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Placement Empowerment Program

Cloud Computing and DevOps Centre

Set Up a Local Git Repository: Initialize a Git repository locally and version control your static website

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AUTONOMOUS INSTITUTIONS, AFFILIATED TO ANNA UNIVERSITY

Introduction

Version control is an essential practice in software development that helps manage code changes over time. It offers a structured approach to tracking modifications, collaborating with team members, and rolling back to earlier versions when necessary. Git, a widely popular version control system, is renowned for its speed, adaptability, and decentralized nature.

In this proof of concept (POC), we'll set up a local Git repository to manage the version control of your static website. This setup will allow you to monitor changes in your project files, test new features in an organized manner, and share your work with others effortlessly. Initializing a Git repository is a vital step in establishing a systematic and dependable workflow, particularly for developers and teams engaged in collaborative projects.

Overview

Here's what this setup will include:

1. **Installing Git**: Verify that Git is installed on your system and configured correctly.
2. **Initializing a Local Repository**: Set up a Git repository in the root directory of your static website.
3. **Staging and Committing Files**: Add project files to the staging area and commit them to create a saved snapshot of your progress.
4. **Reviewing Repository Changes**: Use Git commands to inspect the repository's status and ensure all files are properly tracked.

Objectives

By completing this POC, you will:

1. **Learn the Fundamentals of Version Control: Understand the role of Git in managing and tracking project changes effectively.**
2. **Initialize a Git Repository: Acquire the skills to set up a local Git repository for version controlling your static website.**
3. **Track Project Updates: Master the process of staging and committing files to log every change systematically.**
4. **Streamline Your Workflow: Organize your static website project with a structured approach that allows for easy rollback of changes when necessary.**
5. **Get Ready for Team Collaboration: Build a solid foundation to share your repository and collaborate with others seamlessly using Git.**

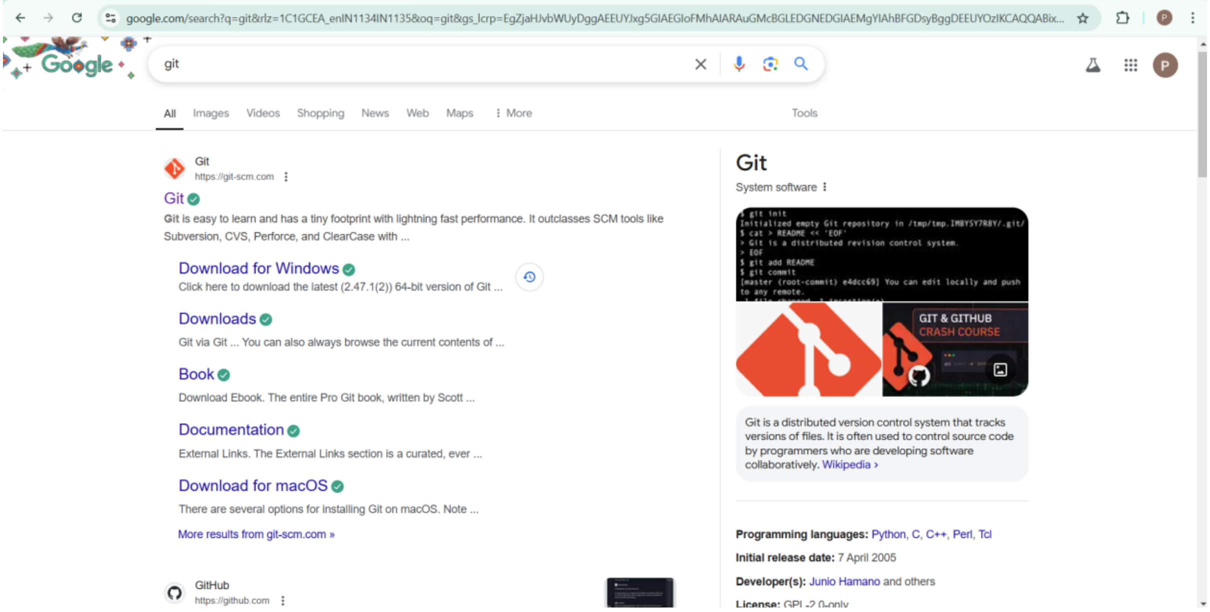
Importance of Setting Up a Local Git Repository

