UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
DEHRADUN

DISTRIBUTED SYSTEMS

Docker - Containerization

MTECH-COMPUTER SCIENCE ENGINEERING
CYBER SECURITY AND FORENSICS

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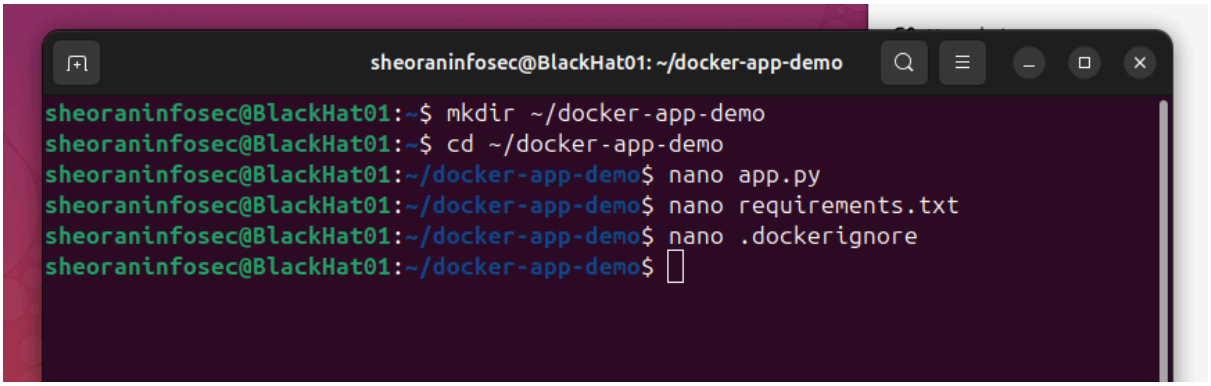
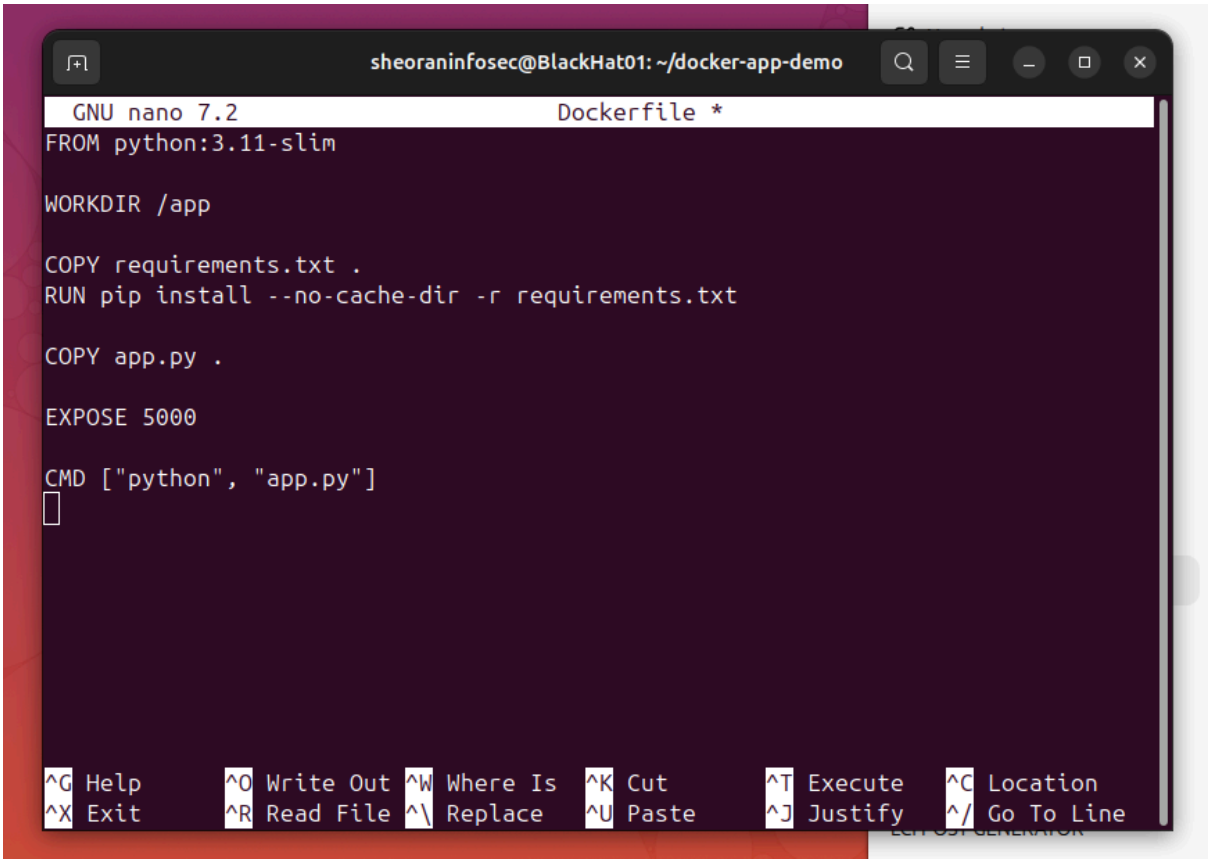
Objective — implement containerization by deploying applications in Docker containers. Students will create Docker images and run containers to observe how virtualization and resource management are achieved in cloud computing environments

