**Day-6 (Assigment-3)**

# Q)write a step to create a new branch and merge with master branch

## Step-by-Step Guide to Create a New Branch and Merge with Master Branch

#### **Step 1: Check Out the Master Branch**

* First, ensure you are on the master branch and your local repository is up-to-date.

**Command:-**

* git checkout master
* git pull origin master

**Explanation:-**  
This step switches your working directory to the master branch and fetches the latest changes from the remote repository, ensuring you are working with the most recent version of the code.

#### **Step 2: Create a New Branch**

* Create and switch to a new branch where you will make your changes.

**Command:-**

git checkout -b new-branch-name

**Explanation:-**  
git checkout -b new-branch-name creates a new branch called new-branch-name and immediately switches to it. This branch is based on the latest state of the master branch.

#### **Step 3: Make Changes and Commit**

* Make your changes in the new branch, then stage and commit them.

**Command:-**

git add .

git commit -m "Description of changes"

**Explanation:-**  
git add . stages all changes in the working directory. git commit -m "Description of changes" commits these changes with a descriptive message, allowing others to understand what was modified.

#### **Step 4: Push the New Branch to the Remote Repository**

* Push your new branch to the remote repository.

**Command:-**

git push origin new-branch-name

**Explanation:-**  
This command uploads your new branch to the remote repository, making it accessible to others and allowing for potential collaboration or review.

#### **Step 5: Merge the New Branch with Master**

* Switch back to the master branch and merge the changes from your new branch.

**Command:-**

git checkout master

git pull origin master

git merge new-branch-name

**Explanation:**

1. git checkout master switches back to the master branch.
2. git pull origin master ensures the master branch is up-to-date with the remote repository.
3. git merge new-branch-name merges the changes from new-branch-name into the master branch.

#### **Step 6: Push the Merged Changes to the Remote Repository**

* Push the updated master branch with the merged changes to the remote repository.

**Command:-**

git push origin master

**Explanation:-**  
This command updates the remote repository with the merged changes from your new branch, making the updates available to everyone using the repository.

### **Summary**

1. **Checkout and Update Master:** Ensure you are on the latest master branch.
2. **Create a New Branch:** Make a new branch for your changes.
3. **Make Changes and Commit:** Implement and commit your changes in the new branch.
4. **Push New Branch:** Push your new branch to the remote repository.
5. **Merge with Master:** Merge your new branch into the master branch.
6. **Push Merged Changes:** Push the updated master branch to the remote repository.