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|-----------|--|----------|
| Exp No. 1 | <b>Git Essentials – Commit, Push, Merge, and Pull Requests</b> | Reg No : |
| Date:     |  |          |

### Aim

The aim is to demonstrate pushing changes to a GitHub repository, covering setup, managing visibility, and executing basic Git operations.

### Description

The aim of the experiment is to demonstrate the process of pushing changes to a GitHub repository. This involves:

1. Setting up Git: Ensure Git is installed on your computer.
2. Managing Repository Visibility: Understand the effects of making a repository private or public on GitHub.
3. Changing Repository Visibility: Learn how to change the visibility of a repository on GitHub.
4. Pushing Changes to the Repository: Make changes to a local repository, commit them, and push them to the remote repository on GitHub.

### Introduction of GIT

Git is one of the ways of implementing the idea of version control. It is Distributed Version Control System.

### Installing GIT

Before you start using Git, you have to make it available on your computer.

if it's already installed, it's probably a good idea to update to the latest version. You can either install it as a package or via another installer, or download the source code and compile it yourself.

### Installing on Windows

The easiest way to get Git is to download the executable from [the Git website](#).

Click "64-bit Git for Windows Setup" to start the [download](#), and then wait a moment — the download is only about 50 megabytes, so it shouldn't take very long.

## Download for Windows

[Click here to download](#) the latest (2.37.3) 64-bit version of **Git for Windows**. This is the most recent maintained build. It was released 12 days ago, on 2022-08-30.

### Other Git for Windows downloads

Standalone Installer

[32-bit Git for Windows Setup](#).

**[64-bit Git for Windows Setup.](#)**

Portable ("thumbdrive edition")

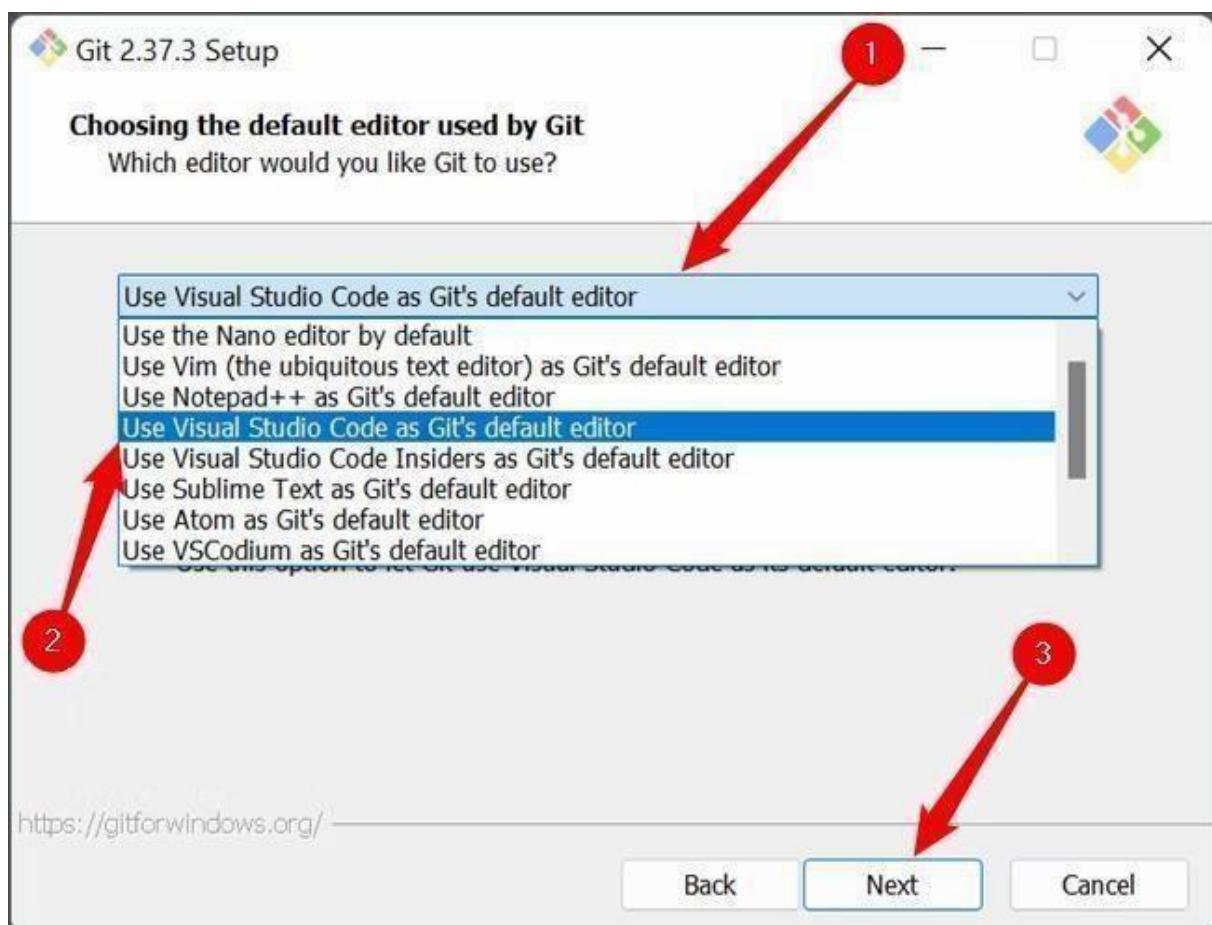
[32-bit Git for Windows Portable](#).