Step 1: Create Project Folder

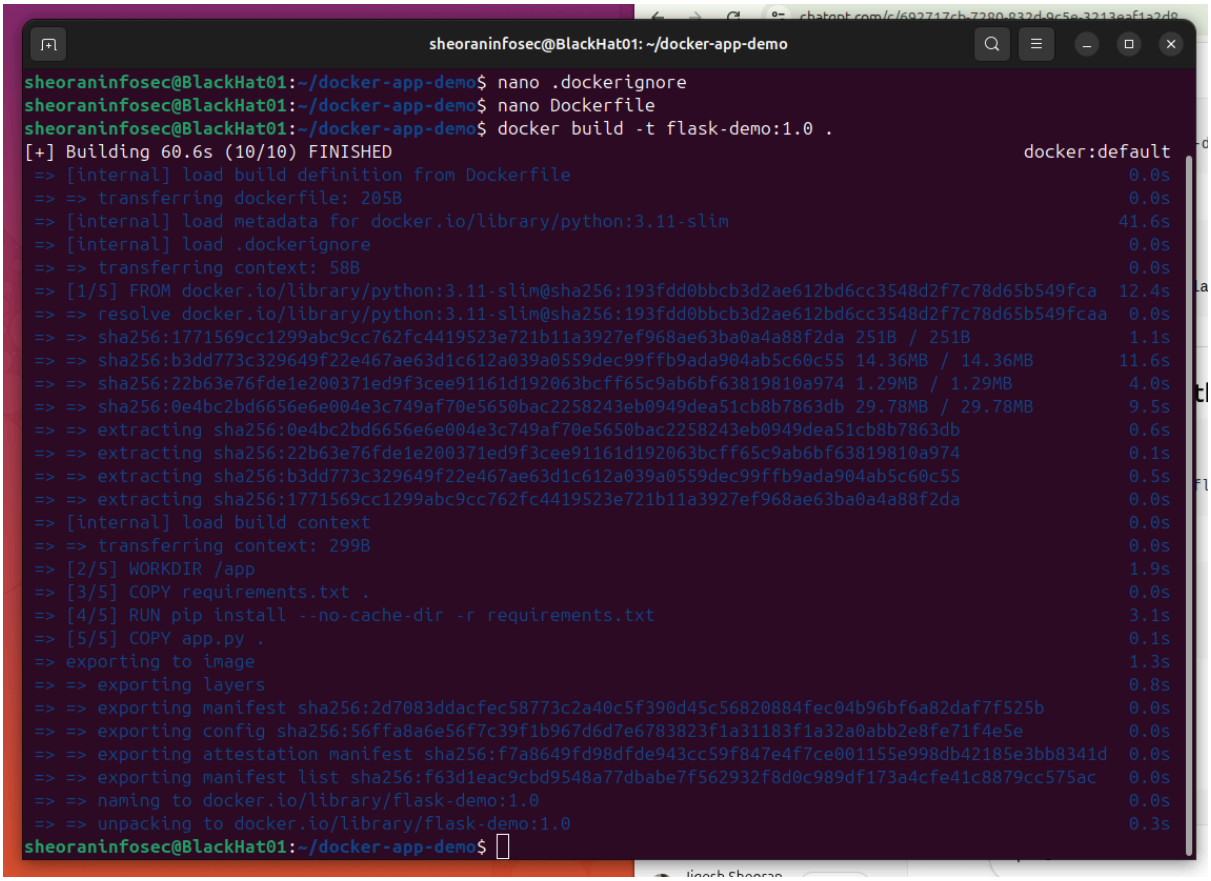
Step 2: write nano app.py , requirement.txt and i also have written .dockerignore as a good coding practice.



