Assignment 1

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Demonstrate minimum 15 basic docker command with explanation and screenshot.

1. Docker pull <image> ->It pulls the image from Docker Repository

```
C:\Users\abhis>docker pull nginx
Using default tag: latest
latest: Pulling from library/nginx
bd159e379b3b: Already exists
8d634ce99fb9: Pull complete
98b0bbcc0ec6: Pull complete
6ab6a6301bde: Pull complete
f5d8edcd47b1: Pull complete
fe24ce36f968: Pull complete
Digest: sha256:2f770d2fe27bc85f68fd7fe6a63900ef7076bc703022fe81b980377fe3d27b70
Status: Downloaded newer image for nginx:latest
docker.io/library/nginx:latest
```

2. Docker run <image> - > Run the Docker Image

```
C:\Users\abhis>docker run nginx
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
```

3. Running an image in detached mode
   Docker run -d <image>

```
C:\Users\abhis>docker run -d nginx
68882dc72317065159f954132fad029cd024dd701b12e1b8ee6f08e4bc3e21b4
```

4. Docker attach - attach to a running container
   Docker attach <Container I.D>

```
C:\Users\abhis>docker attach 68882dc
```

Note: Simply provide the first few characters of the CONTAINER I.D

5. Pause and Unpause a Container

```
C:\Users\abhis>docker pause nginx
```

```
C:\Users\abhis>docker unpause nginx
```

6. Docker ps -> It lists all running containers and basic information about them

```
C:\Users\abhis>docker ps
CONTAINER ID    IMAGE     COMMAND                  CREATED         STATUS         PORTS      NAMES
06e8c11a504f    nginx     "/docker-entrypoint.…"   2 minutes ago   Up 4 seconds   80/tcp     nostalgic_ritchie
```

7. Docker ps -a --> To see the list of all containers including running and exited ones

```
C:\Users\abhis>docker ps -a
CONTAINER ID    IMAGE          COMMAND                  CREATED         STATUS              PORTS      NAMES
06e8c11a504f    nginx          "/docker-entrypoint.…"   3 minutes ago   Up About a minute   80/tcp     nostalgic_ritchie
ad74fd360231    85f64ed41a28   "gunicorn --bind 0.0…"   2 weeks ago     Created             8080/tcp   jovial_tharp
3139834ff727    85f64ed41a28   "gunicorn --bind 0.0…"   2 weeks ago     Created             8080/tcp   loving_boyd
```

8. Docker stop ->
   To stop a running container use the Dockers stop command but you must provide either the container I.D. or the container name.

```
C:\Users\abhis>docker stop nostalgic_ritchie
nostalgic_ritchie
```

9. Remove a Container
   To remove a container - > docker rm <container name>

```
C:\Users\abhis>docker rm nostalgic_ritchie
nostalgic_ritchie
```

10. To see a list of images

```
C:\Users\abhis>docker images
REPOSITORY    TAG        IMAGE ID        CREATED       SIZE
nginx         latest     51086ed63d8c    2 days ago    142MB
```

11. Removing an image

DOCKER rmi <image name>

```
C:\Users\abhis>docker rmi nginx
Untagged: nginx:latest
Untagged: nginx@sha256:2f770d2fe27bc85f68fd7fe6a63900ef7076bc703022fe81b980377fe3d27b70
Deleted: sha256:51086ed63d8cba3a6a3d94ecd103e9638b4cb8533bb896caf2cda04fb79b862f
Deleted: sha256:c22f011a5c63a718e3155ef21b930f5583102384c8e333299913ed660baa230c
Deleted: sha256:1235ee8acd48a34c389280d8192ae79ef241d546eeea2f3416b64608d68d8538
Deleted: sha256:80ab7667b1007f2ed4b5387e7585e18d3ca1899c76449240e2890373a8e77285
Deleted: sha256:4833b18722fc3d06feafaa0f61726b1b11baa1daa0ea455e6e2ab66a7c8db283
Deleted: sha256:98b8d2ed046082a8f6c2fb2f34430f5142fea7a7078326d980b323d71640d8ff
```

12. History of image -> show the history of the particular image

```
C:\Users\abhis>docker history nginx
IMAGE           CREATED        CREATED BY                                     SIZE       COMMENT
51086ed63d8c    2 days ago     /bin/sh -c #(nop)  CMD ["nginx" "-g" "daemon…  0B
<missing>       2 days ago     /bin/sh -c #(nop)  STOPSIGNAL SIGQUIT          0B
<missing>       2 days ago     /bin/sh -c #(nop)  EXPOSE 80                   0B
<missing>       2 days ago     /bin/sh -c #(nop)  ENTRYPOINT ["/docker-entr…  0B
<missing>       2 days ago     /bin/sh -c #(nop) COPY file:09a214a3e07c919a…  4.61kB
<missing>       2 days ago     /bin/sh -c #(nop) COPY file:0fd5fca330dcd6a7…  1.04kB
<missing>       2 days ago     /bin/sh -c #(nop) COPY file:0b866ff3fc1ef5b0…  1.96kB
<missing>       2 days ago     /bin/sh -c #(nop) COPY file:65504f71f5855ca0…  1.2kB
<missing>       2 days ago     /bin/sh -c set -x     && addgroup --system -…  61.1MB
<missing>       2 days ago     /bin/sh -c #(nop)  ENV PKG_RELEASE=1~bullseye  0B
```

13. Inspect an image - shows the low level information in JSON format

```
C:\Users\abhis>docker inspect nginx
[
    {
        "Id": "sha256:51086ed63d8cba3a6a3d94ecd103e9638b4cb8533bb896caf2cda04fb79b862f",
        "RepoTags": [
            "nginx:latest"
        ],
        "RepoDigests": [
            "nginx@sha256:2f770d2fe27bc85f68fd7fe6a63900ef7076bc703022fe81b980377fe3d27b70"
        ],
        "Parent": "",
        "Comment": "",
        "Created": "2022-10-05T12:44:20.724514723Z",
        "Container": "e6acafd0a562dbff654387e430755689f1ace82ae616020ba972a83dda9df47f",
```

14. Creating an image

```
C:\Users\abhis>docker build -t welcome-app .
```

15. Renaming a container

Docker rename <old-name> <new-name>

```
C:\Users\abhis>docker ps
CONTAINER ID    IMAGE    COMMAND                 CREATED         STATUS          PORTS      NAMES
bb24171eee30    nginx    "/docker-entrypoint.…"  4 seconds ago   Up 3 seconds    80/tcp     crazy_shirley

C:\Users\abhis>docker rename crazy_shirley learn_docker

C:\Users\abhis>docker ps
CONTAINER ID    IMAGE    COMMAND                 CREATED             STATUS              PORTS      NAMES
bb24171eee30    nginx    "/docker-entrypoint.…"  About a minute ago  Up About a minute   80/tcp     learn_docker
```