Track Changes: Git keeps a detailed record of every modification, providing a comprehensive history of your project.
Rollback: Effortlessly restore previous versions to fix errors or undo unwanted changes.
Collaboration: Get your project ready for teamwork, allowing seamless integration of updates from multiple contributors

Step-by-Step Overview

Step 1:

Search for "Git" in Chrome, download it, and click the "Downloads" option on the website.



google.com/search?q=git&rlz=1C1GCEA_enIN1134IN1135&oq=git&gs_lcrp=EgZjaHJvbWUyDggAEEUYJxg5GIAEGIoFMhAIARAuGMcBGLEDGNEDGIAEMgYIAhBFGDsyBggDEEUYOzIKCAQQABix...

git

Git
https://git-scm.com

Git

Git is easy to learn and has a tiny footprint with lightning fast performance. It outclasses SCM tools like Subversion, CVS, Perforce, and ClearCase with ...

Download for Windows
Click here to download the latest (2.47.1(2)) 64-bit version of Git ...

Downloads
Git via Git ... You can also always browse the current contents of ...

Book
Download Ebook. The entire Pro Git book, written by Scott ...

Documentation
External Links. The External Links section is a curated, ever ...

Download for macOS
There are several options for installing Git on macOS. Note ...

More results from git-scm.com »

GitHub
https://github.com

Git

System software

```
$ git init
Initialized empty Git repository in /tmp/tmp.IMBYSY7R8Y/.git/
$ cat > README << 'EOF'
> Git is a distributed revision control system.
> EOF
$ git add README
$ git commit
[master (root-commit) e4dcc69] You can edit locally and push
to any remote.
```

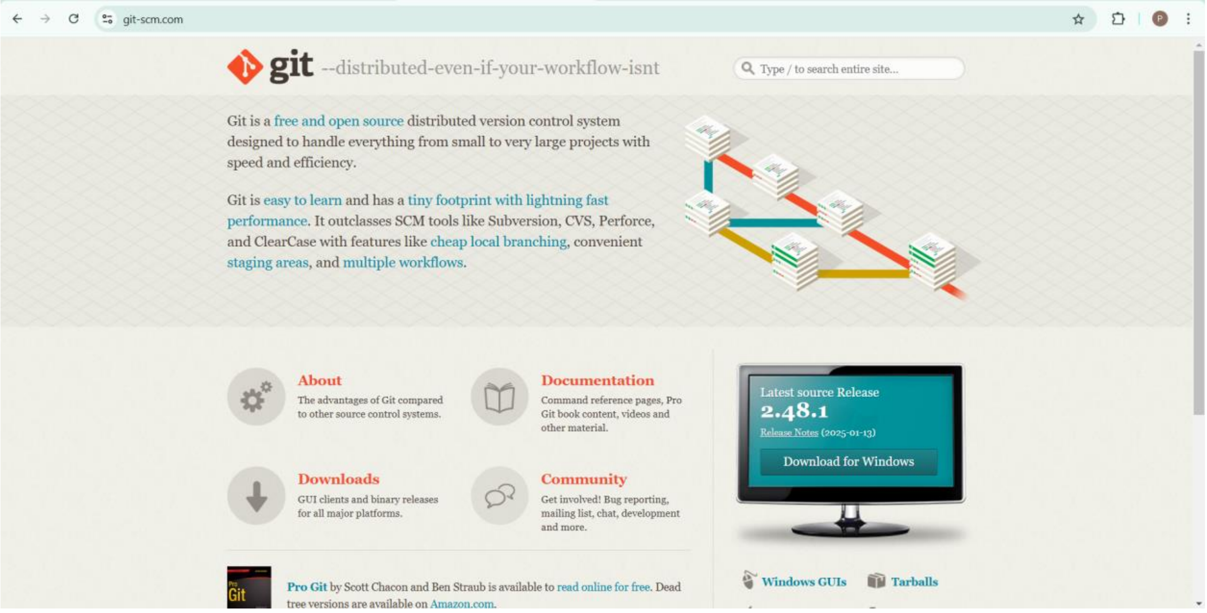
Git is a distributed version control system that tracks versions of files. It is often used to control source code by programmers who are developing software collaboratively. Wikipedia ›

Programming languages: Python, C, C++, Perl, Tcl

Initial release date: 7 April 2005

Developer(s): Junio Hamano and others

License: GPL-2.0-only



git-scm.com

git --distributed-even-if-your-workflow-isnt

Type / to search entire site...

