

2. Installation & Configuration:

Git –version

Configuration:

Git config –global [user.name](#)"name"

Git config –global user.email"email"

Check Configuration:

Git config –list

3. Create a local repository

Step 1: Create Project Folder

mkdir myproject

cd myproject

Step 2: Initialize Git Repository

git init

This creates a hidden .git folder to track changes.

Check Status:

git status

4. Commit to a local repository

Step 1: Create a file

touch [app.py](#)

Step 2: Add file to staging area

git add filename

Or

git add . -> to add all the files

Step 3: Commit Changes

git commit -m"Initial commit"

Check commit history:

git log

5. Create a Remote Repository

Remote repositories are typically created on platforms like:

- GitHub
- GitLab
- BitBucket

Steps:

1. Login to Github
2. Click “New Repository”
3. Enter repository name
4. Click Create

Copy the repository url

Example:

https://github.com/SivanandhiniChandrasekar/git_practice.git

6. Push to a remote repository

Step 1: Connect Local Repo to Remote

```
git add remote origin "url"
```

Check Remote:

```
git remote -v
```

Step 2: Push Code

```
git push -u origin main
```

After first push, next time simply:

```
git push
```

7. Git References (Important Commands)

Commands	Description
git status	Check Current Status
git add	Add file to staging
git commit	Save changes
git log	View commit history

git commit	Save changes
git log	View commit history
git diff	View file changes
git branch	List branches
git checkout	Switch branch
git merge	Merge branches
git pull	Fetch + merge remote changes
git clone	Copy remote repository

8. Branching and merging

Branching allows parallel development without affecting main code.

Create new branch

git branch feature1 → branch name

Switch to branch

git checkout feature1

Or shortcut

git checkout -b feature1

Make changes and commit

git add .

git commit -m "Added new feature"

Merge branch into main

Switch to main branch

git checkout main

Merge:

git merge feature1

Delete branch

git branch -d feature1

9. Basic git workflow

```
Working directory
  |
Staging Area(git add .)
  |
Local Repository (git commit)
  |
Remote Repository (git push)
```