

A2. Demonstrate to create a project in remote repository and apply fork, merge, diff, merge conflict, branch and pull request concepts on repository using GitHub

Git **fork** command:

Description

A fork in Git is simply a copy of an existing repository in which the new owner disconnects the codebase from previous committers.

Syntax : git clone <url>

URL of Repository: <https://github.com/yashwanths814/DevOps.git>

Git **merge** command:

Description

merge the specified branch's history into the current one

Syntax : git merge <branch_name>

Example : git merge f1

Git **diff** command:

Description

Show unstaged changes between your index and working directory.

Syntax : git diff <branch_name>

Example : git diff f1

Git **branch** command:

Description

List all of the branches in your repo. Add a <branch> argument to create a new branch with the name <branch>.

Syntax : git branch <branch_name>

Example : git branch f1

Git **merge conflict** demonstration :

Description

When two branches are trying to merge, and both are edited at the same time and in the same file, git won't be able to identify which version is to be taken for changes.

```
test.py
Accept Current Change | Accept Incoming Change | Accept Both Changes | Compare Changes
1 <<<<<< HEAD (Current Change)
2 print("Hello World VVCE")
3 =====
4 print("Hello Worlddd")
5 >>>>>> f1 (Incoming Change)
6
```

Create **pull request** demonstration:

Description

A pull request is a request to merge changes from one branch into another branch in git repository.

Example :

The screenshot displays the GitHub DevOps interface for a pull request titled "Update app.py #1". The top section shows the repository name "DevOps" and a notification that "f1 had recent pushes 39 seconds ago". Below this, there are buttons for "Compare & pull request", "Go to file", "Add file", "Code", and "Contribute". The main content area shows the pull request details, including the commit message "Update app.py #1" and the status "Pull request successfully merged and closed". The interface also includes a section for "Require approval from specific reviewers before merging" and a "Merge pull request" button.