Git is a free and open source distributed version control system designed to handle everything from small to very large projects with speed and efficiency.

Git is easy to learn and has a tiny footprint with lightning fast performance. It outclasses SCM tools like Subversion, CVS, Perforce, and ClearCase with features like cheap local branching, convenient staging areas, and multiple workflows.

About
The advantages of Git compared to other source control systems.

Documentation
Command reference pages, Pro Git book content, videos and other material.

Downloads
GUI clients and binary releases for all major platforms.

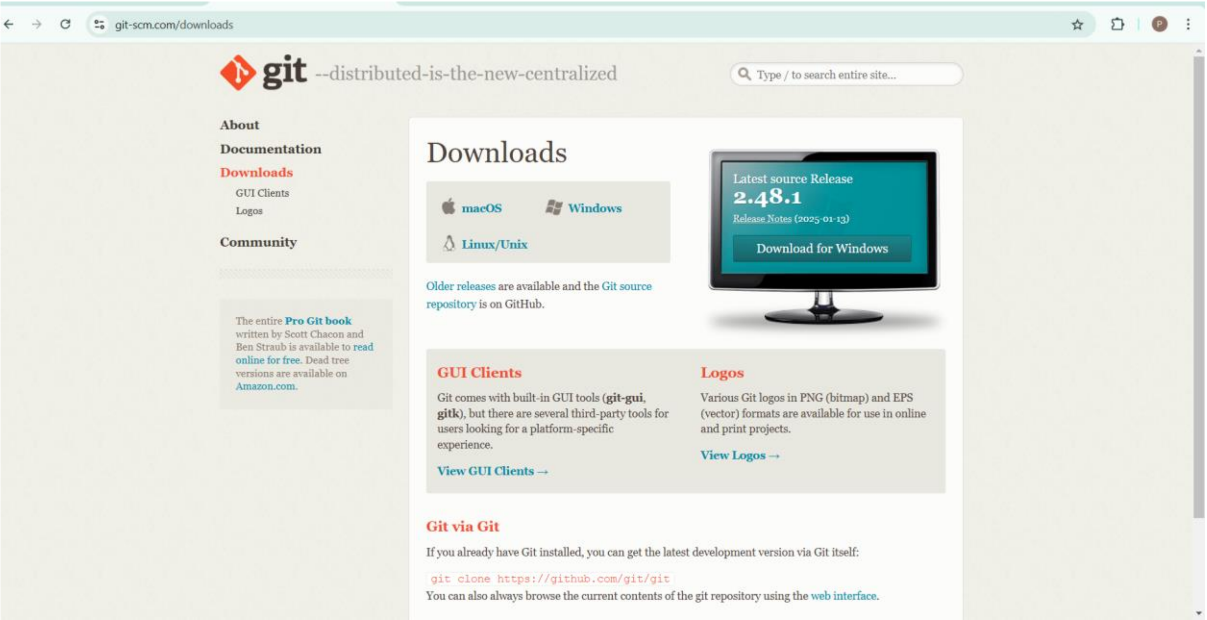
Community
Get involved! Bug reporting, mailing list, chat, development and more.

Latest source Release
2.48.1
Release Notes (2025-01-13)
Download for Windows

Pro Git by Scott Chacon and Ben Straub is available to read online for free. Dead tree versions are available on Amazon.com.

Step 2

Click the **Windows** option on the download page and follow the installation wizard.



git-scm.com/downloads

git --distributed-is-the-new-centralized

Type / to search entire site...

About

Documentation

Downloads

GUI Clients

Logos

Community

The entire Pro Git book written by Scott Chacon and Ben Straub is available to read online for free. Dead tree versions are available on Amazon.com.

Downloads

macOS Windows

Linux/Unix

Older releases are available and the Git source repository is on GitHub.

