

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

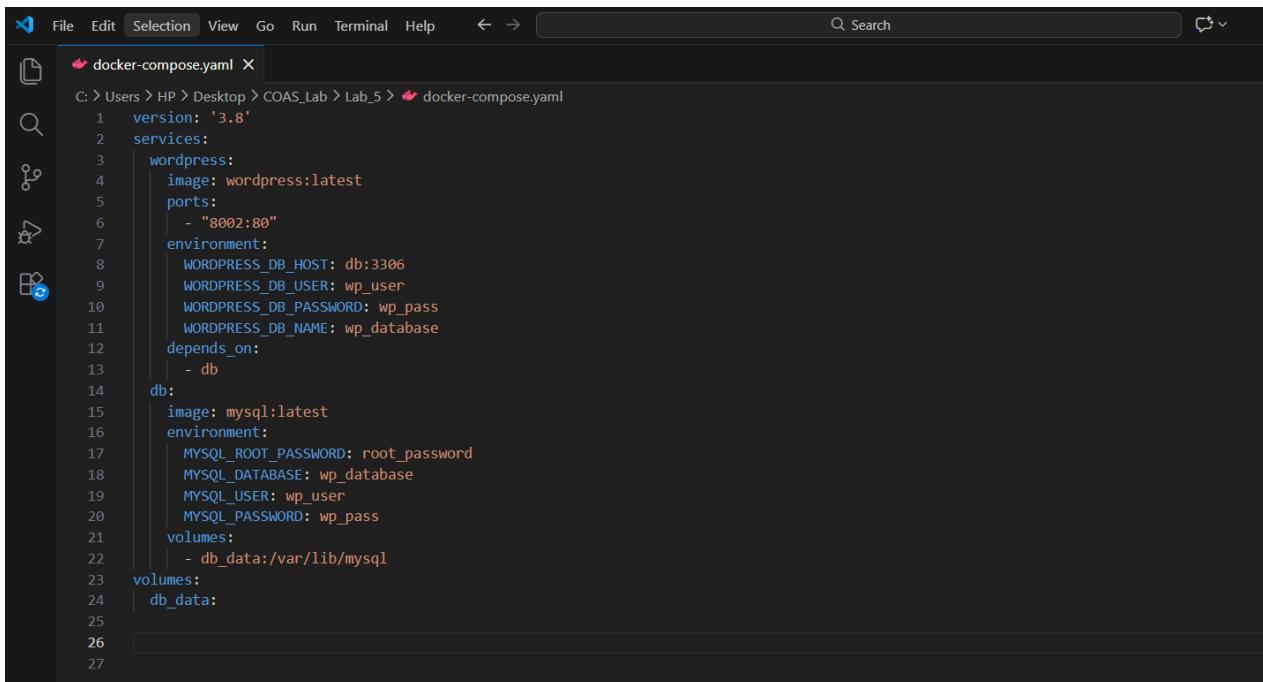
1. In the project directory, create a file named docker-compose.yaml.
2. Add the following content to docker-compose.yaml:

docker-compose.yml

```
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:
```

```
PowerShell 7.5.4
PS C:\Windows\System32> cd C:\Users\HP\Desktop\COAS_Lab\Lab_5
PS C:\Users\HP\Desktop\COAS_Lab\Lab_5> wsl
```

```
PS C:\Users\HP\Desktop\COAS_Lab\Lab_5> wsl
docker-desktop:/tmp/docker-desktop-root/run/desktop/mnt/host/c/Users/HP/Desktop/COAS_Lab/Lab_5# touch docker-compose.yaml
l
docker-desktop:/tmp/docker-desktop-root/run/desktop/mnt/host/c/Users/HP/Desktop/COAS_Lab/Lab_5# ls
Lab Exercise 6.docx docker-compose.yaml
docker-desktop:/tmp/docker-desktop-root/run/desktop/mnt/host/c/Users/HP/Desktop/COAS_Lab/Lab_5# vi docker-compose.yaml
docker-desktop:/tmp/docker-desktop-root/run/desktop/mnt/host/c/Users/HP/Desktop/COAS_Lab/Lab_5# ls
Lab Exercise 6.docx docker-compose.yaml
docker-desktop:/tmp/docker-desktop-root/run/desktop/mnt/host/c/Users/HP/Desktop/COAS_Lab/Lab_5# |
```



```
docker-compose.yaml
C: > Users > HP > Desktop > COAS_Lab > Lab_5 > docker-compose.yaml
1 version: '3.8'
2 services:
3   wordpress:
4     image: wordpress:latest
5     ports:
6       - "8002:80"
7     environment:
8       WORDPRESS_DB_HOST: db:3306
9       WORDPRESS_DB_USER: wp_user
10      WORDPRESS_DB_PASSWORD: wp_pass
11      WORDPRESS_DB_NAME: wp_database
12     depends_on:
13       - db
14   db:
15     image: mysql:latest
16     environment:
17       MYSQL_ROOT_PASSWORD: root_password
18       MYSQL_DATABASE: wp_database
19       MYSQL_USER: wp_user
20       MYSQL_PASSWORD: wp_pass
21     volumes:
22       - db_data:/var/lib/mysql
23   volumes:
24     db_data:
```

