Lab Exercise 6- Docker-Compose file

Objective:

Set up a WordPress environment using Docker Compose, including a MySQL database as the backend.

Prerequisites:

- Docker and Docker Compose installed on your system.

Step 1: Create a docker-compose.yml File

1. In the project directory, create a file named docker-compose.yml.

2. Add the following content to docker-compose.yml:

```
devanksilswal@devanks-MacBook-Air ~ % mkdir wordpress-compose
cd wordpress-compose

devanksilswal@devanks-MacBook-Air wordpress-compose % pwd

/Users/devanksilswal/wordpress-compose
devanksilswal@devanks-MacBook-Air wordpress-compose % touch docker-compose.yml
```
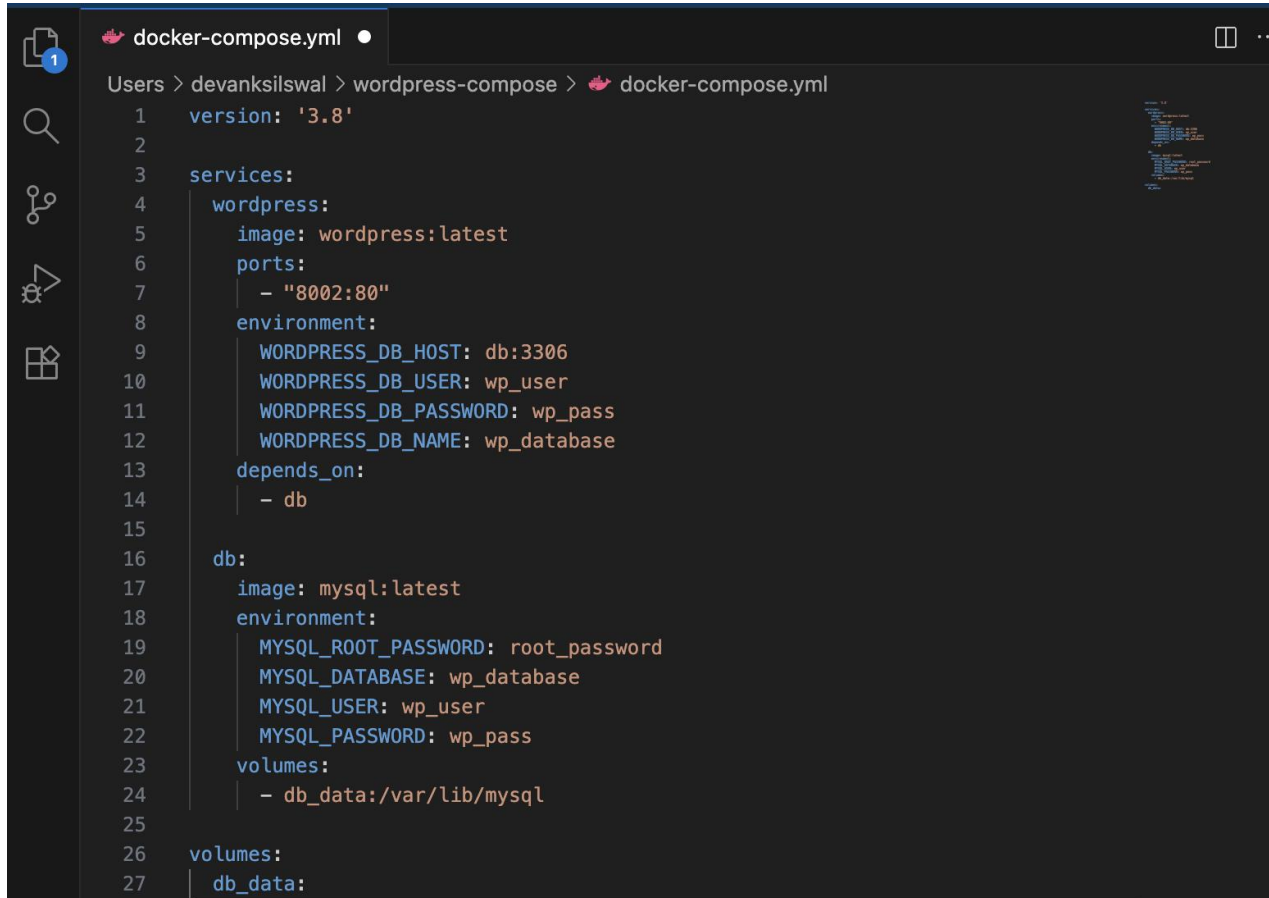
docker-compose.yml

```yaml
version: '3.8'

services:
  wordpress:
    image: wordpress:latest
    ports:
      - "8002:80"
    environment:
      WORDPRESS_DB_HOST: db:3306
      WORDPRESS_DB_USER: wp_user
      WORDPRESS_DB_PASSWORD: wp_pass
      WORDPRESS_DB_NAME: wp_database
    depends_on:
      - db

  db:
    image: mysql:latest
    environment:
      MYSQL_ROOT_PASSWORD: root_password
      MYSQL_DATABASE: wp_database
      MYSQL_USER: wp_user
      MYSQL_PASSWORD: wp_pass
    volumes:
      - db_data:/var/lib/mysql

volumes:
  db_data:
```

```yaml
docker-compose.yml  ●

Users > devanksilswal > wordpress-compose > docker-compose.yml
1    version: '3.8'
2
3    services:
4      wordpress:
5        image: wordpress:latest
6        ports:
7          - "8002:80"
8        environment:
9          WORDPRESS_DB_HOST: db:3306
10          WORDPRESS_DB_USER: wp_user
11          WORDPRESS_DB_PASSWORD: wp_pass
12          WORDPRESS_DB_NAME: wp_database
13        depends_on:
14          - db
15
16      db:
17        image: mysql:latest
18        environment:
19          MYSQL_ROOT_PASSWORD: root_password
20          MYSQL_DATABASE: wp_database
21          MYSQL_USER: wp_user
22          MYSQL_PASSWORD: wp_pass
23        volumes:
24          - db_data:/var/lib/mysql
25
26    volumes:
27      db_data:
```

