## Practical-7

Aim: Deployment of ML project in docker using Streamlit

**Task 1:** Ensure that the required libraries are installed:

- Install the Docker Command Line Interface Tool from: https://docs.docker.com/desktop/
- Install Streamlit library (<a href="https://docs.streamlit.io/library/get-started/installation">https://docs.streamlit.io/library/get-started/installation</a>)

**Task 2:** Create the docker file using the steps described in theory material.

**Task 3:** Create the docker image using docker build command.

```
PS C:\Users\Makul\Downloads\MtOPs\Practicals\Practical 7> docker build -t pr7 .

[+] Building 68.1s (10/10) FINISHED

> [internal] load build definition from Dockerfile

> > transferring dockerfile: 5668

> [internal] load .dockerignore

> > transferring context: 28

> [internal] load metadata for docker.io/library/python:3.8-slim

> [internal] load metadata for docker.io/library/python:9.8-slim

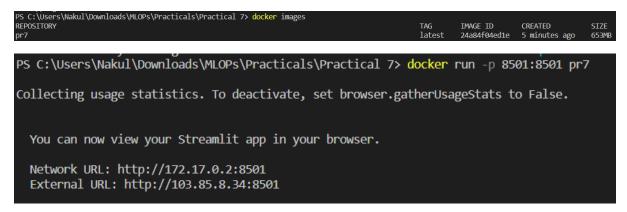
> [internal] load metadata for docker.io/library/python:9.8-slim

| [internal] load metadata for docker.io/library/python:9.8-slim

| [internal] load build context

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**Task 4:** Run the docker container to execute the docker image and host the machine learning model using streamlit app server.



**Task 5:** Compare the performance of the model in docker container and streamlit deployment on local server.

If the response time is a critical factor for your application, achieving a lower response time in the Docker container is a positive outcome. You may also want to consider running more extensive tests, including load testing, to assess how well each deployment scenario handles varying workloads.

If you have specific criteria or additional metrics you'd like to evaluate, feel free to provide more details, and I can offer further guidance.