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aws

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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Introduction

Version control is an essential practice in software development, enabling you to manage and track changes to your code over time. It facilitates collaboration, provides a structured way to update projects, and allows you to revert to previous versions when necessary. Git, a widely used version control system, is known for its efficiency, flexibility, and distributed nature.

In this Proof of Concept (POC), we will initialize a local Git repository to version control your static website. This setup will help you monitor changes, experiment with new features in a controlled environment, and seamlessly share your project with others. Establishing a Git repository is a crucial step in maintaining an organized and reliable workflow, particularly for developers and teams working on collaborative projects.

Overview

In this setup, we will cover the following steps:

1. **Installing Git** – Verify that Git is installed on your system and properly configured.
2. **Creating a Local Repository** – Initialize a Git repository in the root folder of your static website.
3. **Staging and Committing Files** – Add project files to the staging area and commit them to save snapshots of your work.
4. **Reviewing Repository State** – Use Git commands to check the status of your repository and ensure all changes are tracked correctly.

Objective

By the end of this Proof of Concept (POC), you will:

1. **Understand Version Control Basics** – Learn the significance of Git in managing and tracking changes in your projects.
2. **Set Up a Git Repository** – Initialize a local Git repository to version control your static website.
3. **Track Changes Efficiently** – Master staging and committing files to log every modification accurately.
4. **Maintain Project Organization** – Establish a structured workflow that allows for easy rollbacks and version management.
5. **Prepare for Collaboration** – Gain the foundation needed to share your repository and collaborate seamlessly using Git.

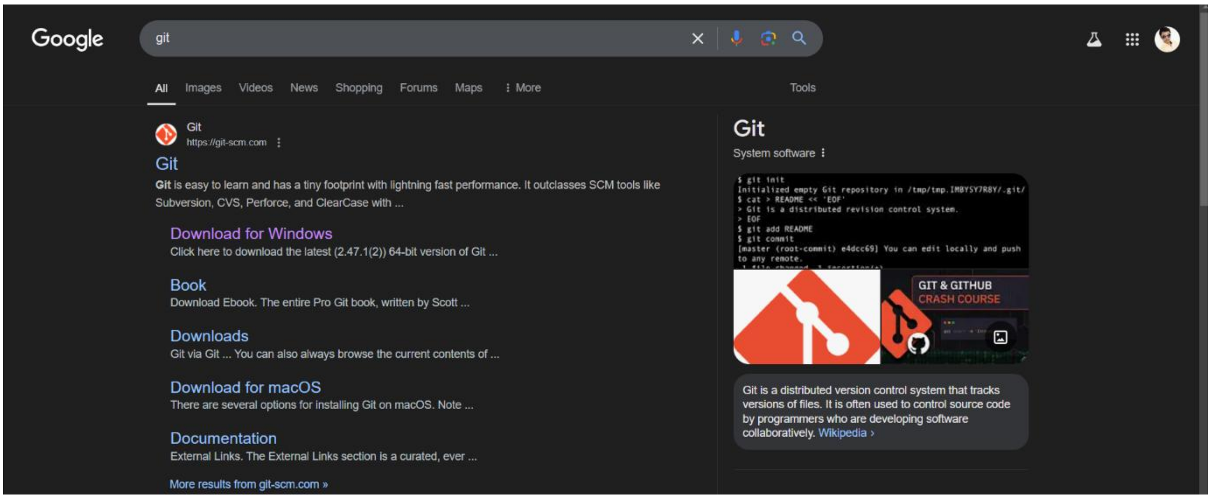
Importance

- **Track Changes** – Git maintains a detailed history of all modifications, providing clear version tracking for your project.
- **Rollback** – Effortlessly revert to previous versions to correct mistakes or restore earlier states.
- **Collaboration** – Streamline teamwork by enabling seamless integration of changes and shared development efforts.

Step-by-Step Overview

Step 1:

- Open Chrome and search for **"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 ...

