Experiment 1: Install & Explore the google app engine

Steps

1. Open Google Console Cloud
2. Sign up/Sign in
3. Three lines > dashboard
4. My first project > new project > create project
5. My first project > select project
6. Search admin api > select App engine admin API
7. Activate cloud shell
8. Go to github > create repo
9. Commands
    1. git clone link of github
    2. ls
    3. cd repo name
    4. python file name

Experiment 3 : Simulate a cloud scenario using cloudsim and run a scheduling algorithm that is not present in cloudsim

Steps:

1. Download and install eclipse

2.Open eclipse and go to File -> new->java project-> give any project name-> next-> finish.

3.Expand project by clicking on project name (SJFCloudSim) arrow -> select src-> right click on src->new->package->give any name to package(Assignment3)->finish

4.Right click on Assignment3(package)->select show in -> system explorer->it will open src folder -> open Assignment3 package->download sample code from GitHub and paste 5 Files in Assignment3 package folder-> close

5.Go to eclipse -> right click on project name(SJFCloudSim)->select close project

6.Right click on project name(SJFCloudSim)->open project-> click on arrow before project name->click on src arrow->Assignment3 arrow->open all 5 files and write package name(Assignment3)in first statement of each file and save each file.

7.Select project tab on upper menu bar ->properties->from left side select java build path->select libraries -> click on add external JARs-> select already downloaded CloudSim JARs(CloudSim4.0 and CloudSim-examples4.0)->open ->apply->apply and close. If not downloaded then go to google ->CloudSim download-> select GitHub link releases –cloudslab/CloudSim->go to CloudSim 4.0-> select assets arrow-> download all 4 files -> extract CloudSim 4.0.tar

8.Run the file which contains main function(SJF_Schedule.java) by right click -> run as -> java application

Fix errors by typing requires cloudsim; in module-info.java file to fix errors and save it

Experiment 4: Find a procedure to transfer the filesfrom one virtual machine to another virtual machine

Steps:

1) Install Oracle VM Virtual box

2) Create two Virtual machines VM1&VM2. Download 23.10.1.Desktop—amd64 ISO Disk image file & add path of above ISO Disk image file path & select type linux and version Ubuntu(64- bit)

3) In virtual box select tools-> create Nat network

4) IN VM1 go to settings◊ network ◊ attached two Nat network ◊ ok. Repeat same procedure for VM2

5) Open VM1 & VM2

6) Open terminal in both virtual machine

7) Type ls and check the files present

8) Create any file by using command touch filename.txt ◊ type cat filename.txt to see the contents of the file

9) To add data to filename.txt type nano.txt which will open an editor in which you can type any txt message ◊ ctrl S◊ ctrl X to exit.

10) Type cat filename.txt. It will show entered text

11) To find ip address type ifconfig . if you get an error saying ifconfig not found then type sudo apt install net-tools◊ wait for 100% completions after which again type ifconfig and note IP address of machine . repeat the same procedure for other virtual machine

12) Type systemctl status ssh ◊ if it gives error type sudo apt-get install openssh-server openssh client◊ select install the package maintainers version. Repeat the same for both virtual machine

13) Type systemctl status ssh◊ if status is inactive then type systemctl restart ssh◊ authenticate ◊ check whether the status has become active by command systemctl status ssh ctrl C to exit . repeat the same procedure for both virtual machines

14) Type command scp filename.txt ubuntu@IPAddress of receiver virtual machine:/home/Ubuntu◊ type yes. It will ask for password -◊ type any password ◊it will deny ◊ now change password by command passwd and change password .repaeat the same procedure for both virtual machine

15) Run command scp filename.txt ubuntu@IPAddress of receiver virtual machine:/home/Ubuntu and Enter new password of receiving virtual machine .

16) Check whether the file is received on receiving virtual machine by commands ls & cat

Experiment no 6: Design and deploy a web application in a PaaS environment

Steps :

1) In google search Aws amplify

2) Create a new aws account

3) In github create new repository and add all the required files into it

4) In google search Aws amplify & click on host a web application with AWS amplify

5) Click on github & continue

6) Click on “only select repositories”

7) In recently updated repositories,select your repository

8) Tick connecting a monorepo & write path of the repository ◊ next ◊ save &deploy

9) Wait till deployment process is complete

10) Open the generated link