

Assignment 2

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Roll No: T23-133

Aim: To understand version Control System, Git installation and GitHub account.

Theory:

GIT

Git is a distributed version control system that tracks changes in any set of computer files, usually used for coordinating work among programmers collaboratively developing source code during software development. Its goals include speed, data integrity, and support for distributed, non-linear workflows (thousands of parallel branches running on different computers).

Git was originally authored by Linus Torvalds in 2005 for development of the Linux kernel, with other kernel developers contributing to its initial development. Since 2005, Junio Hamano has been the core maintainer. As with most other distributed version control systems, and unlike most client–server systems, every Git directory on every computer is a full-fledged repository with complete history and full version-tracking abilities, independent of network access or a central server. Git is free and open-source software shared under the GPL-2.0-only license.

GIT INSTALL

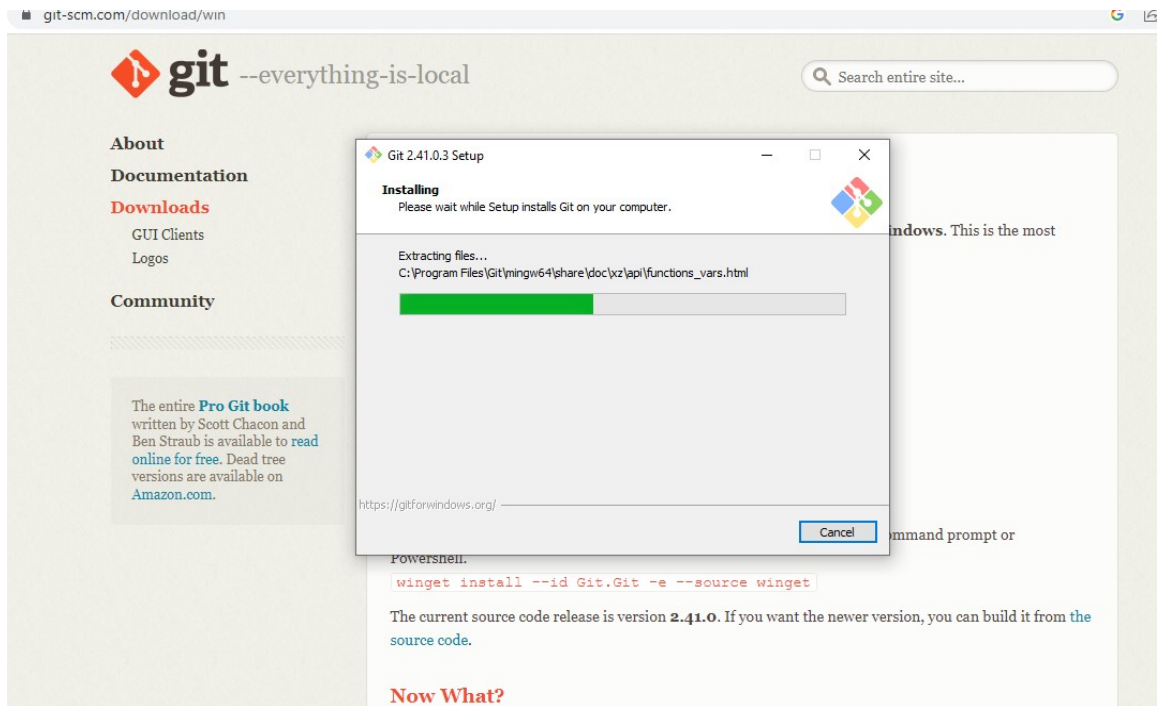
Steps to install Git-

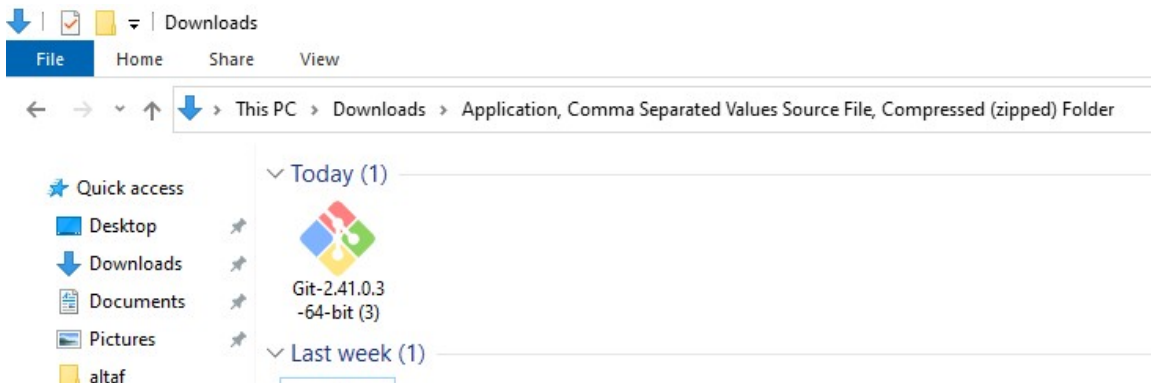
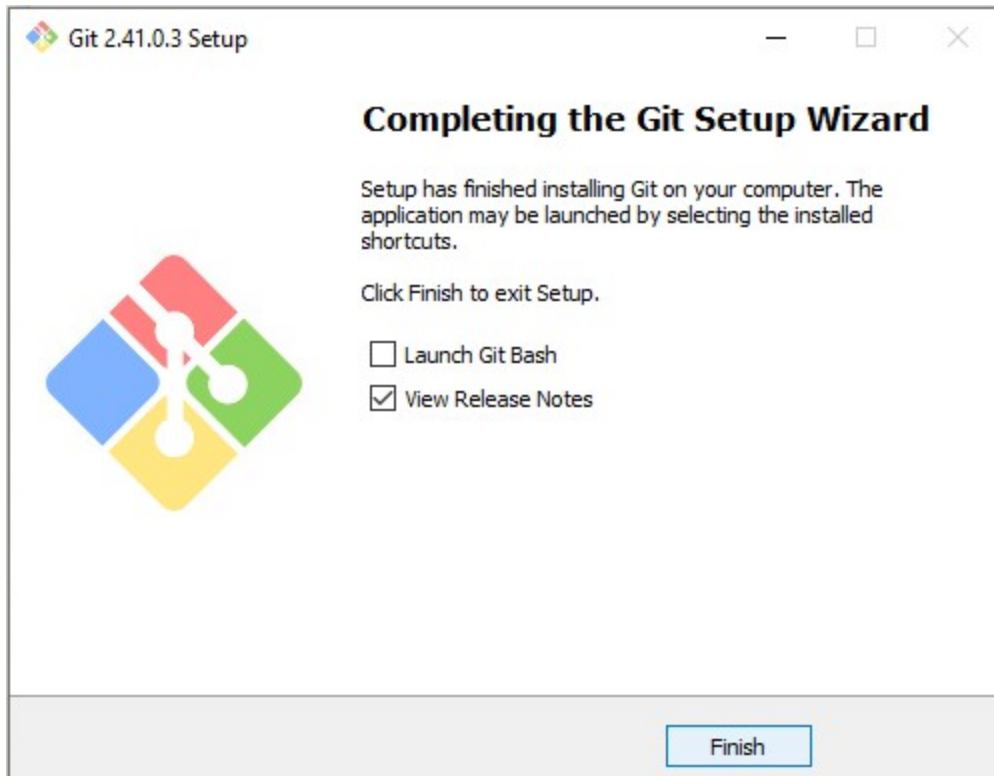
1. Browse to the official Git website: <https://git-scm.com/downloads>
2. Click the download link for Windows and allow the download to complete.
3. Browse to the download location (or use the download shortcut in your browser). Double-click the file to extract and launch the installer.
4. Allow the app to make changes to your device by clicking Yes on the User Account Control dialog that opens.
5. Review the GNU General Public License, and when you're ready to install, click Next.

6. The installer will ask you for an installation location. Leave the default, unless you have reason to change it, and click Next.
7. A component selection screen will appear. Leave the defaults unless you have a specific need to change them and click Next.
8. The installer will offer to create a start menu folder. Simply click Next.
9. Select a text editor you'd like to use with Git. Use the drop-down menu to select Notepad++ (or whichever text editor you prefer) and click Next.
10. The next step allows you to choose a different name for your initial branch. The default is 'master.' Unless you're working in a team that requires a different name, leave the default option and click Next.
11. 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.
12. 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.
13. The next option relates to server certificates. Most users should use the default. If you're working in an Active Directory environment, you may need to switch to Windows Store certificates. Click Next.
