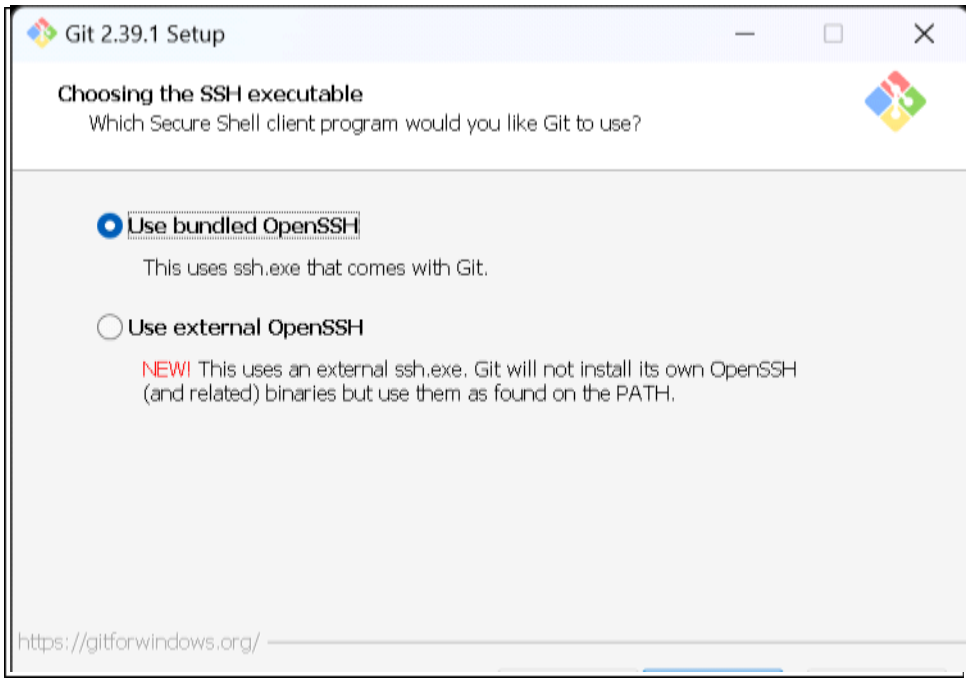
The next step allows you to choose a different name for your initial branch. The default is 'master.' leave the default option and click Next.



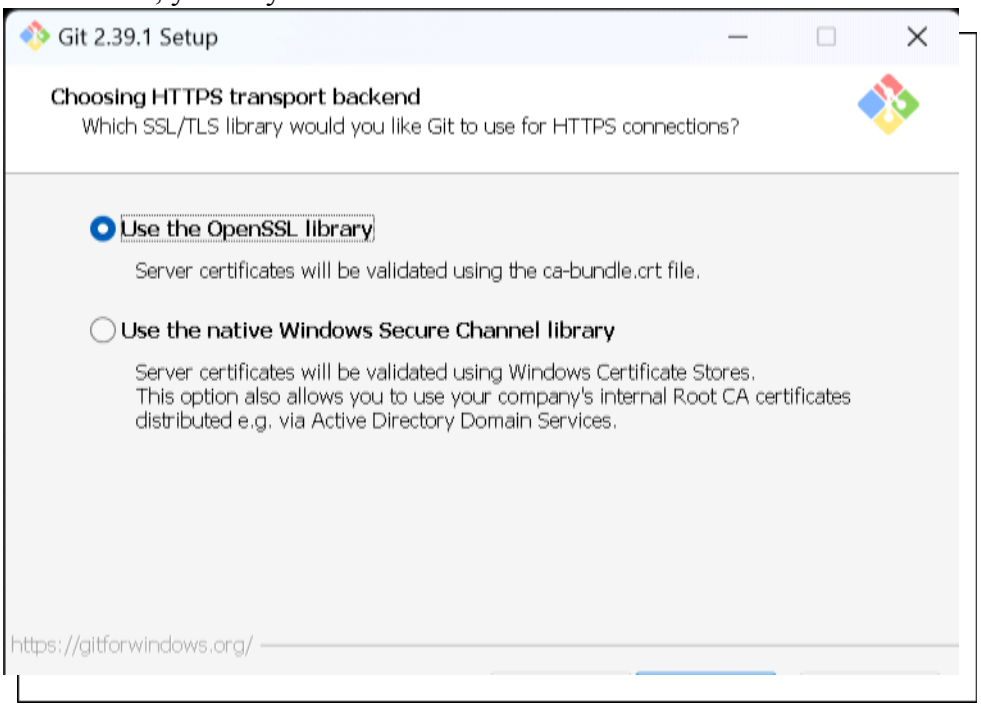
This installation step allows you to change the PATH environment. The PATH is the default set of directories included when you run a command from the command line. Leave this on the middle (recommended) selection and click Next.