[64-bit Git for Windows Portable](#).

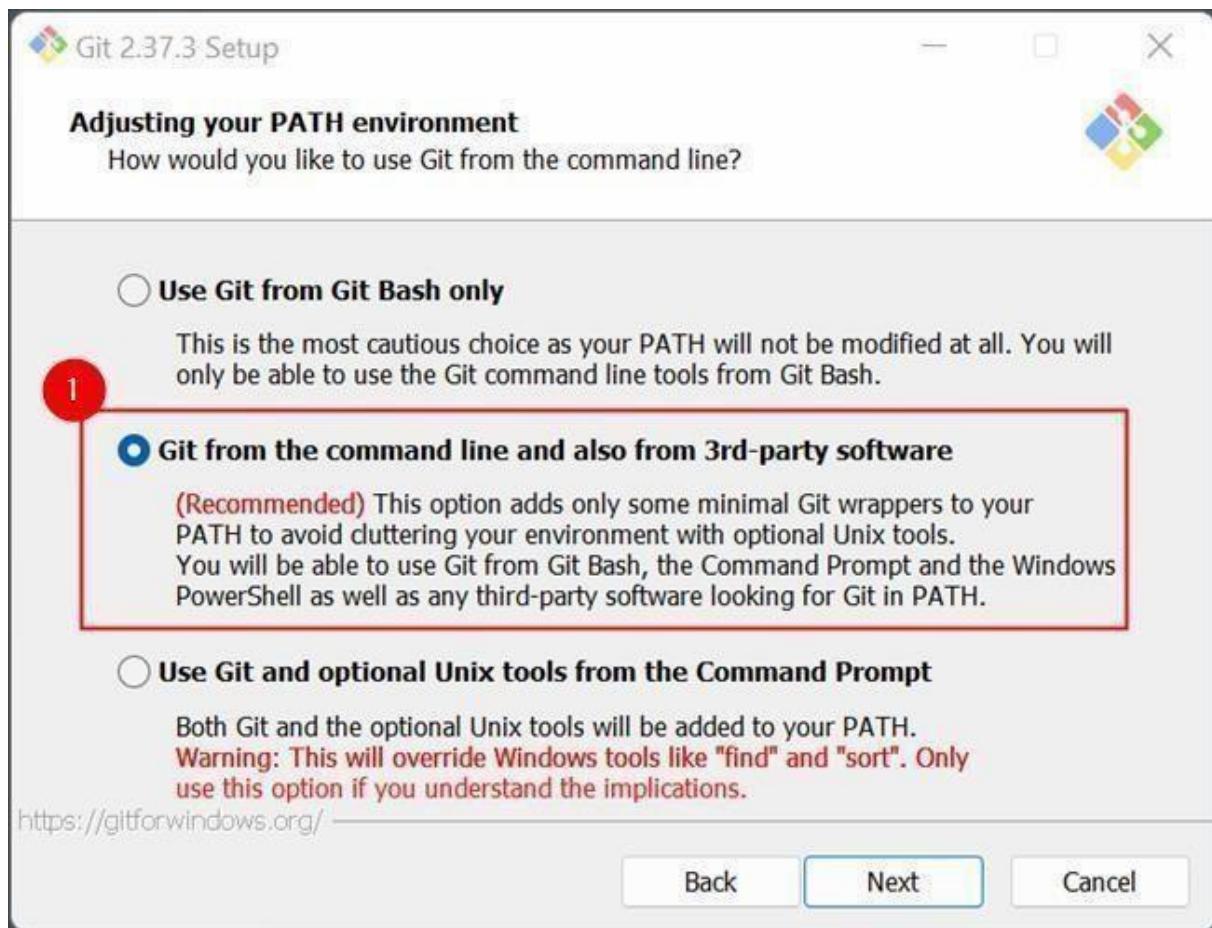
Double-click the executable you just [downloaded](#), then click "Next" to move through the installation prompts.

