**1.Run and Execute any 6 docker commands:**

docker --version

docker login

docker images

docker ps

docker build -t sample-web-app .

docker run -p 3000:3000 sample-web-app

docker kill container\_name

docker stop container\_name

**2.Create a docker file and run the container:**

* Create a folder, cd to that,do npm init -y, npm i express ,create dockerfile,server.js and html file
* docker file code:

FROM node:18

WORKDIR /app

COPY . .

RUN npm install

EXPOSE 3000

CMD [ "node", "server.js"]

* Server.js Code:

const express=require('express');

const app=express();

const port=3000;

app.use(express.static(\_\_dirname));

app.listen(port, () => {

console.log(`App running at http://localhost:${port}`);

});

* docker build -t sample-web-app .
* docker images
* docker run -p 3000:3000 sample-web-app

**3.Pull an image from docker Hub, perform tasks on it:**

* docker pull prakhar362/sample-web-app:latest
* docker build -t prakhar362/sample-web-app:latest .
* docker run -p 3000:3000 cvtprac
* docker stop distracted\_darwin

**4.Create master and worker nodes,Run any 6 commands with examples:**

* Do ctrl+insert to copy and shift+insert to paste,create an instance and do first two cmds and then take the worker node initialize cmd and paste in another instance.
* kubectl get nodes
* kubectl get pods
* kubectl cluster-info
* kubectl version
* kubectl api-resources
* kubectl get secrets
* kubectl get events
* kubectl get services

**5.Create a pod in Kubernetes,find the ip add and logs:**

* kubectl get nodes
* kubectl run mypod –image=nginx
* kubectl get pods
* kubectl get pod mypod -o wide
* kubectl logs mypod
* kubectl delete pod mypod

**6. Create a VM in any hypervisor and figure out diff in host machine and guest machine do steps in terminal:**

| **Types of difference** | **VMWARE Guest Machine** | **HOST Machine** |
| --- | --- | --- |
| OS Type | hostnamectl | syteminfo |
| Ip config | ifconfig | ipconfig |
| CPU/RAM | lscpu | Go to task manager |
| Architecture | uname -m | settings-> system->abt->system type |
| MAC address | ip a | getmac |
| Storage | df -h | File explorer->this pc ->space |