14. The next selection converts line endings. It is recommended that you leave the default selection. This relates to the way data is formatted and changing this option may cause problems. Click Next.
15. Choose the terminal emulator you want to use. The default MinTTY is recommended, for its features. Click Next.
16. The installer now asks what the git pull command should do. The default option is recommended unless you specifically need to change its behavior. Click Next to continue with the installation.
17. Next you should choose which credential helper to use. Git uses credential helpers to fetch or save credentials. Leave the default option as it is the most stable one, and click Next.
18. The default options are recommended, however this step allows you to decide which extra option you would like to enable. If you use symbolic links, which are

like shortcuts for the command line, tick the box. Click Next.

19. Depending on the version of Git you're installing, it may offer to install experimental features. At the time this article was written, the options to include support for pseudo controls and a built-in file system monitor were offered. Unless you are feeling adventurous, leave them unchecked and click Install.
20. Once the installation is complete, tick the boxes to view the Release Notes or Launch Git Bash, then click Finish.





GITHUB

GitHub is a platform and cloud-based service for software development and version control using Git, allowing developers to store and manage their code. It provides the distributed version control of Git plus access control, bug tracking, software feature requests, task management, continuous integration, and wikis for every project. Headquartered in California, it has been a subsidiary of Microsoft since 2018.

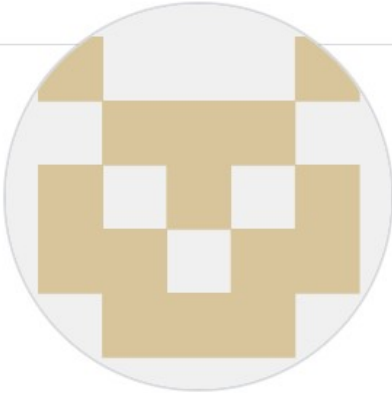
It is commonly used to host open source software development projects. As of January 2023, GitHub reported having over 100 million developers and more than 372 million repositories, including at least 28 million public repositories. It is the largest source code host as of June 2023.

Overview

Repositories14

Projects

Packages



Shipra Suvarna

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GitHub Stats:

Shipra Suvarna's GitHub Stats

Total Stars Earned:	1
Total Commits:	101
Total PRs:	1
Total Issues:	0
Contributed to (last year):	0

117

0

5

Total Contributions

Longest Streak

LO Mapping: LO1, LO2

Conclusion: To be aware of different Version Control Tools like Git and GitHub.

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