What is Git?

Git is a distributed version control system used to track changes in source code during software

development. It allows multiple developers to work on a project simultaneously without interfering

with each other's changes.

Why Use Git?

1. Collaboration: Multiple developers can work on the same project.

2. Version Control: Keeps track of every change made to the code.

3. Backup: Provides a reliable backup of your code.

4. Branching and Merging: Allows you to work on different features simultaneously.

Basic Git Terminology

Repository (Repo): A directory which contains your project work, including a .git folder, where Git

stores all the metadata and object database.

Commit: A snapshot of your repository at a specific point in time.

Branch: A movable pointer to a commit. The default branch name in Git is main.

Clone: A copy of a repository.

Push: Sending your committed changes to a remote repository.

Pull: Fetching and merging changes from a remote repository to your local repository.

Merge: Combining changes from different branches.

Setting Up Git

1. Install Git: Download and install Git from https://git-scm.com/.

2. Configure Git: git config --global user.name "Your Name" git config --global user.email "your.email@example.com"

Basic Git Commands

Initializing a Repository

git init

Cloning a Repository

git clone https://github.com/user/repo.git

Checking the Status

git status

Adding Changes

git add filename or add all changes git add.

Committing Changes

git commit -m "Your commit message"

Viewing Commit History

git log

Branching

git branch branch_name
git checkout branch_name
or create and switch
git checkout -b branch_name

Merging

git merge branch_name

Pushing Changes

git push origin branch_name

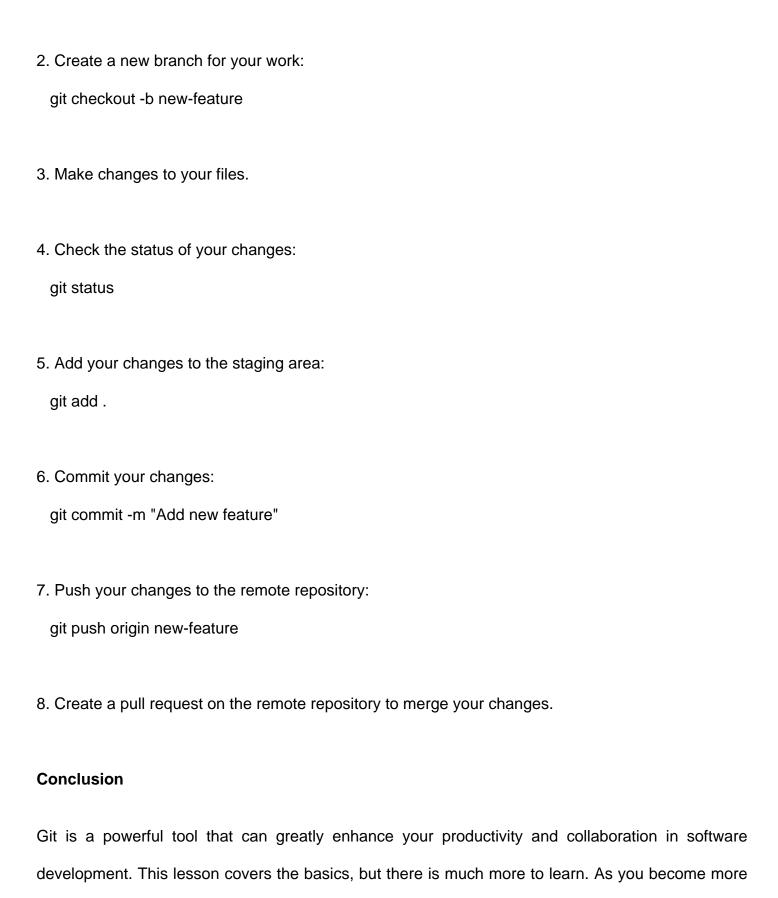
Pulling Changes

git pull origin branch_name

Basic Workflow

Clone the repository (if you haven't already):
 git clone https://github.com/user/repo.git

cd repo



comfortable with Git, explore more advanced features like rebasing, cherry-picking, and using

hooks. Happy coding!