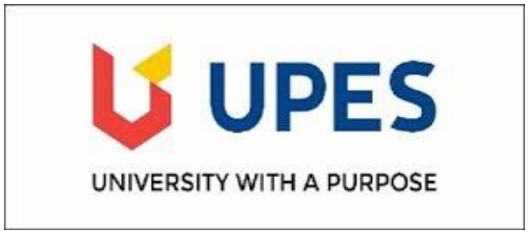

Lab Experiment – 5

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COURSE – B. Tech CSE- DevOps Batch 1

SUBJECT – Application Containerization

SEMESTER – 6th semester

Submitted To:

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To create Docker image using Docker compose

- Create a directory using mkdir command and create two files there:
  1. evs.env file where we will be storing all the environmental variable needed for running the docker compose file.
  2. docker-compose.yml file is the main file from which we will be running the docker containers, in this case, nginx image is used for server and mysql image for the database.

```
[root@localhost ~]# mkdir docker_compose
[root@localhost ~]# cd docker_compose/
[root@localhost docker_compose]# touch  evs.env
[root@localhost docker_compose]# touch docker-compose.yml
[root@localhost docker_compose]#
```

- The contents of the docker-compose.yml file is shown below, where we have given names to both the containers and specifications such as port number to expose and attach (host-port number) and environmental file which is being used. Note that we have used the keyword “depends_on” to tell the compose file to run the database container first and then web.

```
[root@localhost docker_compose]# cat docker-compose.yml
version: '3'

services:

  databases:

     image: mysql

     ports:

      - "3307:3306"

     env_file:

      - evs.env

  web:

     image: nginx

     ports:

      - "80:80"

     depends_on:

      - databases
```

- The contents of the evs.env file is shown below.

```
[root@localhost docker_compose]# cat evs.env
MYSQL_ROOT_PASSWORD=redhat

MYSQL_DATABASE=nginxdb

MYSQL_USER=root
```

- Using the command “docker-compose up -d” to run the docker-compose file.

```
[root@localhost docker_compose]# docker-compose up -d
Creating network "docker_compose_default" with the default driver
Pulling databases (mysql:)...
latest: Pulling from library/mysql
45b42c59be33: Pull complete
b4f790bd91da: Pull complete
325ae51788e9: Pull complete
adcb9439d751: Pull complete
174c7fe16c78: Pull complete
698058ef136c: Pull complete
4690143a669e: Pull complete
f7599a246fd6: Pull complete
35a55bf0c196: Pull complete
790ac54f4c47: Pull complete
18602acc97e1: Pull complete
365caa3500d0: Pull complete
Digest: sha256:b1cc887ed32cc6c2f217b12703bd05f503f2037892c8bb226047fe5dff85a109
Status: Downloaded newer image for mysql:latest
Pulling web (nginx:)...
latest: Pulling from library/nginx
45b42c59be33: Already exists
8acc495f1d91: Pull complete
ec3bd7de90d7: Pull complete
19e2441aeeab: Pull complete
f5a38c5f8d4e: Pull complete
83500d851118: Pull complete
Digest: sha256:f3693fe50d5b1df1ecd315d54813a77afd56b0245a404055a946574deb6b34fc
Status: Downloaded newer image for nginx:latest
Creating docker_compose_databases_1 ... done
Creating docker_compose_web_1       ...
Creating docker_compose_web_1       ... error
```

```
[root@localhost docker_compose]# docker-compose up -d
Creating docker_compose_databases_1 ... done
Creating docker_compose_web_1       ... done
```

- Use the “docker ps” command to check whether the container is running or not.

```
[root@localhost docker_compose]# docker ps
CONTAINER ID        IMAGE               COMMAND                  CREATED             STATUS              PORTS                               NAMES
c6897940aaae        nginx               "/docker-entrypoint.…"   About a minute ago   Up About a minute   0.0.0.0:8085->80/tcp                docker_compose_web_1
fd6f5ff80bb1        mysql               "docker-entrypoint.s…"   About a minute ago   Up About a minute   33060/tcp, 0.0.0.0:3307->3306/tcp   docker_compose_databases_1
5bdcc404e58a        joomla              "/entrypoint.sh apac…"   9 months ago        Up About an hour    0.0.0.0:8081->80/tcp                compose-ws_joomla_1
7dd33ad391c8        mysql:5.7           "docker-entrypoint.s…"   9 months ago        Up About an hour    3306/tcp, 33060/tcp                 compose-ws_webos_1
```