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What is Git?

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, then using Git effectively will probably be much easier for you. As you learn Git, try to clear your mind of the things you may know about other vcs. such as doing so will help you avoid subtle confusion when using the tool. Even though Git is used to tracking changes in the source code, enabling multiple developers to work together on non-linear development. Git as their version control system of choice. Over the last few years, the survey hasn't even bothered to ask about version control because Git is so widely used.

- Businesses using Git can break down communication barriers between teams and keep them focused on doing their best work. Plus, Git makes it possible to align experts across a business to collaborate on major projects.
- Any changes made to the source code were unknown to the other developers
- Developers used to submit their codes to the central server without having copies of their own

Basic Git commands

There are many git commands that can be used to perform many operations these are the some of the basic git commands

- git commit captures a snapshot of the projects currently staged changes also functions like taking a photo. Anything that's been staged with git add will become a part of the snapshot with git commit.

```
> git commit -m "my message"
```

- git status shows the status of changes as untracked, modified, or staged.
- git branch shows the branches being worked on locally.

```
> git branch
```

- git merge merges is used for development created by git branch and integrate them into a single branch
- git pull that allows to fetch and download content from a remote repository and immediately update the local repository to match that content
- git push updates the remote repository with any commits made locally to a branch.
- git init initializes a brand It can be used to convert an existing, unversioned project to a Git repository or initialize a new. It adds a hidden subfolder within the existing directory that houses the internal data structure required for version control.
- git clone creates a local copy of a project that already exists remotely. The clone includes all the project's files, history, and branches.

```
> git clone <url>
```

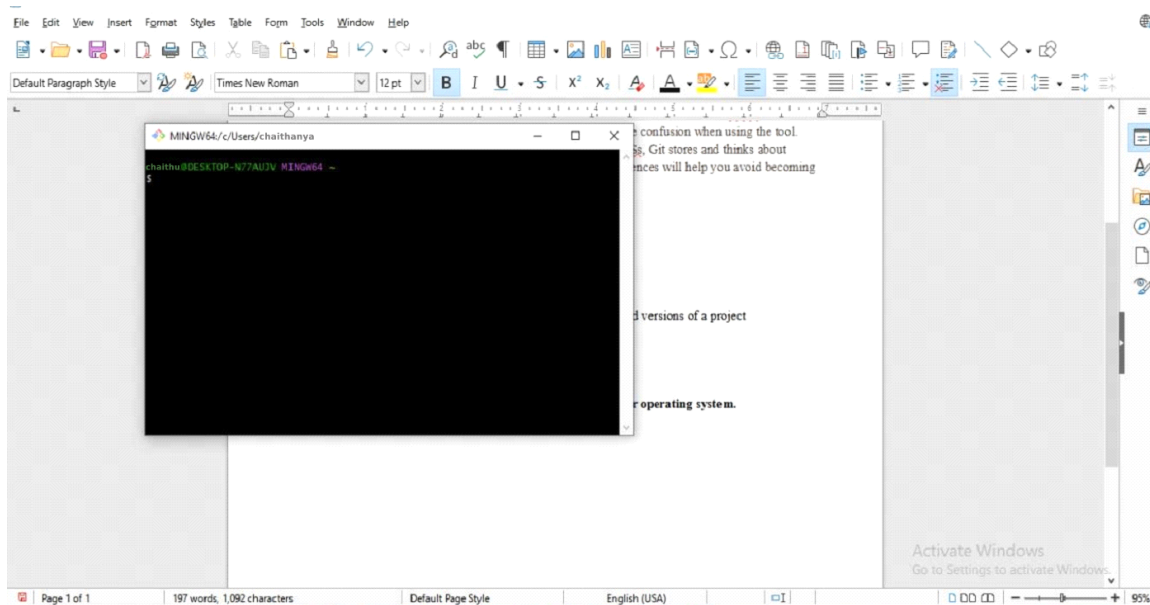
- git add stages a change adds a change in the working directory to the staging area. It tells Git that you want to include updates to a particular file in the next commit

```
> git add file1 file2
```