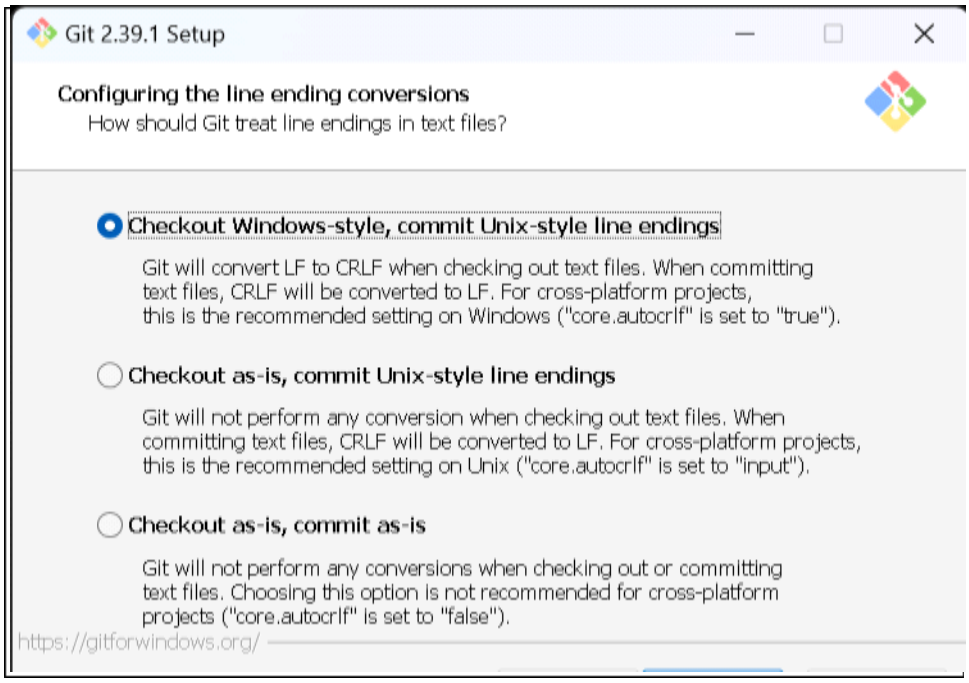
The installer now asks which SSH client you want Git to use. Git already comes with its own SSH client, so if you don't need a specific one, leave the default option and click Next.



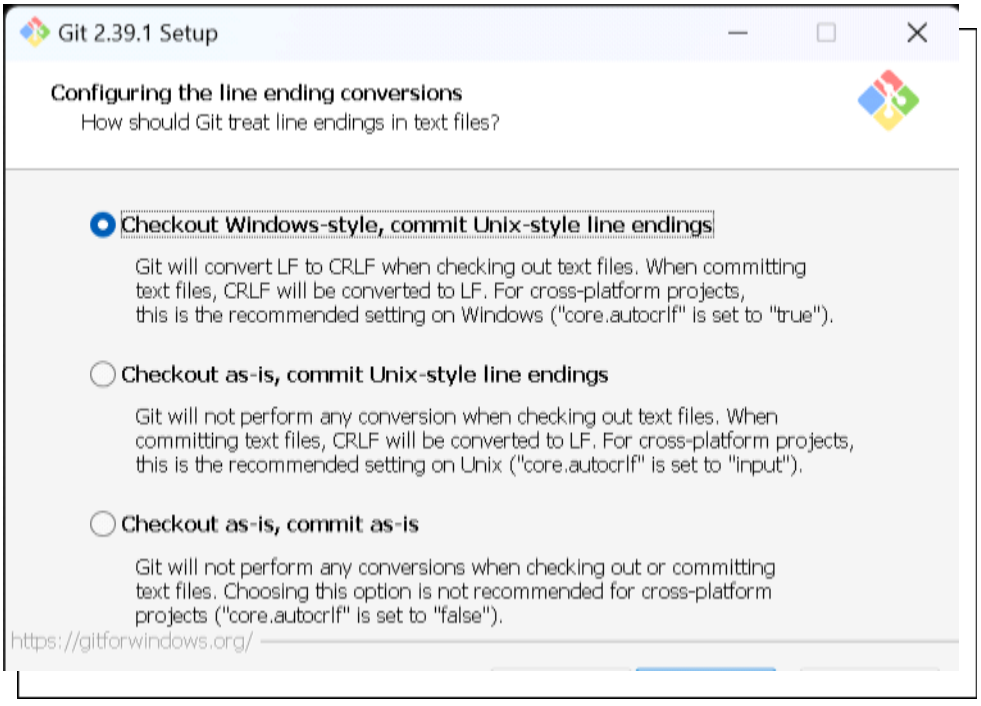
The next option relates to server certificates. If you're working in an Active Directory environment, you may need to switch to Windows Store certificates. Click Next.



