

Name – Anurag Gupta

Roll No. – 23_CSE AIML_021

Dept. – CSE -AIML

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GIT AND GITHUB

Git:- Git is a online version system which help us to track the changes made in a file. It is a very important tool in software development. Git store the data locally.

Github:- Github is a website which allows users to share their code, development projects and allow them to collaborate with each other. It also allows them to make the changes and merge it to the file. Github store the data in cloud.

IMPORTANT TERMS IN GIT/GITHUB

Repository :- It is a folder in the github.

Branch :- Branch is just a copy of the main file in which we can make our desired changes. This will not change the content in the main file until we merge these changes.

Branch merging :- It means that we are adding the changes made by us to the main file/branch.

Forking :- To create a fork means to create a copy of the file of the repository in our github account.

Cloning :- To create a clone means to copy the contents in the repository in our system locally so that we can work on it.

Creating pull request :- It means that we are asking the owner of the repository to add the changes that we have made in it.

Commands in Git

- `git config --global user.name <name>` : To create or define the name of the user . This name will be visible in the commits you make.
- `git config --global user.email <email id>`: To create or define the email id of the user . This email id will be visible in the commits you make.
- `git config user.name` : To view the name you created.
- `git config user.email` : To view the email id you created.
- `git init` : To initialize or create a new git folder.
- `git add -A`: To add a file so that git can now track the file.
- `git status` : To show the status of the git .

- `git commit -am"comment"` : to add a commit which means to mark a checkpoint to the changes made.
- `git log` : To show all the history of the commits made by the user.
- `git checkout -b<name>` : to create a new branch.
- `git branch -d<name>` : to delete the branch.
- `git checkout <branch name>` : to go to the desired branch you want.
- `git branch` : to see the branch we are currently in .
- `git merge <branch name>` : used to merge the branch created in the master branch.
- `git reset --hard<commit id>` : used to delete the commits above from the commit id which you have pasted and bring the head to that commit id.
- `git revert <commit id>` : it creates a new commit id which is different from the commit id pasted and the contents are different.
- `git clone <github url.git>`: to create a copy of the repository locally in our system.
- `git remote -v` : it will show the repository which has either the fetch option or pull option.
- `git push <remote name> <branch>` : used to pass the modified content in the folder to the desired repository in github.

- git fetch : it only copies the changes from the remote repository to our local directory.
- git pull : it both fetches and merges the changes to our directory.

Steps to create a pull request

1. click on the fork option from the github account from which you want to clone.
2. Create a directory in which you want to clone.
3. Clone the repository by using the git clone command.
4. Change directory to the folder in which repository created.
5. Create a branch.
6. Change the desired data in the file.
7. Commit the change.
8. Push the changes by using the git push command.
9. Switch to github and click on compare and create pull request.

10. Add the description and title.
11. Click on create pull request.