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

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

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

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

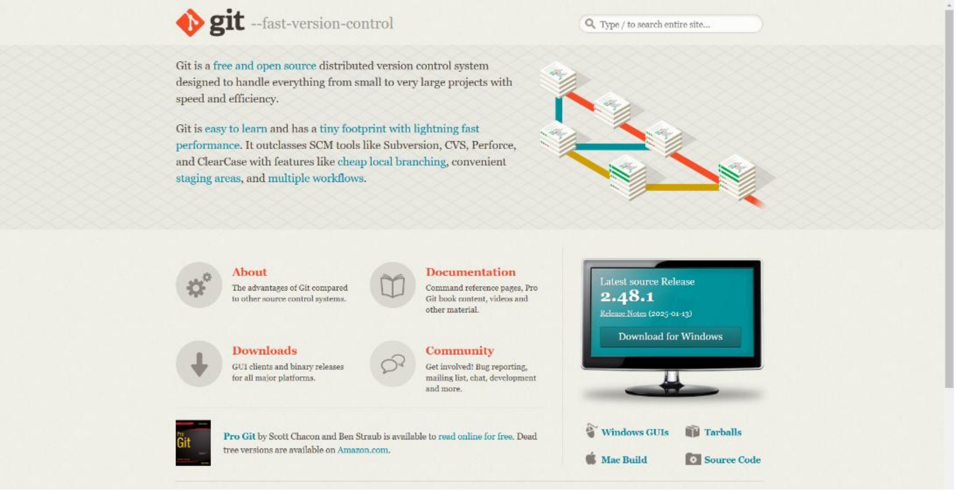
More results from git-scm.com »

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 ›

- Visit the official Git website and click on the **"Downloads"** option.



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.

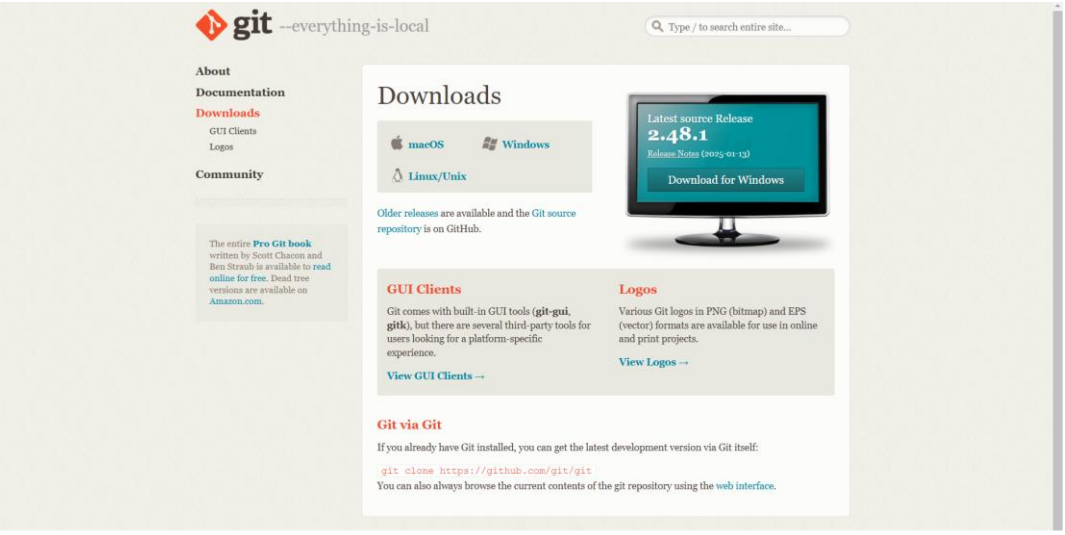
Community
Get involved! Bug reporting, mailing list, chat, development and more.

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

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

Step 2:

Select the **Windows** version and follow the installation wizard to complete the setup.



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

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

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

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.

