What is version control and GIT? How does it help team working?

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What is Version Control?

Version control allows you to keep track of your work and helps you to easily explore the changes you have made on your files.

Eg: Our Coding files, Design files

Our conventional version control be like..

Design_script_25thFeb

Design_script_25thFeb.version_1

Design_script_28thFeb.version_1.2

Design_script_30thFeb.version_1.2.1

Design_script_6thMar.version_1.2.newdesign

Design_script_25thMar.version_1.2.newdesign_final

How version control system helps..

- Generate backups
- Test and experiment
- Keep history and track changes
- Collaborate and contribute (Team Working)

git

Founder: Linux Torvalds
Initial release: 2005

What is GIT?

Git is the World's popular **version control system.**
Git is software for tracking changes in any set of files, usually used for **coordinating work** among programmers **collaboratively** developing source code during software development.

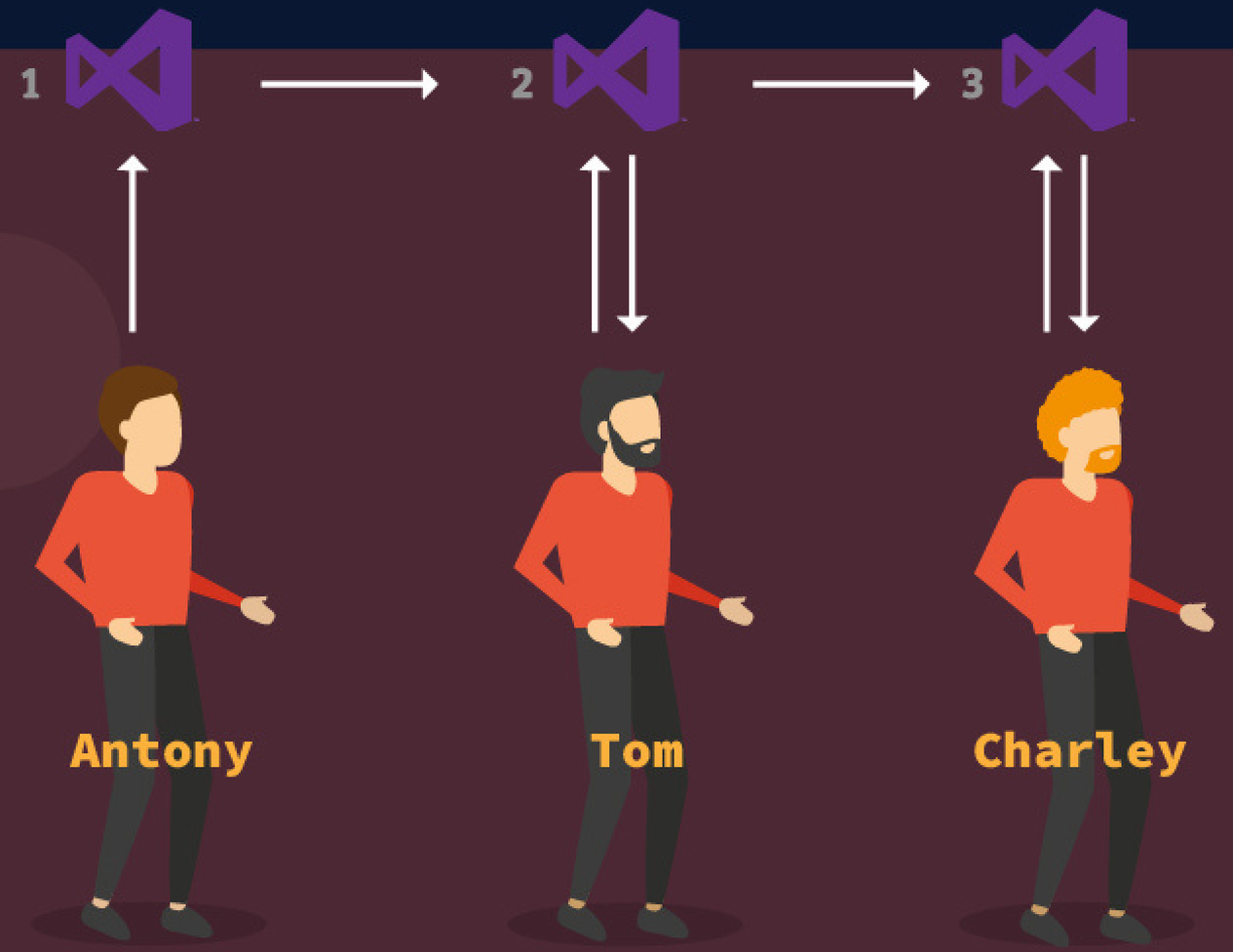
Advantages of Git

- Open Source
- Team Working
- Compatibility
- Reliability
- Speed
- Code Backup
- Branching and Merging

How git is helping for team working.

History
Collaboration
Feature Branches

Example Of Git As A team Work



Example Of Git As A team Work

Writing a Book

Email the copy

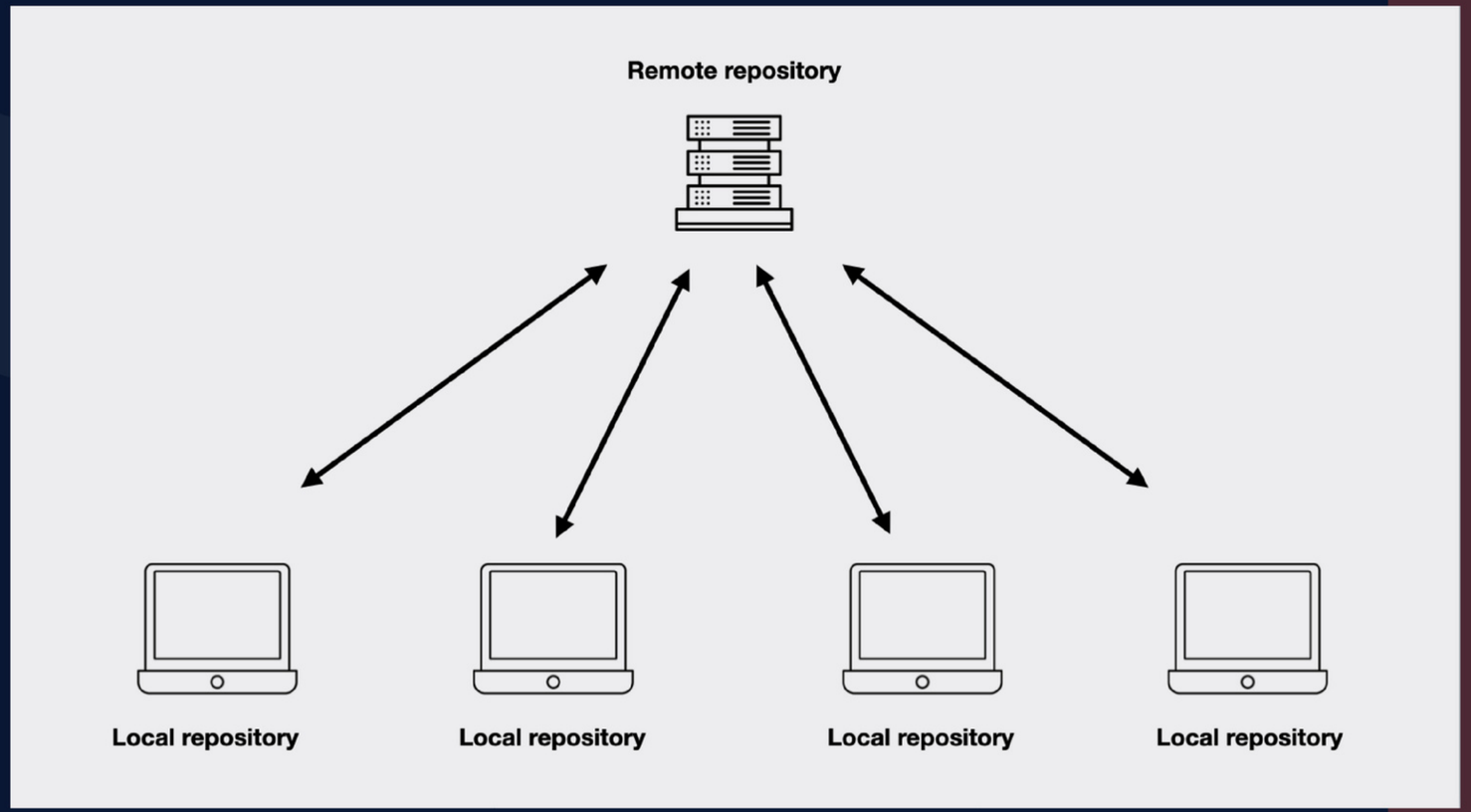
Stuck, waiting for friends updates

Repositories - Local & Remote.