Step 2: Start the Containers

1. Run the following command to start the containers:
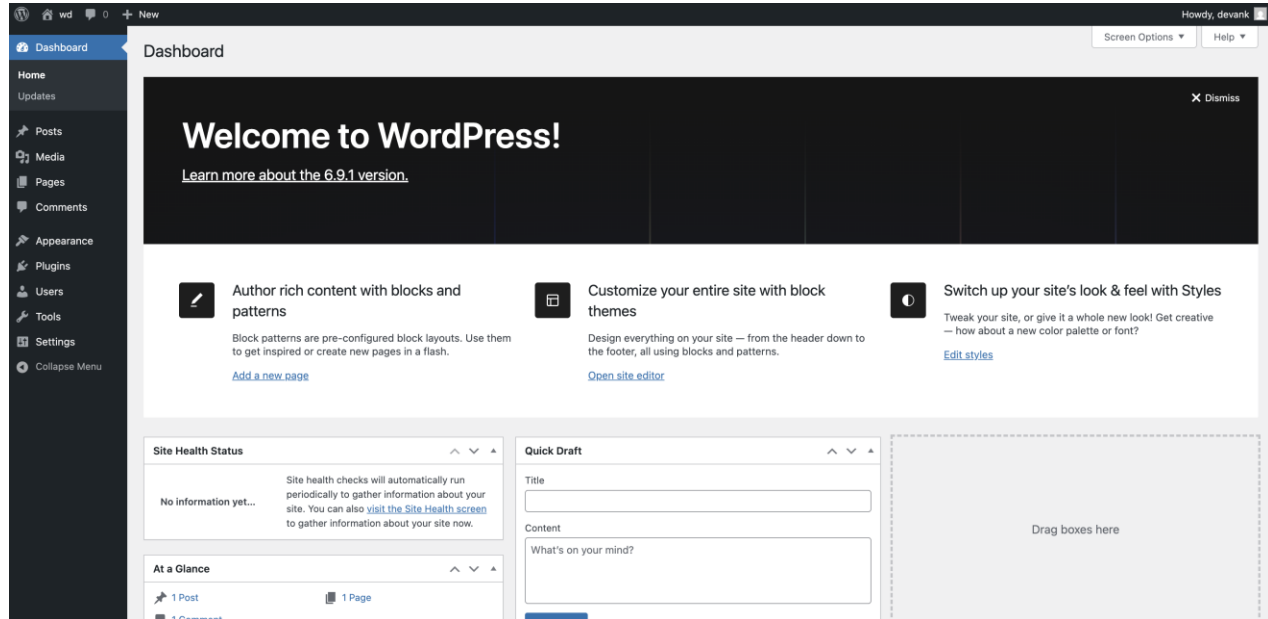
```
docker-compose up -d
```

```
devanksilswal@devanks-MacBook-Air wordpress-compose % docker-compose up -d

WARN[0000] /Users/devanksilswal/wordpress-compose/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] Running 36/36
 ✔ db Pulled                                                                  50.3s
   ✔ bdaccdb6a2d1 Pull complete                                               34.5s
   ✔ cb8e577a10e0 Pull complete                                               45.6s
   ✔ dbc311b7141a Pull complete                                                3.1s
   ✔ ad37a81ec0b0 Pull complete                                                2.8s
   ✔ f3308f5dc5a7 Pull complete                                                6.4s
   ✔ 8bd823d80b30 Pull complete                                                3.7s
   ✔ 9b9e9c3d0312 Pull complete                                               23.2s
   ✔ 2866f080bd66 Pull complete                                                4.7s
   ✔ c74b2b2e44e4 Pull complete                                                4.6s
   ✔ 78c8f56b46ce Pull complete                                               43.6s
 ✔ wordpress Pulled                                                           52.4s
   ✔ d34bfaa4d5f1 Pull complete                                               11.0s
   ✔ c6f9d5c47a09 Pull complete                                                1.8s
   ✔ ca8d61c3d87a Pull complete                                                4.1s
   ✔ 3ea009573b47 Pull complete                                               37.0s
   ✔ 5d225e106966 Pull complete                                                4.7s
   ✔ f202f660d31f Pull complete                                                4.3s
   ✔ 61f711318d6f Pull complete                                                2.6s
   ✔ 9168af4a56e4 Pull complete                                               46.6s
   ✔ 4f4fb700ef54 Pull complete                                                0.1s
   ✔ 4b5312722e19 Pull complete                                                4.3s
   ✔ d2ec1041e865 Pull complete                                               47.0s
   ✔ 6897e73ce33c Pull complete                                               46.7s
   ✔ 031554348f61 Pull complete                                               47.3s
   ✔ 868481f74eb0 Pull complete                                                4.5s
