

GIT AND GITHUB ASSIGNMENTS

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Assignment 1: Git Basics (Local Repository)

Problem Statement

You are starting a new project called **Student-Management-System** and want to track code changes using Git.

Tasks

1. Create a new folder named student-management-system
2. Initialize Git repository
3. Create a file README.md and add project description
4. Check Git status
5. Stage and commit the file

```
MINGW64:/c/Users/likhi/OneDrive/Desktop/student-management-system
likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (master)
$ pwd
/c/Users/likhi/OneDrive/Desktop/student-management-system
likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (master)
$ git init
Reinitialized existing Git repository in C:/Users/likhi/OneDrive/Desktop/student-management-system/.git/
likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (master)
$ git status
On branch master
No commits yet
Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file: README.md

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (master)
$ git add README.md

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (master)
$ git commit -m " added readme file"
[master (root-commit) 5100b31] added readme file
 1 file changed, 2 insertions(+)
 create mode 100644 README.md

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (master)
$ git status
On branch master
nothing to commit, working tree clean
```

Assignment 2: Working with Branches

Problem Statement

You need to add a new feature without affecting the main code.

Tasks

1. Create a branch named feature-login
2. Switch to the branch
3. Add file login.txt
4. Commit changes
5. Merge branch into main

```
MINGW64:/c/Users/likhi/OneDrive/Desktop/student-management-system
likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (master)
$ git branch feature-login
likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (master)
$ git branch
  feature-login
* master

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (master)
$ git checkout feature-login
Switched to branch 'feature-login'

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (feature-login)
$ touch login.txt

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (feature-login)
$ git add login.txt

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (feature-login)
$ git commit -m "added login feature file"
[feature-login c265943] added login feature file
 1 file changed, 1 insertion(+)
 create mode 100644 login.txt

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (feature-login)
$ git status
On branch feature-login
nothing to commit, working tree clean

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (feature-login)
$ git checkout main
error: pathspec 'main' did not match any file(s) known to git

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (feature-login)
$ git checkout master
Switched to branch 'master'

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (master)
$ git merge feature-login
Updating 5100b31..c265943
Fast-forward
  login.txt | 1 +
  1 file changed, 1 insertion(+)
 create mode 100644 login.txt
```

Assignment 3: GitHub Integration

Problem Statement

Your project must be stored in GitHub for collaboration.