Local repository: It is just a file location residing in your system.

Remote repository: lies somewhere outside your system, on a remote machine.Important when you are working as a **Team**. This is the place where everyone will be sharing their code.

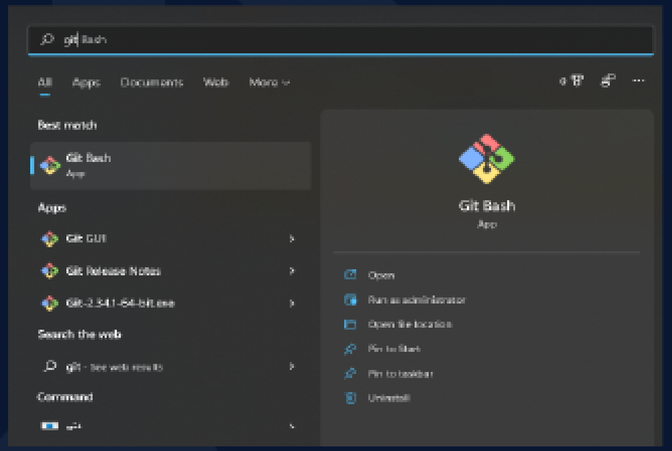
How it works..

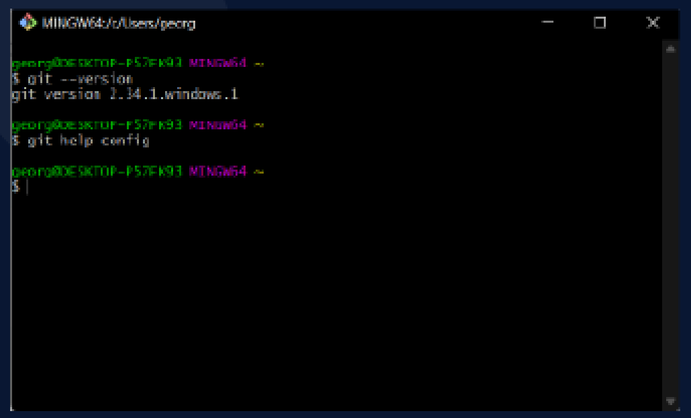

Remote repository
Local repository
Local repository
Local repository
Local repository

How it works..

