

1. `docker build -t riteshsil/welcome-app .`

```
C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>docker build -t riteshsil/welcome-app .
[+] Building 4.0s (10/10) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 31B
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [internal] load metadata for docker.io/library/python:3.7
=> [auth] library/python:pull token for registry-1.docker.io
=> [internal] load build context
=> => transferring context: 116B
=> [1/4] FROM docker.io/library/python:3.7@sha256:fd3895990a9ab8dcc466665fff55b719ab538431b12bda514d0436e193b0eadc
=> CACHED [2/4] COPY . /app
=> CACHED [3/4] WORKDIR /app
=> CACHED [4/4] RUN pip install -r requirements.txt
```

2. `docker images`

It shows all the existing images locally

Use `docker scan` to run snyk tests against images to find vulnerabilities and learn how to fix them

```
C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>docker images
REPOSITORY          TAG         IMAGE ID      CREATED        SIZE
riteshsil/welcome-app latest      a187dc992074  18 minutes ago 1.06GB

C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>
```

3. `docker run -d -p 5000:5000 <docker image name>`

Run a docker image inside a container

```
C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>docker run -d -p 5000:5000 riteshsil/welcome-app
e50e67c8d5ffeb75f1e55b85fa8e4da1652e3f2ce9e26d8bbc4358924281d51c

C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>
```

4. `docker ps`

Show all the running containers

```
C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>docker ps
CONTAINER ID   IMAGE                COMMAND                  CREATED        STATUS              PORTS                               NAMES
e50e67c8d5ff   riteshsil/welcome-app "python app.py"         About a minute Up About a minute   0.0.0.0:5000->5000/tcp             modest_davinci

C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>
```

5. `docker stop <container id>`

Stop the running docker containers

```
C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>docker stop e50e67c8d5ff
e50e67c8d5ff

C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>docker ps
CONTAINER ID   IMAGE                COMMAND                  CREATED        STATUS        PORTS   NAMES
C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>
```

6. `docker rmi -f <docker image>`

Remove a docker images

```
C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>docker rmi -f riteshsil/welcome-app
Untagged: riteshsil/welcome-app:latest
Deleted: sha256:a187dc992074759af1eac729b9c14af93859866a72527d6319060195ebc3d797

C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>docker images
REPOSITORY    TAG          IMAGE ID     CREATED    SIZE

C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>
```

7. `docker rmi -f $(docker images -aq)`

Nested docker command to remove all the docker images available.

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER COMMENTS

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\$ docker images

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
welcome-app	1.0.0	a187dc992074	About an hour ago	1.06GB
riteshsil/welcome-app	1.0.0	a187dc992074	About an hour ago	1.06GB

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\$ docker rmi -f \$(docker images -aq)

Untagged: welcome-app:1.0.0

Untagged: riteshsil/welcome-app:1.0.0

Untagged: riteshsil/welcome-app@sha256:264df93381da606e35b7bd90e5847a961263afde37c6d76134fa6e91cf1ae3fa

Deleted: sha256:a187dc992074759af1eac729b9c14af93859866a72527d6319060195ebc3d797

Error: No such image: a187dc992074

silri@Shonku MINGW64 ~/Applied_AI/IN - Industry Ready Projects/02. Docker/Application

\$

8.docker login

logging into the docker hub.

C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>docker login

Authenticating with existing credentials...

Login Succeeded

Logging in with your password grants your terminal complete access to your account.

For better security, log in with a limited-privilege personal access token. Learn more at <https://docs.docker.com/go/access-tokens/>

C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>

9. `docker tag <docker image name>:latest <user_name/docker image name : version>`

Tag a docker image with proper versioning

```
C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>docker tag welcome-app:latest riteshsil/welcome-app:1.0.0

C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>docker images
REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
welcome-app         latest          a187dc992074   50 minutes ago 1.06GB
riteshsil/welcome-app 1.0.0          a187dc992074   50 minutes ago 1.06GB

C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>
```

10. `docker push <user_name/docker_image_name: version>`

```
C:\Users\silri\Applied_AI\IN - Industry Ready Projects\02. Docker\Application>docker push riteshsil/welcome-app:1.0.0
The push refers to repository [docker.io/riteshsil/welcome-app]
23cf7ee335ae: Pushed
5f70bf18a086: Pushed
cd08349d664e: Pushed
760e649f9ede: Pushed
634bb2b2ca8e: Pushed
80bc379fe03f: Pushed
0c7daf9a72c8: Pushed
75ba02937496: Pushing [=====> ] 265.7MB/528.9MB
288cf3a46e32: Pushed
186da837555d: Pushed
955c9335e041: Pushed
8e079fee2186: Pushing [=====> ] 121.7MB/124.1MB
█
```

