



# **Experiment No. 3.1**

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: Working with Docker Compose.

### 2. Code for experiment/practical:

Compose is a tool for defining and running multi-container Docker applications. With Compose, you use a YAML file to configure your application's services. Then, with a single command, you create and start all the services from your configuration.

Compose works in all environments; production, staging, development, testing, as well as CI workflows. It also has commands for managing the whole lifecycle of your application:

- Start, stop, and rebuild services
- View the status of running services
- Stream the log output of running services
- Run a one-off command on a service

#### **Working with Docker Compose:**

- Installation
- Create Docker Compose File
- Use Docker Compose file to create services

#### A. Installation

With Docker-Desktop installation, Docker-Compose is pre-installed

PS C:\Users\Pinda> docker-compose -v Docker Compose version v2.19.1

#### B. Create Docker Compose file

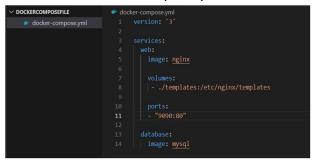
Create a directory at a specific location.







• Go to that directory and create a file docker-compose.yml.



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
         create_host_path: true
networks:
  default:
     name: dockercomposefile_default
```

#### C. Use Docker Compose File to create services

Run docker-compose.yml file.

```
PS C:\Users\Pinda\Desktop\Docker\DockerComposeFile> docker-compose up -d

√ Network dockercomposefile_default

√ Container dockercomposefile-web-1

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

To stop docker-compose

## 3. Learning outcomes (What I have learned):

- a) To understand the Docker Compose.
- b) To manage multiple containers using Docker Compose.
- c) To create services in Docker Compose.