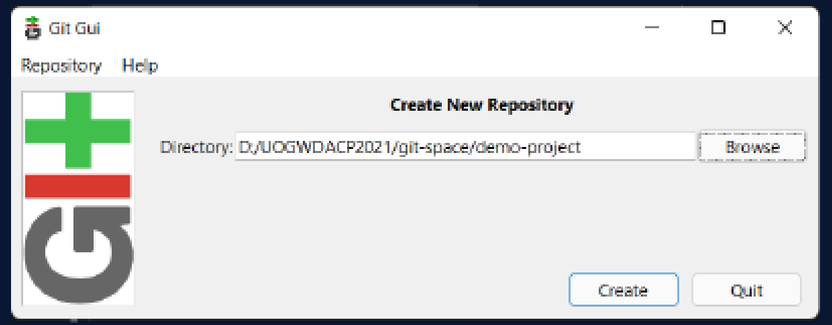
Install git from https://git-scm.com/

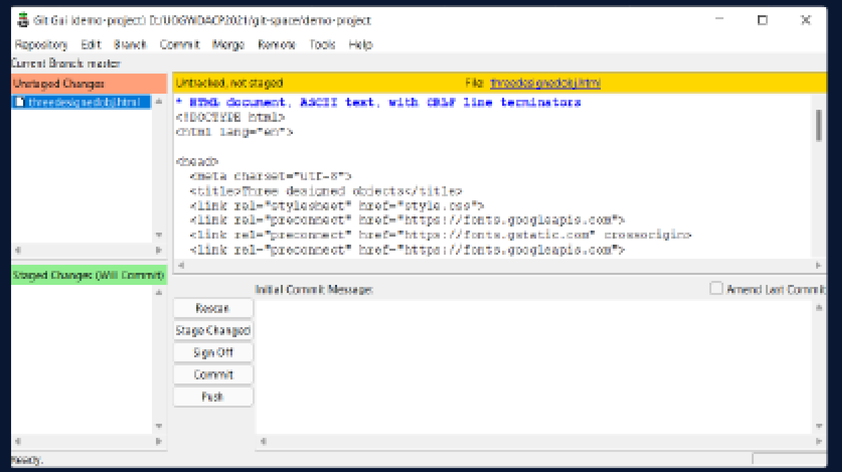
Command line Interface





