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Documentation on git.

Git

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

is software for tracking changes in any set of 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 systems).[9][10][11]

Git was originally authored by Linus Torvalds in 2005 for development of the Linux kernel, with other kernel developers contributing to its initial development.[12] Since 2005, Junio Hamano has been the core maintainer.

Git lets developers see the entire timeline of their changes, decisions, and progression of any project in one place. From the moment they access the history of a project, the developer has all the context they need to understand it and start contributing.

- **Control System:** This basically means that Git is a content tracker. So Git can be used to store content — it is mostly used to store code due to the other features it provides.
- **Version Control System**: The code which is stored in Git keeps changing as more code is added. Also, many developers can add code in parallel. So Version Control System helps in handling this by maintaining a history of what changes have happened. Also, Git provides features like branches and merges, which I will be covering later.
- **Distributed Version Control System**: Git has a remote repository which is stored in a server and a local repository which is stored in the computer of each developer. This means that the code is not just stored in a central server, but the full copy of the code is present in all the developers' computers. Git is a Distributed Version Control System since the code is present in every developer's computer. I will explain the concept of remote and local repositories later in this article.

Advantages of Git:

- track changes across multiple files
- Compare versions of a project
- "Time travel" back to old versions
- Collaborate and share changes
- Combine changes.
- Revert to a previous version

Github is a service that hosts Git repositories in the cloud and makes it easier to collaborate with other people. You do need to sign up for an account to use Github. It's an online place to share work that is done using Git.

Repository

A Git "Repo" is a workspace which tracks and manages files within a folder. Anytime we want to use Git with a project, app, etc we need to create a new git repository. We can have as many repos on our machine as needed, all with separate histories and contents.

Git operations

1 git config This command is used set author name and email address

2 git in it The command is used has new repository

3 git clone This command is used obtain a repo

4 git add Used has file the staging area

5 git commit Usage snapshots the file permanently

6 git diff-stagged It shows the differences between the files staging area and latest

7 git reset upstages files but preserves the files

After installing the git we need create a repo and create what project need to do after we can perform few tasks according to it.

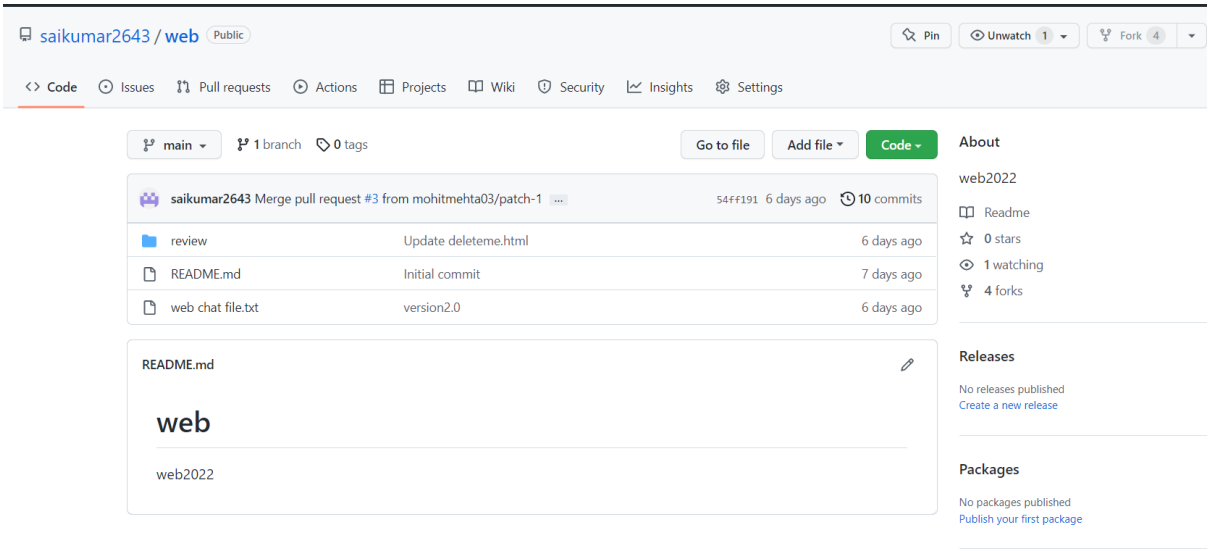
And even we have repo so that we can commit or clone or push or pull we can do according according what we required.

Manage projects with Repositories

- Clone project to work on a local copy
- Control and track changes with Staging and Committing
- Branch and Merge to allow for work on different parts and versions of a project
- Pull the latest version of the project to a local copy
- Push local updates to the main project

1. First step is create a git hub account

2.download the file of as required git bash file windows or other operating system.

