UNIVERSITY INSTITUTE of COMPUTING
Asia's Fastest Growing University

Experiment No. 1.1

Student Name: Parvinder Singh
UID: 22MCC20043
Branch: MCA - CCD
Section/Group: 22MCD-1/ Grp B
Semester: III
Subject Name: Containerization With Docker
Subject Code: 22CAH-742

1. Aim/Overview of the practical:

1. Install Docker on Linux or windows
2. Using docker CLI with commands.

2. Code for experiment/practical:

Specifications

- While choosing for windows 10 or 11 with 64 bit, it must be having higher level of translation
- 4GB RAM or Higher version but not less
- BIOS settings should have hardware virtualization support enabled.
- Hyper V feature, WSL 2 feature and Container feature should be enabled in windows.
- Windows supported by Microsoft need to be updated, if computers have older versions of windows.

Installing Docker on Windows:

- Go to the website https://docs.docker.com/docker-for-windows/install/ and download the docker file.
- Note: A 64-bit processor and 4GB system RAM are the hardware prerequisites required to successfully run Docker on Windows 10.
- Then, double-click on the Docker Desktop Installer.exe to run the installer.
- Note: Suppose the installer (Docker Desktop Installer.exe) is not downloaded; you can get it from Docker Hub and run it whenever required.
- Once you start the installation process, always enable Hyper-V Windows Feature on the Configuration page.
- Then, follow the installation process to allow the installer and wait till the process is done.
- After completion of the installation process, click Close and restart.

Start Docker Desktop Tool

- After the installation process is complete, the tool does not start automatically. To start the Docker tool, search for the tool, and select Docker Desktop in your desktop search results.

- Before starting the application, Docker offers an onboarding tutorial. The tutorial explains how to build a Docker image and run a container.
- You are now successfully running Docker Desktop on Windows.
- Next, follow the instruction below to install the Docker engine on your system.
- Go to Docker CLI and run the Docker version to verify the version of Docker installation on the system.
- Congratulations, Docker Installation on Windows is now done, and now, you are ready to build and run Docker images and containers on the Docker ecosystem.

```
PS C:\Users\Pinda> docker -v
Docker version 24.0.2, build cb74dfc
```

Using docker CLI with commands.

- docker ps: List all running containers.
- docker images: List all images.
- docker run: Run a container.
- docker stop: Stop a container.
- docker rm: Remove a container.
- docker build: Build an image.
- docker push: Push an image to a registry.
- docker pull: Pull an image from a registry.

3. Learning outcomes (What I have learned):

a) To install Docker on Windows.
b) To install Docker Desktop, WSL on windows.
c) Understand to use Docker with CLI.