Logos

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

Git via Git

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

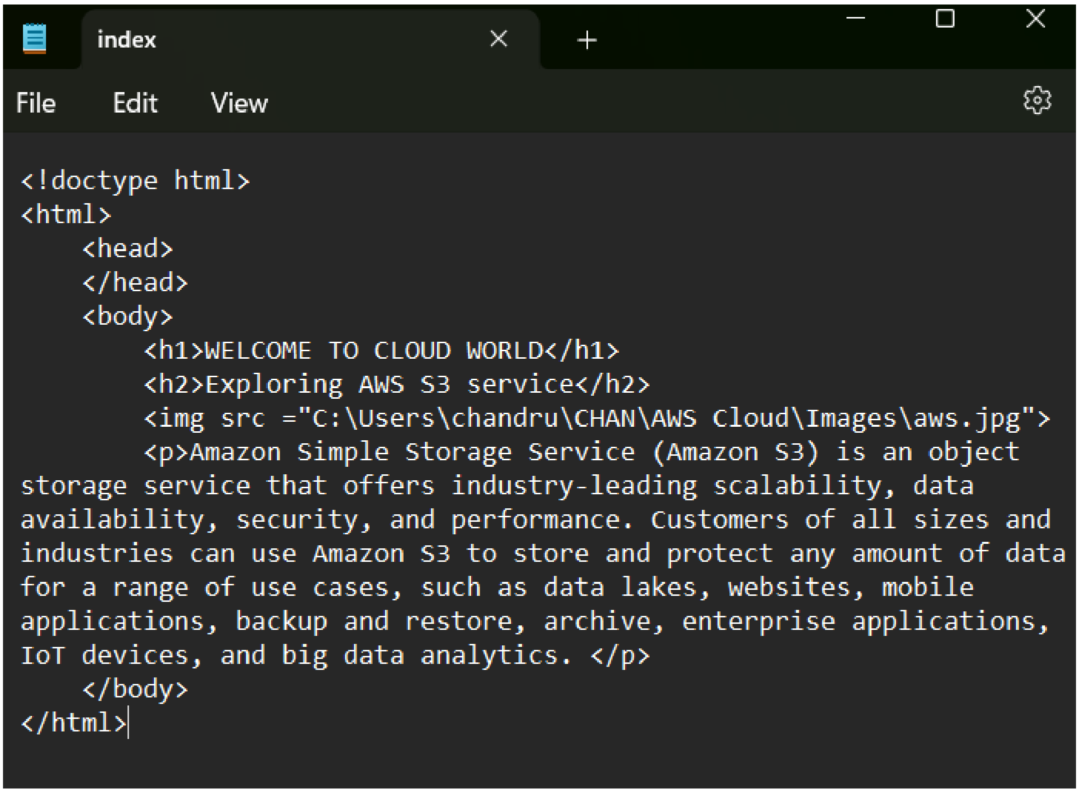
```
git clone https://github.com/git/git
```

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

Step 3:

- On your **Desktop**, create a new folder named **website**.

