Assignment Number 3

Git Operation

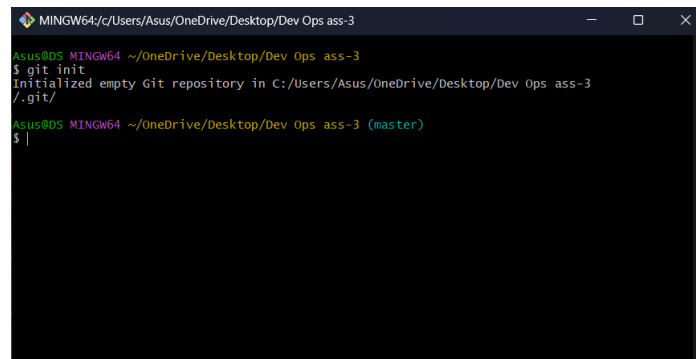**Aim:** To perform various Git operations.

LO mapped: LO1, LO2

Theory:

There are various git operations performed using git bash and they are mentioned below with their usage and syntax.

1. git init
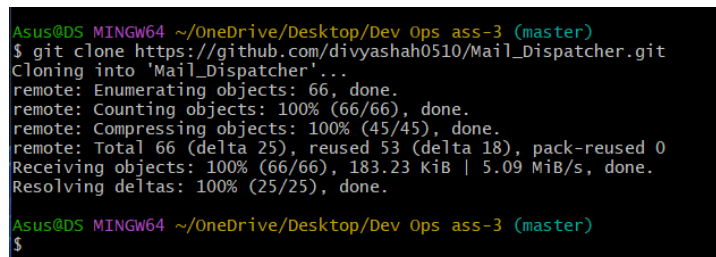   Usage: Initializes a new Git repository in the current directory.
    Syntax: git init

3.1 Initialized empty git repository

2. git clone
    Usage: Creates a copy of a remote repository on your local machine.
    Syntax: git clone <repository_url>

3.2 Cloning existing repository from GitHub

3. git add
    Usage: Adds changes or new files to the staging area, preparing them for a commit.
    Syntax: git add <file_path>

3.3 Adding file to staging area

4. git commit
   Usage: Records the changes in the staging area and creates a new commit with a message.
   Syntax: git commit -m "commit message"

3.4 Process of commit

5. git status
   Usage: Shows the current status of the repository, including changes and staged files.
   Syntax: git status

3.5 Checking status of initialized repository

6. git log
   Usage: Displays a list of commits in reverse chronological order.
   Syntax: git log

3.6 Display commit's history

7. git push

   Usage: Sends local commits to the remote repository.

   Syntax: git push <remote_name> <branch_name>

3.7 Pushing folder to origin from branch master

8. git pull

   Usage: Fetches and merges changes from the remote repository to your local branch.

   Syntax: git pull <remote_name> <branch_name>

3.8 Applying Git Pull Command

9. git branch

   Usage: Lists all branches in the repository.

   Syntax: git branch

3.9 List branch currently present in repository

10. git checkout
    Usage: Switches to a different branch or a specific commit.
    Syntax: git checkout <branch_name/commit_id>

3.10 Adding new branch into repository

11. git merge
    Usage: Combines changes from one branch into another.
    Syntax: git merge <source_branch>

3.11 Merged Two branches

12. git remove
    Usage: This removes file from local repository.
    Syntax: git rm <file _name>

3.12 Removing file name namely "other.html"

13. git fetch
    Usage: Downloads changes from the remote repository without merging.
    Syntax: git fetch <remote_name>

3.13 Using git fetch command

14. git reset

Usage: Removes changes from the staging area, but keeps the modifications in the working directory.

Syntax: git reset <file_path>

3.14 Resetting the file "my.html"

15. git revert

Usage: Reverts one or more commits, creating a new commit to undo the changes.

Syntax: git revert <commit_id>

3.15 To revert to specific commit

16. git remote

Usage: The git remote command lets you create, view, and delete connections to other repositories.

Syntax: git remote add origin <url_to_be_specified>

3.16 Adding repository to remote origin

Conclusion: By this assignment we learned various kinds of git operations and implement them using git bash.