

## Unit 4.1 Graded Assignment

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### **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=saad_and_hamza
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:3306
24       - WORDPRESS_DB_USER=wordpress
25       - WORDPRESS_DB_PASSWORD=wordpress
26       - WORDPRESS_DB_NAME=wordpress
27   phpmyadmin:
28     image: phpmyadmin/phpmyadmin:latest
29     restart: always
30     ports:
31       - 8008:80
32     environment:
33       - PMA_ARBITRARY=1
34       - MYSQL_ROOT_PASSWORD=saad_and_hamza
35
36 volumes:
37   db_data:
38   wp_data:
```

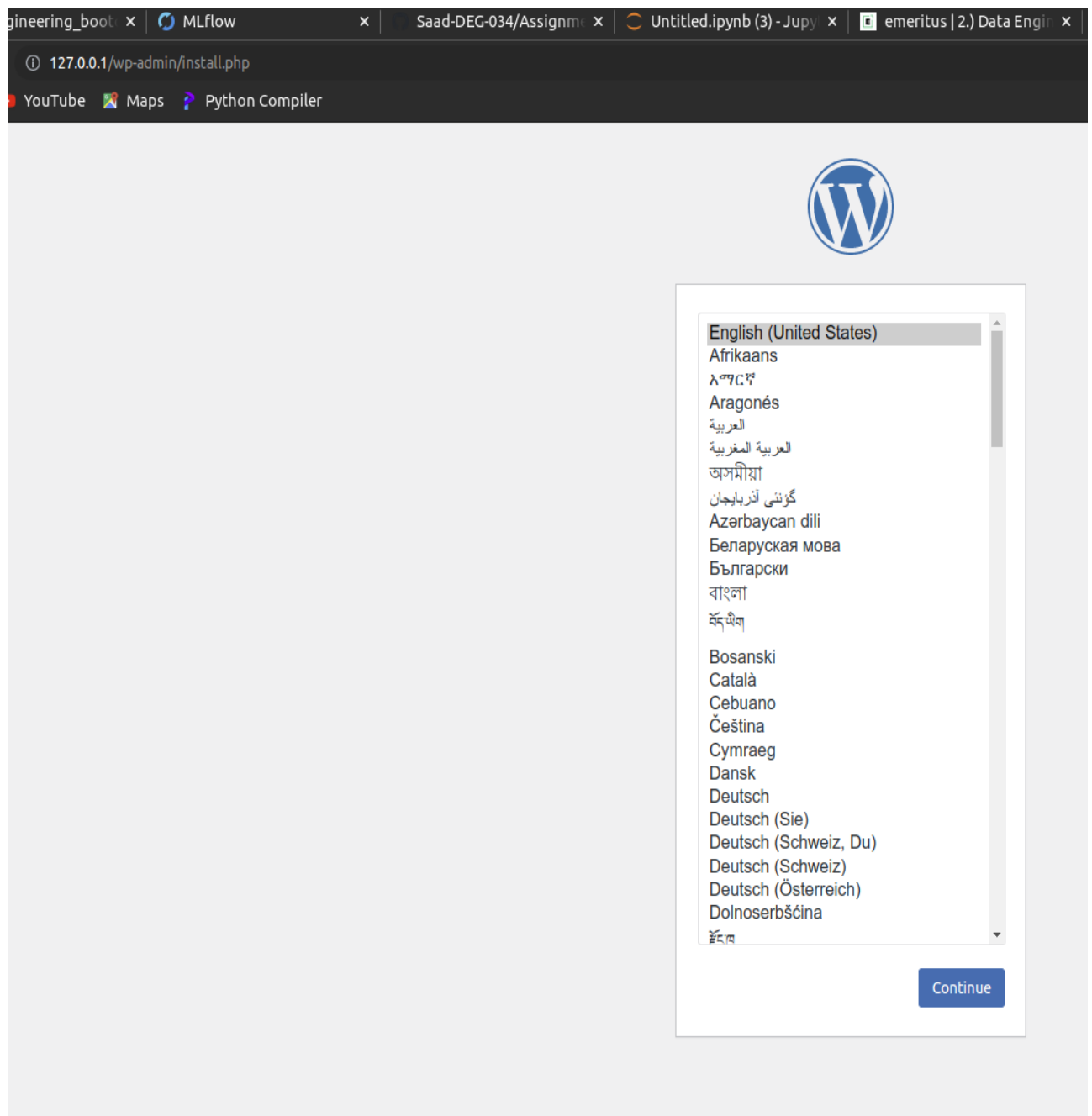
Above, we have defined 3 services; mariaDB, wordpress, and phpadmin.

## ***MariaDB***

- MariaDB holds the database that contains user information such as email and password.
- In the environment variables we have set MYSQL\_DATABASE, MYSQL\_USER, MYSQL\_PASSWORD, which specify the name of the database, the user-name and password that wordpress will use for accessing and adding to the database.
- MYSQL\_ROOT\_PASSWORD specifies the password that phpadmin can use to have root access to the database.
- To allow Wordpress and phpadmin to communicate with MariaDB, we have exposed its port at **3306**.

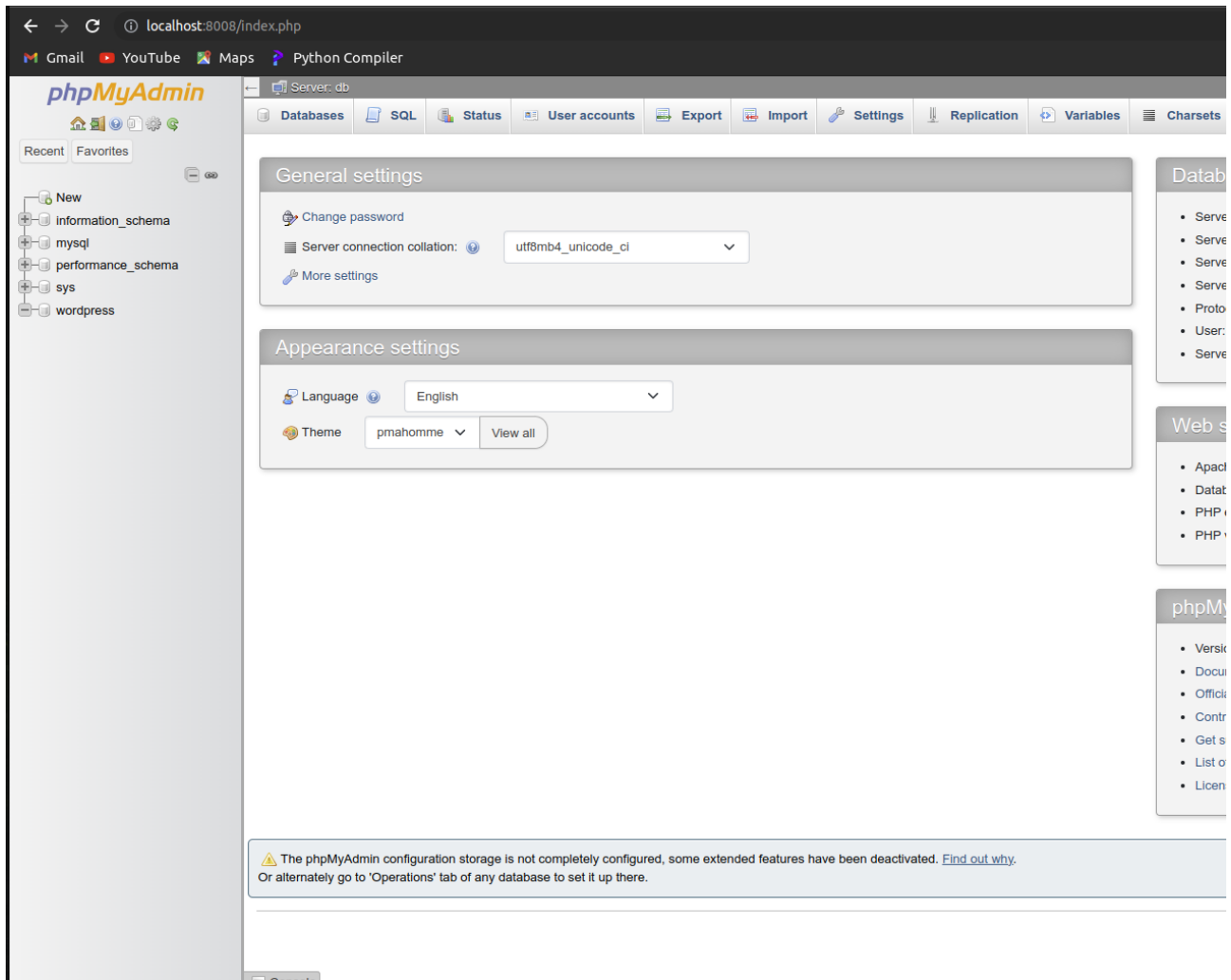
## Wordpress

- Wordpress communicates with mariaDB when it wants to log in users and wants to access the user info database in mariaDB. Also when it creates new users, which will be stored in the database at mariaDB.
- We provide it the same variables with the same values as we did in mariaDB, to allow it access to the database.
- To view the UI of wordpress we have bound it to port **80** of our host machine to allow access at <http://127.0.0.1/>.



## phpadmin

- Phpadmin can alter the user database created in mariaDB.
- To give it root access to mariaDB, we provide it the root password we defined in mariaDB service.
- To access its UI, we bind it to port **8008** of our host machine.



## Docker-compose Logs:

Viewing the logs being created by docker-compose

```
saadsameerkhan@all-MS-7035:~/Documents/Assignments/Unit 4.1$ docker-compose logs
Attaching to unit41_phpmyadmin_1, unit41_wordpress_1, unit41_db_1
phpmyadmin_1 | AH00558: apache2: Could not reliably determine the server's fully qualified
phpmyadmin_1 | AH00558: apache2: Could not reliably determine the server's fully qualified
phpmyadmin_1 | [Fri May 05 03:13:28.221671 2023] [mpm_prefork:notice] [pid 1] AH00163: Apa
phpmyadmin_1 | [Fri May 05 03:13:28.221691 2023] [core:notice] [pid 1] AH00094: Command li
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET / HTTP/1.1" 200 6195 "-" "
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET /themes/pmahomme/jquery/jq
e/112.0.0.0 Safari/537.36"
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET /js/vendor/codemirror/addo
ike Gecko) Chrome/112.0.0.0 Safari/537.36"
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET /js/vendor/codemirror/addo
Gecko) Chrome/112.0.0.0 Safari/537.36"
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET /js/vendor/jquery/jquery-m
cko) Chrome/112.0.0.0 Safari/537.36"
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET /js/vendor/codemirror/lib/
ecko) Chrome/112.0.0.0 Safari/537.36"
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET /js/vendor/jquery/jquery.m
rome/112.0.0.0 Safari/537.36"
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET /js/dist/keyhandler.js?v=5
.0.0 Safari/537.36"
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET /js/vendor/sprintf.js?v=5.
0.0 Safari/537.36"
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET /js/dist/ajax.js?v=5.2.1 H
afari/537.36"
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET /js/dist/name-conflict-fix
me/112.0.0.0 Safari/537.36"
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET /js/vendor/js.cookie.js?v=
0.0.0 Safari/537.36"
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET /themes/pmahomme/css/theme
ome/112.0.0.0 Safari/537.36"
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET /js/vendor/jquery/jquery.d
Gecko) Chrome/112.0.0.0 Safari/537.36"
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET /js/vendor/bootstrap/boots
ike Gecko) Chrome/112.0.0.0 Safari/537.36"
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET /js/vendor/jquery/jquery.v
ecko) Chrome/112.0.0.0 Safari/537.36"
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET /js/dist/menu_resizer.js?v
.0.0.0 Safari/537.36"
phpmyadmin_1 | 172.18.0.1 - - [05/May/2023:03:14:00 +0000] "GET /js/dist/cross_framing_pro
Chrome/112.0.0.0 Safari/537.36"
```