

➤ Assignment: 05 JULY 2024

Git Commands

1. **git init**

- **Definition:** Initializes a new Git repository.
- **When to Use:** Use this command to start a new repository in your project directory.

2. **git clone <repository-url>**

- **Definition:** Creates a copy of an existing Git repository.
- **When to Use:** Use this command to download a repository from a remote source (e.g., GitHub).

3. **git add <file-or-directory>**

- **Definition:** Stages changes for the next commit.
- **When to Use:** Use this command to add files or updates to the staging area before committing them.

4. **git commit -m "commit message"**

- **Definition:** Records changes to the repository.
- **When to Use:** Use this command to save your staged changes to the repository with a message describing the changes.

5. **git status**

- **Definition:** Shows the working directory status.
- **When to Use:** Use this command to view the state of your files in the working directory and staging area.

6. **git remote add origin <repository-url>**

- **Definition:** Adds a remote repository URL as an alias.
- **When to Use:** Use this command to link your local repository to a remote repository for the first time.

7. **git push <remote> <branch>**

- **Definition:** Updates the remote repository with your local commits.
- **When to Use:** Use this command to upload your local repository changes to a remote repository.

8. **git pull <remote> <branch>**

- **Definition:** Fetches and integrates changes from a remote repository to your local repository.
- **When to Use:** Use this command to update your local repository with changes from the remote repository.

9. **git branch**

- **Definition:** Lists, creates, or deletes branches.

- **When to Use:** Use this command to manage branches in your repository. For example, `git branch` lists branches, `git branch <branch-name>` creates a new branch, and `git branch -d <branch-name>` deletes a branch.

10. `git checkout <branch-or-commit>`

- **Definition:** Switches branches or restores working tree files.
- **When to Use:** Use this command to switch between branches or revert files to a specific state.

11. `git merge <branch>`

- **Definition:** Merges changes from one branch into another.
- **When to Use:** Use this command to combine changes from different branches.

12. `git fetch <remote>`

- **Definition:** Downloads objects and refs from another repository.
- **When to Use:** Use this command to get updates from a remote repository without integrating them into your local branch.

13. `git rebase <branch>`

- **Definition:** Reapplies commits on top of another base tip.
- **When to Use:** Use this command to move or combine a sequence of commits to a new base commit.

14. `git log`

- **Definition:** Shows the commit history.
- **When to Use:** Use this command to view the commit history of the repository.

15. `git diff`

- **Definition:** Shows changes between commits, commit and working tree, etc.
- **When to Use:** Use this command to see differences between various states of the repository.

16. `git reset <commit>`

- **Definition:** Resets current HEAD to a specified state.
- **When to Use:** Use this command to undo changes by resetting the repository to a previous commit.