**Objectives**

What are containers?

What is Docker?

Why do you need it?

What can it do?

Run Docker Containers?

Create a Docker image?

Networks in Docker

Docker compose

Docker concepts in depth

Docker for windows

Docker swarm

Docker vs kubernetes

**Docker Commands**

1. **RUN**:

**docker run nginx**

The above command will pull the nginx docker image and run the nginx. If it is already present in local then it will run the existing image.

**Docker run –d nginx**

To run the container in detached mode.

1. **PS**:

**Docker ps**

This command shows all the running containers and some basic information.it will list containers with container id, image,status, ports etc..

**Docker ps –a**

This command shows all the running and exited containers.

**Run – Tag**

**Docker run redis**

The above command will get the default tag if no tag is specified at runtime.

**Docker run redis:4.0**

The above command gets the specified version of tag as mentioned.

**Run – STDIN**

**Docker run –i simple-prompt-docker**

This command runs in interactive mode as accepting the inputs from console.

**Docker run –it simple-prompt-docker**

The command runs with terminal and intercative mode.

1. **STOP**:

To stop the running container we use stop command.

To stop we need container id or container name.

To confirm we can run “docker ps –a” to see container runing or exited.

1. **Rm**:

To remove the stopped/exitted container permanently.

Docker rm silly\_simmet

Which removes the silly\_simmet container from local.

1. **Images**:

**Docker images**

To see the images present in local.

1. **Rmi**:

**Docker rmi nginx**

To remove the images from local.But there should not be any runing containers based on that image and should be deleted the containers.

1. **Pull**:

**Docker pull nginx**

To download the image from docker hub/repository.