11. `docker run -d -p 5000:5000 --name <docker_image_name> <user_name/docker_image_name:version>`

Running a docker images with a given name to the image.

```
silri@Shonku MINGW64 ~/Applied_AI/IN - Industry Ready Projects/02. Docker/Application
```

```
$ docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
riteshsil/welcome-app	1.0.0	a187dc992074	2 hours ago	1.06GB

```
silri@Shonku MINGW64 ~/Applied_AI/IN - Industry Ready Projects/02. Docker/Application
```

```
$ docker run -d -p 5000:5000 riteshsil/welcome-app
```

```
Unable to find image 'riteshsil/welcome-app:latest' locally
```

```
docker: Error response from daemon: manifest for riteshsil/welcome-app:latest not found: manifest unknown: manifest unknown.  
See 'docker run --help'.
```

```
silri@Shonku MINGW64 ~/Applied_AI/IN - Industry Ready Projects/02. Docker/Application
```

```
$ docker run -d -p 5000:5000 --name welcome-app riteshsil/welcome-app:1.0.0  
2fdf9b03f5daab7ce978c893f05b4c1d259ce2a26eda8627fbc06c27f62ed646
```

```
silri@Shonku MINGW64 ~/Applied_AI/IN - Industry Ready Projects/02. Docker/Application
```

```
$
```

12. `docker log <container_id>`

See the running log of a container

```

silri@Shonku MINGW64 ~/Applied_AI/IN - Industry Ready Projects/02. Docker/Application
$ docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS                               NAMES
2fdf9b03f5da   riteshsil/welcome-app:1.0.0        "python app.py"         3 minutes ago Up 3 minutes   0.0.0.0:5000->5000/tcp             welcome-app

silri@Shonku MINGW64 ~/Applied_AI/IN - Industry Ready Projects/02. Docker/Application
$ docker logs 2fdf9b03f5da
* Serving Flask app 'app'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:5000
* Running on http://172.17.0.2:5000
Press CTRL+C to quit
172.17.0.1 - - [26/Oct/2022 04:56:00] "GET / HTTP/1.1" 200 -

silri@Shonku MINGW64 ~/Applied_AI/IN - Industry Ready Projects/02. Docker/Application
$

```

13. `docker kill <container_id>`

Forcefully kill a running docker container


```

silri@Shonku MINGW64 ~/Applied_AI/IN - Industry Ready Projects/02. Docker/Application
$ docker ps
CONTAINER ID   IMAGE                COMMAND                  CREATED        STATUS        PORTS                NAMES
2fdf9b03f5da   riteshsil/welcome-app:1.0.0   "python app.py"         5 minutes ago   Up 5 minutes   0.0.0.0:5000->5000/tcp   welcome-app

silri@Shonku MINGW64 ~/Applied_AI/IN - Industry Ready Projects/02. Docker/Application
$ docker kill 2fdf9b03f5da
2fdf9b03f5da

silri@Shonku MINGW64 ~/Applied_AI/IN - Industry Ready Projects/02. Docker/Application
$ docker ps
CONTAINER ID   IMAGE                COMMAND                  CREATED        STATUS        PORTS                NAMES

silri@Shonku MINGW64 ~/Applied_AI/IN - Industry Ready Projects/02. Docker/Application
$ 

```

14. **docker network ls**

Listing the docker networks

```

silri@Shonku MINGW64 ~/Applied_AI/IN - Industry Ready Projects/02. Docker/Application
$ docker network ls
NETWORK ID      NAME      DRIVER      SCOPE
97cb408b80b6    bridge    bridge       local
8266126cca3a    host      host         local
24f2d297deb6    none      null         local

silri@Shonku MINGW64 ~/Applied_AI/IN - Industry Ready Projects/02. Docker/Application
$ 

```

15. **docker rm <container id>**

Removing an existing container

```
silri@Shonku MINGW64 ~/Applied_AI/IN - Industry Ready Projects/02. Docker/Application
```

```
$ docker rm 2fdf9b03f5daab7ce978c893f05b4c1d259ce2a26eda8627fbc06c27f62ed646
```

```
2fdf9b03f5daab7ce978c893f05b4c1d259ce2a26eda8627fbc06c27f62ed646
```

```
silri@Shonku MINGW64 ~/Applied_AI/IN - Industry Ready Projects/02. Docker/Application
```

```
$ docker run -p 5000:5000 --name welcome-app riteshsil/welcome-app:1.0.0
```

```
* Serving Flask app 'app'
```

```
* Debug mode: off
```

```
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
```

```
* Running on all addresses (0.0.0.0)
```

```
* Running on http://127.0.0.1:5000
```

```
* Running on http://172.17.0.2:5000
```

```
Press CTRL+C to quit
```

```
□
```