Section 1 - Getting started with docker.

Need to download the image. The running instance of the image is called as container.

- To pull the image the command is **sudo docker pull <image_name>.**
- To check all the image list the command is **sudo docker images**
- To check the containers which are running the command is **sudo docker ps.**
- To run the docker image **sudo docker run -it -p 80:80 <image_name>.**

When the image is run then a container is formed. To check if the container assigned to a port is working we need to first need the ip address of the machine. For that we need to use the command ifconfig. In case if we are looking it on the local machine then we need to check it with local host ip address that is 127.0.0.1.

We can also check if the container is working or not in CLI as well. For that all we have to do is use the ip address and the assigned port in curl command. **Curl -I 127.0.0.1:80**

Docker gives its own names to the container if we don't give it by ourselves. And once the docker container is stopped it is not shown in the list of docker ps.

> **We can also see the assigned programs to different ip addresses. for that we need to use the command netstat -ntlp.**

Container identification:

Every container has a default name and docker container id. This id is called as UUID. We can also edit the container names.

So we need to give name to the container at the time of run command. We use —name flag.

sudo docker run —name <my_given_name> -it -p 8000:80 image_name

Port Binding:

By default the docker can make connection to the outside world but the outside world cannot make connections to the docker container.

If we want the connect the container then we need to bind the container to the host port.

So we do this mapping during running the docker image. For that we do is assign the port of the local machine to the container by using -p flag.

sudo docker run —name <my_given_name> -it -p 8000:80 <image_name>

Attached and detached mode:

There are two types of mode to run the docker image. One is foreground/attached mode. In this mode all the output of the container is shown in the terminal. Other is detached mode where the output of the container is not shown in the terminal.

In case of attached mode:

- Once we run the docker run command we don’t get access to our terminal after hitting enter.
- **To run the image container in attached mode we need to remove -dt flag from the command and for detached set use -dt in run command.**
- When we run the ip address on the browser to access the container and once we access it and come back to the command line interface we will get all the logs below the run command.
- need to hit control c to access back the container.

Removing and stopping containers in Mass:

To remove container the command used is **docker container rm <container name or id>**

To list all the containers we can use the command **docker container ls -aq** this command will give all the container id list.

Now if we merger the above two commands then we can remove all the containers at once.

docker container rm $(docker container ls -aq)

Same is with the stop command.

docker container stop $(docker container ls -aq).