Graphical user Interface

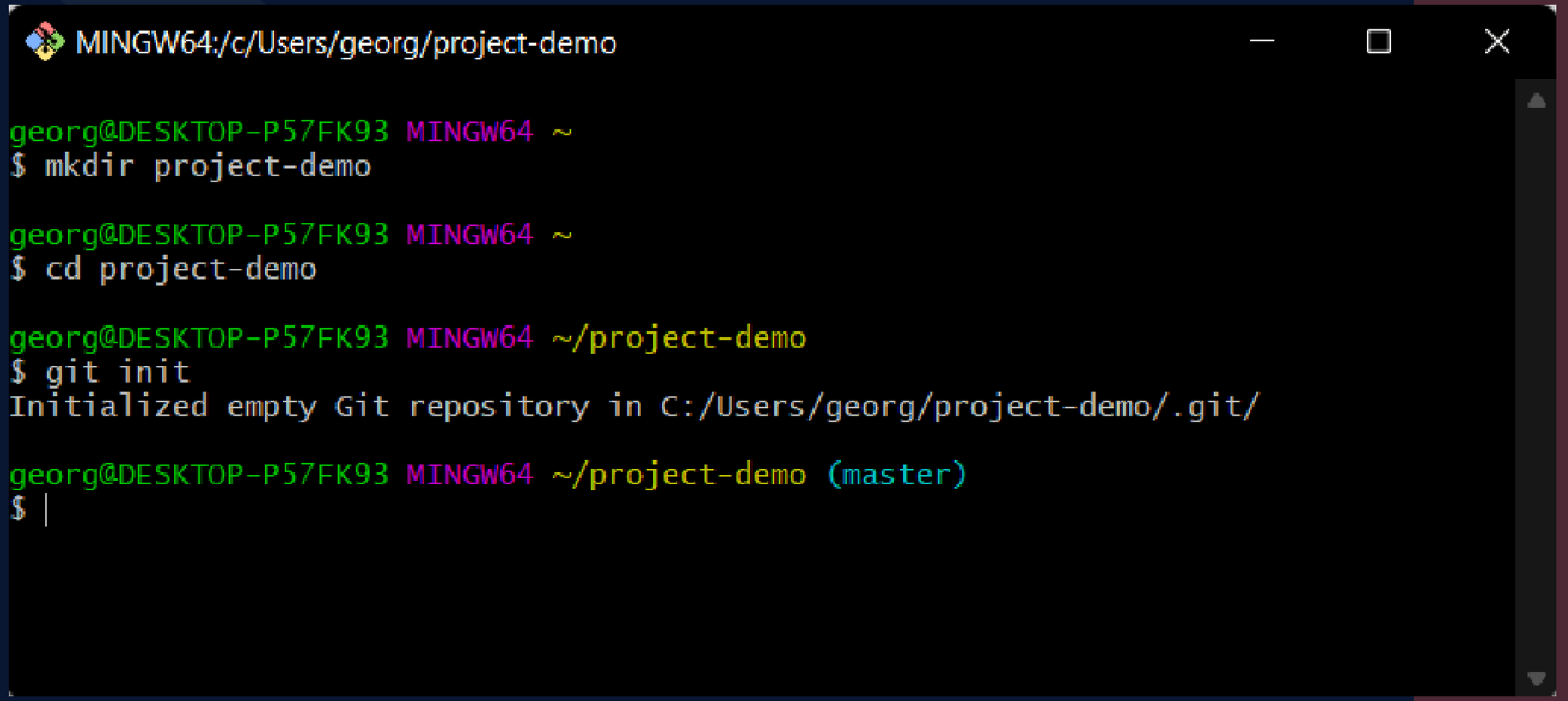




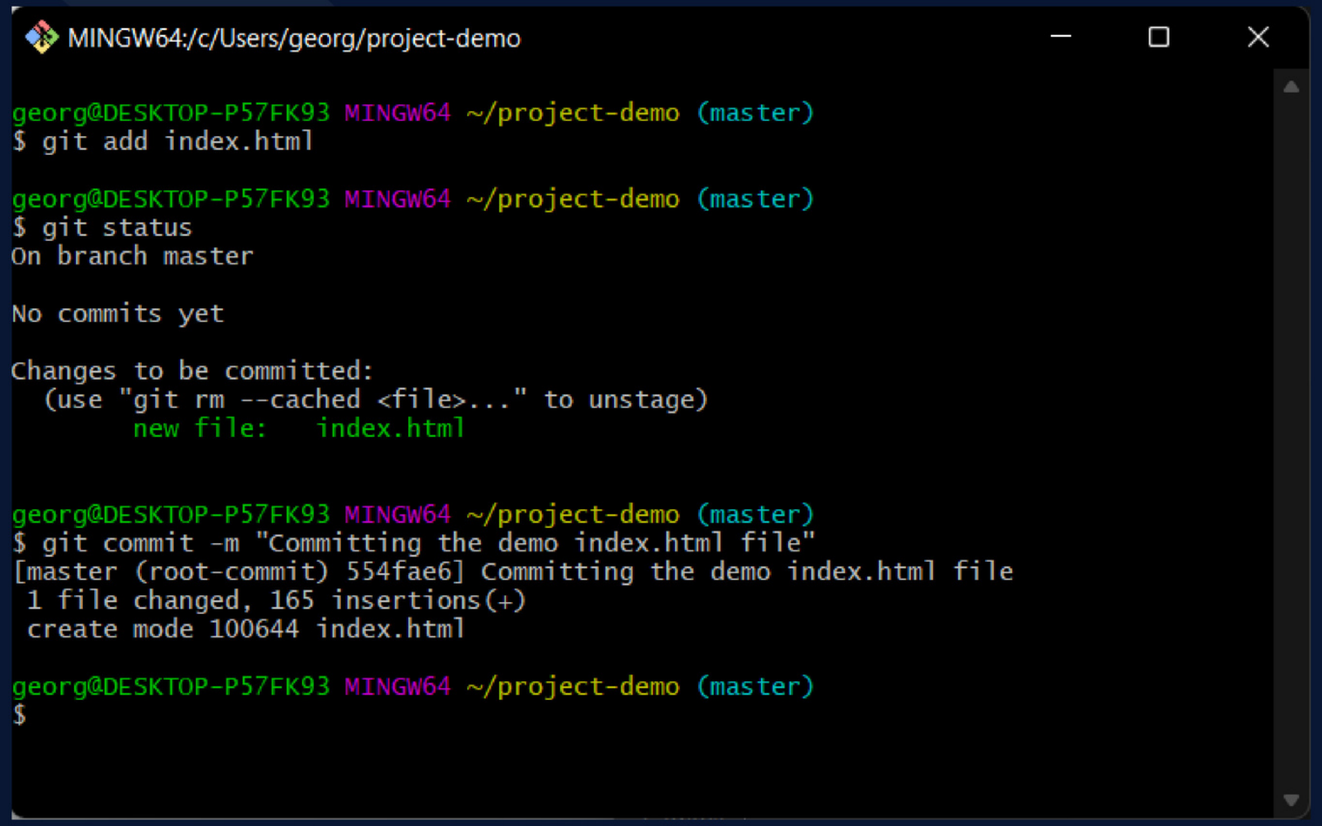
Free Graphical User Interface for team work Eg:

- GitHub Desktop (Win/Mac) - Commonly Used
- SourceTree (Win/Mac)
- Git Extensions (Win/Mac)
- Fugitive (Win/Mac)
- Magit (Win/Mac)
- git g (Win/Mac)

Create a local directory and Initialize the directory:



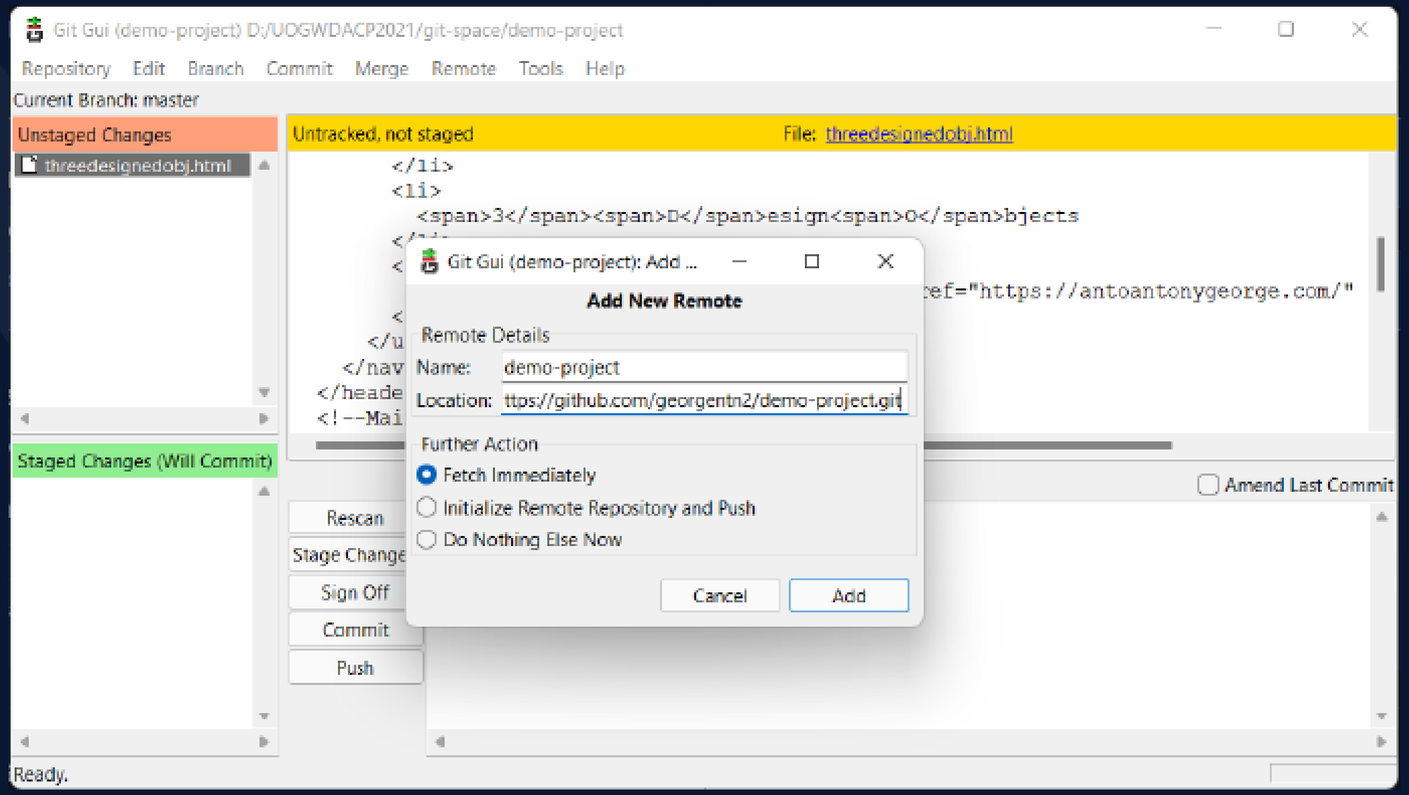
Add any project related file to the project folder which we have created.



