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**UNIVERSITY OF PETROLEUM
& ENERGY STUDIES**

Dehradun

APPLICATION
CONTAINERIZATION

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Experiment-5
Docker Compose

Step-1: Install docker-compose.

```
rakshit@rakshit-virtual-machine:~$ docker-compose --version
docker-compose version 1.25.0, build unknown
rakshit@rakshit-virtual-machine:~$
```

Step-2: Use docker-compose version 3 to create docker-compose.yaml file.Create a service named "databases". Use image named "mysql" Map container 3306 port to host machine 3306 port. Add environment variables named "MYSQL_ROOT_PASSWORD", "MYSQL_DATABASE", "MYSQL_USER" and "MYSQL_PASSWORD" along with corresponding values for all.

```
1 MYSQL_ROOT_PASSWORD=123456
2 MYSQL_DATABASE=nginxdb
3 MYSQL_USER=root
4
```

Step-3: Add another service named "web". Use image "nginx"

```
1 version: '3'
2 services:
3   databases:
4     image: mysql
5     ports:
6       - "3307:3306"
7     env_file:
8       - ens.env
9   web:
10    image: nginx
11    ports:
12      - "80:80"
13    depends_on:
14      - databases
15
```

```
rakshit@rakshit-virtual-machine:~$ cd lab
rakshit@rakshit-virtual-machine:~/lab$ ls
rakshit@rakshit-virtual-machine:~/lab$ gedit ens.env
rakshit@rakshit-virtual-machine:~/lab$ gedit docker-compose.yml
rakshit@rakshit-virtual-machine:~/lab$ docker-compose up -d
ERROR: Couldn't find env file: /home/rakshit/lab/evs.env
rakshit@rakshit-virtual-machine:~/lab$ gedit docker-compose.yml
rakshit@rakshit-virtual-machine:~/lab$ docker-compose up -d
Creating network "lab_default" with the default driver
Pulling databases (mysql:)...
latest: Pulling from library/mysql
6f28985ad184: Extracting [==========================================>      ]  24.48MB/27.1MBDownload complete
6f28985ad184: Extracting [==========================================>   ]  25.66MB/27.1MB
ee91068b9313: Download complete
b4efa1a4f93b: Download complete
 384.2kB/1.419MBwnload complete
74a27d3460f8: Download complete
  13.1MB/13.45MBwnload complete
fbce32c99761: Download complete
08545fb3966f: Downloading [========================>               ]  55.12MB/113.1MB
08545fb3966f: Downloading [============================>           ]  68.53MB/113.1MB

ef8b369352ae: Download complete
ebd210f0917d: Download complete
    121B/121B
```

```
Creating network "lab_default" with the default driver
Pulling databases (mysql:)...
latest: Pulling from library/mysql
6f28985ad184: Extracting [==============================================>    ]  24.48MB/27.1MBBownload complete
6f28985ad184: Pull complete
e7cd18945cf6: Pull complete
ee91068b9313: Pull complete
b4efa1a4f93b: Pull complete
f220edfa5893: Pull complete
74a27d3460f8: Pull complete
2e11e23b7542: Pull complete
fbce32c99761: Pull complete
08545fb3966f: Pull complete
5b9c076841dc: Pull complete
ef8b369352ae: Pull complete
ebd210f0917d: Pull complete
Digest: sha256:5d1d733f32c28d47061e9d5c2b1fb49b4628c4432901632a70019ec950eda491
Status: Downloaded newer image for mysql:latest
Pulling web (nginx:)...
latest: Pulling from library/nginx
6f28985ad184: Already exists
29f7ebf60efd: Pull complete
879a7c160ac6: Pull complete
de58cd48a671: Pull complete
be704f37b5f4: Pull complete
158aac73782c: Pull complete
Digest: sha256:d2925188effb4ddca9f14f162d6fba9b5fab232028aa07ae5c1dab764dca8f9f
Status: Downloaded newer image for nginx:latest
Creating lab_databases_1 ...
```

```
rakshit@rakshit-virtual-machine:~/lab$ docker ps
CONTAINER ID   IMAGE    COMMAND              CREATED          STATUS          PORTS                  NAMES
56f391a5b23d   nginx    "/docker-entrypoint.…"   47 seconds ago   Up 44 seconds   0.0.0.0:80->80/tcp   lab_web_1
rakshit@rakshit-virtual-machine:~/lab$ docker ps -a
CONTAINER ID   IMAGE    COMMAND                  CREATED          STATUS                  PORTS                NAMES
56f391a5b23d   nginx    "/docker-entrypoint.…"   52 seconds ago   Up 49 seconds           0.0.0.0:80->80/tcp   lab_w
eb_1
5083ff03bb7f   mysql    "docker-entrypoint.s…"   58 seconds ago   Exited (1) 50 seconds ago                    lab_d
atabases_1
```