**DevOps Assignment**

**Upload a document form desktop to GitHub.**

1. Setting up Remote Repository (GitHub Repository)  
   1.1 Create a GitHub account.  
   1.2 Create a GitHub Repository and make it as public.
2. Setting up Local Repository  
   2.1 Create a folder in any director and open terminal in present working directory and initialize Git repository by using “git init” command. It will create a “.git” folder in present working directory.
3. Configuring Git and GitHub  
   3.1 Configure GitHub repository to Local Git repository by executing below commands.  
     
   $ git config --global user.email <emailID>  
   $ git config --global user.name <UserName>  
   $ git remote add origin <GitRepoURL>

1. Creating document in local repository and uploading it to GitHub  
   4.1 Create a document in git repository by using vim editor  
     
   $ vim demo.txt  
     
   4.2 Adding demo.txt file to staging area  
     
   $ git add demo.txt  
     
   4.3 Moving files from staging area to git repository  
     
   $ git commit -m “adding demo.txt”  
     
     
     
   4.4 Pushing files from Git repository to GitHub repository.  
     
   $ git push  
     
   If we are pushing for the first time then execute the below command, it will push the files to master branch.  
      
   $ git push -u origin master

**Creating a project and applying all DevOps tools which works together.**

1. Working with AWS  
   1.1 Create an AWS account and login as IAM user.   
   1.2 Initialize an Amazon EC2 instance and download security key(temp.pem / temp.ppk) file.   
   1.3 Once the instance is up and running then try to connect it through SSH or Putty. Below is the SSH command to connect EC2 instance.   
     
   $ ssh -i temp.pem usernme@ip-address  
   This command allows us to interact with EC2 instance via terminal.
2. Docker in AWS  
   2.1 To install docker in AWS execute below commands.  
     
   $ sudo -i  
   This command will switch to root user  
     
   $ yum install docker -y  
   This command will download docker in EC2 instance  
     
   2.2 Starting the Docker Engine   
     
   $ service docker start  
   This command will start docker engine   
     
   $ docker info  
   We can view the status of docker by executing above command.  
     
   $ docker images  
   This command will display all the images  
     
   $ docker ps -a   
   This command will display all the containers

2.3 Launching a Ubuntu container

$ docker run -it ubuntu bash

1. Installing Jenkins in Ubuntu container  
   3.1 Installation  
     
   $ sudo apt-get update  
   $ sudo apt-get upgrade

$ sudo apt-get install Jenkins

3.2 Starting Jenkins server.

$ service jenkins start  
  
Once the Jenkins server is up and make sure EC2 is allowing port 8080 in security group and go to below url.

<http://publicIPV4DNS:8080>  
  
Jenkins dashboard will be appeared here we can perform Continuous Integration tasks.