

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 is a rough copy of a repository. Forking a repository allows you to freely test and debug with changes without affecting the original project.

It is a straight-forward process. Steps for forking the repository are as follows:

- o Login to the GitHub account.
- o Find the GitHub repository which you want to fork.
- o Click the Fork button on the upper right side of the repository's page.

Git **merge** command:

Description:

By default, when creating a repository, the code is placed in the main branch called master. In order to be able to isolate the developments of the master branch—for example, to develop a new feature, fix a bug, or even make technical experiments—we can create new branches from other branches and merge them together when we want to merge their code.

Syntax :git merge <branch name>

Example :git merge yashwanth

Git **diff** command:

Description:

It compares the different versions of data sources. The version control system stands for working with a modified version of files. So, the diff command is a useful tool for working with Git.

Syntax :git diff <branch name>

Example :git diff master

Git **branch** command:

Description

A branch is a version of the repository that diverges from the main working project. It is a

feature available in most modern version control systems. A Git project can have more than one branch. You can create a new branch with the help of the `git branch` command. This command will be used.

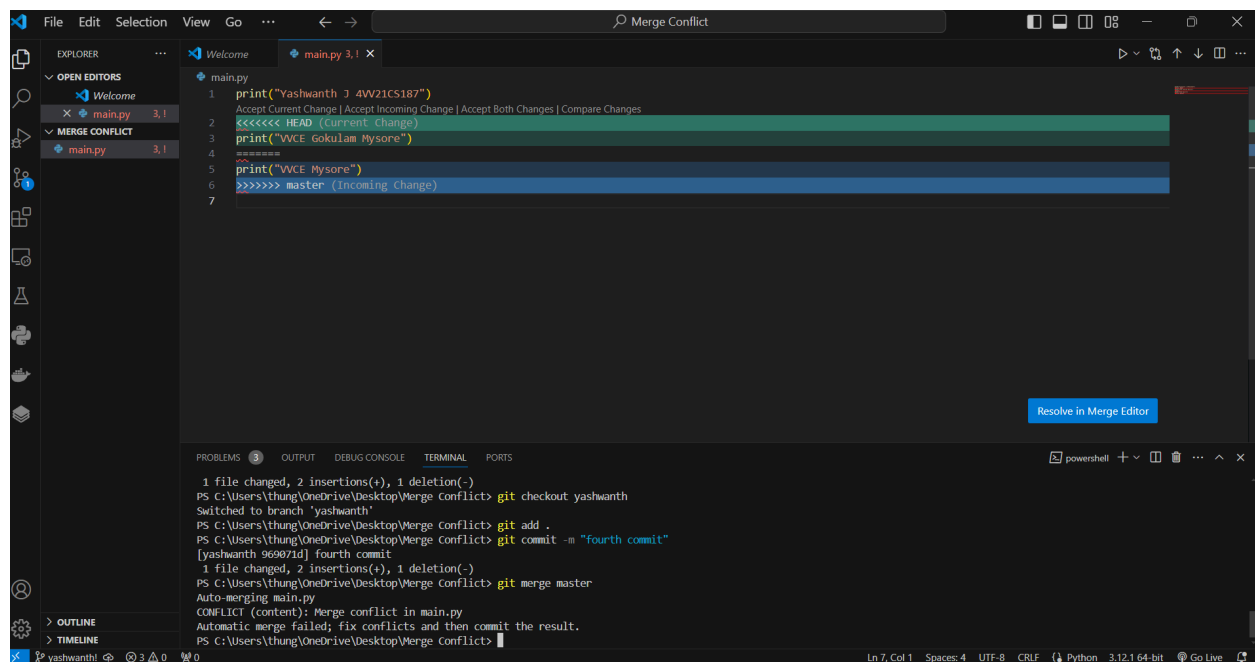
Syntax : `git branch <branch name>`

Example : `git branch yashwanth`

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 take for changes. Such a situation is called merge conflict.



```
1 print("Yashwanth 3 4V21CS187")
2 <<<<<< HEAD (Current Change)
3 print("VVCE Gokulam Mysore")
4 =====
5 print("VVCE Mysore")
6 >>>>>> master (Incoming Change)
7
```

