IMPLEMENTATIONOF CONTAINERS

Name:Nagasurya N

RollNo:2023115106

Aim

Toinstall Docker on Windows Subsystem for Linux (WSL), create andmanage containers, and execute a Python environment inside aDocker container.

Objective

- Install Docker Engine in WSL.
- Verify Docker functionality.
- Run lightweight containers.
- Deploy a web server container.
- Execute Python inside a containerized environment.

System Requirements

- Windows 10/11 with WSL enabled
- Ubuntu (WSL distribution)
- Docker Engine
- Internet connectivity

Procedure Step 1 – Install Docker Docker packages and dependencies were installed using the apt package manager.

Command used:

sudo apt update

sudo apt install docker.io

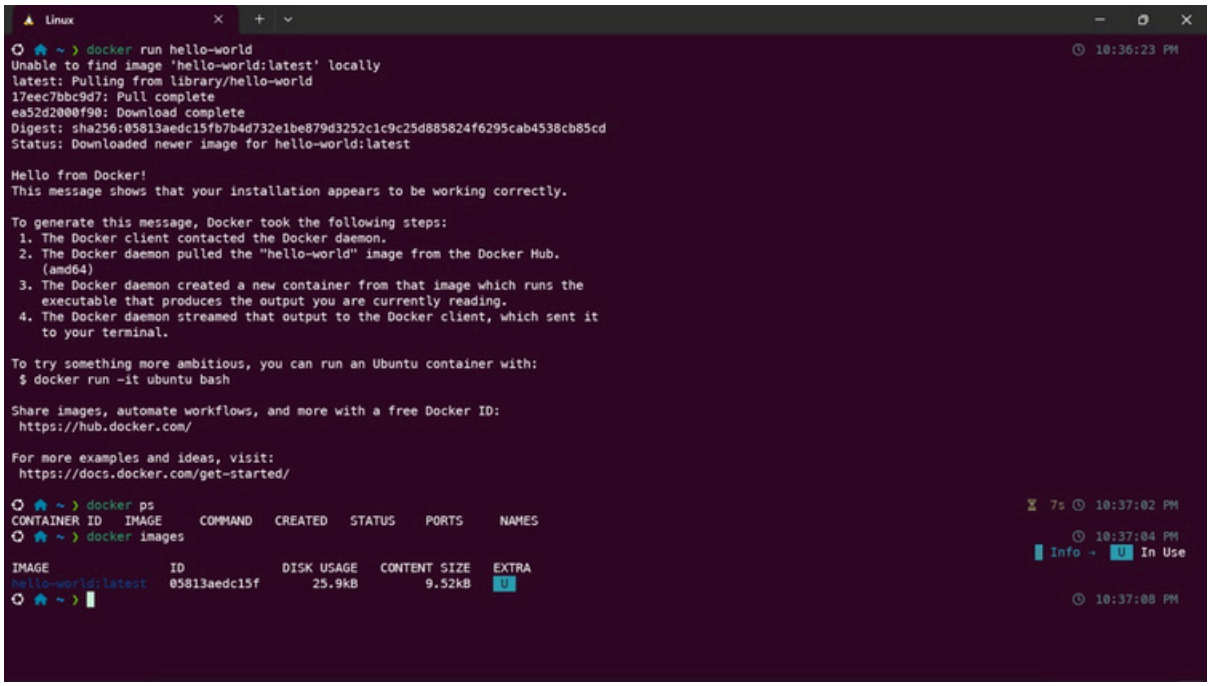
Step 2 – Start Docker Service

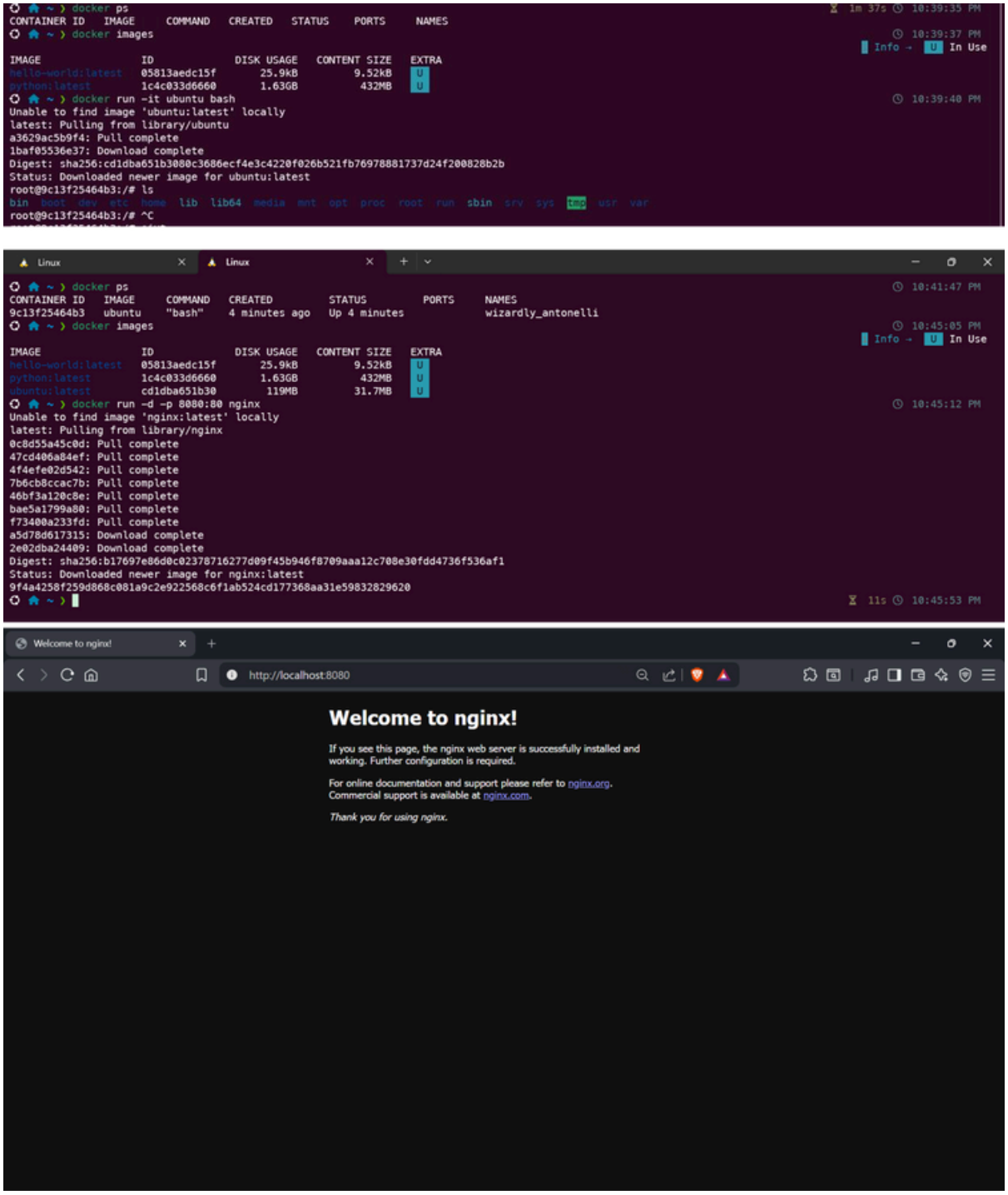
The Docker service was started and verified.