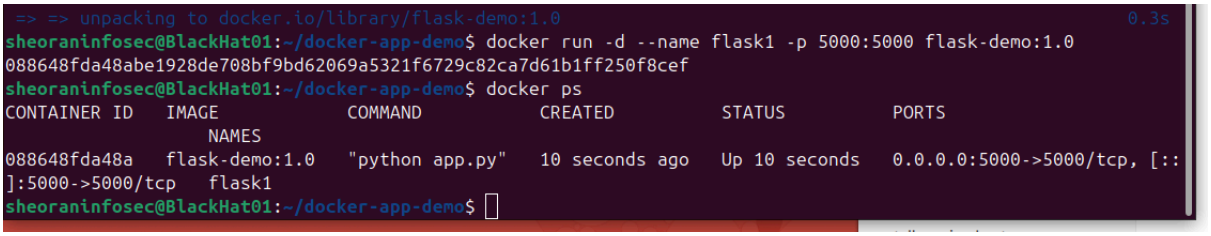
Step 3: Create the DockerFile



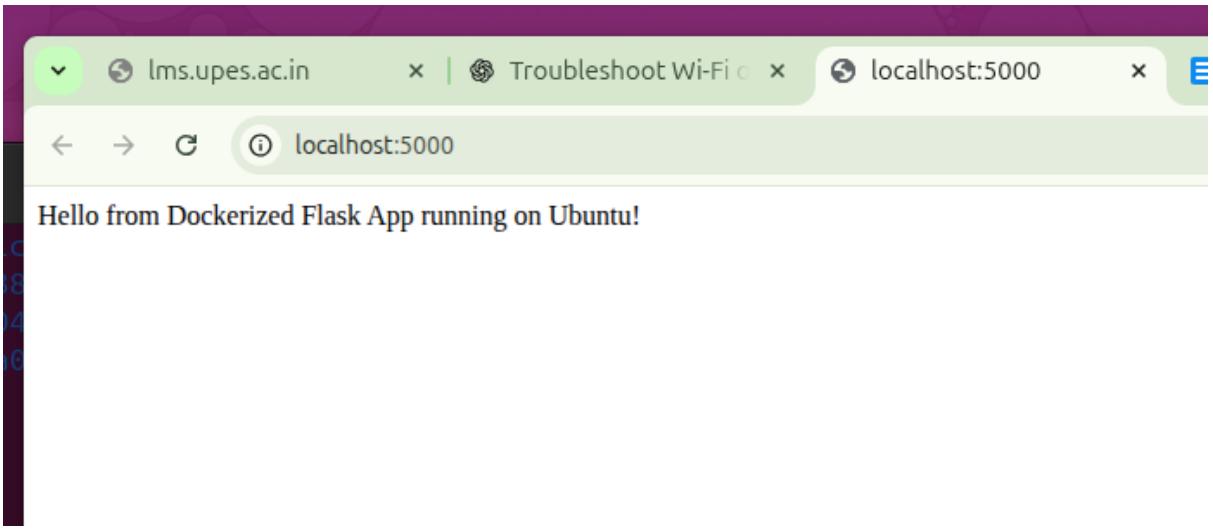
Step 4: Build the Docker image



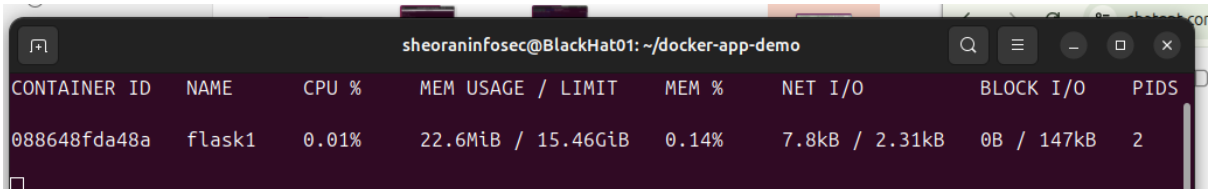
Step 5: Run the COntainer



Step 6: Check if its running or not

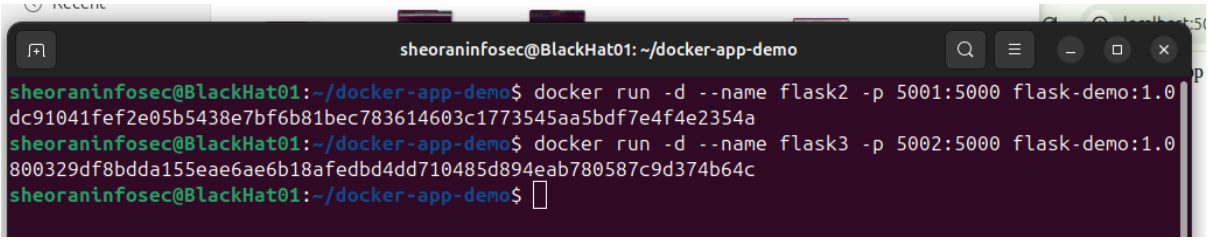


Step 7: Monitor Resource Usage

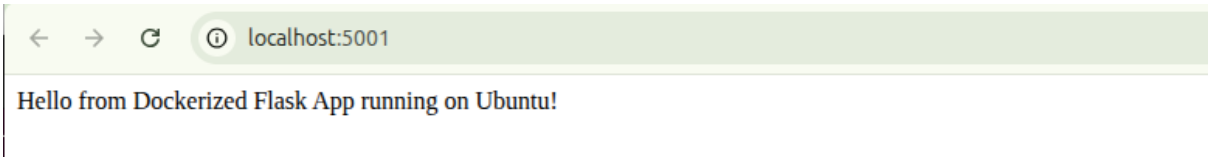


Step 8: Show detailed container info.

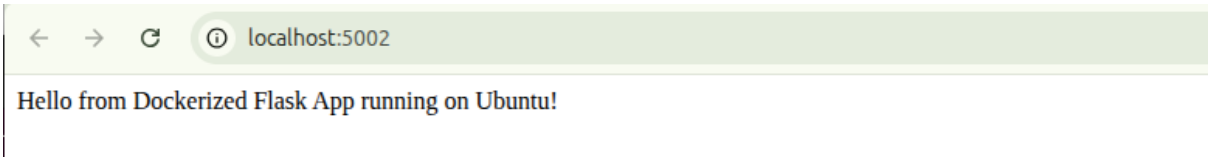
Step 9: Scaling from 1 container to multiple comtainers.