Latest source Release
2.48.1
Release Notes (2025-01-13)

Download for Windows

GUI Clients

Git comes with built-in GUI tools (**git-gui**, **gitk**), but there are several third-party tools for users looking for a platform-specific experience.

View GUI Clients →

Logos

Various Git logos in PNG (bitmap) and EPS (vector) formats are available for use in online and print projects.

View Logos →

Git via Git

If you already have Git installed, you can get the latest development version via Git itself:

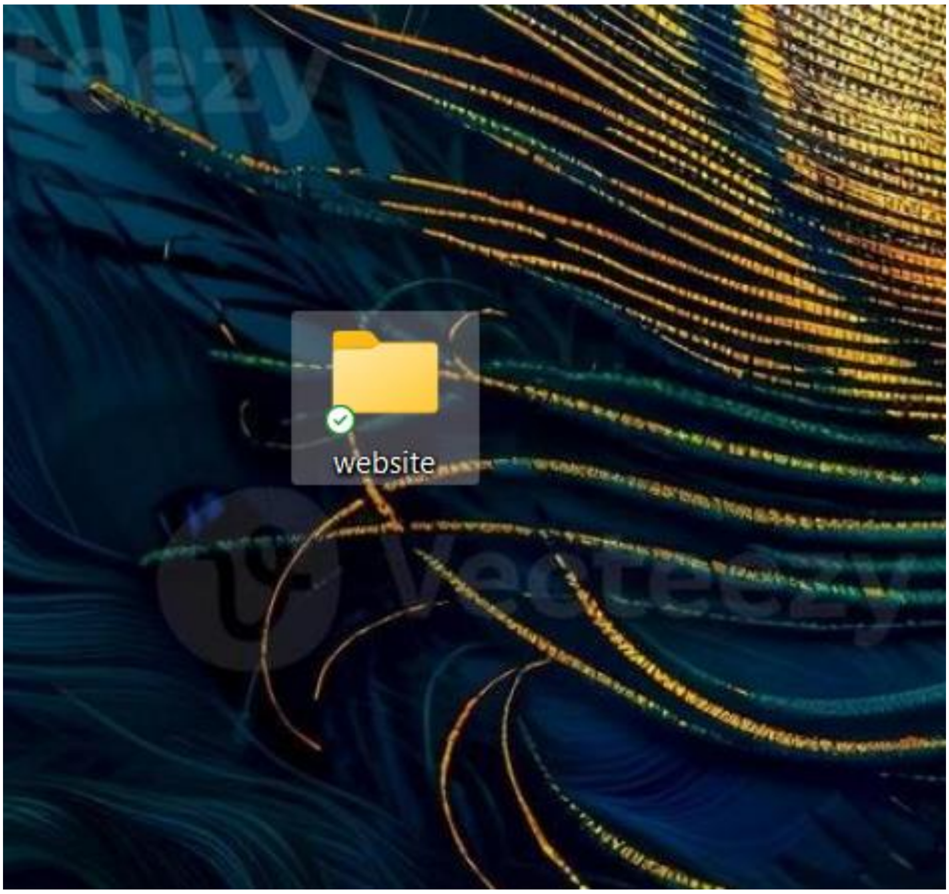
```
git clone https://github.com/git/git
```

