***TASK 1***

Hi everyone!

I am Yukta Gaba, pursuing B.Tech in Computer Science from DIT University, Dehradun.

1.What are git and GitHub?

Git is created by LINUS TORVALDS. It is an open-source, free and distributed version control system. Git has trunk based development in it which involves branches in the repository in which we can create new branch even while working with the current branch and also we can merge the new branch with the master branch if required at any point.

GitHub is a website which in which we can upload projects that’ve version control on them. GitHub is a file or code sharing service to collaborate with different people.

2.Why GitHub is so popular and used in most of the projects?

GitHub is popular as:

* It has an extremely large community of developers
* Separate public and private repositories
* Shared Repositories which can be accessed by millions of users and make contributions to existing files or codes
* Easy Version Control
* Can be accessed anytime and anywhere

3. What are the other platforms similar to GitHub?

GitLab

GitBucket

Source Forge

AWS Code Commit

***TASK 2***

1.How git workflow works?

Ans1. There is one local repository and the developer that wants to make changes clones the repository and make changes using the commit command and further pushes it to the remote repository from where developers can pull and use in their work.

2.What are the different stages of git project?

Ans2.

• Modified:

A repository is created using Git through the files that are stored in a particular folder. Anyone can make changes to a repository that is public by cloning them inside their system and modify as their requirement and then uploading it onto GitHub so that the file can be used for Staging.

• Staged:

Git add command is used to add a file from the workspace or the working directory to the Index or the staging stage. After that the file is staged i.e., it is marked to commit but is not yet committed.

• Commit:

When we used the Git commit command, all the files that were staged in the Index are released here and the changes are committed to the local repository. Each commit command represents the changes made to project in the past, with the details about the time at which commit was made and the author of the code. So, finally when you make a commit, and it gets committed, then this simply means that you have successfully applied a certain modification to the code.

3.Is it possible to do a git commit before git add?If No,explain why?

Ans3. No, it is not possible as git add command adds the files from the working directory to the staging area and then the changes are saved using commit command in the local repository.

4. Why is git diff used?

Ans4. Git diff command is used to track the differences or changes made on a file in a local or a working directory from the Index/staging state.

5. Can we leave the commit messages as blank?

Ans5. Yes,that can be done using the following command

git commit -a --allow-empty-message -m ""

My GitHub repository link is:

<https://github.com/Yukta1999/git_learn_series>

Thank you

YUKTA GABA (DIT University)