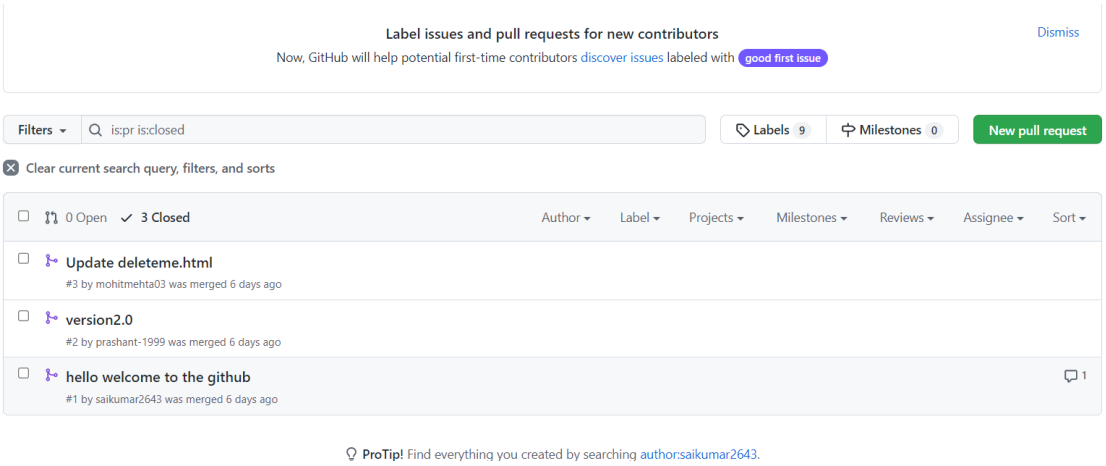


This repo of the project while we enter to git we have to do and create what we need

We have main branch tags go file add file

According our requirements we can add our code or files in add file selection

And we have push and merge operations in the git



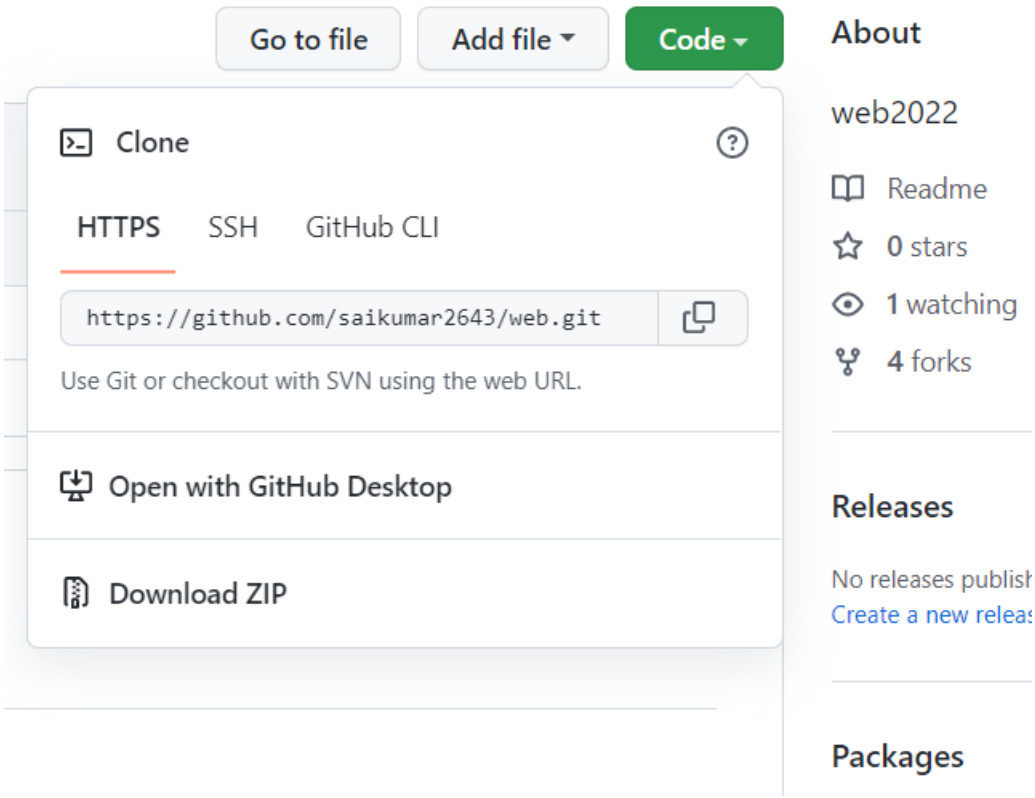
This is the pull request so we can add pull request from another we