   ✔ eb06e9ad6735 Pull complete                                               47.5s
   ✔ d1cf9d588dad Pull complete                                                4.3s
   ✔ e81f715612e4 Pull complete                                                5.5s
   ✔ 10bf88c5b92c Pull complete                                                4.8s
   ✔ e2c78c9a71db Pull complete                                                2.9s
   ✔ efd517cdb9dd Pull complete                                                3.6s
   ✔ f2017a0c70b3 Pull complete                                               29.6s
   ✔ 09788444ce81 Pull complete                                                3.4s
   ✔ 54a8ba2dc970 Pull complete                                               46.8s
   ✔ dbaefff9267a Pull complete                                                4.0s
[+] Running 4/4
 ✔ Network wordpress-compose_default        Created                           0.0s
 ✔ Volume wordpress-compose_db_data         Created                           0.0s
 ✔ Container wordpress-compose-db-1         Started                           0.4s
 ✔ Container wordpress-compose-wordpress-1  Started                           0.2s
```

```
devanksilswal@devanks-MacBook-Air wordpress-compose % docker ps
CONTAINER ID   IMAGE             COMMAND                 CREATED           STATUS           PORTS                                        NAMES
ac8ece1343a7   wordpress:latest  "docker-entrypoint.s…"  About a minute ago  Up About a minute  0.0.0.0:8002->80/tcp, [::]:8002->80/tcp  wordpress-compose-wordpress-1
9772ccf0a74b   mysql:latest      "docker-entrypoint.s…"  About a minute ago  Up About a minute  3306/tcp, 33060/tcp                      wordpress-compose-db-1
```

2. Docker Compose will download the necessary images (WordPress and MySQL) and
   start both services.

Step 4: Access WordPress

1. Open your web browser and go to **http://localhost:8002**

2. Follow the WordPress installation steps to set up your site.

Step 5: Stop and Remove Containers

To stop the containers and remove the associated resources, run:

```
docker-compose down
```


Explanation of docker-compose.yml:

- **wordpress**: Sets up the WordPress container, mapping port 80 inside the container to port 8002 on your local machine.

- **db**: Sets up the MySQL container with a volume (db_data) for persistent storage.

Additional Notes:

- Modify the environment variables as needed for different configurations.

- To view logs, use docker-compose logs -f.

This setup allows you to quickly start a WordPress site locally and experiment with configurations.