1. **Basic Git Setup**

# Set your username

git config --global user.name "Sujith"

# Set your email

git config --global user.email "youremail@example.com"

# Check configuration

git config –list

1. **Create and Initialize Repository**

# Initialize a new Git repository in current folder

git init

# Clone a remote repository to your local system

git clone <https://github.com/username/repository.git>

1. Staging and Committing Changes

# Check file status (modified, staged, untracked)

git status

# Add a single file to staging area

git add filename.html

# Add all files (new + modified)

git add .

# Commit the staged files with a message

git commit -m "Added index page"

# Add and commit in one line

git commit -am "Updated file"

1. Viewing History

# Show commit history

git log

# Show simplified commit history (one line)

git log --oneline

# Show differences between working directory and last commit

git diff

# Show changes between two commits

git diff commit1 commit2

1. **Working with Branches**

# List all branches

git branch

# Create a new branch

git branch feature-branch

# Switch to another branch

git checkout feature-branch

# Create and switch at once

git checkout -b new-branch

# Merge a branch into current branch

git merge feature-branch

# Delete a branch

git branch -d feature-branch

1. Remote Repository (GitHub)

# Add a remote repository (GitHub)

git remote add origin https://github.com/username/repository.git

# Check remote URLs

git remote -v

# Push branch to remote

git push -u origin main

# Push changes

git push

# Pull latest changes from remote

git pull origin main

# Fetch data from remote (no merge)

git fetch origin

1. Syncing Local & Remote

# Push all branches

git push --all origin

# Force push (⚠️ overwrites remote)

git push origin main --force

# Pull with rebase (avoid unnecessary merge commits)

git pull --rebase origin main