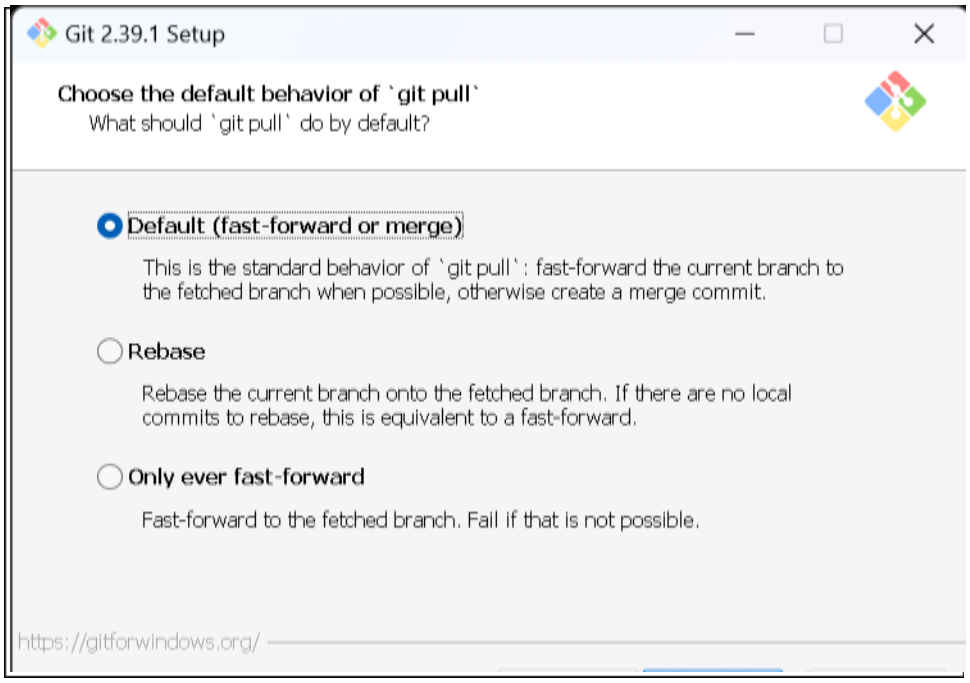
The next selection converts line endings. Click Next.