Tasks

1. Create a GitHub repository

2. Connect local repo to GitHub

3. Push code to GitHub

4. Verify files online

```
MINGW64:/c/Users/likhi/OneDrive/Desktop/student-management-system
README.md  login.txt

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (master)
$ git branch -M main

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (main)
$ git remote add origin https://github.com/Likhi161/student-management-system.git

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (main)
$ git push -u origin main
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 16 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (6/6), 582 bytes | 291.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/Likhi161/student-management-system.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.

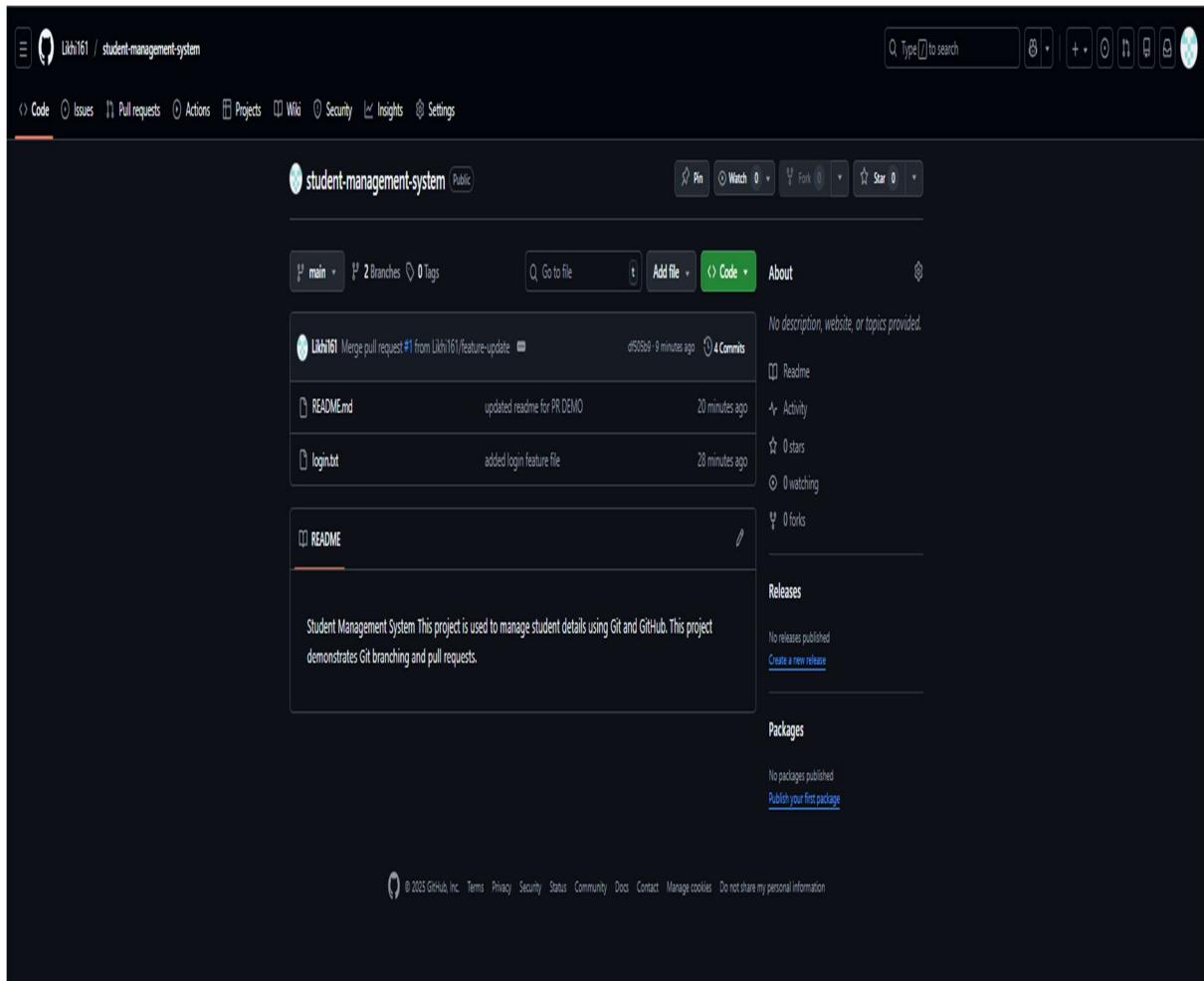
likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (main)
$ git checkout -b feature-update
Switched to a new branch 'feature-update'

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (feature-update)
$ nano README.md

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (feature-update)
$ git add README.md
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (feature-update)
$ git commit -m "updated readme for PR DEMO"
[feature-update 3d66aec] updated readme for PR DEMO
 1 file changed, 1 insertion(+)

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (feature-update)
$ git push origin feature-update
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 16 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 397 bytes | 397.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: create a pull request for 'feature-update' on GitHub by visiting:
remote:   https://github.com/Likhi161/student-management-system/pull/new/feature-update
remote:
To https://github.com/Likhi161/student-management-system.git
 * [new branch]      feature-update -> feature-update
```



Assignment 4: GitHub Pull Request (PR)

Problem Statement

Changes must be reviewed before merging.

Tasks

1. Create a branch
2. Push branch to GitHub
3. Create Pull Request
4. Merge PR

```

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (main)
$ git checkout -b feature-update
Switched to a new branch 'feature-update'

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (feature-update)
$ nano README.md

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (feature-update)
$ git add README.md
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (feature-update)
$ git commit -m "updated readme for PR DEMO"
[feature-update 3d66aec] updated readme for PR DEMO
 1 file changed, 1 insertion(+)

likhi@LAPTOP-2PBH9KUR MINGW64 ~/OneDrive/Desktop/student-management-system (feature-update)
$ git push origin feature-update
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 16 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 397 bytes | 397.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'feature-update' on GitHub by visiting:
remote:   https://github.com/Likhi161/student-management-system/pull/new/feature-update
remote:
To https://github.com/Likhi161/student-management-system.git
 * [new branch]      feature-update -> feature-update

```

updated readme for PR DEMO #1

Merged Likhi161 merged 1 commit into `main` from `feature-update` 8 minutes ago

Conversation 0 Commits 1 Checks 0 Files changed 1

Likhi161 commented 17 minutes ago
No description provided.

Likhi161 merged commit `d9f9e9b` into `main` 8 minutes ago

Pull request successfully merged and closed
You're all set—the `feature-update` branch can be safely deleted.

Add a comment

Write Preview H B I R P | E % @ C

Markdown is supported Paste, drop, or click to add files

Comment

Remember, contributions to this repository should follow our [GitHub Community Guidelines](#).

ProTip! Add comments to specific lines under [Files changed](#).

1 participant