In this case i have created two more container at
localhost:5001
localhost:5002



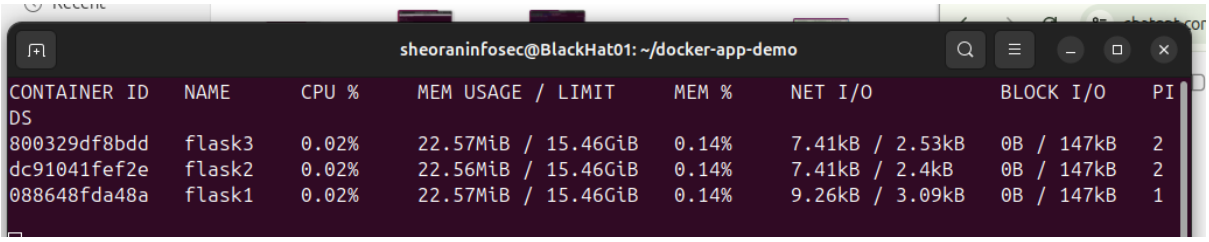
Step 10: checking the cointainer running at localhost:5001



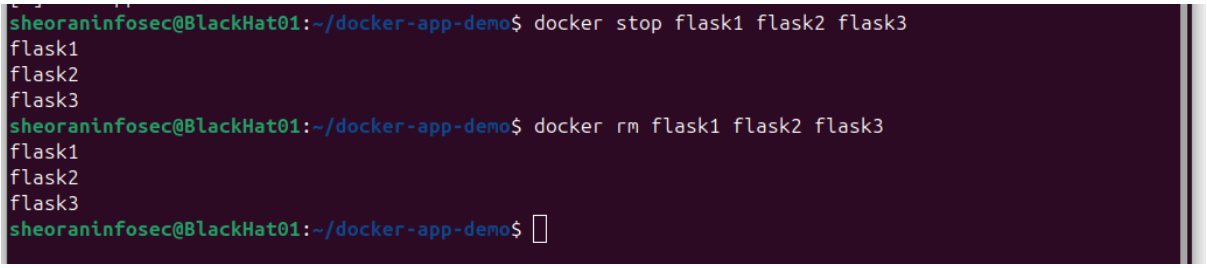
Step 11: checking the cointainer running at localhost:5002



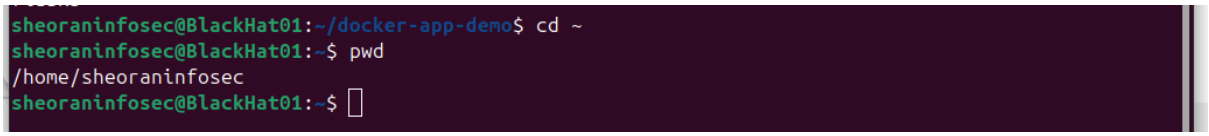
Step 12: checking resource usage and stats



Step 13: At last stopping the running container and cleaning up.



Step 14: come back to home directory.



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