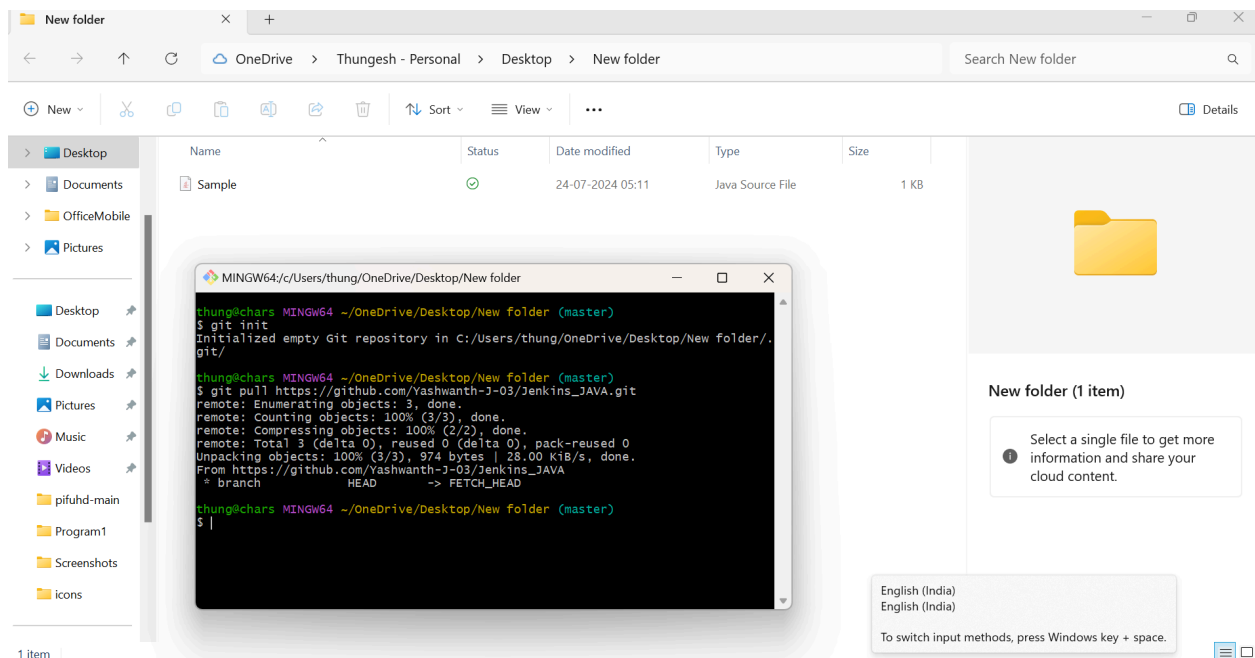
```
1 file changed, 2 insertions(+), 1 deletion(-)
PS C:\Users\thung\OneDrive\Desktop\Merge Conflict> git checkout yashwanth
Switched to branch 'yashwanth'
PS C:\Users\thung\OneDrive\Desktop\Merge Conflict> git add .
PS C:\Users\thung\OneDrive\Desktop\Merge Conflict> git commit -m "fourth commit"
[yashwanth 969071d] fourth commit
1 file changed, 2 insertions(+), 1 deletion(-)
PS C:\Users\thung\OneDrive\Desktop\Merge Conflict> git merge master
Auto-merging main.py
CONFLICT (content): Merge conflict in main.py
Automatic merge failed; fix conflicts and then commit the result.
PS C:\Users\thung\OneDrive\Desktop\Merge Conflict>
```

Create **pull request** demonstration:

Description:

The term pull is used to receive data from GitHub. It fetches and merges changes from the remote server to your working directory. The git pull command is used to pull a repository.

Example :



← → ↻ github.com/Yashwanth-J-03/Jenkins_JAVA/tree/main 🔍 📄 🌟 ⚙️ 👤 ⋮

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🏠 Yashwanth-J-03 Create Sample.java

📄 Sample.java Create Sample.java

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HTTPS SSH GitHub CLI

https://github.com/Yashwanth-J-03/Jenkins_JAVA. 📄

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📄 Open with GitHub Desktop

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No description, website, or topics provided.

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