**Assignment 1: Case study 1**

Business challenge/requirement :

An international banking organization was struggling to achieve more stable development practices within the organization. Because banking environment is highly controlled and rigid along with other complexities, it’s difficult to make changes which are quick and agile. They brought git in their environment and understood how transforming it was for just everything. They explored the new agile methods and do away with old traditional development styles and reinvented their stack to achieve DevOps at scale.

Perform the below mentioned steps :

steps: 1. Create a repository 2. Clone it

3. Check the current branch

4. Add few files

5. Commit them with message

6. Push them in branch

7. Check last commits

Assignment2: Case Study 2

Perform the following steps :

1. create one repository having README file which will contains some information about repository.
2. Pull master branch into local repository
3. Create a Java program or any file in the local repository
4. Create a new feature branch and push the changes
5. Create one more branch from GIT HUB UI
6. Check in command line if you can see new branch details
7. Use appropriate command to pull branch from remote
8. Create tag release v1.1 & push to remote
9. Change in file and create new tag release v1.2 & push to remote
10. List all tags
11. Delete branch from remote
12. Delete branch from local

Assignment 3: Case Study 3:

You are to demonstrate the use of Git by using a sample project and showing how multiple developers, working from remote locations can work in Git.

Your manager asked you to do below mentioned tasks in GIT:

1. Create pull request

2. Merge 2 branches

3. Check difference in 2 branches

4. Delete remote repository

5. Generating pull request from UI

6. Resolve Conflicts and merge from UI

7. Merging from GIT Bash

8. Use reset command to revert the changes

Assignment 4: Case Study 4:

Suppose you are 4 developers team.

1. Create a github repo with main branch
2. Clone the repo to local
3. Create a new feature branch with the name as Addition
4. Create a file on the branch and push the branch Addition on github
5. Your remote repo should have 2 branches now
6. Create a release branch in git hub from main branch
7. Create pull requires in github to merge Addition branch with release branch
8. Merge addition branch to release branch
9. Delete the addition branch in remote and local

Assignment 5: Case study 5:

1. Git falls under which VCS category?

a. Centralized VCS

b. Distributed VCS

c. Both

d. None of the above

Ans: b

Explanation:

Git enables the developers to manage the changes offline. Also, it allows them to

branch and merge whenever required, giving them complete control over the local

codebase. Due to these reasons, it falls under Distributed VCS category.

-------------------------------------------------------------------------------------------------------------------------------

2. What are the characteristics of a Version Control System?

a. Recording changes to a file or a set of files over time

b. Identifying who made the changes and when

c. Comparing and reverting to a previous state

d. All the above

Ans: d

Explanation:

VCS allows you to record changes to a file, identifying when changes in the code are made,

what changes are made and by whom. Apart from that, it also enables us to compare the code

and revert to a previous state.

-------------------------------------------------------------------------------------------------------------------------------

3. Which of the following are advantages of using GIT?

a. Collaboration friendly

b. Branching capabilities

c. It can handle larger projects efficiently

d. All the above

Ans: d

Explanation:

Git is collaboration friendly as multiple developers can work seamlessly together. It can handle

larger projects efficiently, and it has rich branching and merging capabilities.

-------------------------------------------------------------------------------------------------------------------------------

4. Which command do you use to initialize a new Git repository?

a. git init

b. git install

c. git start

d. git bash

e.

Ans: a

Explanation:

Git init command is used to initialize a new, empty repository and used to convert an existing,

un-versioned project to a Git repository.

-------------------------------------------------------------------------------------------------------------------------------

5. How can you save the current state of your code into the Git VCS?

a. Using git push

b. Using git commit

c. Using git stage

d. Using git add

Ans: b

Explanation:

The current state of your code can be saved by committing the staged changes with 'git

commit'.

-------------------------------------------------------------------------------------------------------------------------------

6. What is the purpose of 'git push' in Git?

a. 'git push' is used to upload local repository content to a remote repository

b. 'git push' is used to import commits to local branches

c. 'git push' is used to configure remote branches

d. None of these

Ans: a

Explanation:

'git push' is used to upload local repository content to a remote repository.

'git fetch' is used to import commits to local branches.

'git remote' is used to configure remote branches.

-------------------------------------------------------------------------------------------------------------------------------

7. What are the three levels of configurations available in Git?

a. System, Global and Project

b. System, Global and User

c. Global, User and Repository

d. User, System and Global

Ans: a

Explanation:

Project: Configs that are only available for the current project and stored in .git/config in the

project's directory.

For example: git config user.name "Tom Sparta"

Global: Configs which are available for all projects for the current user and stored in ~/.gitconfig.

For example, git config --global user.name "Tom Sparta"

System: Configs which are available for all the users/projects and stored in /etc/gitconfig.

For example, git config --system user.name "Tom Sparta"

-------------------------------------------------------------------------------------------------------------------------------

8. Which of the following commands is used to stage all the changes you have?

a. git add -A

b. git push

c. git commit -am "commit Message"

d. git commit add -A

Ans: a

Explanation:

To stage all the changes "git add -A " command is used.

'git push' transfer commits from your local repository to a remote repo git commit.

'git commit' is used for saving changes locally.

'git commit add -A' is not a valid command.

-------------------------------------------------------------------------------------------------------------------------------

9. Which of the following git commands downloads your repository from GitHub

VCS to your computer?

a. git fork

b. git clone

c. git push

d. git commit

e.

Ans: b

Explanation:

The git clone command is used to download the existing repository from GitHub to your local

computer.

-------------------------------------------------------------------------------------------------------------------------------

10. Which of the following commands will display the status of the repository in Git?

a. git status

b. git log

c. git init

d. git branch

Ans: a

Explanation:

'git status' displays the state of the working directory and the staging area.

'git log' is a utility tool to review and read a history of everything that happens to a repository.

'git init' is used for creating a new repository.

'git branch' is used to list or create a branch.