Git-Day-4

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<mark>Merge conflict</mark>
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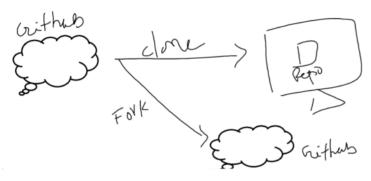When same file & same line getting modified & merged into main branches one after one.

1. Git on Windows ==> developer1 ==> update user config ==> feature1
2. Git on EC2 ==> developer2 ==> update user config ==> feature2

3. Merge feature1 into main branch by developer1

4. Merge feature2 branch into main branch by developer2

5. Merge conflict
        Get the base branch changes into local machines
        git pull origin main

        git checkout feature2
        git merge master

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Forking repo
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► Before we understand what is and Forking repository, let see this diagram

► **Assume there is a repository in the GitHub & you want copy of this repository in your local machine how can we do that?**
We can use git **clone** command to copy repository from the GitHub to your local machine.

► **Similar way your repository in GitHub account-1 & you want to create copy the repository in another GitHub account-2, how can you do that?**
Fork option will be used.

► When you do the fork repository we have two independent repos so the changes in one repo will not affect the another repository.

► **Why do we need to fork repository?**
   ○ Suppose you have interest to **develop a hotel-booking** so you have one option like you have to write a from the scratch and complete the application development that is one way.

   ○ Else we can check internet is there anyone having similar interest to develop a hotel-booking application & pushed code in GitHub.

   ○ So now you can take that copy of code into your account and you can start developing your application according to your company requirements using the Fork option.

   ○ When you do the fork repository we have two independent repos so the changes in one repo will not affect the another repository.

► Now let's go to the GitHub repositories, here you can see there are many number of users forked this repository because other users considered my repositories are might useful for them and they want to maintain my repository in their account that's why they did the fork.

► Similarly I can create the others repositories is whatever present in the different type of account into my data account by clicking on the fork button.

► Now here we can see the owner of the repo is different user now when I click on the fork button it is coming under my own account and also by default we are copying the master branch code.

► The fork button you can see the number of users have made the forking of repository on this main repository.

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REVERT Changes

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- ► Now we will see how to revert the changes from the
  - ○ working area
  - ○ staging area
  - ○ local repository in the developers machine.

- ► Now let's see how to **rollback changes in workspace area**
  In order to revert changes from the working directory we can use a command
  git restore filename

- ► How to **revert the changes from the staging area to working directory**
  git restore --staged file #Discard changes from staging area
  git restore file #Discard changes from working directory

- ► DISCARD THE CHANGES FROM LOCAL REPOSITORY
  git reset HEAD~ # Revert the changes from local repo to working directory
  git restore file

- ► Revert the changes from the remote repository
  We don't have any direct to it to reward the changes from remote repository.
  We have to undo the changes by comparing the last to commits and push back those changes whatever you did again in order to under the changes in remote repository.

<mark>.gitignore</mark>