

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: git fork

Description

A fork is your own copy of someone's GitHub project. It lets you make changes safely and suggest improvements back to the original via pull requests.

Syntax : git fork

URL of Repository: <https://github.com/VeerajRatrikar/certificatevalidation.git>

Git **merge** command:

Description

git merge is a command that combines changes from one branch into another. It integrates the histories, allowing you to bring updates from different lines of development together.

Syntax : git merge

Example : git merge feature

Git **diff** command:

Description

git diff shows the differences between files or commits in your repository.

Syntax : git diff <commit1> <commit2>

Example : git diff branch1 branch2

Git **branch** command:

Description

git branch lets you create, list, rename, or delete branches in your Git repository.

Syntax : git branch

Example : git branch -b vvce

Git merge conflict demonstration :

Description

A merge conflict occurs when Git is unable to automatically combine changes from different branches because the same part of a file was edited in conflicting ways. It requires manual intervention to resolve the differences before completing the merge.

```

Incoming  fb324ae · refs/heads/feature3
2  <html lang="en">
17 <body class="bg-gray-100 text-gray-800">
21 <div class="text-2xl font-bold text-gray-900">My Dummy Page</div>
22 <h2>Hello Anil Sir!!!</h2>
23 <nav>
24 <ul class="flex space-x-4">
25 <li><a href="#" class="text-blue-600 hover:text-blue-800">Home</a></li>
Current  dad66a4 · refs/heads/main
2  <html lang="en">
17 <body class="bg-gray-100 text-gray-800">
21 <div class="text-2xl font-bold text-gray-900">My Dummy Page</div>
22 <h1 class="text-2xl font-bold text-gray-900">My Main Page</h1>
23 <nav>
24 <ul class="flex space-x-4">
25 <li><a href="#" class="text-blue-600 hover:text-blue-800">Home</a></li>
Result lab2.html
2  <html lang="en">
17 <body class="bg-gray-100 text-gray-800">
20 <header class="bg-white shadow-md p-4 flex justify-between items-center rounded-b-lg">
21 <div class="text-2xl font-bold text-gray-900">My Dummy Page</div>
22 <h2>Hello Anil Sir!!!</h2>
23 <nav>
24 <ul class="flex space-x-4">
25 <li><a href="#" class="text-blue-600 hover:text-blue-800 transition-colors">Home</a></li>
26 <li><a href="#" class="text-gray-600 hover:text-gray-800 transition-colors">About</a></li>
27 <li><a href="#" class="text-gray-600 hover:text-gray-800 transition-colors">Contact</a></li>
28 </ul>
29 </nav>
30 </header>
31 </body>
32 </html>
1 Conflict Remaining
Complete Merge
  
```

Create pull request demonstration:

Description

A pull request is a way to propose changes you made in your fork or branch to be merged into another repository or branch. It lets others review, discuss, and approve your changes before merging.

Example :

The image displays two screenshots of a GitHub pull request interface for a repository named 'sumans-19 / DevopsLab'.

Top Screenshot (Open Pull Request):

- Title:** Update lab2.html #1
- Status:** Open (sumans-19 wants to merge 1 commit into main from feature1)
- Conversation:** 0
- Commits:** 1
- Checks:** 0
- Files changed:** 1
- Diff:** +1 -0
- Summary:** sumans-19 commented now. New changes.
- Files:** Update lab2.html (Verified, bcfaced)
- Conflict Check:** No conflicts with base branch. Merging can be performed automatically.
- Buttons:** Merge pull request, Select merge method.
- Right Sidebar:** Reviewers (No reviews), Assignees (No one—assign yourself), Labels (None yet), Projects (None yet), Milestone (No milestone), Development (Successfully merging this pull request may close these).

Bottom Screenshot (Merged Pull Request):

- Title:** Update lab2.html #1
- Status:** Merged (sumans-19 merged 1 commit into main from feature1 now)
- Conversation:** 0
- Commits:** 1
- Checks:** 0
- Files changed:** 1
- Diff:** +1 -0
- Summary:** sumans-19 commented now. New changes.
- Files:** Update lab2.html (Verified, bcfaced)
- Conflict Check:** sumans-19 merged commit 1283512 into main now.
- Buttons:** Revert, Delete branch.
- Right Sidebar:** Reviewers (No reviews), Assignees (No one—assign yourself), Labels (None yet), Projects (None yet), Milestone (No milestone), Development (Successfully merging this pull request may close these).

