

**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 :

URL of Repository: <https://github.com/sumans-19/Diet-Planner>

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 <branch-name>

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.

```

lab2.html > html > body.bg-gray-100.text-gray-800 > header.bg-white.shadow-md.p-4.flex.justify-between.items-center.rounded-b-lg > ?
2  <html lang="en">
3  <head>
11  <style>
15  </style>
16  </head>
17  <body class="bg-gray-100 text-gray-800">
18
19  <!-- Header Section -->
20  <header class="bg-white shadow-md p-4 flex justify-between items-center rounded-b-lg">
21  <h1 class="text-2xl font-bold text-gray-900">My Dummy Page</h1>
Accept Current Change | Accept Incoming Change | Accept Both Changes | Compare Changes
22  <<<<<< HEAD (Current Change)
23  <h1 class="text-2xl font-bold text-gray-900">My Main Page</h1>
24  =====
25  <h2>Hello Anil Sir!!!</h2>
26  >>>>> feature3 (Incoming Change)
27  <nav>
28  <ul class="flex space-x-4">
29  <li><a href="#" class="text-blue-600 hover:text-blue-800 transition-colors">Home</a></li>
30  <li><a href="#" class="text-gray-600 hover:text-gray-800 transition-colors">About</a></li>
31  <li><a href="#" class="text-gray-600 hover:text-gray-800 transition-colors">Contact</a></li>
32  </ul>
33  </nav>
  
```

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 :