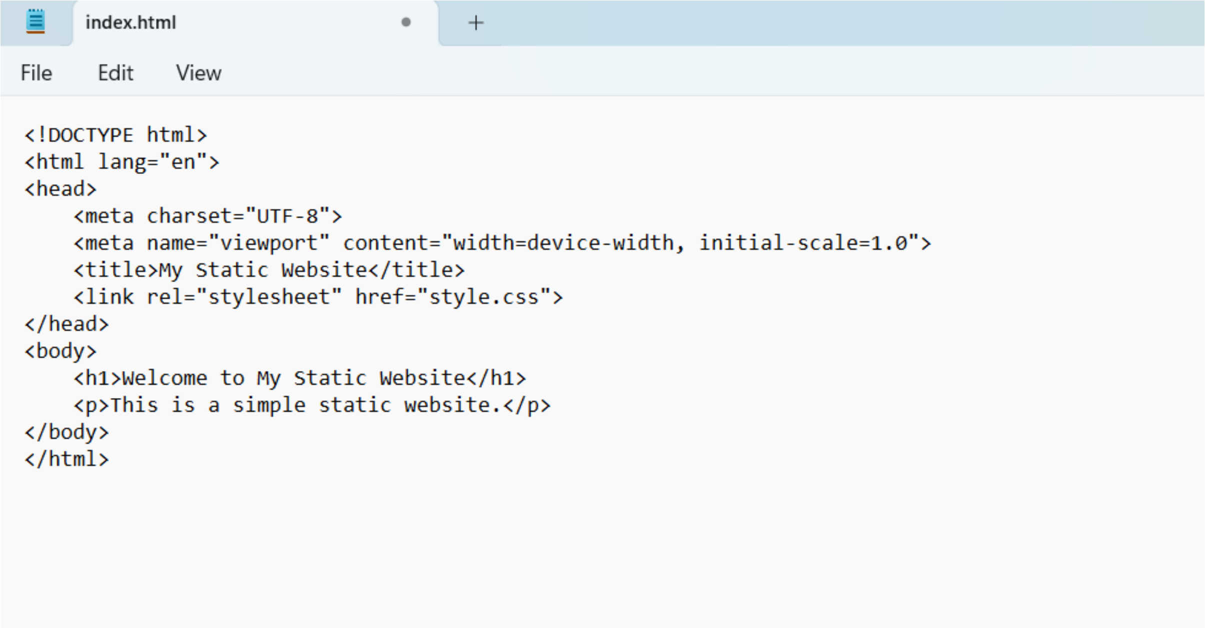
You can also always browse the current contents of the git repository using the web interface.

Step 3

In your Desktop Create a folder named website for your static website

Inside that folder, create a simple HTML file named index.html. You can write some basic HTML

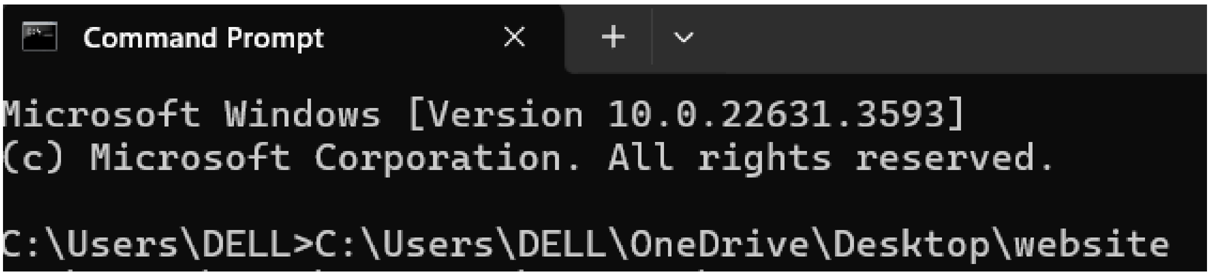




```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>My Static Website</title>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <h1>Welcome to My Static Website</h1>
    <p>This is a simple static website.</p>
</body>
</html>
```

Step 5

Open the Command prompt and set the path to the folder named website we created



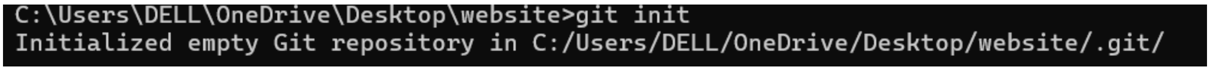
```
Microsoft Windows [Version 10.0.22631.3593]
(c) Microsoft Corporation. All rights reserved.

C:\Users\DELL>C:\Users\DELL\OneDrive\Desktop\website
```

Step 6

Now, initialize Git by typing this command:

git init

This command will create a .git folder inside your project folder, which tells Git to start tracking your files.



```
C:\Users\DELL\OneDrive\Desktop\website>git init
Initialized empty Git repository in C:/Users/DELL/OneDrive/Desktop/website/.git/
```

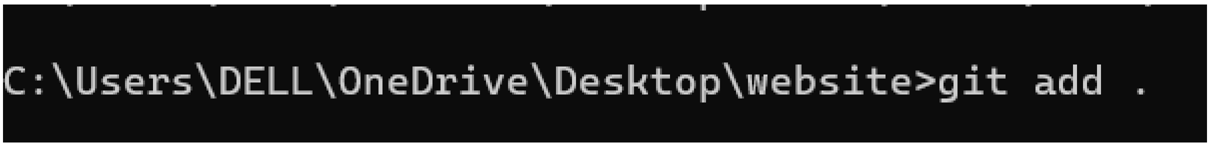
Step 7

Next, we need to tell Git to start tracking your website files.