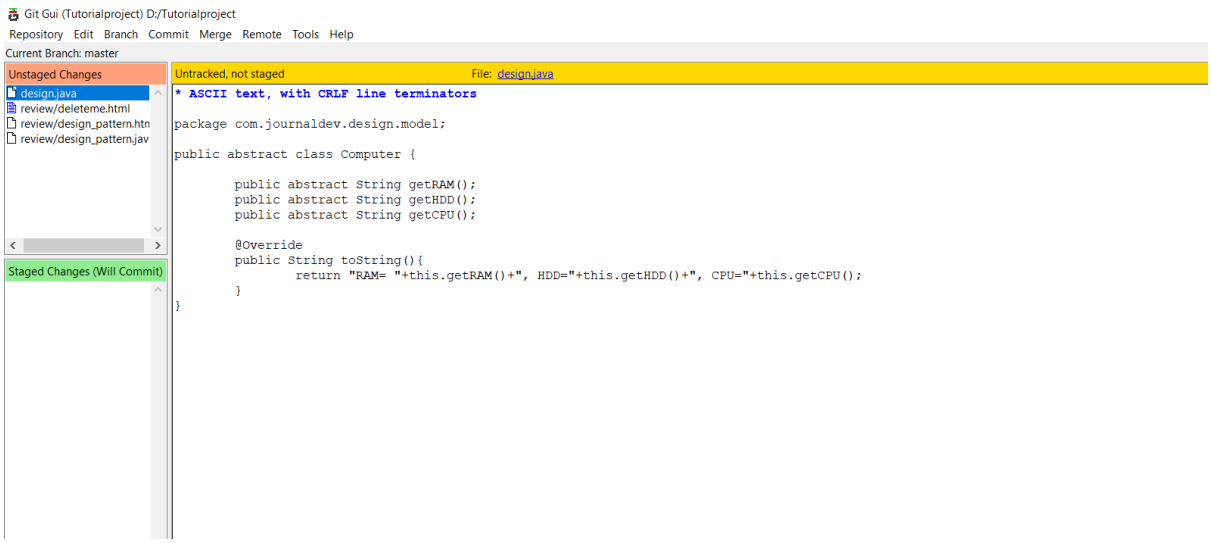
can we use another account and change code they are those open and changed code in code

Push operation using git gui firstly we need download new repo

To get your own changes and Git history up on Github, we need to PUSH them up. The typical workflow looks something like this:

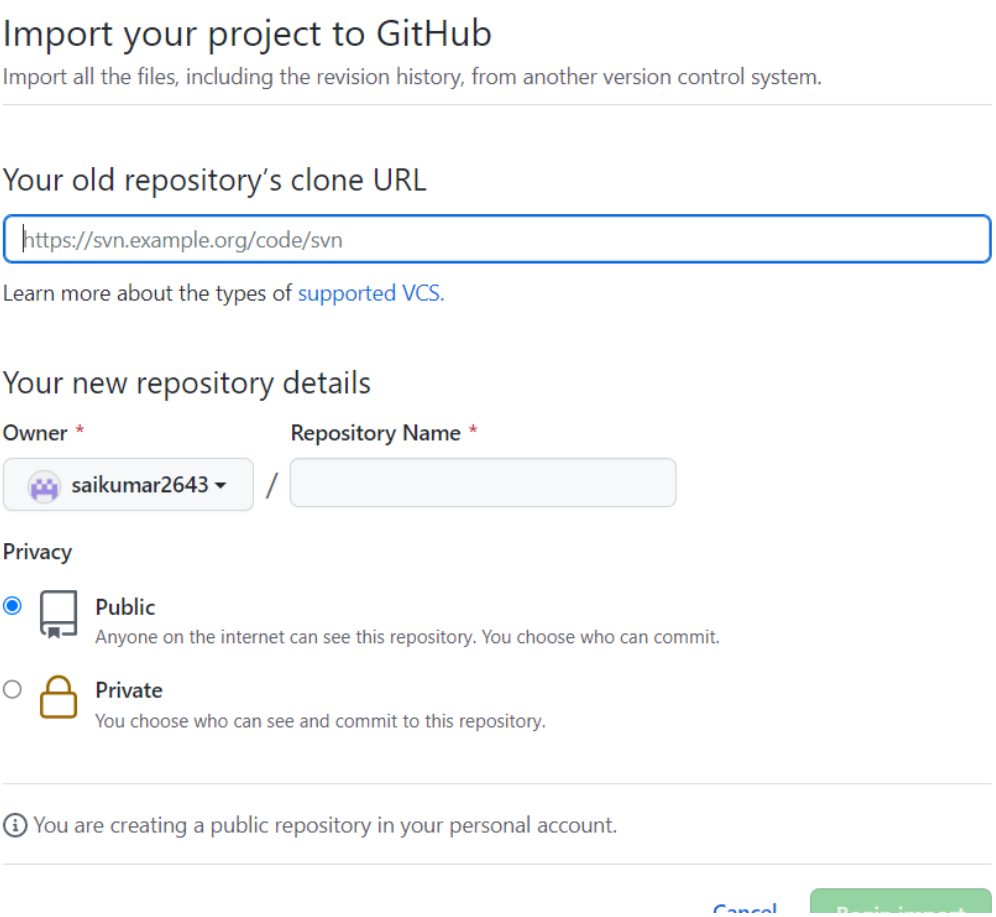
- Make some changes locally
- Add and commit those changes
- Repeat...
- Push new commits up to Github
- First we need to make a Repo On Github





Buy using git gui I have abstract the code from vs code and pushed the code

By doing and creating tutorial



This is how pull and push code according our requriments

Thank you