WORK CASE #1

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1.Git is a distributed version control system used for tracking changes in source code and collaborating on projects in a team. Its primary purpose is to store, track, and manage versions of files in a repository. Below are some key actions and commands you perform in Git:

Repository Initialization:

git init: Creates a new repository in the current directory.

Repository Cloning:

git clone <URL>: Clones a remote repository from the specified URL to the local computer.

Saving Changes:

git add <file>: Adds a file to the staging area for a future commit.

git add . or git add -A: Adds all modified or new files to the staging area.

git commit -m "Commit message": Saves the changes in the staging area with a comment.

Tracking Repository Status:

git status: Displays information about the repository's status, including uncommitted changes.

Viewing Commit History:

git log: Lists the commits in the repository with their hashes, authors, and comments.

Working with Branches:

git branch: Shows a list of local branches.

git branch <branch\_name>: Creates a new branch.

git checkout <branch\_name>: Switches to another branch.

git merge <branch\_name>: Merges changes from another branch into the current one.

git push origin <branch\_name>: Uploads a local branch to a remote server.

Updating and Synchronizing with Remote Repository:

git pull: Fetches changes from a remote repository and merges them into the current branch.

git push: Sends local changes to a remote server.

Deleting and Renaming Files:

git rm <file>: Removes a file from the repository.

git mv <old\_name> <new\_name>: Renames a file.

Fixing Mistakes in Commits:

Note: Fixing mistakes in commits can involve more advanced Git techniques like amending commits, squashing, or rebasing, which require a deeper understanding of Git.

This summary provides an overview of common Git commands and actions used for version control and collaborative development.

git commit --amend: Allows you to make changes to the last commit (useful for updating comments or adding a forgotten file).

These commands are just the basics, and Git has many other features and capabilities for version control of your code and collaborative project work.