

INTRODUCTION TO GIT AND GITHUB

By

S.M. Rakibul Hasan Shuvo

ID: 2104010202307

CSE306: Software Engineering and Information System Design Lab



Instructor:

MD. Tamim Hossain

Lecturer

Department of Computer Science and Engineering
Premier University

Signature

Department of Computer Science and Engineering

Premier University

Chattogram-4000, Bangladesh

13 November, 2023

Abstract :

- 1 Introduction
- 2 Materials
- 3 Activity
- 4 Discussion
- 5 Conclusion .

Introduction : Git is a version controller system. This system can track project version history like when new file or code added , delete file or code & update . Git one of the most popular version control system in the world which is free , open source . Also its fast and scalable .

Github is a ~~webpage~~ webapps which allows developer to store and ~~manag~~ manage their code using git . We can share privately or publicly our source code . Before store

must be we have github account.

Activity :

1 git init : Initializes a new git repository.

2 git clone [repository URL] : Creates a local copy of a remote repository.

3 git add [file] : Adds changes in a file to staging area.

4 git commit -m "[commit message]" :
Records changes to the repository with a descriptive message.

5 git status : Shows the status of the changes as untracked, modified or staged

6 git pull [remote] [branch] : Fetches changes from a remote repository and merge them into the current branch.

7 git push [remote] [branch] : Pushes changes to a remote repository.

8) git branch : Lists all local branches , highlighting current one .

9) git checkout [branch] : Switches to the specified branch .

10) git merge [branch] : Combines changes from the specified branch into the current one .

11) git log : Displays a log of commits , showing commit messages and IDs .

12) git remote → : Lists all remote repositories .

13) git fetch [remote] : Retrieves changes from a remote repository without merging .

14) git diff : Shows the differences between the working directory and repository .

15) git reset [file] : Unstages changes for a specific file .

16 | git revert [commit] : Undoes a commit by creating a new commit with the inverse changes.

17 | git rm [file] : Removes a file from both the working directory and the repository.

18 | git tag [tagname] : Creates a new tag at the current commit.

19 | git stash : Temporarily saves changes that are not ready to be committed.

20 | git remote add [name] [url] : a new remote repository.

Discussion : Embarking on my coding journey, I created a github account, unlocking a powerful version controller ecosystem. Using "git init," I transformed a local folder into a repository. Adding and committing lab report changes with "git add" & "git commit" allowed for meticulous tracking. Pushing to Github via "git push" expanded collaboration horizons, enabling seamless sharing. Github, to me, ~~is~~ isn't just a repository. It's feel something like difference a world collaborate workspace.

Conclusion : I use Git for version control and Github for its unparalleled collaborative features. Together they providing an efficient and organized environment for tracking changes, collaborate and contributing to open-source projects.