School of Computer Science Engineering and Technology

Course- B.Tech./BCA
Course Code –CSET232/BCA220

Type- Specialization Core-II
Course Name- Design of Cloud
Architectural Solution

Year- 2023
Date- 23-02-2023

Semester- 4th
Batch- 2021

A-Type- Lab Assignment # No. 5 (Week 6, Assignment No. 5)

Lab Objective:

Installation of Git on AWS Linux machine, account creation on Github, create a local repository in the git and push/pull the contents in the local/central repository to the global/local repository to/from Github.
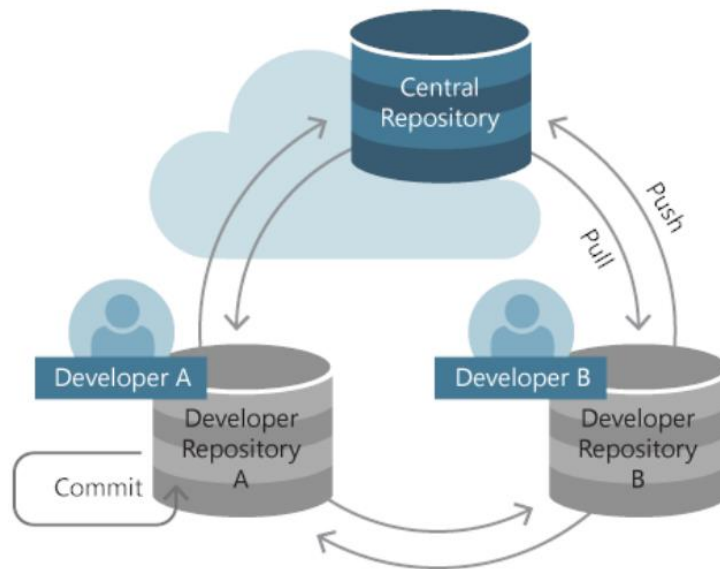
CO-Mapping:

Exp. No.	Name	CO1	CO2	CO3
06	AWS Linux machine, account creation on Github, create a local repository in the git and push/pull the contents in the local/central repository to the global/local repository to/from Github		✓	✓

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Description:

Create two EC2 Linux instances in two different regions for Developer A and Developer B, respectively. Developer A installs git in his system, creates a directory, writes contents in the working area, moves the contents to the staging area, and commits in the local repository. The local repository can be added to a central repository, and the contents can be pushed to the central repository. Developer B will also do the same as Developer A. The developers can pull the contents of the central repository and find the updated contents along with the respective changes made by the developers.

Laboratory Activities:

Step 1: Create a Central Git repository on github.com

Step 2: Launch two EC2 Instances in different regions

Step 3: Use custom Security Group with SSH, HTTP and HTTPS enabled.

Step 4: Login Instance 1 using Putty

> ➤ sudo su
> ➤ yum update -y
> ➤ yum install git -y
> ➤ git --version
> ➤ which git
> ➤ git config --global user.name "abc"
> ➤ git config --global user.email "abc@gmail.com"
> ➤ git config --list

Step 5: Login Instance 2 using Putty

> ➤ sudo su
> ➤ yum update -y
> ➤ yum install git -y
> ➤ git --version
> ➤ which git
> ➤ git config --global user.name "abc"
> ➤ git config --global user.email "abc@gmail.com"
> ➤ git config --list

Step 6: Create a new directory in Instance 1 -> Switch to the new directory

> ➤ mkdir mydirectory
> ➤ cd mydirectory

Step 7: Initialize git into the new directory

> ➤ git init

- ➢ cat >myflie (Create a new file, instead of cat, vi or touch can also be used)
- ➢ git status
- ➢ git add
- ➢ git status
- ➢ git commit -m "my first commit"
- ➢ git status
- ➢ git log
- ➢ git show 38b54c19d4861cd (This is your commit id)
- ➢ git status

Step 8: Add to central git repository

git remote add origin https://github.com/abc/TestRepo.git (URL of the repository)

git push -u origin master (Password Authentication will fail)

Step 9: Reasons and Fix

Github is no longer accepting account passwords when authenticating Git operations (Starting from August 2021).

Click settings on the right corner.

Now In the left sidebar, click Developer settings.

In the left sidebar there are option of Personal access tokens. click Personal access tokens.

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Click on generate new Token.

Click to copy the token to your clipboard. And Just Remember For security reasons,

after you navigate off the page, you will not be able to see the token again.

So Don't Forgot to copy your new token.

Step 10: Git Testing

- ➢ cat >myfile (write and save the document)
- ➢ git status
- ➢ git add .
- ➢ git status
- ➢ git commit -m "any message"
- ➢ git log
- ➢ git show 228ec79babd95
- ➢ git push origin master

Step 11: Login to second instance using putty (10 minutes)

- ➢ sudo su
- ➢ mkdir mydirectory (create directory)
- ➢ cd mydirectory (browse to the directory)
- ➢ git init

- ➢ git remote add origin https://github.com/abc/TestRepo.git
- ➢ git pull -u origin master (Remove -u from command if it throws an exception)
- ➢ git log
- ➢ git show <commit id>
- ➢ cat >myfile (Write ans save)
- ➢ git status
- ➢ git add .
- ➢ git status
- ➢ git log
- ➢ git push origin master

Step 12: Verify it on Instance 1

- ➢ git pull -u origin master (Remove -u if throws an exception)
- ➢ git log

Step 13: Git Ignore

Create new file in mydirectory

vi .gitignore (file name must be the same, universal naming conventions)

Press i to insert

*.css

*.java

Press Escape

:wq (write and quit)

Step 14: Add to repository

- ➢ git add .gitignore
- ➢ git commit -m "any message"
- ➢ touch alpha.txt alpha.java beta.txt beta.css
- ➢ ls
- ➢ git status
- ➢ git commit -m
- ➢ git log
- ➢ git show <commit id>

Take the snapshots of all tasks and create a doc/pdf of your enrolment number_lab05 (e.g., E21CSE072_Lab5) and upload the file on LMS

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