ASSIGNMENT 4.1

on

Microservices

Submitted by:

Haseebullah Shaikh (2303.KHI.DEG.015)

and

Faiza Gulzar Ahmed (2303.khi.deg.001)

Dated: 5th May 2023

Task 01: Browse to:

tasks/4_microservices_development/day_1_microservices/docker_composeexample

docker-compose.yml ✕

docker_compose_example > 🐳 docker-compose.yml

```yaml
1  services:
2    db:
3      image: mariadb:10.6.4-focal
4      command: '--default-authentication-plugin=mysql_native_password'
5      volumes:
6        - db_data:/var/lib/mysql
7      restart: always
8      environment:
9        - MYSQL_ROOT_PASSWORD=somewordpress
10       - MYSQL_DATABASE=wordpress
11       - MYSQL_USER=wordpress
12       - MYSQL_PASSWORD=wordpress
13     expose:
14       - 3306
15   wordpress:
16     image: wordpress:latest
17     volumes:
18       - wp_data:/var/www/html
19     ports:
20       - 81:80
21     restart: always
22     environment:
23       - WORDPRESS_DB_HOST=db
24       - WORDPRESS_DB_USER=wordpress
25       - WORDPRESS_DB_PASSWORD=wordpress
26       - WORDPRESS_DB_NAME=wordpress
27   phpmyadmin:
28     image: phpmyadmin
29     restart: always
30     ports:
31       - 8080:80
32     environment:
33       - MYSQL_ROOT_PASSWORD=somewordpress
34       - MYSQL_USER=wordpress
35       - MYSQL_PASSWORD=wordpress
36 volumes:
37   db_data:
38   wp_data:
```

Next you will:

- Start the system using docker-compose so that it runs in background,

```
faizakiyani@all-MS-7D35:~/Downloads/day_1_microservices$ cd docker_compose_example/
faizakiyani@all-MS-7D35:~/Downloads/day_1_microservices/docker_compose_example$ sudo docker compose up -d
[sudo] password for faizakiyani:
[+] Running 3/0
 ⠿ Container docker_compose_example-db-1          Running
 ⠿ Container docker_compose_example-wordpress-1   Running
 ⠿ Container docker_compose_example-phpmyadmin-1  Running
faizakiyani@all-MS-7D35:~/Downloads/day_1_microservices/docker_compose_example$ █
```

- Visit http://127.0.0.1/ to see WordPress installation panel,

- See the system logs

```
faizakiyani@all-MS-7D35:~/Downloads/day_1_microservices/docker_compose_example$ sudo docker compose logs
docker_compose_example-db-1       | 2023-05-04 09:22:26+00:00 [Note] [Entrypoint]: Entrypoint script for MariaDB Server 1:10.6.4+maria~focal s
tarted.
docker_compose_example-db-1       | 2023-05-04 09:22:27+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
docker_compose_example-db-1       | 2023-05-04 09:22:27+00:00 [Note] [Entrypoint]: Entrypoint script for MariaDB Server 1:10.6.4+maria~focal s
tarted.
docker_compose_example-phpmyadmin-1  | AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172
.18.0.3. Set the 'ServerName' directive globally to suppress this message
docker_compose_example-phpmyadmin-1  | AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172
.18.0.3. Set the 'ServerName' directive globally to suppress this message
docker_compose_example-db-1       | 2023-05-04  9:22:27 0 [Note] mysqld (server 10.6.4-MariaDB-1:10.6.4+maria~focal) starting as proce
ss 1 ...
docker_compose_example-phpmyadmin-1  | [Thu May 04 12:04:27.567902 2023] [mpm_prefork:notice] [pid 1] AH00163: Apache/2.4.56 (Debian) PHP
/8.1.18 configured -- resuming normal operations
docker_compose_example-db-1       | 2023-05-04  9:22:27 0 [Note] InnoDB: Compressed tables use zlib 1.2.11
docker_compose_example-db-1       | 2023-05-04  9:22:27 0 [Note] InnoDB: Number of pools: 1
```

```
docker_compose_example-phpmyadmin-1  | [Thu May 04 12:04:27.567902 2023] [mpm_prefork:notice] [pid 1] AH00163: Apache/2.4.56 (Debian) PHP
/8.1.18 configured -- resuming normal operations
docker_compose_example-db-1       | 2023-05-04  9:22:27 0 [Note] InnoDB: Compressed tables use zlib 1.2.11
docker_compose_example-db-1       | 2023-05-04  9:22:27 0 [Note] InnoDB: Number of pools: 1
docker_compose_example-phpmyadmin-1  | [Thu May 04 12:04:27.567945 2023] [core:notice] [pid 1] AH00094: Command line: 'apache2 -D FOREGRO
UND'
docker_compose_example-phpmyadmin-1  | [Thu May 04 12:04:29.518957 2023] [mpm_prefork:notice] [pid 1] AH00170: caught SIGWINCH, shutting
down gracefully
docker_compose_example-db-1       | 2023-05-04  9:22:27 0 [Note] InnoDB: Using crc32 + pclmulqdq instructions
docker_compose_example-db-1       | 2023-05-04  9:22:27 0 [Note] mysqld: O_TMPFILE is not supported on /tmp (disabling future attempts
)
docker_compose_example-phpmyadmin-1  | AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172
.18.0.4. Set the 'ServerName' directive globally to suppress this message
docker_compose_example-phpmyadmin-1  | AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172
.18.0.4. Set the 'ServerName' directive globally to suppress this message
docker_compose_example-phpmyadmin-1  | [Thu May 04 12:04:34.252504 2023] [mpm_prefork:notice] [pid 1] AH00163: Apache/2.4.56 (Debian) PHP
```