To tell Git which files to track, use the git add command. If you want to track all the files in your folder, type

git add .

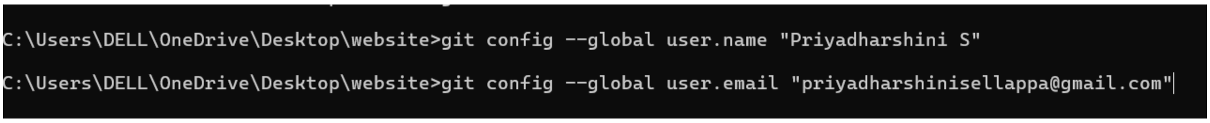
This command adds all the files to Git's tracking system.



```
C:\Users\DELL\OneDrive\Desktop\website>git add .
```

Step 8

Set Up Your Name and Email Globally Git doesn't know who is making the commit because you haven't configured your name and email yet. Git uses this information to track who made the changes.



```
C:\Users\DELL\OneDrive\Desktop\website>git config --global user.name "Priyadharshini S"

C:\Users\DELL\OneDrive\Desktop\website>git config --global user.email "priyadharshinisellappa@gmail.com"
```

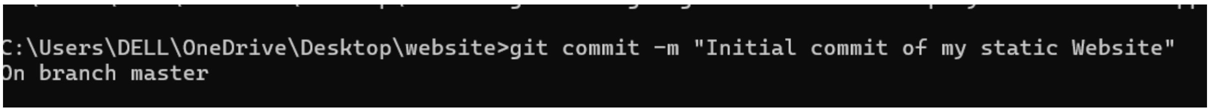
Step 9

Now, we need to save these changes in Git. When you "commit" changes, Git takes a snapshot of your files.

Type the following command to commit your changes:

git commit -m "Initial commit of my static website"

The -m flag allows you to add a message about your changes. In this case, we’re saying this is the "initial commit," meaning the first time we’re saving our work.



```
C:\Users\DELL\OneDrive\Desktop\website>git commit -m "Initial commit of my static Website"
On branch master
```

Step 10

Create a New Repository:

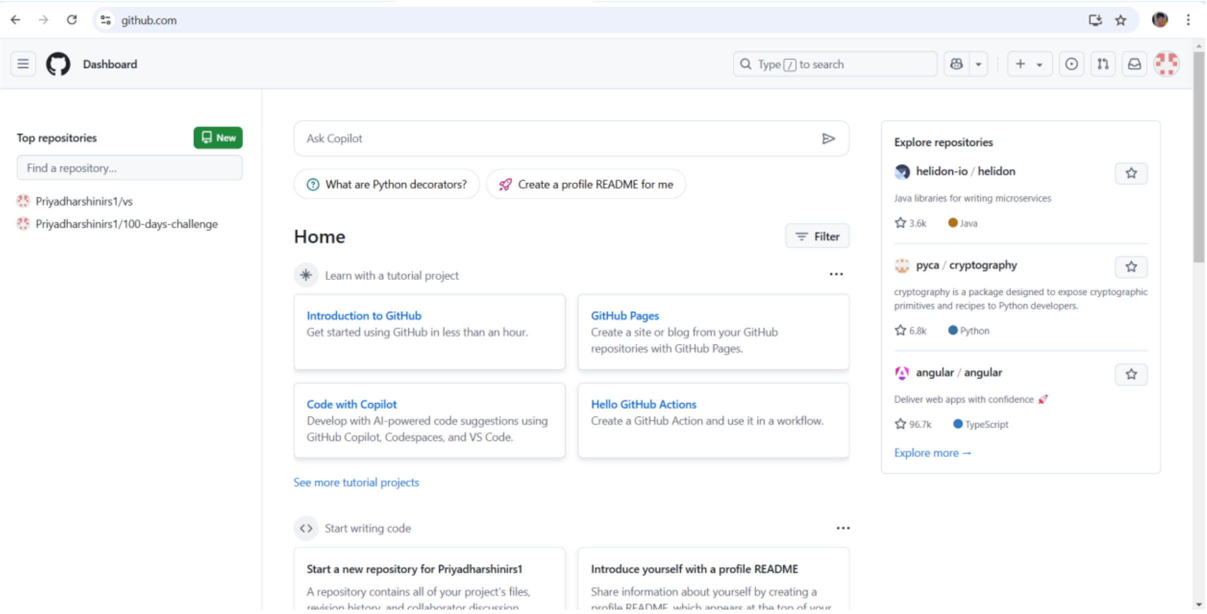
Once you're logged in, click the green **"New"** button on the top-right of your GitHub homepage to create a new repository.