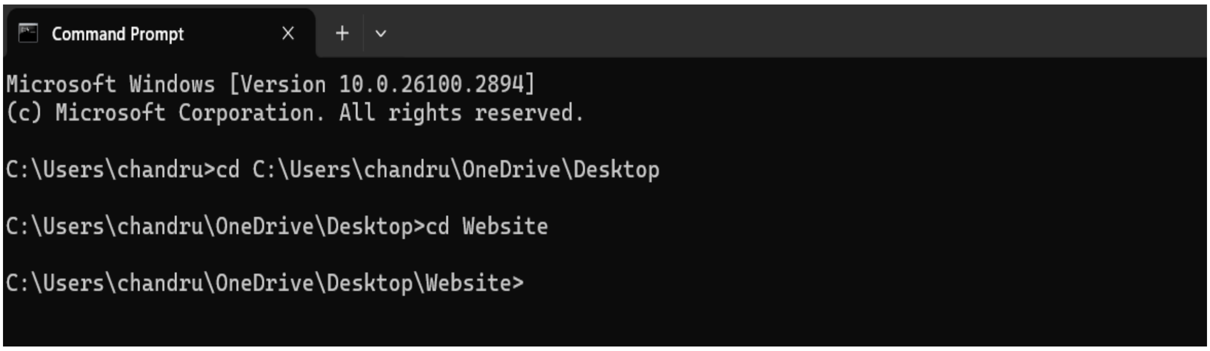
- Inside this folder, create a simple HTML file called **index.html** and write some basic HTML content.



```
<!doctype html>
<html>
    <head>
    </head>
    <body>
        <h1>WELCOME TO CLOUD WORLD</h1>
        <h2>Exploring AWS S3 service</h2>
        <img src ="C:\Users\chandru\CHAN\AWS Cloud\Images\aws.jpg">
        <p>Amazon Simple Storage Service (Amazon S3) is an object
storage service that offers industry-leading scalability, data
availability, security, and performance. Customers of all sizes and
industries can use Amazon S3 to store and protect any amount of data
for a range of use cases, such as data lakes, websites, mobile
applications, backup and restore, archive, enterprise applications,
IoT devices, and big data analytics. </p>
    </body>
</html>
```

Step 4:

- Open the **Command Prompt**.
- Change the directory to the newly created **website** folder using the command:

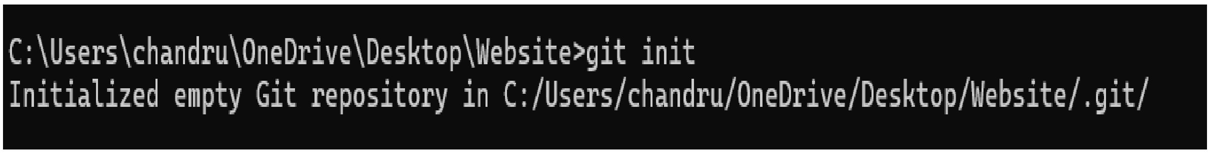


```
Microsoft Windows [Version 10.0.26100.2894]
(c) Microsoft Corporation. All rights reserved.

C:\Users\chandru>cd C:\Users\chandru\OneDrive\Desktop

C:\Users\chandru\OneDrive\Desktop>cd Website

C:\Users\chandru\OneDrive\Desktop\Website>
```

Step 5:

- Initialize Git in your project folder by running:
  git init

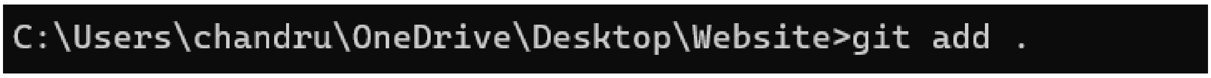
- This creates a hidden .git folder, signaling that Git will start tracking your files.



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

Step 6:

- To track all the files in your project, use:
  git add .
- This stages all files for version control.



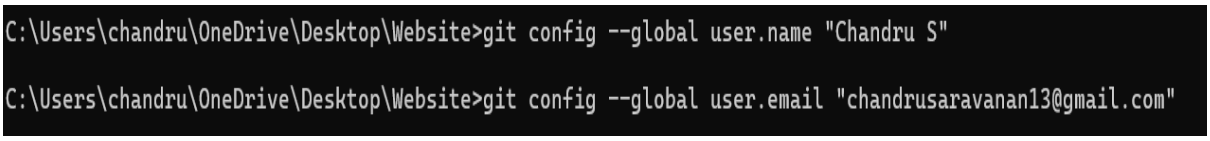
```
C:\Users\chandru\OneDrive\Desktop\Website>git add .
```

Step 7:

Set your name and email globally so Git can identify your commits:

git config --global user.name "Your Name"

