GIT – SCM - Version Control System – L1 – Assignment

General Instructions:

a. Capture screenshots for each step while doing the below assignments into a word document.

Assignments:

1. Set the global configuration file with your username and email. List all the properties which you just set.

2. Create a fresh Git project. Add a file into the project. Commit the changes to the local repository.

3. Create a GitHub/Gitlab account (or use the account if already registered). Clone a project

from the remote repository to your local repository

4. Push the project created in assignment 2 to the remote repository.

5. Try out all the different ways of renaming and moving files. Understand the differences between different options.

6. You just created a new file in your Git project, but then you decided that the file is to be removed.

How do you delete this untracked file.

7. Demonstrate the following:

a. delete of a tracked file

b. backing out staged deletion

c. recursive deletion

8. You have lot of changes in your Git project but you do not want to push certain folders/files of your project. How do you manage this?

9. Create a branch called “test”. Make some changes in the master branch. Let there be some changes in the working directory and some in the staging area. Make some changes in the test branch as well. Issue the command to show the differences for

a. Working directory vs Staging area

b. Working directory vs Local Repository

c. Staging area vs Local Repository

d. Between two commits

e. Between two tags

f. Local vs Remote Repository

g. Master branch vs test branch

10. Merge the changes from test branch to master branch.

a. FastForward merge

b. Disabling FastForward merge

c. What is the difference between option (a) and option (b)

11. Create a merge conflict situation. Resolve the conflict and merge the changes between the branches.

12. What is the difference between merge and rebase, demonstrate with an example. Explain it.

13. With an example, demonstrate fetch, clone and pull. What is the use case for these operations. Are they same or different? Explain.

14. Create a new repository in Github/Gitlab, with a README file. While pushing to the remote repository, if the remote branch is ahead of the local repository (new file is added in remote repository, which is not there in local repository) and pull is failing, how do you solve this problem?