Pragya Shakya

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Git and GitHub Question/Answers

Read about the difference between Git and GitHub.

* Git is a version control system that lets you manage and keep track of the source code history.

GitHub is a cloud-based hosting service that lets the developer to manage Git repositories.

Git repository hosting service is online database that allows developers to keep track of and share the Git version control projects. Unlike Git, GitHub is a for profit service. The codes can be shared with others through GitHub, which will give the developers the power to makes changes and edits on various Git branches.

Read about Git Workflow.

* Git Workflow is a recipe or recommendation for how to use Git to accomplish work in a consistent and productive manner. Git workflows encourage users to leverage Git effectively and consistently. Git can be used effectively and consistently by the developers because of the Git Workflows. The Git Workflow provides guidelines to the users of Git. Git Workflow has to be created to enhance the effectiveness of the team.

How many types of version control systems are there?

* There are three types of version control system:

1. Local Version Control System: Local Version Control System (LVCS) has a simple database that keep all the changes to files under revision control. This version helps to deal with the error when a user forgets which directory to be copied and accidently writes to the wrong file or copies over files which was not meant to.
2. Centralized Version Control System: Central Version Control Systems (CVCS) were developed to deal with the major issue that people encounter when they need to collaborate with developers on other systems. Although CVCS is advantageous over LVCS, there are disadvantages of CVCS as well. If the centralized server fails due to some reason and went down even for an hour, nobody can collaborate at all and save versioned changes to anything they are working on. If the hard disk containing central database becomes corrupted, and proper backups have not been kept, the entire history of project can be lost.
3. Distributed Version Control System: Distributed Version Control Systems (DVCS), such as Git, Mercurial, etc. is used to deal with the problems the LVCS and CVCS can cause. The clients fully mirror the repository including its full history in DVCS. The collaboration of systems is done via servers in DVCS, and when the server dies due to any reason, any of the client repositories can be copied back up to the server and restore it. In DVCS, several types of workflows can be set up as many of these systems can have several remote repositories to work with.

Explain Branching concept in Git.

* Branching in Git is when the main line of development is divided to one or more branches to be worked on by developers or to be worked on without messing up the main line of development. When branches are created, the developer can switch back and forth from the main to other branches. The branched lines of the development can be worked on and merged to the main line of development when ready. The commands used for branching are branch, checkout and commit.

Explain Forking Workflow in Git.

* Forking Workflow is when each developer gets their own server- side repository rather than using a single server-side repository. Thus, the developer will have two Git repositories, and they are private local one and public server-side one. Forking workflow helps because everyone’s contributions can be integrated without the need for them to push to a single one. Once all the developers are ready, the project maintainer can merge all the branches to the original repository.