Git Assignment 2 Answer

1. The command “git status” shows the status of the modified files and code in repository and staging area. It allows us to see the tracked, untracked and changes.
2. We can delete the local branch using the command “git branch -d <branch-name>”. Before deleting the local branch, make sure to switch to another branch that you do not want to delete using the command “git checkout <other-branch-name>”.
3. There is no change in the process when you want to add an existing project to the git or to start a project from scratch and then add it to git. Just enter a command “git init” to initialize the repository. Then you can add all the files from the existing project to the staging area and next to the local repository using git commit.
4. Git fork is used to copy the remote repository of project of some other person to your remote repository (e.g., GitHub, GitLab, bitbucket). In GitHub, when you open some other person’s project repository, you can see the fork option in the top right region.

In git, branch can be considered as side working area where we can code whatever we want and after testing if it works as you desired then you can merge the code from side working area into the main working area.

In git, clone is used to copy the code from the remote repository into your computer and to initialize the git there.

1. In git, HEAD can be considered as kind of a pointer on the branch. Next commit will be added next to the HEAD then that new commit will become the new HEAD.

In git working tree means the root folder into which the git has been initialized. If we make any changes to the code which is present in this root folder then git will surely track this.

In git, we refer staging area which is present between workspace and local repository as an index. Index is used as a place to consolidate whatever made and needs to be committed.

1. Commands used to switch branch:
   1. git checkout <branch-name>
   2. git switch <branch-name>

We can create a new branch and then switch to that branch in one command also:

1. git checkout -b <branch-name>
2. git switch -c <branch-name>
3. git is a distributed version control system for tracking code during development process. Git is created to make the collaboration between the developers easy regardless of their physical location.

GitHub is kind of web service which has all the functionalities of git and more. It acts as a remote repository through which teams of large size can maintain the source code. Random people can also collaborate on the open-source project using the GitHub platform.

One can consider git as a core using which platforms such as GitHub, GitLab, bitbucket work.

1. Version control system has the following advantages:
   1. All the code and files become traceable.
   2. History of things like who did what is very important information.
   3. Branching and merging reduces the code breaking significantly.

C is the underlying programming language in which the git is written.

1. Features of git repository:
   1. Git repository contains the code up to the certain point.
   2. Git remote and local repositories can interact with each other using git fetch, git push and git pull.
   3. Git local repository is the last stop for the code tracking in local.
   4. Basically .git file can be considered as a local repository. Once you delete .git file, all the tracking is ceased.