

2. Find a image from dockerhub of your choice(recommeded: nginx), don't use browser, pull the official image from dockerhub

Command: `docker pull debian`

3. List all the available images in your machine/vm, make sure you see recently pulled image in the list.

Command: `docker images`

4. Find out the "Full" ImageId of the image that you pulled and write it below.

`IMAGE ID :77af4d6b9913`

5. Create a container of your image

Command: `docker run node-docker`

6. List all the running containers

`docker ps`

7. List all the running and stopped containers

`docker ps -a`

8. Find out the "Full" containerId of the container and write it below.

`e90b8831a4b8`

9. Find out how many image layers are used to build this image.

`docker history ubuntu`

10. Get the Apache Tomcat 7 server image from the docker hub.

`docker pull Tomcat7`

11. Run the Apache Tomcat 7, I mean create a container of Apache Tomcat.

`docker run -it --rm -p 8888:8080 tomcat:8.0`

12. Find out what is the IP Address of the Apache Tomcat Container that it is running on

`docker-machine ls`

13. Which Port it is using?

8888

14. Try to access the Tomcat's home page from your machine/vm.

15. What is the disk size of Apache Tomcat image?

355Mb

16. Find out list of all environment variables that is configured for tomcat image, can you see JAVA\_HOME and CATALINA\_HOME? What did you notice about it?

17. Find out which port is exposed for tomcat?

8080

18. Run multiple containers of tomcat on different port and access it's home page.

```
docker run --name MyContainer1 tomcat
docker run --name MyContainer2 tomcat
docker run --name MyContainer3 tomcat
```

19. Pull ubuntu os from dockerhub, try to pull 2 images of ubuntu, Except the latest one.

Docker pull ubuntu

20. Run the container of ubuntu in attached mode.

```
docker run ubuntu
```

21. Run the container of another ubuntu in detached mode.

```
docker run -d -p 80:80 ubuntu service nginx start
```

22. Check how many ubuntu containers are running and stopped

```
docker ps -l
```

23. Is the tomcat container running? If no, start one.

24. Check the logs, generated by tomcat container(don't forget to make request to tomcat's home page to see the log).

```
docker logs tomcat CONTAINER
```

25. Check if ubuntu container is running? If no, start one in attached mode to the terminal.

26. Login as root user in ubuntu container

```
docker exec -it Ubuntu bash
```

27. Create a file with any name in root directory

```
mkdir lokesh
```

28. Install software of your choice in ubuntu container using "apt-get install"

29. Now exit the ubuntu shell, are you back to your host machine, if not, come back to the host machine.

30. Check if the ubuntu container is running.

31. Create a new ubuntu container out of the same image as that previous container in attached mode.

```
docker run --name MyContainer1 ubuntu
```

32. Login as a root user

33. Check if you can see the file created in previous container, you will not see the file as well as software that you installed in the previous container. Now kill this Container.

34. Do you have the previous ubuntu container where you created the file and installed the software? If no repeat step 25 to 29.

35. Create an Image out of the existing container.

```
docker image build
```

36. Now Create a Container out of this image and login into it to see if you can see the file and software installed by you in the previous container.

Docker run image\_name

37. Do you have running tomcat container? If yes, Stop it and kill all tomcat container.

38. Create an index.html file with following code in it:-

```
<h1>This is Tomcat Container</h1>
```

Now, Start a tomcat container in such a way that on hitting its URL for home page it should show the above html page.

39. type below command:-

```
docker images --help
```

Now, try to run command that proves the concept of following three options:-

1. -a

2. -f

3. -q

write atleast 1 command using each option above and prove their concepts as described in the --help.

40. type below command:-

```
docker ps --help
```

Now, try to run command that proves the concept of following six options:-

1. -a

2. -f

3. -q

4. -n
5. -l
6. -s