Give your repository a name, for example, my-website.

Leave the other settings as default, and click **"Create repository"**.

Step 11

Add the Remote Repository URL to Your Local Repository:



Introduction to GitHub
Get started using GitHub in less than an hour.

GitHub Pages
Create a site or blog from your GitHub repositories with GitHub Pages.

Code with Copilot
Develop with AI-powered code suggestions using GitHub Copilot, Codespaces, and VS Code.

Hello GitHub Actions
Create a GitHub Action and use it in a workflow.

Start a new repository for Priyadharshinirs1
A repository contains all of your project's files,

Introduce yourself with a profile README
Share information about yourself by creating a

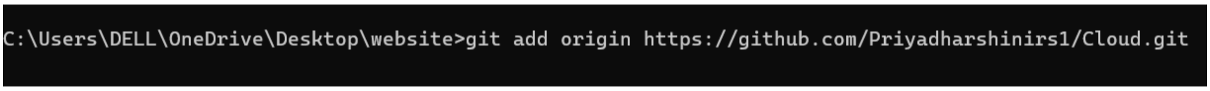
helidon-io / helidon
Java libraries for writing microservices
☆ 3.6k ● Java

pyca / cryptography
cryptography is a package designed to expose cryptographic primitives and recipes to Python developers.
☆ 6.8k ● Python

angular / angular
Deliver web apps with confidence
☆ 96.7k ● TypeScript

git remote add origin https://github.com/yourusername/my-website.git

Replace yourusername with your GitHub username and my-website with the name of your GitHub repository.



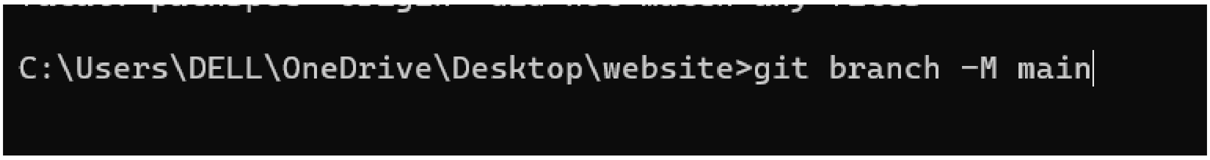
```
C:\Users\DELL\OneDrive\Desktop\website>git add origin https://github.com/Priyadharshinirs1/Cloud.git
```

Step 12

The **git branch -M** main command is used to **rename the current branch** to main. Here's what it does:

-M: This flag forces the renaming, even if a branch named main already exists. It will overwrite the existing main branch.

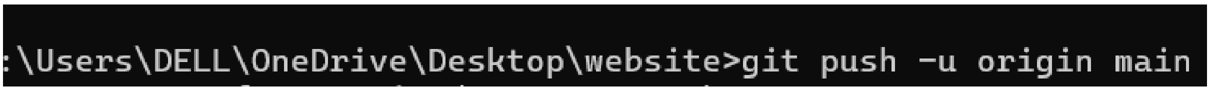
main: This is the new name for the current branch.