Step 2: Start the Containers

1. Run the following command to start the containers:

```
docker-compose up -d
```

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

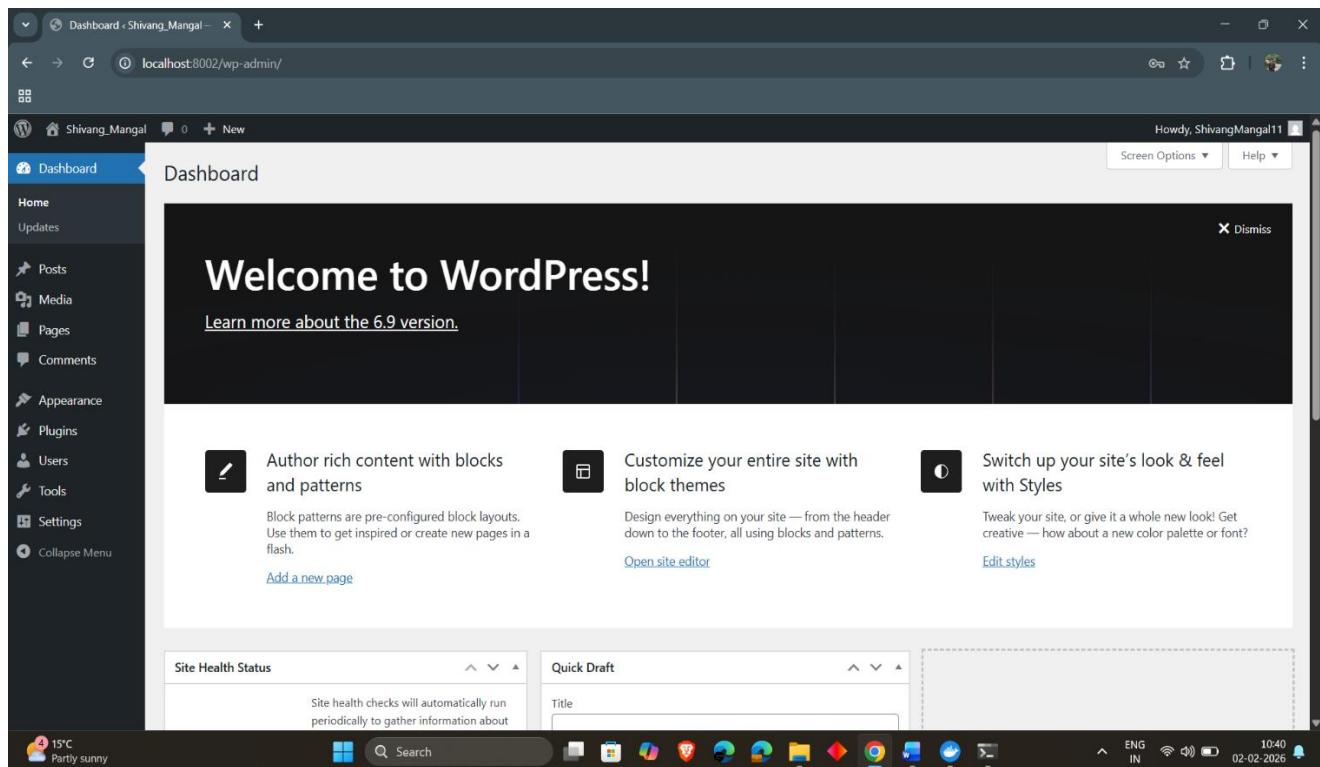
```

C:\Program Files\WindowsAPPS> docker-compose up -d
PS C:\Users\HP\Desktop\COAS_Lab\Lab_5> docker-compose up -d
time="2026-02-02T10:17:24+05:30" level=warning msg="C:\\\\Users\\\\HP\\\\Desktop\\\\COAS_Lab\\\\Lab_5\\\\docker-compose.yaml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion"
[+] Running 36/39
  ✓ db Pulled
    ✓ 6f92d9f2f65a Pull complete   295.9s
    ✓ 4a3af2db6b75 Pull complete  290.8s
    ✓ 359d294926a1 Pull complete  10.2s
    ✓ c21bb7e51cd3 Pull complete  0.8s
    ✓ 012d138a56c4 Pull complete  196.7s
    ✓ 5fdc017098ae Pull complete  2.8s
    ✓ b6c26b04681b Pull complete  196.9s
    ✓ d97d4e0fa091 Pull complete  198.3s
    ✓ 863342a2e065 Pull complete  197.8s
    ✓ 8cf746d6e600 Pull complete  290.7s
    ✓ 8cf746d6e600 Pull complete  3.0s
  ✓ wordpress Pulled
    ✓ f6dalb14fcf6 Pull complete  281.0s
    ✓ 119d43ee815 Pull complete  2.4s
    ✓ 0c8190b486bc Pull complete  185.8s
    ✓ fd8d2946b911 Pull complete  274.0s
    ✓ f888ecc1552d Pull complete  3.8s
    ✓ d851cc61e688 Pull complete  3.2s
    ✓ 1e82d9b5f876 Pull complete  3.2s
    ✓ 9f7c018cbf82 Pull complete  273.1s
    ✓ bb65f8b7b06b Pull complete  2.4s
    ✓ 367b027a2920 Pull complete  276.8s
    ✓ a7ac8f681c14 Pull complete  1.4s
