Docker Basic Commands

1) Docker Image commands
a) docker search <image_name:tag>
// search for images in terminal
b) docker pull <image_name:tag>
// pull images to local machine from docker hub
c) docker image ls (or) docker images
// list all downloaded docker images in local system
d) docker image inspect <image_name:tag>
// display detailed information on one or more images
e) docker image history <image_name:tag>
// show the history of an image
f) docker image prune
// remove all unused images from local machine
g) docker push <image_name:tag>
// push images to docker hub/registry
h) docker image rm <image_name:tag> (or) docker rmi
<image_name:tag>
// do delete one or multiple docker images

2) Docker container commands
a) docker ps
// list all running container
b) docker ps -a
// list all containers info (running + stopped)
c) docker ps -l
// last effected container details
d) docker stop <container_name/id> (or) docker kill
<container_name/id>
// stop running container
e) docker rename <container_name> <new_name>
// change name of running container
f) docker rm <container_name/id>
// delete container from local machine
g) docker inspect <container_name/id>
// to see detailed info about a container
h) docker cp /source/path
<container_name/id>:/destination/path
// copy files from local host to container
i) docker container prune
//Remove all stopped containers

3) Running Containers
Syntax: docker run [OPTIONS] <image_name:tag>
a) -it
// launch container with interactive mode
// docker run -itd centos
b) -d
// launch containers with detach mode (run in background)
// docker run -d tomcat
c) -itd
// launch containers with detach mode
// docker run -itd centos
d) --name
// provide name to container when you are launching it
// docker run -itd --name <container_name>
<image_name:tag>
e) -v
// used to attach volumes
f) --volumes-from
// for creating and attaching reusables volumes
g) --network
// use for attaching a network to a container
h) -p
// use for port mapping (if you want to go with a specific port
for port mapping)
//docker run -d -p <defalut_port_of _app/tool>:<your_port>
<image_name/id:tag>
// docker run -d -p 8080:80 tomcat
i) -P
// Used for port mapping (docker daemon will pick a free port
for port mapping, generally docker daemon will pick from
32768 range)
// docker run -d -P tomcat
j) -e
// Used for specifying the environment variables of a
container
k) --cpu
// used to specify the processors that the container should
use

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4) <u>To enter into a container environment which is running in background</u>

    a) docker exec -it <container_name/id> bash
       // docker exec -it container1 bash

5) <u>Docker Networking</u>

    a) docker network ls
       // list all available docker networks

    b) docker network inspect <network_name/id>
       // shows detailed info about a docker network

    c) docker network create <network_name>
       // to create docker network with default values

    d) docker network create --driver <driver_name> <network_name>
       // to create docker network with specific driver

    e) docker network create --driver <driver_name> --subnet <subnet_range> <network_name>

    f) // to create docker network with specific driver and subnet range

    g) docker network connect <network_name/network_id> <container_name/id>
       // to connect container to specific docker network

    h) docker network connect <network_name/network_id> --ip <ipadd> <container_name/id>
       // to connect container to specific docker network with specific ip

    i) docker network rm <network_name/network_id>
       // to delete one or multiple docker networks

    j) docker network prune
       // to delete all unused all docker networks

    k) docker network disconnect <network_name/network_id> <container_name/id>
       // disconnect container from docker network

6) <u>Docker Volumes</u>

    a) docker volume ls
       // to list available docker volumes in local machine

    b) docker volume inspect <volume_name/id>
       // shows detailed info about a docker volume

    c) docker volume create <volume_name>
       // to create docker volume

    d) docker volume rm <volume_name/id>
       // to remove one or multiple docker volumes

    e) docker volume prune
       // to delete all unused docker volumes

    f) -v
       // create a docker volume and attach a docker volume to container
       // docker run -itd -v /data centos

    g) --mount
       // to attach a docker local volume(which is already created) to container
       // docker run -itd --mount "source=<docker_local_volume/path> dest <destination_dir/path/in/container>" <image_name/id:tag>