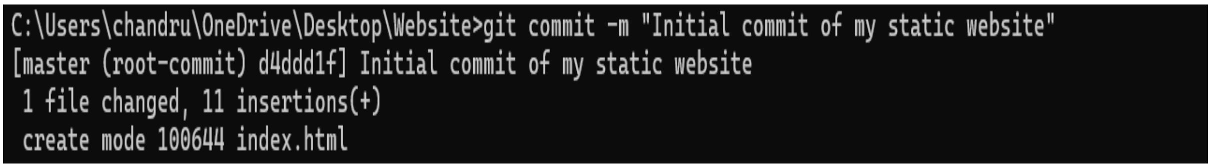
git config --global user.email "your.email@example.com"



```
C:\Users\chandru\OneDrive\Desktop\Website>git config --global user.name "Chandru S"

C:\Users\chandru\OneDrive\Desktop\Website>git config --global user.email "chandrusaravanan13@gmail.com"
```

Step 8:

- Now, we need to save these changes in Git. When you "commit" changes, Git takes a snapshot of your files.
- Save your changes in Git with a meaningful commit message:
  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.

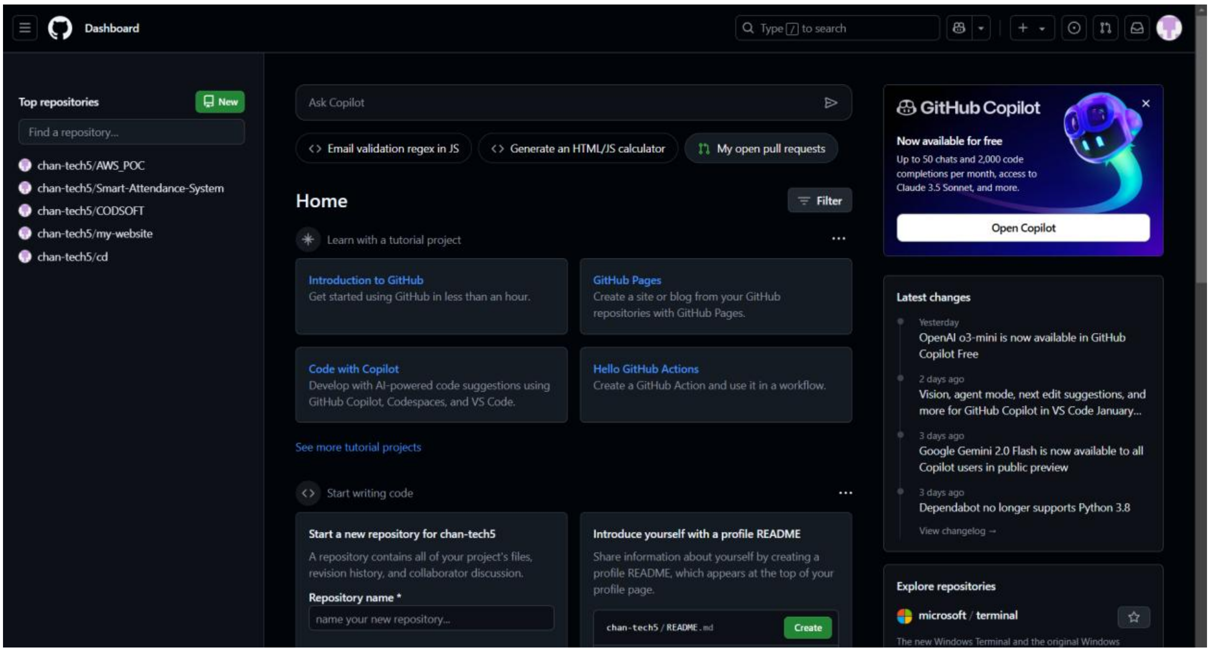


```
C:\Users\chandru\OneDrive\Desktop\Website>git commit -m "Initial commit of my static website"
[master (root-commit) d4ddd1f] Initial commit of my static website
 1 file changed, 11 insertions(+)
 create mode 100644 index.html
```

Step 9:

Create a New GitHub Repository

1. Log in to GitHub.
2. Click the "**New**" button at the top-right corner.
3. Give your repository a name (e.g., **my-website**), leave the settings as default, and click "**Create repository**".



chan-tech5/AWS_POC
chan-tech5/Smart-Attendance-System
chan-tech5/CODSOFT
chan-tech5/my-website
chan-tech5/cd

Ask Copilot
Email validation regex in JS
Generate an HTML/JS calculator
My open pull requests
Home
Filter
Learn with a tutorial project

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.