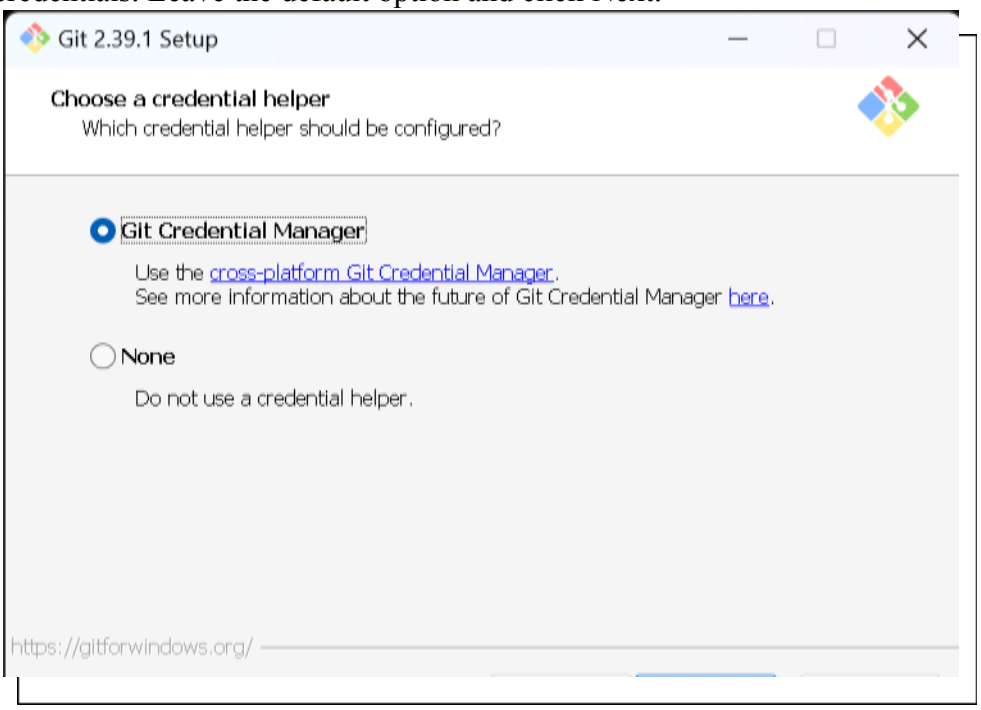
Choose the terminal emulator you want to use. The default MinTTY is recommended, for its features. Click Next.



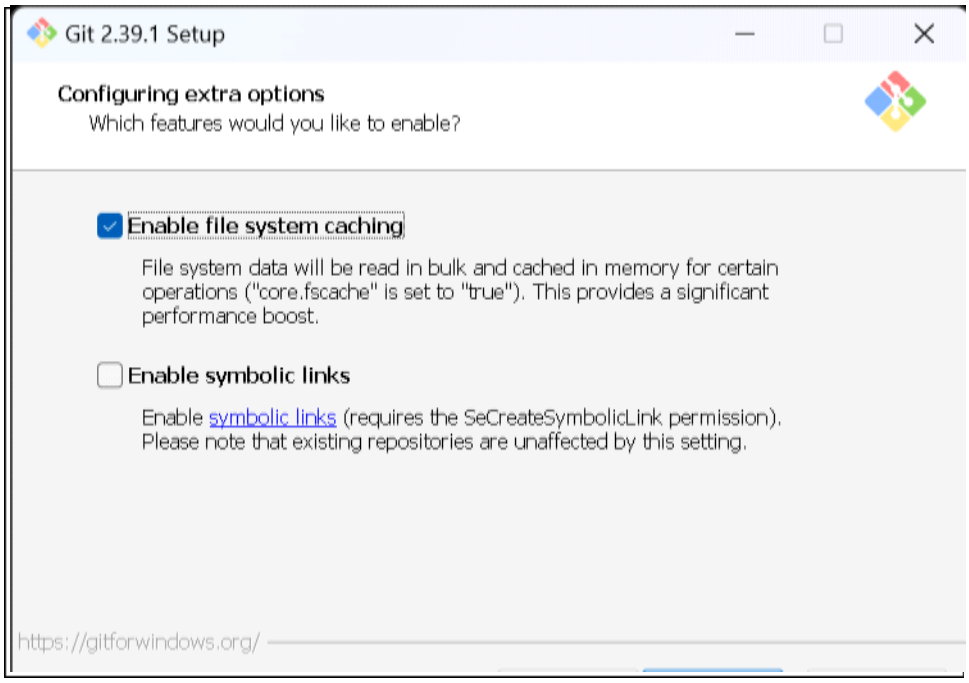
The installer now asks what the git pull command should do. The default option is recommended unless you need to change its behavior. Click Next to continue .



