

## 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](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

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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

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Staging Area(git add .)

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Local Repository (git commit)

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Remote Repository (git push)