**Creating Ubuntu VM**

* Create ubuntu vm by normal method
* Root user is diabled in ubuntu by default
* If we want to login to root
  + Give password

How to login with root user?

# cd /etc/gdm3/

# vim custom.conf

After # Automaticlogin

Type 🡪 AllowRoot=true

# cd ..

# cd pam.d/

# ls

# vim gdm-password

Comment 3rd line

# reboot

While selecting user

Click not listed

Username: root

Password: hpcsa

**Installing docker**

# apt update

# apt-get install docker\* -y

Installing docker

# docker –version

# which docker

# systemctl start docker

# systemctl enable docker

# systemctl status docker

# docker ps

* Show running containers
  + Container is 🡪 auto generated by docker
  + Image 🡪 docker image or package, with the help of this we create container
  + Command 🡪 it runs in background
  + Created 🡪 when container created
  + Status 🡪 running, terminating etc
  + Port 🡪 on which port, container is running
  + Names 🡪 container name, if we don’t give any name then docker will give

# docker ps -a

This will show running as well as stopped container

Official Images

* [www.hub.docker.com](http://www.hub.docker.com)
* Register on this
* In explore section we wil have all docker official images

#docker login

Username: docker\_hub\_username

Password: docker\_hub\_password

**How to download image from docker hub ?**

# docker pull ubuntu

Present on docker hub

This will download latest version

# docker pull ubuntu:18.04

Downloading 18.04 version

We can download any specific version

#docker images

* This will show list of all images
* Repository 🡪 package
* Tag 🡪 version
* Image\_id 🡪 random id, container id
* Created 🡪 when did docker updated it
* Size 🡪 docker image size

# docker rmi <image\_id>

This will delete docker image

# dokcer run –ti ubuntu

* -ti 🡪 accessing terminal, interactive terminal
* Run 🡪 download image and create container
* This command will give shell of ubuntu after completion

Go to new terminal

# docker ps

This should show one running container

Give name to container

# docker run –name d1 –ti ubuntu:18.04

D1 🡪 name of container

**Installing apache server**

# apt update

# apt-get install apache2

In ubuntu we have apache2 instead of httpd

# cd /var/www/html

# ls

# rm –rf index.html

# vim index.html

“my web page”

Go to base machine shell

# ip a

This will show ip of docker also (docker 0)

# docker ps

# docker inspect <Container\_id>

IPAddress 🡪 “This will show container IP”

Eg. 172.17.0.2

# curl <container\_ip>

# exit

**If we again want to login to that shell:**

# docker ps –a

# docker start <container\_id>

# docker attach <container\_id>

Que-1: what is difference between docker and VMWare

Que-2: what is difference between docker images and docker container

Que-3: Create 2 containers

1. Container 1 of centos – run python application, swapping two numbers
2. Container 2 of ubuntu – Install python and run factorial program

# docker rm <container\_id>

# docker rm –f <container\_id>

This will delete running container

HOSTING WEBSITE IN CONTAINER

#docker run –name d1 –ti ubuntu

#apt update

#apt-get install apache2 curl vim –y

#cd /var/www/html

#rm –rf index.html

#vim index.html

“Hello.dem web

OPEN NEW TAB

#docker inspect <container-id>

# check IP of container

# service apache2 start

OPEN BROWSERS

Type http://<IP>

#curl <container ip>

Question 4:- Create one application using centos image and host it on ubuntu browser

Content 🡪 Name and PRN

Note :-

Before starting httpd Service : run following commands

# run –d –ti privileged <image-id> /user/sbin/init

Question 5:- Create application using ubuntu 18.04

Question 6:- Create application using centos7