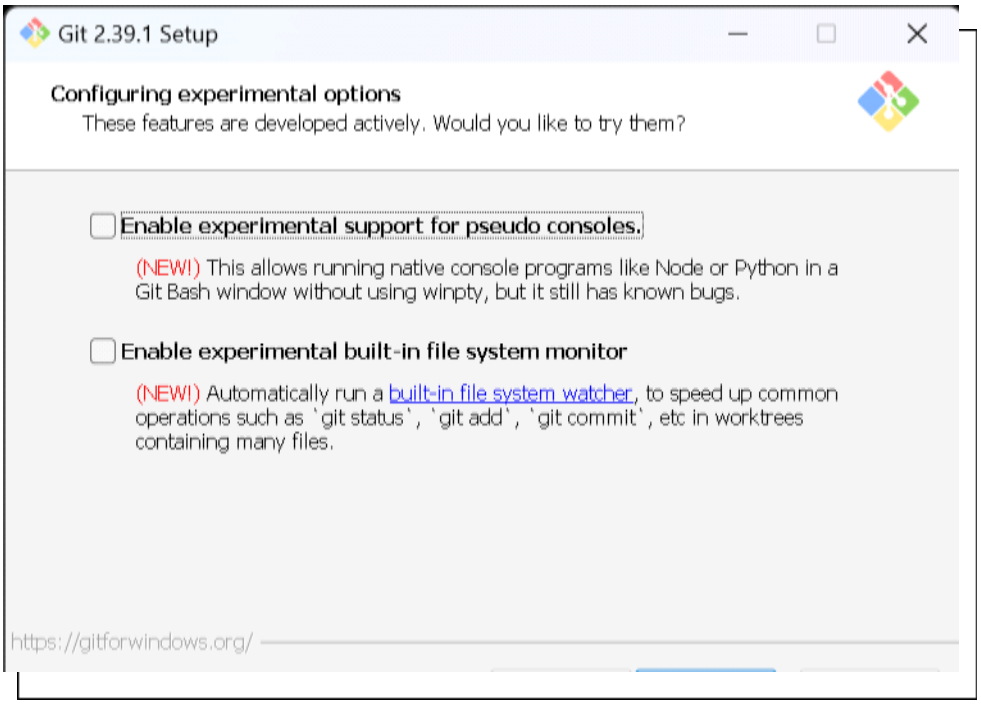
Next you should choose which credential helper to use. Git uses credential helpers to fetch or save credentials. Leave the default option and click Next.



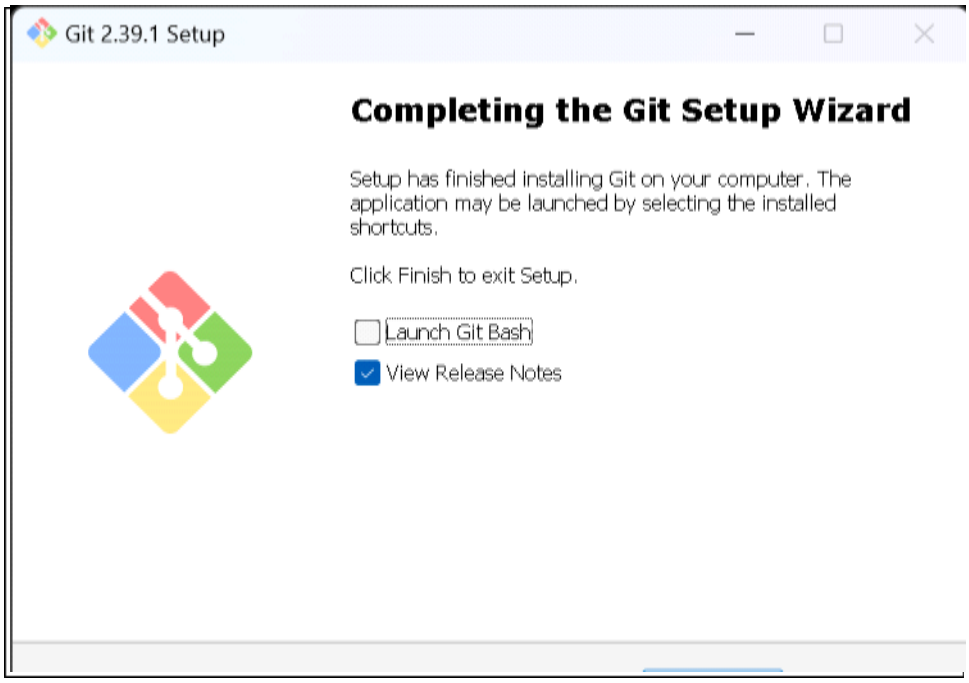
The default options are recommended, click Next.