sudo systemctl start docker

docker –version

Step 3 – Create Containers



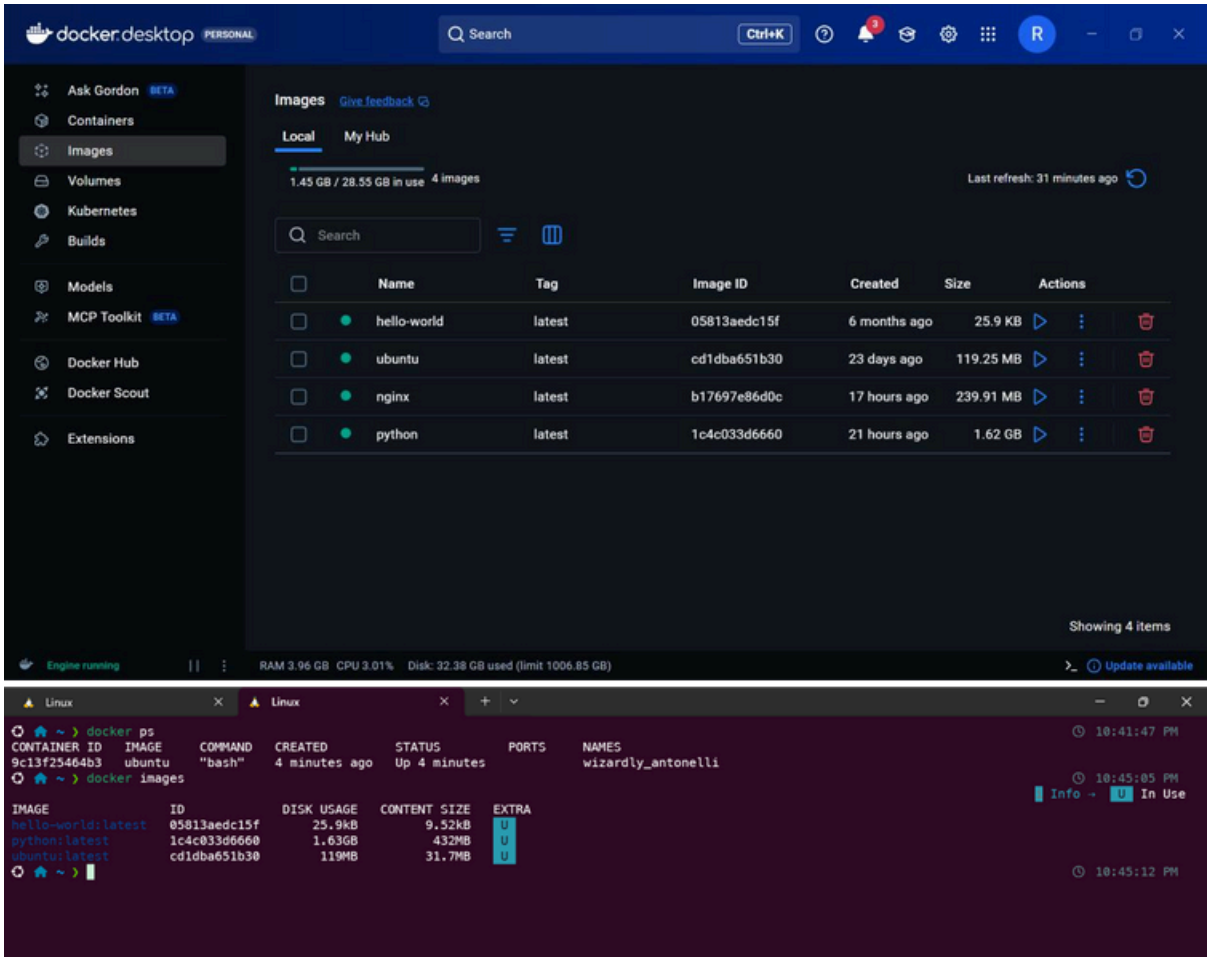


Step 4 – View Docker Containers

All containers were listed to verify their status.

docker ps -a

This displayed running and stopped containers.



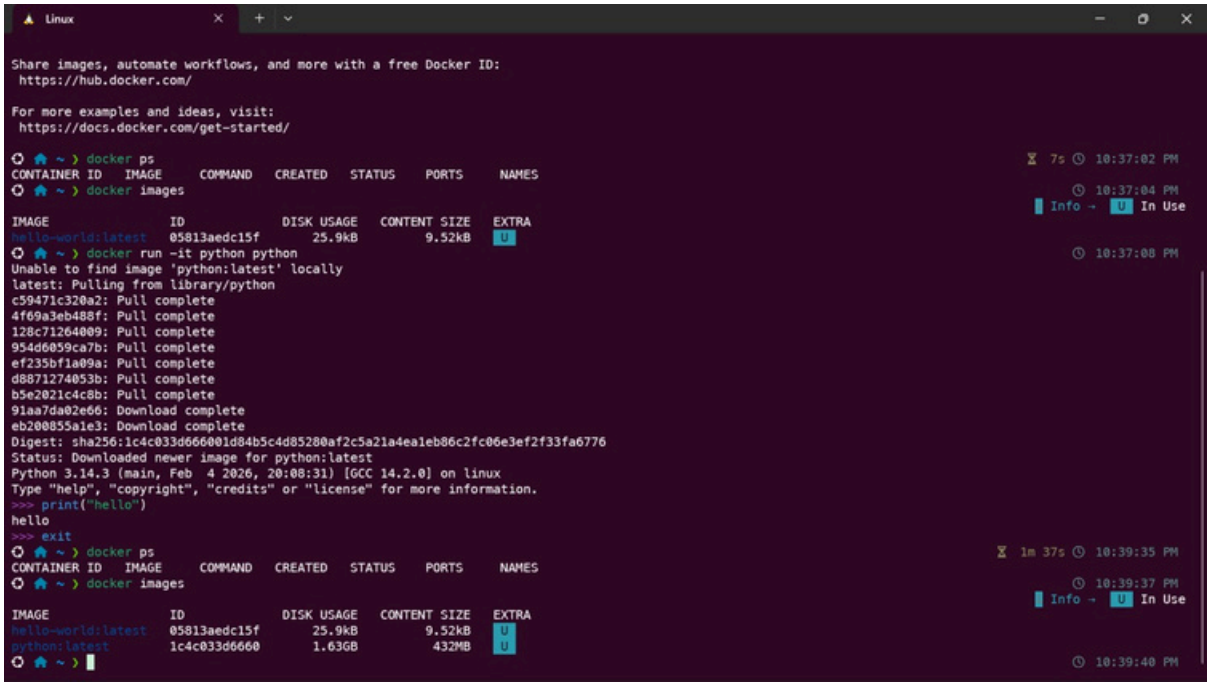
Step 5 – Run Python Container

A Python development container was launched.

docker run -it python:3.11-slim bash

python3

Python executed successfully inside the container.



Output

- Docker Engine installed successfully.
- Containers were created and executed without errors.
- Python environment functioned correctly inside Docker.

Result

Docker was successfully installed and configured in WSL. Multiple containers were created and managed, and a Python runtime environment was executed inside a Docker container, demonstrating effective containerization.