

Perform Various Git Operations on Local and Remote Repository

Steps and Commands:

Check Git Version

Command:

```
git --version
```

How to run: Open Git Bash or CMD and type the command.

Meaning: Shows the installed version of Git on your system.

Configure Username

Command:

```
git config --global user.name "YourName"
```

How to run: Run in Git Bash.

Meaning: Sets your username for Git commits globally on your system.

Configure Email

Command:

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

How to run: Run in Git Bash.

Meaning: Sets your email ID for Git commits globally.

Create a New Directory

Command:

```
mkdir devops-demo  
cd devops-demo
```

How to run: Run in CMD or Git Bash.

Meaning: Creates a new folder named devops-demo and moves into it.

Initialize a Local Repository

Command:

```
git init
```

How to run: Inside the devops-demo folder, run in Git Bash.

Meaning: Initializes a new local Git repository in the current directory.

Create a New File

Command:

```
echo "Hello DevOps" > readme.txt
```

How to run: Run in Git Bash or CMD.

Meaning: Creates a new file readme.txt with sample text.

Check Repository Status

Command:

```
git status
```

How to run: Run inside the repository folder.

Meaning: Displays the state of working directory and staged files.

Add File to Staging Area

Command:

```
git add readme.txt
```

How to run: Run in Git Bash.

Meaning: Adds readme.txt to staging area (ready for commit).

Commit the Changes

Command:

```
git commit -m "Initial commit"
```

How to run: Run in Git Bash.

Meaning: Saves the staged changes to the local repository with a message.

Add Remote Repository

Command:

```
git remote add origin https://github.com/yourusername/devops-demo.git
```

How to run: Run in Git Bash.

Meaning: Connects your local repository to a remote repository on GitHub.

Push Changes to Remote

Command:

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

How to run: Run in Git Bash (after creating a main branch).

Meaning: Uploads local commits to the remote GitHub repository.

Clone a Repository

Command:

```
git clone https://github.com/yourusername/devops-demo.git
```

How to run: Run in Git Bash or CMD.

Meaning: Downloads a copy of a remote repository to your local machine.

Create a New Branch

Command:

```
git branch feature1
```

How to run: Run in Git Bash.

Meaning: Creates a new branch named feature1.

Switch Between Branches

Command:

```
git checkout feature1
```

How to run: Run in Git Bash.

Meaning: Moves your workspace to the feature1 branch.

Merge Branches

Command:

```
git checkout main
```

```
git merge feature1
```

How to run: Run both commands in Git Bash.

Meaning: Combines changes from feature1 branch into the main branch.

View Commit History

Command:

`git log`

How to run: Run in Git Bash.

Meaning: Displays a list of all commits in the current repository.

Remove a File

Command:

`git rm readme.txt`

How to run: Run in Git Bash.

Meaning: Deletes the file and stages the deletion for commit.

Pull Latest Changes

Command:

`git pull origin main`

How to run: Run in Git Bash.

Meaning: Downloads and merges latest changes from the remote repository.