Answers

1. Version control system is a system which helps developers to work on a single project effectively and without any confusion. I help manage and tracks the users and their work. You can work on different versions at same time.

2. Version control system was required so that multiple developers can work on a single project without affecting the main branch code and if something wrong happens then they can switch back to previous version.

3. The 2 types of version control system are – (i) Central version control system – It is a system in which all the developers work on a central main branch and pull push request from that. They don't have a proper full copy of the main branch.
   (ii) Distributed version control system – In this system developers can keep the proper full copy of the main branch code and work on that then push or merge all the changes altogether.

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Central version control system	**Distributed version control system**
Versions are stored on a central system.	Developers can keep the clone version in their local repository.
The main branch is very important.	Doesn't have a single point of failure.

5. Git is an open-source software where developers can share their work and can work on a project together. It is a distributed version control system.

6. Features of git
   Open source
   Branching is easier
   Backups are there in case of failures
   Working together on a single project is easier

7. git status – to get the status of the repository
   git log – to get the history of the commits in past
   git branch – to see the branches

8. Git is the tool which developers uses to work on the project and manage files. Whereas GitHub is a place where developers can share their projects or can work on a single project together through internet.

9. git –-version

10. git add "name"

11. Git status gives tells the current position and status of the files whether they are in staged area or commits/changes are there or not. Whereas git log command tells the history of the

previous commits with every detail like time, the changes, message, etc.

12. git init

13. Git has 4 states of file
    (i) Untracked – Here the files are not tracked and ignored by git.
    (ii) Staged – Here the files are recognized by git and it starts tracking the file.
    (ii) Unmodified – Here the staged files are unmodified and tracked by git.
    (ii) Modified – Here the files content is changed, so it needs to again staged to track the changes.
    Basically, when files are in staged area it is ready/ to get snapped/committed. And when it gets committed/snapped it gets recorded by git.

14. False, every new file needs to be added and committed for git to start tracking them. This is because if it new files get auto tracked then it can cause errors in the project on the staged area.

15. git commit

16. git commit -m “New Email”

17. Branch is an independent line of a development. It is a clone of the main branch/project. Developers can work on the clone branch to avoid any real time errors on the main branch while working.

18. git branch new-email

19. git checkout new-email

20. git checkout -b “name”

21. git init command initializes git in that file.

22. Fork is a completely independent copy of the main repository whereas git clone is the linked copy of the main repository.
    To fork a repository, you have to click on the Fork button on the top right corner of the GitHub interface.
    To clone the git repository you have to click on green “Code” button on the top of repo and copy the link of the repository and go to Git terminal on your computer and type
    git clone <link>

23. Push means you are updating or pushing your changes in the main branch from your local/cloned/forked branch.
    Its command is: git push -u origin “branchName”

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