Checking the status

Commiting the file with a note to local repository

We will explain it with the help of GUI



Now we need GitHub

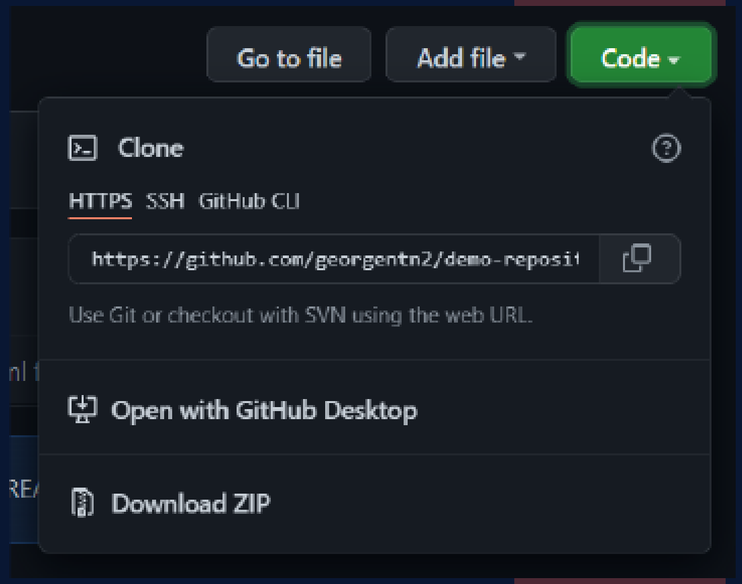
What is GitHub?

GitHub is a GUI platfrom that allows to host your **Git projects on a remote server** somewhere (or in other words, in the cloud).

Millions of **developers** and **companies** build, ship, and maintain their software on GitHub—the largest and most advanced development platform in the world.

go to https://github.com/ to create a new account

create a new repository in github



Copy the newly created repository url

He or she could

Create branches- Creating a new copy of master code as branch and work on it

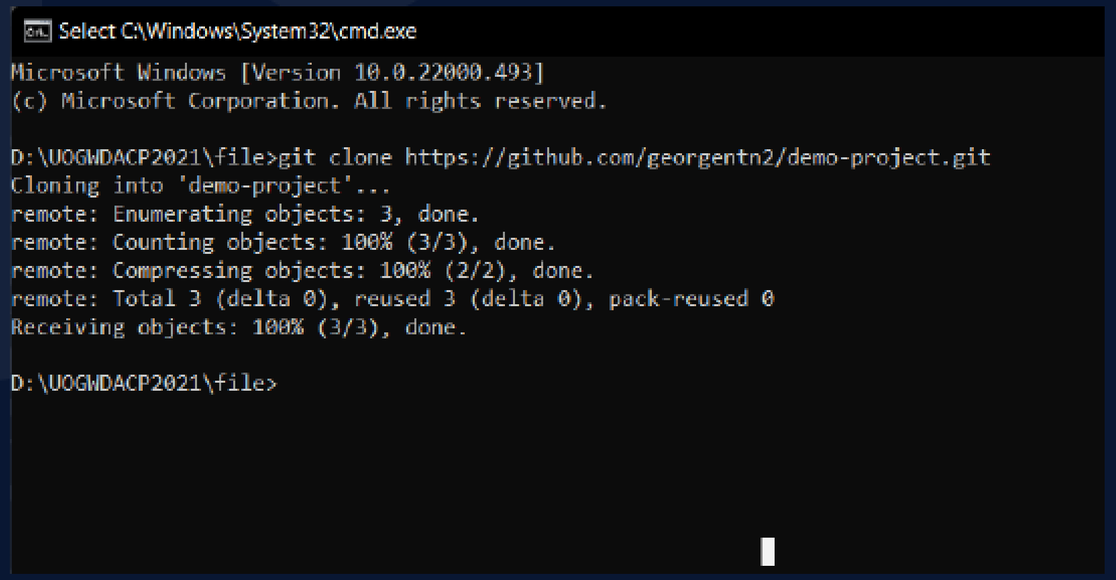
Pull- retrieving latest changes from repo

Push- Updating the new changes made

merge- Merging multiple branches together or to master branch

Now one of the team member wants our code in his local machine

he/she can use **git clone <repository link>** command on CLI in his PC where **git** is installed



thank you.