WORK-CASE №1

1) Опишіть для чого використовують git, які основні дії та команди в ньому виконують.

Describe what you should try git for, and what basic actions and commands it uses.

Git is a distributed version control system used for tracking changes in software code and collaborating on projects. Its primary purpose is to provide an efficient way to store and track the history of changes in a project's file structure. The main actions and commands performed in Git include:

* **git init**: Initializes a new Git repository in the current directory.
* **git clone**: Copies an existing Git repository from a remote server to your local machine.
* **git add**: Moves changes from the working directory to the staging area. This gives you the opportunity to prepare a snapshot before committing it to the official history.
* **git commit**: Records the staged changes in the repository along with a commit message that explains what was changed. For example, git commit -m "Fix a bug in the login process".
* **git status**: Displays the status of the working directory and the staging area, showing which files are untracked, modified, or staged.
* **git log**: Shows the commit history of the repository, including commit hashes, authors, dates, and commit messages.
* **git pull**: Fetches the latest changes from a remote repository and merges them into the current branch.
* **git push**: Pushes local changes to a remote repository, updating it with your latest commits.
* **git branch**: Lists all branches in the repository. The command git branch branchname creates a new branch, and git checkout branchname switches to another branch.
* **git merge**: Combines changes from one branch into another. For example, git merge feature-branch merges changes from the "feature-branch" into the current branch.
* **git stash**: Temporarily stores changes that are not ready for commit in a stash. This is useful when you want to switch branches or pull changes from a remote repository without committing your current changes.
* **git checkout**: Switches between branches or restores files from previous commits.

These are just the basic Git commands. Git offers many other features and capabilities, such as branch deletion, rebasing, working with remote repositories, tagging, file ignoring, and more. Git enables development teams to efficiently manage versions and collaborate on projects.

2) Що таке "комміт", як він дозволяє відслідковувати зміни у файлах?

What is a "commit" and how does it allow you to track changes to files?

"Commit" is a term commonly used in version control systems like Git to describe the act of recording (saving) changes to project files. Each commit represents a point in the project's history and contains information about the changes made to the files during that commit.

Commits allow you to track the history of changes in files and the project as a whole. They facilitate branching and merging of working branches in Git, enabling developers to work in parallel on different features and fixes, and then merge those changes into the main branch (e.g., "master" or "main").