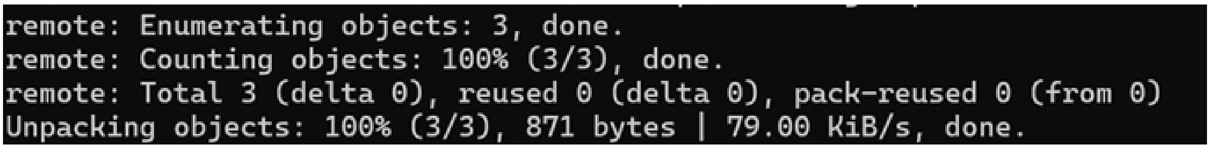
```
C:\Users\DELL\OneDrive\Desktop\website>git branch -M main
```

Step 13

The command git **push -u origin main** is used to push your local **main** branch to the remote repository (**origin**) and set it as the upstream branch



```
:\Users\DELL\OneDrive\Desktop\website>git push -u origin main
```



```
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 871 bytes | 79.00 KiB/s, done.
```

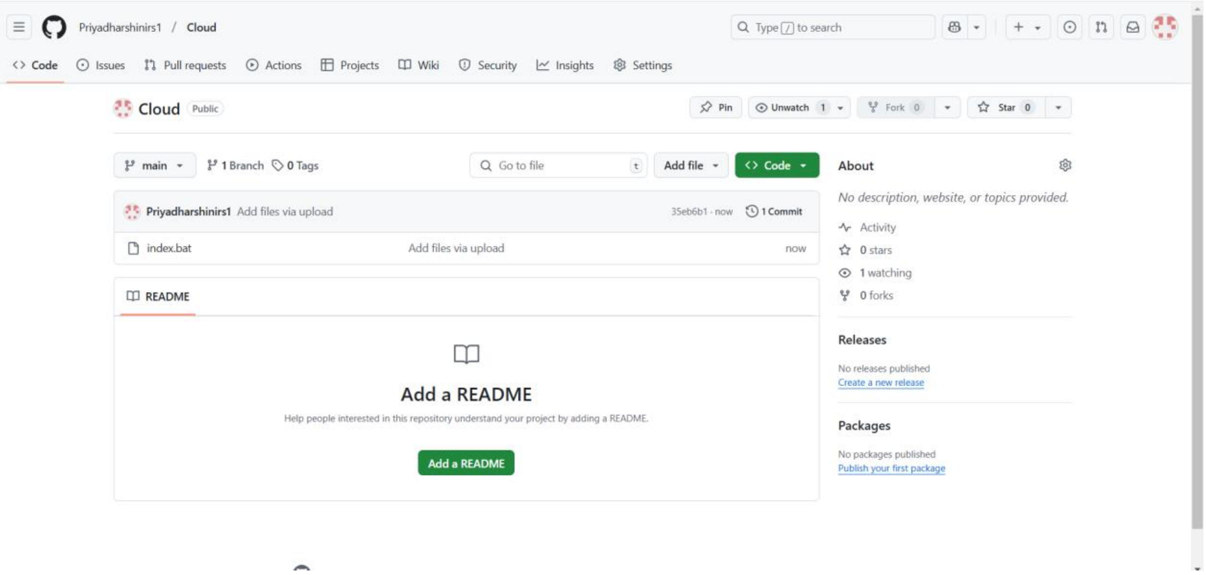
Step 14

Verify Your Files on GitHub

Go to your GitHub Repository:

Open your web browser and navigate to your GitHub repository (e.g., https://github.com/yourusername/my-website).

You should see your website files there!



Priyadharshinirs1 Add files via upload 35eb6b1 · now 1 Commit

index.bat Add files via upload now

Add a README

Help people interested in this repository understand your project by adding a README.

About

No description, website, or topics provided.

Activity

0 stars

1 watching

0 forks

Releases

No releases published

Create a new release

Packages

No packages published

Publish your first package

Expected Outcome

By completing this PoC of setting up a local Git repository, you will:

1. Successfully initialize a Git repository in your local static website folder.

2. Track changes made to your website files (HTML, CSS, etc.) using Git version control.

3. Understand the basic Git commands (git init, git add, git commit) for version control.

4. Commit your changes locally with a descriptive commit message.

5. Gain hands-on experience with Git and how it helps manage and track website file changes.