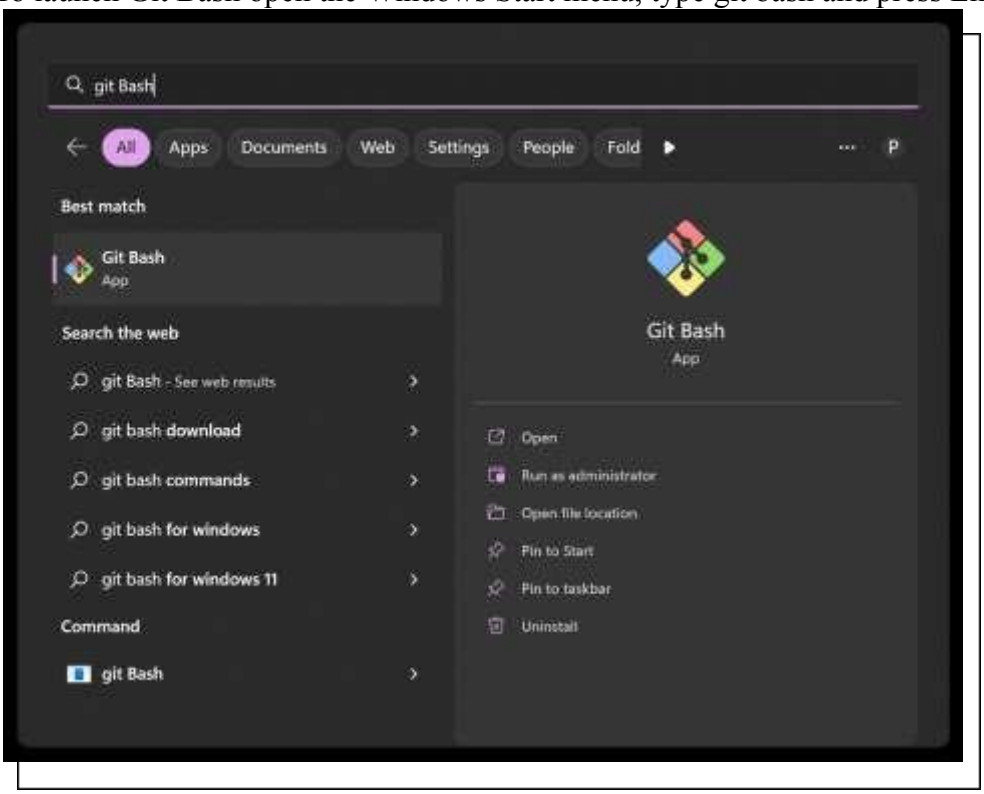
Leave them unchecked and click Install.



Once the installation is complete, tick the boxes to view the Release Notes or Launch Git Bash, then click Finish.



To launch Git Bash open the Windows Start menu, type git bash and press Enter



CREATE A NEW GITHUB ACCOUNT :

- Go to https://github.com/join in a web browser.
- Enter your personal details.
- Click Verify to start the verification puzzle.
- Click the green Create account button.
- Verify your email by entering the code. (After clicking Create account, you'll receive an email with a code. Enter this code on the verification page.)
- Select your preferences and click Continue.
- Note the types of plans offered by GitHub. (choose Free)
- Note the types of plans offered by GitHub. (You are ready with your github Account)

Conclusion :

Q1. What is a Version Control System ?

Ans: A Version Control System (VCS) is a software tool that tracks changes to files and directories over time, facilitating collaboration and version management in software development projects. It enables developers to efficiently manage code changes, track revisions, and revert to previous versions if needed. VCS systems like Git, Subversion (SVN), and Mercurial provide features such as branching, merging, and conflict resolution to streamline collaboration and ensure code integrity.

Q2. Which is the difference between GIT and GIThub?

Ans: Git is a distributed version control system used for tracking changes in code repositories locally on a developer's machine. GitHub, on the other hand, is a web-based platform that hosts Git repositories in the cloud, providing collaboration features like issue tracking, pull requests, and project management tools. While Git is the underlying technology for version control, GitHub serves as a hosting platform for sharing and collaborating on Git repositories among teams of developers.