

EXPERIMENT 5

Aim- 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:blcc887ed32cc6c2f217b12703bd05f503f2037892c8bb226047fe5dff85a109
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.s..."	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