See more tutorial projects

Start a new repository for chan-tech5
A repository contains all of your project's files, revision history, and collaborator discussion.
Repository name *
name your new repository...

Introduce yourself with a profile README
Share information about yourself by creating a profile README, which appears at the top of your profile page.
chan-tech5 / README.md
Create

GitHub Copilot
Now available for free
Up to 50 chats and 2,000 code completions per month, access to Claude 3.5 Sonnet, and more.
Open Copilot

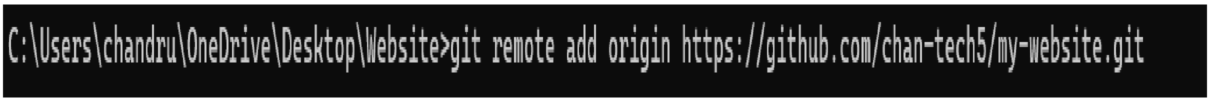
Latest changes
Yesterday
OpenAI o3-mini is now available in GitHub Copilot Free
2 days ago
Vision, agent mode, next edit suggestions, and more for GitHub Copilot in VS Code January...
3 days ago
Google Gemini 2.0 Flash is now available to all Copilot users in public preview
3 days ago
Dependabot no longer supports Python 3.8
View changelog →

Explore repositories
microsoft / terminal
The new Windows Terminal and the original Windows

Step 10:

- Add the GitHub repository as a remote origin by running:
  git remote add origin https://github.com/yourusername/my-website.git

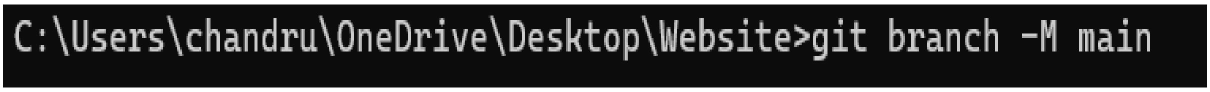
(Replace yourusername with your actual GitHub username and my-website with your repository name.)



```
C:\Users\chandru\OneDrive\Desktop\Website>git remote add origin https://github.com/chan-tech5/my-website.git
```

Step 11:

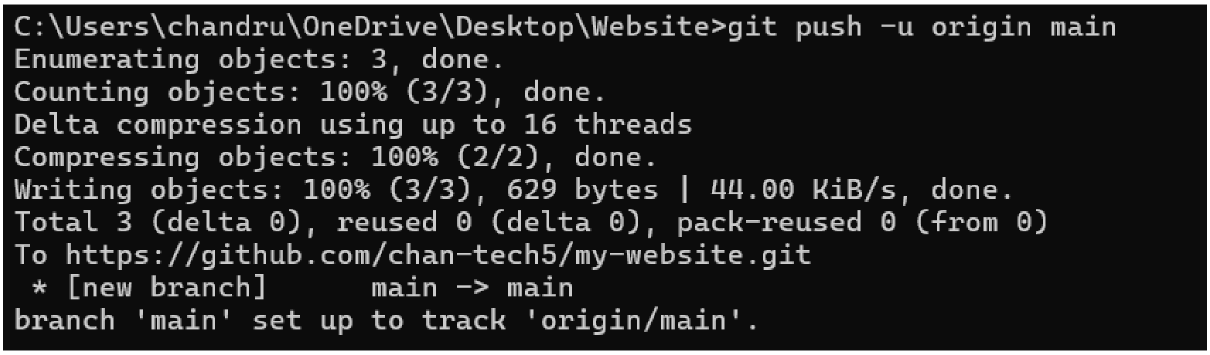
- The command is used to rename the current branch to main:
  git branch -M main
- Here **-M**: This flag forces the renaming, even if a branch named main already exists. It will overwrite the existing main branch.
- **main**: This is the new name for the current branch.



```
C:\Users\chandru\OneDrive\Desktop\Website>git branch -M main
```