The first is the text editor Git will use. The default selection is Vim. Vim is ubiquitous and a hallmark of command-line interfaces everywhere but learning to use its idiosyncratic

commands can be daunting. You should probably pick something else instead, like Visual Studio Code, Sublime, NotePad++, or any other [plain text editor](#) you like.



The second is the way Git integrates itself into your PC's PATH. Make sure that the "Git From The Command Line And Also From 3rd-Party Software" is selected.



Click through the remaining options, and wait for everything to finish downloading. The time requires to download everything will vary depending on what you chose to install. The default selection results in a download that is about 270 megabytes.

## Managing Private and Public Repository

### Making a repository Private

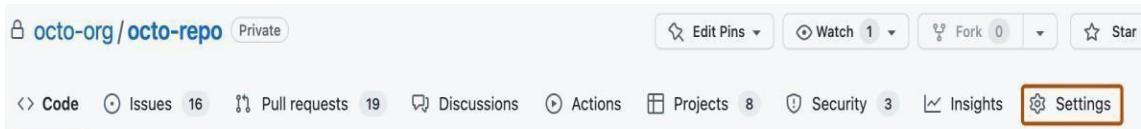
- GitHub will detach public forks of the public repository and put them into a new network. Public forks are not made private.
- If you're using GitHub Free for personal accounts or organizations, some features won't be available in the repository after you change the visibility to private. Any published GitHub Pages site will be automatically unpublished. If you added a customdomain to the GitHub Pages site, you should remove or update your DNS records before making the repository private, to avoid the risk of a domain takeover.
- GitHub will no longer include the repository in the GitHub Archive Program.
- GitHub Advanced Security features, such as code scanning, will stop working.

## Making a repository Public

- GitHub will detach private forks and turn them into a standalone private repository.
- If you're converting your private repository to a public repository as part of a move toward creating an open source project.
- Once your repository is public, you can also view your repository's community profile to see whether your project meets best practices for supporting contributors.
- The repository will automatically gain access to GitHub Advanced Security features.

## Changing a repository's Visibility

1. On GitHub.com, navigate to the main page of the repository.
2. Under your repository name, click **Settings**. If you cannot see the "Settings" tab, select the dropdown menu, then click **Settings**.



3. In the "Danger Zone" section, to the right of "Change repository visibility", click **Change visibility**.
4. Select a visibility.
5. To verify that you're changing the correct repository's visibility, type the name of the repository you want to change the visibility of.
6. Click **I understand, change repository visibility**.

## Git Repository:

The screenshot shows a GitHub profile for the user 'luepiga'. At the top, there's a search bar with placeholder text 'Type / to search' and various navigation icons. Below the header, the user's name 'luepiga' is displayed next to a large, circular profile picture featuring a green octocat icon. The profile picture has a small orange circular badge with a yellow smiley face at the bottom right. To the right of the profile picture, the name 'luepiga' is written in bold black text, followed by the name 'Luepiga' in a smaller gray font. A 'Edit profile' button is located just below the name.

Below the profile information, there's a section titled 'Popular repositories' which lists one repository: 'luepi-' (HTML, Public). The main area features a chart titled '11 contributions in the last year' showing activity from April 2023 to March 2024. The chart uses a color scale where darker shades represent more contributions. A legend at the bottom right indicates that darker shades represent 'More' contributions, while lighter shades represent 'Less'. The chart shows a series of small green squares indicating contributions, with a notable cluster in January 2024.

On the right side of the profile page, there are sections for 'Customize your pins' and 'Contribution settings'. The date '2024' is highlighted in blue, while '2023' is in gray. At the bottom of the page, a message states 'Luepiga has no activity yet for this period.'

## Git Commands:

**Git init**

**Git add .**

**Git commit -m "message"**

**Git remote add origin "Give the git repository link here"**

**Git remote -v**

**Git push -u origin main**

**Git pull origin main**

**Git pull**

## Token Creation:

## OUTPUT

Result:

