

4.1 Assignment Docker Compose

Peer Members:

- Syed Muhammad Raqim Ali Shah (2303.KHI.DEG.008)
- Maaz Javaid Siddique (2303.KHI.DEG.004)

Question:

Browse to:

tasks/4_microservices_development/day_1_microservices/docker_compose_example

Next you will:

- Start the system using docker-compose so that it runs in background,
- Visit <http://127.0.0.1/> to see WordPress installation panel,
- See the system logs
- Add a PHPMyAdmin service from <https://hub.docker.com/r/phpmyadmin/phpmyadmin/> so that you can manage the raw database contents.

Solution:

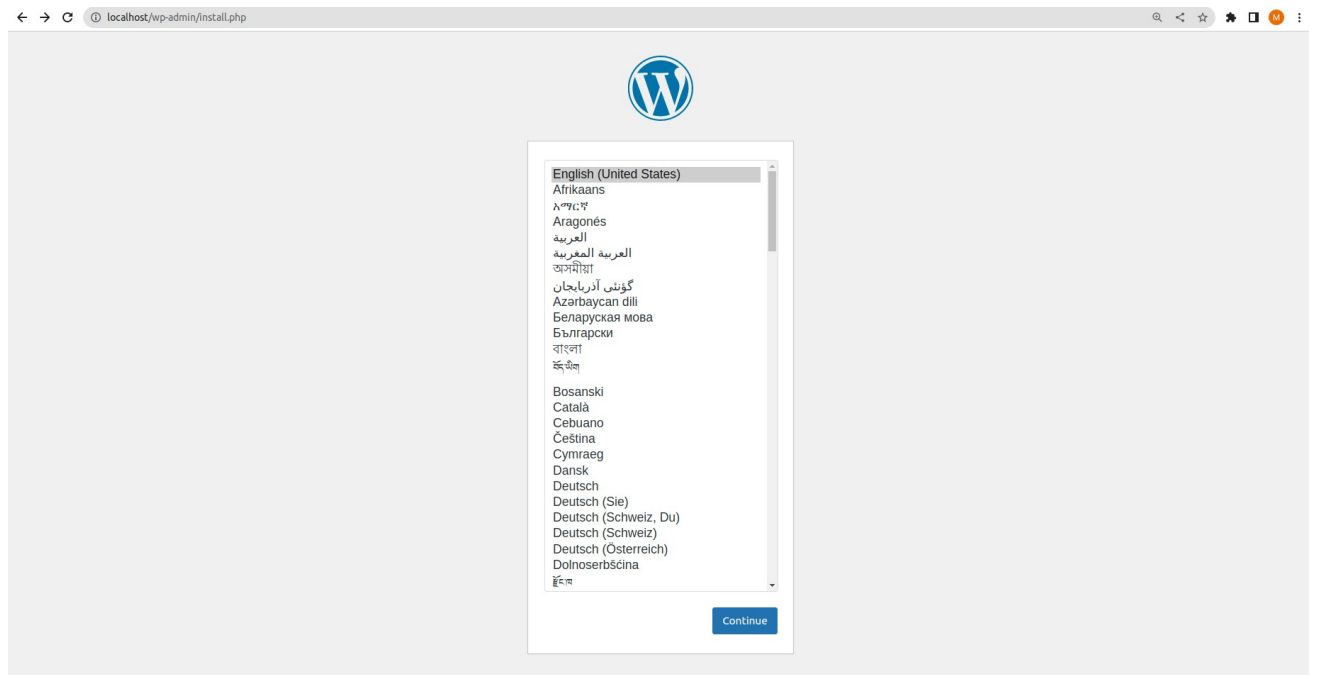
First we created a docker compose file. In this compose file we use three images mariadb, wordpress and phpmyadmin.

```
File Edit Selection View Go Run Terminal Help
Welcome docker-compose.yml X
docker-compose.yml
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       - 80:80
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/phpmyadmin
29     environment:
30       - PMA_HOST= db
31       - MYSQL_USER= wordpress
32       - MYSQL_PASSWORD= wordpress
33     restart: always
34     ports:
35       - 8080:80
36
37 volumes:
38   db_data:
39   wp_data:
```

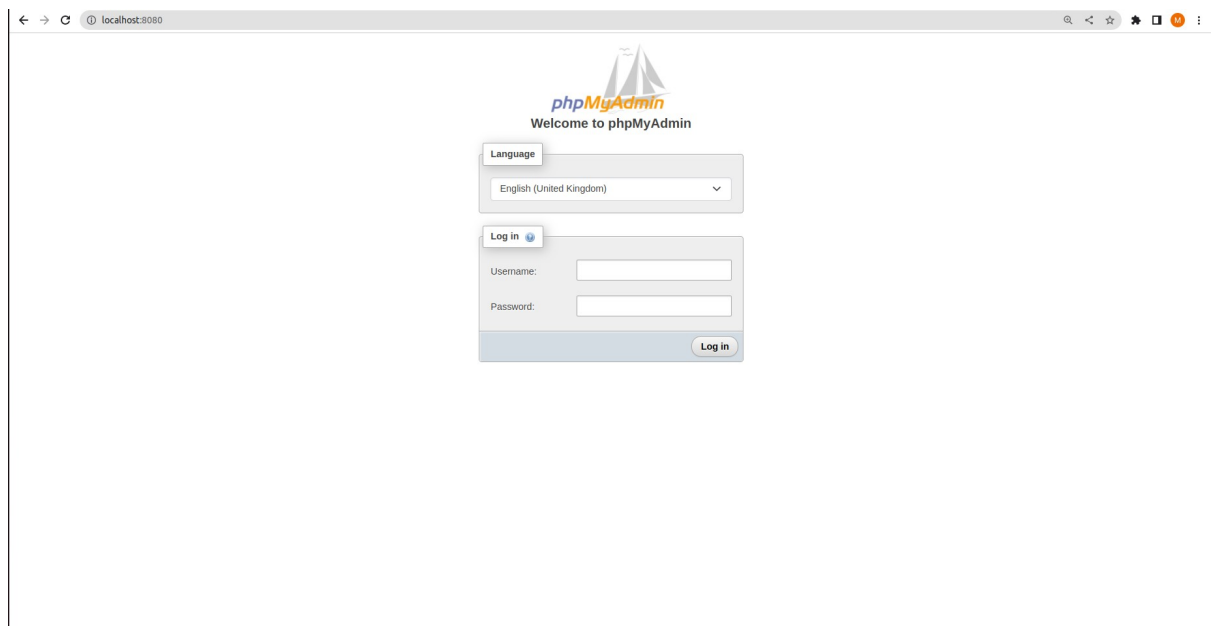
By using the “docker compose up -d” command we run a docker compose file in the background.

```
(base) maazjavasiddique@all-MS-7D35:~/Desktop/docker-compose$ docker compose up -d
[+] Running 3/3
✔ Container docker-compose-phpmyadmin-1 Started 0.7s
✔ Container docker-compose-wordpress-1 Started 0.6s
✔ Container docker-compose-db-1 Started 0.6s
```

By the “localhost:80” we can access the wordpress starting panel.



By the “localhost:8080” can access phpmyadmin login panel




Welcome to phpMyAdmin

Language

English (United Kingdom) ▼

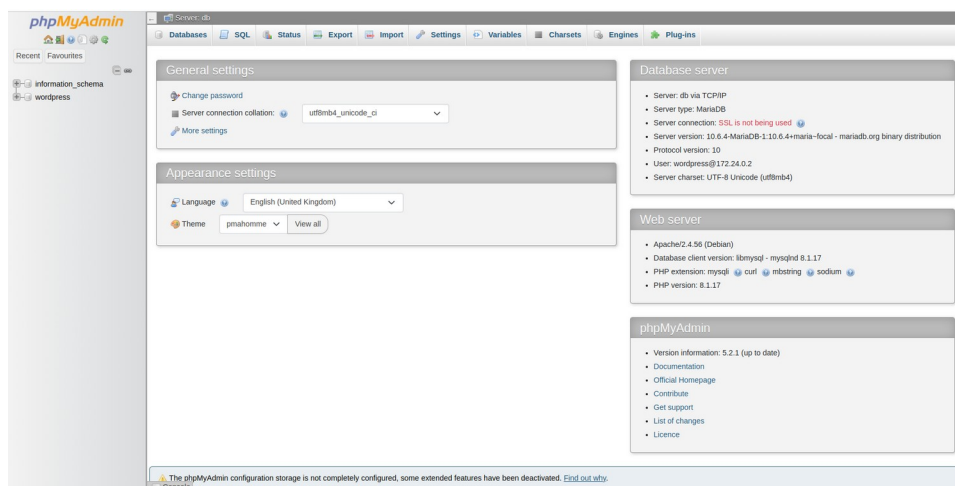
Log in

Username:

Password:

Log in

After passing the credentials we will to the below picture panel.

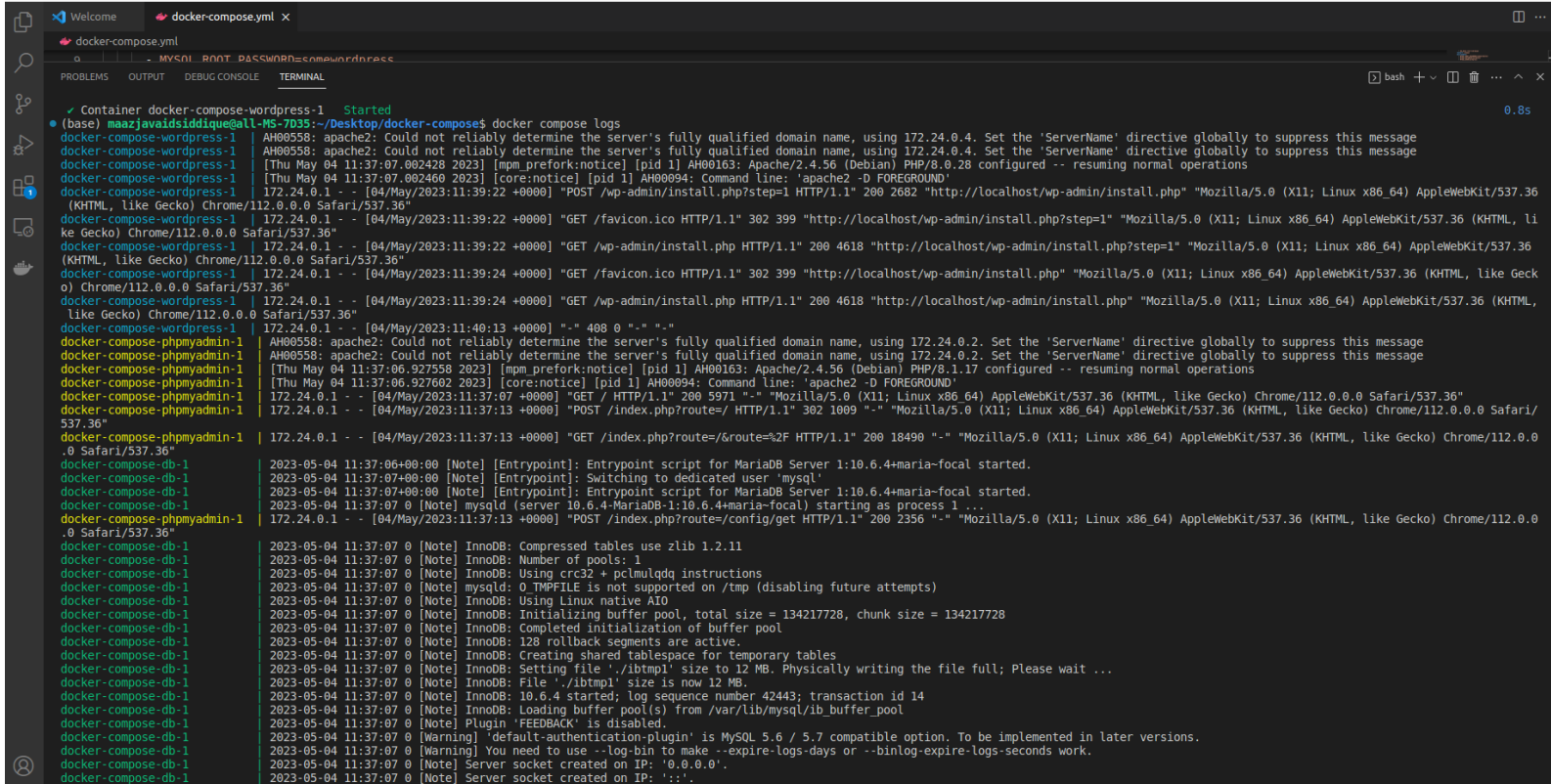


The screenshot shows the phpMyAdmin main interface. On the left is a sidebar with 'Recent' and 'Favourites' sections. The 'Recent' section lists 'information_schema' and 'wordpress'. The 'Favourites' section is empty. The main content area is divided into several panels. The 'General settings' panel includes a 'Change password' link, a 'Server connection collation' dropdown set to 'utf8mb4_unicode_ci', and a 'More settings' link. The 'Appearance settings' panel includes a 'Language' dropdown set to 'English (United Kingdom)' and a 'Theme' dropdown set to 'prnathomme', with a 'View all' link. The 'Database server' panel lists server details: 'Server: db via TCP/IP', 'Server type: MariaDB', 'Server connection: SSL is not being used', 'Server version: 10.6.4-MariaDB-1:10.6.4+maria-foocal - mariadb.org binary distribution', 'Protocol version: 10', 'User: wordpress@172.24.0.2', and 'Server charset: UTF-8 Unicode (utf8mb4)'. The 'Web server' panel lists: 'Apache/2.4.56 (Debian)', 'Database client version: libmysql - mysqlnd 8.1.17', 'PHP extension: mysql, curl, mbstring, sodium', and 'PHP version: 8.1.17'. The 'phpMyAdmin' panel lists: 'Version information: 5.2.1 (up to date)', 'Documentation', 'Official Homepage', 'Contribute', 'Get support', 'List of changes', and 'Licence'. At the bottom, a message states: 'The phpMyAdmin configuration storage is not completely configured, some extended features have been deactivated. Find out why.' Below this is a link to 'Configure phpMyAdmin'.

By using “docker compose logs” command, we found the logs

Here the logs of docker compose

File Edit Selection View Go Run Terminal Help



```
(base) maazjavidisiddique@all-MS-7035:~/Desktop/docker$ docker compose logs
docker-compose-wordpress-1 | AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.24.0.4. Set the 'ServerName' directive globally to suppress this message
docker-compose-wordpress-1 | AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.24.0.4. Set the 'ServerName' directive globally to suppress this message
docker-compose-wordpress-1 | [Thu May 04 11:37:07.002428 2023] [mpm_prefork:notice] [pid 1] AH00163: Apache/2.4.56 (Debian) PHP/8.0.28 configured -- resuming normal operations
docker-compose-wordpress-1 | [Thu May 04 11:37:07.002460 2023] [core:notice] [pid 1] AH00094: Command line: 'apache2 -D FOREGROUND'
docker-compose-wordpress-1 | 172.24.0.1 - - [04/May/2023:11:39:22 +0000] "POST /wp-admin/install.php?step=1 HTTP/1.1" 200 2682 "http://localhost/wp-admin/install.php" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/112.0.0.0 Safari/537.36"
docker-compose-wordpress-1 | 172.24.0.1 - - [04/May/2023:11:39:22 +0000] "GET /favicon.ico HTTP/1.1" 302 399 "http://localhost/wp-admin/install.php?step=1" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/112.0.0.0 Safari/537.36"
docker-compose-wordpress-1 | 172.24.0.1 - - [04/May/2023:11:39:22 +0000] "GET /wp-admin/install.php HTTP/1.1" 200 4618 "http://localhost/wp-admin/install.php?step=1" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/112.0.0.0 Safari/537.36"
docker-compose-wordpress-1 | 172.24.0.1 - - [04/May/2023:11:39:24 +0000] "GET /favicon.ico HTTP/1.1" 302 399 "http://localhost/wp-admin/install.php" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/112.0.0.0 Safari/537.36"
docker-compose-wordpress-1 | 172.24.0.1 - - [04/May/2023:11:39:24 +0000] "GET /wp-admin/install.php HTTP/1.1" 200 4618 "http://localhost/wp-admin/install.php" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/112.0.0.0 Safari/537.36"
docker-compose-wordpress-1 | 172.24.0.1 - - [04/May/2023:11:40:13 +0000] "-" 408 0 "-" "-"
docker-compose-phpmyadmin-1 | AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.24.0.2. Set the 'ServerName' directive globally to suppress this message
docker-compose-phpmyadmin-1 | AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.24.0.2. Set the 'ServerName' directive globally to suppress this message
docker-compose-phpmyadmin-1 | [Thu May 04 11:37:06.927558 2023] [mpm_prefork:notice] [pid 1] AH00163: Apache/2.4.56 (Debian) PHP/8.1.17 configured -- resuming normal operations
docker-compose-phpmyadmin-1 | [Thu May 04 11:37:06.927602 2023] [core:notice] [pid 1] AH00094: Command line: 'apache2 -D FOREGROUND'
docker-compose-phpmyadmin-1 | 172.24.0.1 - - [04/May/2023:11:37:07 +0000] "GET / HTTP/1.1" 200 5971 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/112.0.0.0 Safari/537.36"
docker-compose-phpmyadmin-1 | 172.24.0.1 - - [04/May/2023:11:37:13 +0000] "POST /index.php?route=/ HTTP/1.1" 302 1009 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/112.0.0.0 Safari/537.36"
docker-compose-phpmyadmin-1 | 172.24.0.1 - - [04/May/2023:11:37:13 +0000] "GET /index.php?route=/&route=%2F HTTP/1.1" 200 18490 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/112.0.0.0 Safari/537.36"
docker-compose-db-1 | 2023-05-04 11:37:06+00:00 [Note] [Entrypoint]: Entrypoint script for MariaDB Server 1:10.6.4+maria-focal started.
docker-compose-db-1 | 2023-05-04 11:37:07+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
docker-compose-db-1 | 2023-05-04 11:37:07+00:00 [Note] [Entrypoint]: Entrypoint script for MariaDB Server 1:10.6.4+maria-focal started.
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Note] mysqld (server 10.6.4-MariaDB-1:10.6.4+maria-focal) starting as process 1 ...
docker-compose-phpmyadmin-1 | 172.24.0.1 - - [04/May/2023:11:37:13 +0000] "POST /index.php?route=/config/get HTTP/1.1" 200 2356 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/112.0.0.0 Safari/537.36"
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Note] InnoDB: Compressed tables use zlib 1.2.11
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Note] InnoDB: Number of pools: 1
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Note] InnoDB: Using crc32 + pclmulqdq instructions
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Note] mysqld: 0 TMPFILE is not supported on /tmp (disabling future attempts)
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Note] InnoDB: Using Linux native AIO
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Note] InnoDB: Initializing buffer pool, total size = 134217728, chunk size = 134217728
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Note] InnoDB: Completed initialization of buffer pool
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Note] InnoDB: 128 rollback segments are active.
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Note] InnoDB: Creating shared tablespace for temporary tables
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Note] InnoDB: Setting file './ibtmp1' size to 12 MB. Physically writing the file full; Please wait ...
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Note] InnoDB: File './ibtmp1' size is now 12 MB.
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Note] InnoDB: 10.6.4 started; log sequence number 42443; transaction id 14
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Note] InnoDB: Loading buffer pool(s) from /var/lib/mysql/ib_buffer_pool
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Note] Plugin 'FEEDBACK' is disabled.
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Warning] 'default-authentication-plugin' is MySQL 5.6 / 5.7 compatible option. To be implemented in later versions.
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Warning] You need to use --log-bin to make --expire-logs-days or --binlog-expire-logs-seconds work.
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Note] Server socket created on IP: '0.0.0.0'.
docker-compose-db-1 | 2023-05-04 11:37:07 0 [Note] Server socket created on IP: '::'.
```