



St. JOSEPH'S
GROUP OF INSTITUTIONS
OMR, CHENNAI - 119



Placement Empowerment Program

Cloud Computing and DevOps Centre

Set Up Git Branching

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Introduction

Git is a powerful version control system used to track changes in code. It allows multiple developers to work on a project simultaneously without interfering with each other's work.

Key concepts include

- repositories (which store project files and their history)
- branches (independent lines of development)
- commits (snapshots of the repo with unique IDs and messages)
- merges (integrating changes from one branch to another)
- pulling (fetching changes from a remote repo)
- pushing (sending changes to a remote repo)
- cloning (copying an existing remote repo to your local machine).

Git is essential for collaboration, tracking changes, and managing project versions efficiently.

```
Admin@HP MINGW64 ~/Desktop/sample.html (master)
$ git init
Initialized empty Git repository in C:/Users/Admin/Desktop/sample.html/.git/

Admin@HP MINGW64 ~/Desktop/sample.html (master)
$ git add index.html

Admin@HP MINGW64 ~/Desktop/sample.html (master)
$ git commit -m "hi all"
Author identity unknown

*** Please tell me who you are.

Run

  git config --global user.email "you@example.com"
  git config --global user.name "Your Name"

to set your account's default identity.
Omit --global to set the identity only in this repository.
fatal: unable to auto-detect email address (got 'Admin@HP.(none)')

Admin@HP MINGW64 ~/Desktop/sample.html (master)
$ git commit -m "Firstcommit"
Author identity unknown

*** Please tell me who you are.

Run

  git config --global user.email "you@example.com"
  git config --global user.name "Your Name"

to set your account's default identity.
Omit --global to set the identity only in this repository.
fatal: unable to auto-detect email address (got 'Admin@HP.(none)')

Admin@HP MINGW64 ~/Desktop/sample.html (master)
```

Step-by-Step Overview

Step 1: Initialize the repository.

```
C:\Users\Admin\Desktop\poc>git init  
Initialized empty Git repository in C:/Users/Admin/Desktop/poc/.git/
```

Step 2

Add the files to the repository

```
PS C:\Users\shalni\OneDrive\Desktop\New folder> git add index.html
```

Step 3

Commit the changes.

```
C:\Users\Admin\Desktop\poc>git add .
```

Step 5

Create the branch

Git branch -M main

```
PS C:\Users\shalni\OneDrive\Desktop\New folder> git branch -M main  
PS C:\Users\shalni\OneDrive\Desktop\New folder> git remote add origin https://github.com/Shaliniaa/sample.git
```

Step 6

Push Your Branch to Remote:



```
PS C:\Users\shalni\OneDrive\Desktop\New folder> git push -u origin main
```

Step 7

Merge the Branch: Switch back to your main branch:



```
PS C:\Users\shalni\OneDrive\Desktop\New folder> git branch  
* main
```

Expected Outcome

To set up Git branching in Windows PowerShell, navigate to your repo with `cd /path/to/your/repo`, create a new branch using `git checkout -b new-feature-branch`, add a new feature by creating or modifying a file, stage your changes with `git add new_feature.py`, commit them using `git commit -m "Add new feature: Print 'Hello, new feature!'"`, push your branch to remote with `git push origin new-feature-branch`, switch back to the main branch using `git checkout main`, merge the feature branch into the main branch with `git merge new-feature-branch`, and finally push the merged changes to remote using `git push origin main`. This will create a new branch, add a feature, merge it into the main branch, and push the changes to the remote repository.