**Git and GitHub Assignment**

ABC is a software company and you have been hired as Sr DevOps Engineer and you have to implement DevOps Lifecycle for a certain number of projects. Below tasks are assigned to you to maintain the distributed version control for a project called CAPSTONE and help developers to commit their code in local and remote repository (Git Hub)

1. Create a central repository CAPSTONE to maintain the project and upload the latest version of the project to this repository. **(Hint:-use GitHub)**

ANS.

**git config user.name [User Name]**

**git config user.email [User Email]**

**git clone [https path from the github]**

**git init**

**git add .**

**git commit –m [Message]**

**git push origin master**

1. Sohan and Ram are 2 developers who are going to work on this project so you as a DevOps engineer help them to create 2 branches for Sohan\_branch and Ram\_branch so that they can work independently. (Write the steps to create branches in local and remote repository)

ANS.

**(Hint: -use branches concept)**

**git branch [Branch\_Name]**

1. End of each day at 5PM you must merge the code of each branch to master branch and update the central repository (write the steps to perform this task).**(Hint git push )**

ANS.

**git merge [Branch\_Name]**

**git push origin master**

1. Sohan was on leave for a week and once he returned to his work he wants to sync his branch code with master branch (what strategy you will use help Sohan).**(Hint:-git pull)**

ANS.

**git pull origin master**

1. Marc is a new developer joined the CAPSTONE project, so help him to create upto date project on his machine and also create a branch called Marc\_branch.(**Hint:- git branch)**

ANS.

**git branch Marc**

**git pull origin master**

1. There is file called mathModule.txt which was modified by Marc and Sohan and ultimately the code is to be merged to master branch. What are the challenges you will face to merge the code how will you resolve this problem? (**Hint:- merge conflict)**

ANS.

**When we are going to merge the branch code for both Sohan and Marc, they have a common file named as “mathModule.txt” in which they both have written their on codes. So while merging to the main branch we got the error that the same file has been edited by multiple branch. Then we have to do a manual intervention.**

**git mergetool => help the master owner to review the code and then apply to master branch.**

1. There are different versions of project are created. But operation team wants to implement version 5 how can you help them to get this version.**(Hint:-git tag)**

ANS.

**git tag [Version Name]**

**git branch Operations**

**git pull origin Marc.v5**