Step 12:

- The command is used to upload your project to GitHub by running:
  git push -u origin main
- Then, set it as the upstream branch.



```
C:\Users\chandru\OneDrive\Desktop\Website>git push -u origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 16 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 629 bytes | 44.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/chan-tech5/my-website.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
```

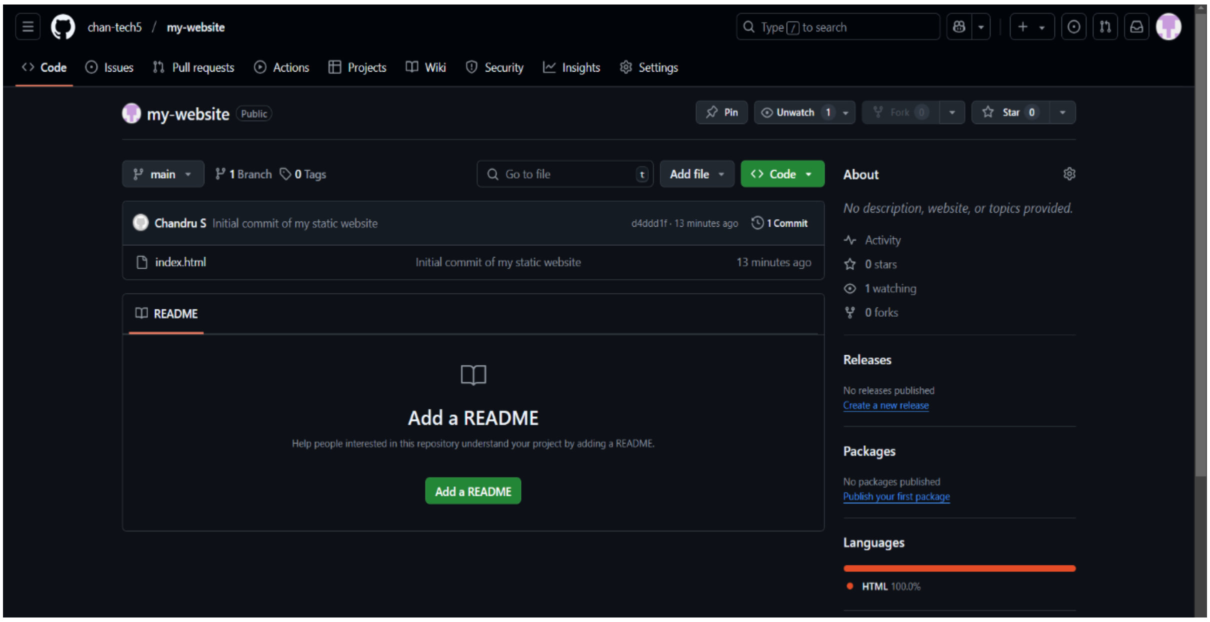
Step 13:

Verify Your Files on GitHub

1. Open your web browser and navigate to your GitHub repository:

   https://github.com/yourusername/my-website

2. You should see your website files successfully uploaded!



Chandru S Initial commit of my static website d4ddd1f · 13 minutes ago 1 Commit

index.html Initial commit of my static website 13 minutes ago

Add a README

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

No description, website, or topics provided.

No releases published
Create a new release

No packages published
Publish your first package

HTML 100.0%

Expected Outcome

By completing this Proof of Concept (PoC), you will:

1. Successfully **initialize a Git repository** in your local static website folder.
2. Track and manage changes to your **website files** (HTML, CSS, etc.) using Git.
3. Learn and apply fundamental **Git commands** (git init, git add, git commit) for version control.
4. Commit changes locally with **clear and descriptive messages** to maintain a structured history.
5. Gain **practical experience** in using Git for tracking and managing website file modifications.