Manage Projects With Repositories

- The First thing we have to do is **Clone** the project to work on a local copy
- Then Control and also track the changes on **Straging , Committing**
- To allow them for work on different locaions we use **Branch** and **Merge**
- Then we need to **Pull** the leatest Version
- Later we have to **Push** local updates to main project

- The very first step is to create an account on github
- Then We need to download the file of git bash file windows
- After downloading we need to install the git bash file and run



- We have to check the version then prompt Git Bash
\$ git --version
- Then we need to change the working directory to local repository the command : \$ cd Document

```

chaithu@DESKTOP-N77AUJV MINGW64 ~
$ git --version
git version 2.37.0.windows.1
chaithu@DESKTOP-N77AUJV MINGW64 ~
$ cd Documents
chaithu@DESKTOP-N77AUJV MINGW64 ~/Documents
$ cd computer network
bash: cd: too many arguments
chaithu@DESKTOP-N77AUJV MINGW64 ~/Documents
$ cd computer network
bash: cd: too many arguments
chaithu@DESKTOP-N77AUJV MINGW64 ~/Documents
$ git init
Initialized empty Git repository in C:/Users/manish/Documents/.git/
chaithu@DESKTOP-N77AUJV MINGW64 ~/Documents (master)
$ git status
warning: could not open directory 'My Music/': Permission denied
warning: could not open directory 'My Pictures/': Permission denied
warning: could not open directory 'My Videos/': Permission denied
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    .Rhistory
    --lock.AWS PPT REVIEW 2.odp#
    --lock.PPT AWS solution Architect.odp#
    --lock.Rushikesh_123 bda.docx#
    AWS PPT REVIEW 2.odp
    Arduino/
    ArduinoData/
    STech 119 Experiment no 2.docx
    CS.pdf
    Document.rtf
    Documents - Shortcut.lnk
    Downloads - Shortcut.lnk
    Gender and age detection Presentation 1.pptx
    IMG_20220204_072331[1].jpg
    PPT AWS solution Architect.odp
    Rushikesh_123 bda.docx
    SelfieCity_20180718181849_org.jpg
    assiment 2.python.rtf
    binary search.cpp

```

Activate Windows
Go to Settings to activate Windows.

Stage the file for commit to your local repository.

-git add

```

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    Arduino/
    ArduinoData/
    STech 119 Experiment no 2.docx
    CS.pdf
    Document.rtf
    Documents - Shortcut.lnk
    Downloads - Shortcut.lnk
    Gender and age detection Presentation 1.pptx
    IMG_20220204_072331[1].jpg
    PPT AWS solution Architect.odp
    Rushikesh_123 bda.docx
    SelfieCity_20180718181849_org.jpg
    assiment 2.python.rtf
    binary search.cpp

```

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- Then we add the file to repository and commit
\$ -git commit -m

The screenshot shows the GitHub repository page for 'chaithanyasainath / computer-network'. The repository is public and has 0 stars and 0 forks. The main branch is 'main'. The repository contains two files: 'README.md' (Initial commit, 28 minutes ago) and 'computer-network.pdf' (Add files via upload, now). The README.md file is displayed with the title 'computer-network' and the description 'all concepts of computer network and notes.' The right sidebar shows the 'About' section with the same description, 'Releases' (No releases published), and 'Packages' (No packages published).

- Atlast we complete the github project

The screenshot shows the file view for 'computer-network / computer network.pdf'. The file is 15 MB and was added via upload. The latest commit is c861d36, 1 minute ago. The file content is displayed as a red box with the text 'Unable to render code block'. The footer shows the GitHub logo, copyright 2022 GitHub, Inc., and various links like Terms, Privacy, Security, Status, Docs, Contact GitHub, Pricing, API, Training, Blog, and About.