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EXPERIMENT 6

AIM: Working with Docker Compose File to Control Multiple Containers

Creating compose files

- Create a directory named nginx in your root.
  Command: mkdir nginx

- Switch to that directory and create a file named docker-compose.yaml

Command: cd nginx
Command: vi docker-compose.yml

```
C:\Users\anmol>mkdir nginx

C:\Users\anmol>cd nginx
```

```
C:\Users\anmol\nginx>dir
 Volume in drive C is Windows
 Volume Serial Number is 2E31-173E

 Directory of C:\Users\anmol\nginx

21-09-2022  11:33    <DIR>          .
21-09-2022  11:10    <DIR>          ..
21-09-2022  11:32               174 docker-compose.yml
21-09-2022  11:34                69 evs.env
               2 File(s)            243 bytes
               2 Dir(s)  332,387,037,184 bytes free
```

docker-compose.yml

C: > Users > anmol > nginx > docker-compose.yml

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

- Use docker-compose version 2 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.

  Create a file : evs.env

```
MYSQL_ROOT_PASSWORD=redhat08
MYSQL_DATABASE=nginxdb
MYSQL_USER=root
```

Running images using docker-compose

- Save docker-compose.yaml file and do docker-compose up.

  Command : docker-compose up -d

```
C:\Users\anmol\nginx>docker-compose up -d
Creating network "nginx_default" with the default driver
Pulling databases (mysql:)...
latest: Pulling from library/mysql
051f419db9dd: Pull complete
7627573fa82a: Pull complete
a44b358d7796: Pull complete
95753aff4b95: Pull complete
a1fa3bee53f4: Pull complete
f5227e0d612c: Pull complete
b4b4368b1983: Pull complete
f26212810c32: Pull complete
d803d4215f95: Pull complete
d5358a7f7d07: Pull complete
435e8908cd69: Pull complete
Digest: sha256:b9532b1edea72b6cee12d9f5a78547bd3812ea5db842566e17f8b33291ed2921
Status: Downloaded newer image for mysql:latest
Pulling web (nginx:)...
latest: Pulling from library/nginx
31b3f1ad4ce1: Pull complete
fd42b079d0f8: Pull complete
30585fbbebc6: Pull complete
18f4ffdd25f4: Pull complete
9dc932c8fba2: Pull complete
600c24b8ba39: Pull complete
Digest: sha256:0b970013351304af46f322da1263516b188318682b2ab1091862497591189ff1
Status: Downloaded newer image for nginx:latest
Creating nginx_databases_1 ... done
Creating nginx_web_1       ... done
```

- Verify nginx service is up and is accessible on machine.

  Command: curl localhost:80

```
C:\Users\anmol\nginx>curl localhost:80
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
html { color-scheme: light dark; }
body { width: 35em; margin: 0 auto;
font-family: Tahoma, Verdana, Arial, sans-serif; }
</style>
</head>
<body>
<h1>Welcome to nginx!</h1>
<p>If you see this page, the nginx web server is successfully installed and
working. Further configuration is required.</p>

<p>For online documentation and support please refer to
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<a href="http://nginx.com/">nginx.com</a>.</p>

<p><em>Thank you for using nginx.</em></p>
</body>
</html>

C:\Users\anmol\nginx>
```

Stop and remove your docker container using docker-compose.

Command : docker-compose down

```
C:\Users\anmol\nginx>docker-compose down
Stopping nginx_web_1 ... done
Removing nginx_web_1       ... done
Removing nginx_databases_1 ... done
Removing network nginx_default

C:\Users\anmol\nginx>
```