    ✓ b4be800bc148 Pull complete  3.0s
    ✓ 6bdb3709272f Pull complete  3.0s
    ✓ 4f4fb700ef54 Pull complete  2.3s
    ✓ c6d68c8cf7be Pull complete  274.1s
    ✓ 0bbc512aa4f9 Pull complete  275.8s
    ✓ a8be71f05569 Pull complete  275.8s
    ✓ 9728c0f605d8 Pull complete  3.0s
    ✓ b5c8ca0f4f5 Pull complete  1.4s
    ✓ a192ef46c713 Pull complete  274.8s
    ✓ f40e018d0724 Pull complete  273.5s
    ✓ 9c3d28e85308 Pull complete  3.2s
    ✓ ddc1c2038b99 Pull complete  1.4s
  [+] Running 4/4
    ✓ Network lab_5_default      Created          0.1s
    ✓ Volume "lab_5_db_data"     Created          0.0s
    ✓ Container lab_5-db-1       Started         1.1s
    ✓ Container lab_5-wordpress-1 Started         1.1s
PS C:\Users\HP\Desktop\COAS_Lab\Lab_5>

```

Step 3: 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 4: Stop and Remove Containers

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

```
docker-compose down
```

```
PS C:\Users\HP\Desktop\COAS_Lab\Lab_5> docker-compose down
time="2026-02-02T10:41:32+05:30" level=warning msg="C:\\\\Users\\\\HP\\\\Desktop\\\\COAS_Lab\\\\Lab_5\\\\docker-compose.yaml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion"
[+] Running 3/3
  ✓ Container lab_5-wordpress-1  Removed          1.5s
  ✓ Container lab_5-db-1        Removed          1.8s
  ✓ Network lab_5_default      Removed          0.4s
PS C:\Users\HP\Desktop\COAS_Lab\Lab_5> |
```

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.