**What is Git?**

Git is the free and open-source distributed version control system that’s responsible for everything **GitHub** related that happens locally on your computer.

Benefits of using git

* History tracking
* Collaboration
* Branching and merging

Version Control?

It is a technique of tracking and managing the codes.

**What is GitHub?**

GitHub is a widely-used Free-to-use cloud Storage platform with version control and many other essential features that specifically helps developers to manage and deploy their projects on GitHub.

Difference between git and github

* Git is a software but github is a service.
* Git is installed in systems locally but github is hosted on web.

Commands in git:

Basic Setup and Initialization

Git init:

Initializes a new, empty repository in the current directory. This is the starting point of project.

Command: git init

Git config:

Sets identity for git commits. This let others who made changes.

Command: git config –global user.name “Your name” and git config –global user. email “email”

Version Control: Staging and Committing

Git add:

It makes changes to files to prepare them for commit.

Command: git add <filename>/ git add .

Git commit:

It saves staged changes as a snapshot in the project history to commit.

Command: git commit -m “The commit message”

Connecting to Remote Repositories:

Git Clone:

The git clone command is used to create a copy of a specific repository or branch within a repository. When we clone a repo you get a copy of the entire history of the repo.

Command: **git clone <repository-link>**

**Git Push:**

**It pushes the local commits from a specific branch to the matching branch on the remote repository named ‘origin’.**

**Command: git push origin <branch\_name>**

**Git Pull:**

**It pulls changes from specified branch on the remote repository and merges them into local branch.**

**Command: git pull origin <branch\_name>**

**Branching:**

**Command: git branch <branch name>**

**Creates a new branch with the specified name where we can make changes isolated from other branches.**

**Command: git merge <branch\_name>**

**Merges changes from a specified branch into current active branch.**

**Command: git status**

**Displays the current status of working directory, showing which files are staged, unstaged or untracked.**

**Command: git log**

**Shows the history of commits in the current branch.**