# INSTALLATION AND CREATION OF DOCKER CONTAINERS

## To view the kernel Version:

uname –r

## Installing Docker:

1. sudo yum -y update

2. sudo tee /etc/yum.repos.d/docker.repo <<-EOF  
 [dockerrepo]  
 name=Docker Repository  
 baseurl=https://yum.dockerproject.org/repo/main/centos/7  
 enabled=1  
 gpgcheck=1  
 gpgkey=https://yum.dockerproject.org/gpg  
 EOF  
 3. sudo yum install -y docker-engine  
 4. sudo service docker start  
 5. sudo chkconfig docker on

## To view the containers:

docket ps –a

ps - list containers

-A - all

## Docker hub account:

<https://hub.docker.com/>

## Demo:

docker run docker/whalesay cowsay boo

sudo docker run hello-world

## To view the images

docker images

## To create own image:

1. mkdir mydockerbuild
2. cd mydockerbuilD
3. touch Dockerfile
4. ls Dockerfile  
    FROM docker/whalesay:latest  
    RUN apt-get -y update && apt-get install -y fortunes  
    CMD /usr/games/fortune -a | cowsay
5. docker build -t docker-whale  
    -t - tag values
6. docker run docker-whale

## Pushing your Images to Docker Hub

1. docker images  
 --> output:  
 REPOSITORY TAG IMAGE ID CREATED VIRTUAL SIZE  
docker-whale latest 7d9495d03763 38 minutes ago 273.7 MB  
<none> <none> 5dac217f722c 45 minutes ago 273.7 MB  
docker/whalesay latest fb434121fc77 4 hours ago 247 MB  
hello-world latest 91c95931e552 5 weeks ago 910 B  
 2. docker tag 7d9495d03763 maryatdocker/docker-whale:latest  
 3. docker login --username=yourhubusername [--email=youremail@company.com](mailto:--email=youremail@company.com) 4. docker push maryatdocker/docker-whale

## To Remove Docker images:

1. docker rmi -f 7d9495d03763  
2. docker rmi -f docker-whale  
 rmi - remove one or more images  
 -f - force

## Port Forwarding in Docker container:

1.docker run -d -p 80:80 ubuntu

2.iptables -t nat -A DOCKER -p tcp --dport 80 -j DNAT --to-destination 172.17.0.2:80

-t = tables

-A = append

-p = protocol

-j = target