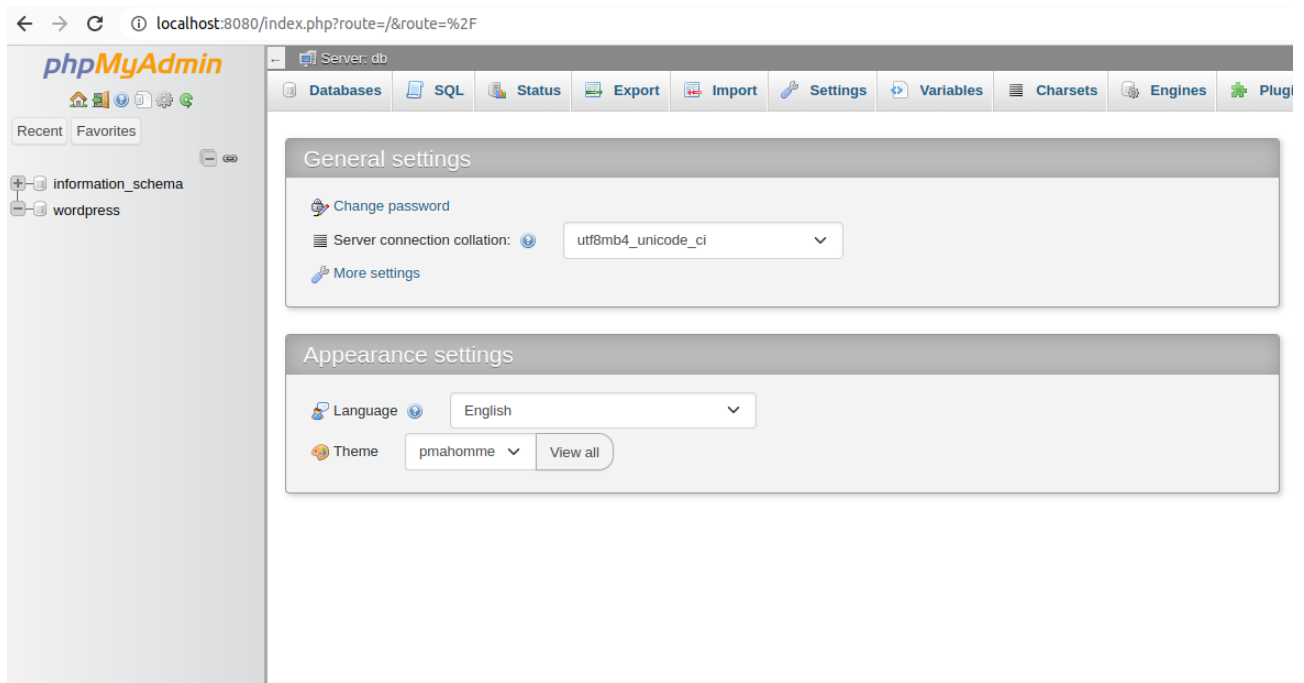Additional logs are written in file named composed logs.

- Add a PHPMyAdmin service from

https://hub.docker.com/r/phpmyadmin/phpmyadmin/ so that you can manage the raw database contents.

```
  phpmyadmin:
    image: phpmyadmin
    restart: always
    ports:
      - 8080:80
    environment:
      - MYSQL_ROOT_PASSWORD=somewordpress
      - MYSQL_USER=wordpress
      - MYSQL_PASSWORD=wordpress
  volumes:
```

Verifying services are accessed on ports

PhpMyAdmin

Wordpress