

Experiment No. 3.1

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Branch: MCA–CCD
Semester: III
Subject Name: CONTAINERIZATION
WITH DOCKER

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1. Aim/Overview of the practical:

- a) Working with Docker Compose.

2. Code for practical: (a)

Step 1 : Compose is a tool for defining and running multi-container Docker applications.

Step 2 : If you want to run multi-container Docker applications with one command and simplify the process, we create a docker-compose file.

Step 3 : Go to that directory and create a file docker-compose.yml.

```
PS C:\Users\Pinda\Desktop\Docker> mkdir DockerComposeFile

Directory: C:\Users\Pinda\Desktop\Docker

Mode                LastWriteTime         Length Name
----                -
d-----          04-11-2023         15:58         DockerComposeFile
```

```
▼ DOCKERCOMPOSEFILE
  docker-compose.yml
  1 version: '3'
  2
  3 services:
  4   web:
  5     image: nginx
  6
  7     volumes:
  8       - ./templates:/etc/nginx/templates
  9
 10     ports:
 11       - "8080:80"
 12
 13   database:
 14     image: mysql
```

Step 4 : Check the validity of docker-compose file.

```
PS C:\Users\Pinda\Desktop\Docker\DockerComposeFile> docker-compose config
name: dockercomposefile
services:
  database:
    image: mysql
    networks:
      default: null
  web:
    image: nginx
    networks:
      default: null
    ports:
      - mode: ingress
        target: 80
        published: "9090"
        protocol: tcp
    volumes:
      - type: bind
        source: C:\Users\Pinda\Desktop\Docker\DockerComposeFile\templates
        target: /etc/nginx/templates
        bind:
          create_host_path: true
networks:
  default:
    name: dockercomposefile_default
```

Step 5 : Run docker-compose.yml file.

```
PS C:\Users\Pinda\Desktop\Docker\DockerComposeFile> docker-compose up -d
[+] Running 3/3
✓ Network dockercomposefile_default      Created          0.3s
✓ Container dockercomposefile-web-1      Started           3.3s
✓ Container dockercomposefile-database-1 Started           3.3s

PS C:\Users\Pinda\Desktop\Docker\DockerComposeFile> docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED          STATUS          PORTS                               NAMES
588a71f85df7   nginx     "/docker-entrypoint..." About a minute ago Up About a minute 0.0.0.0:9090->80/tcp                dockercomposefile-web-1
```

Step 6 : To stop docker-compose.

```
PS C:\Users\Pinda\Desktop\Docker\DockerComposeFile> docker-compose down
[+] Running 3/3
✓ Container dockercomposefile-web-1      Removed          0.6s
✓ Container dockercomposefile-database-1 Removed          0.0s
✓ Network dockercomposefile_default      Removed          0.2s
```