

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

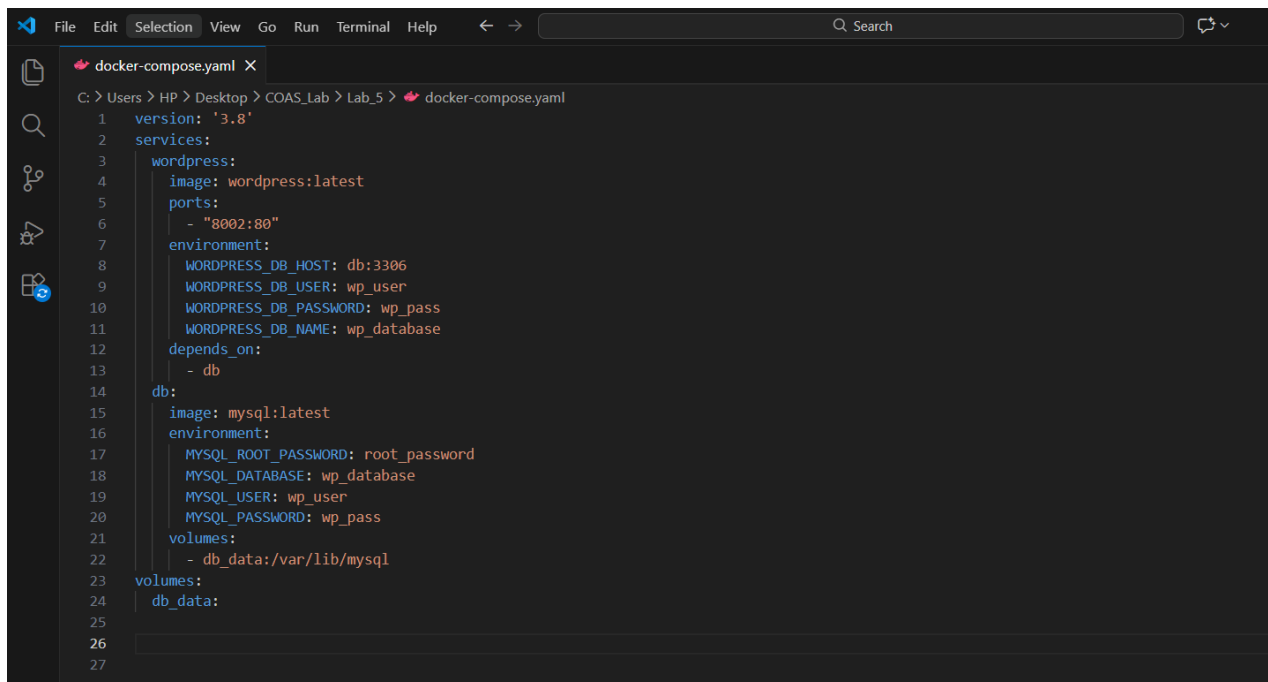
1. In the project directory, create a file named docker-compose.yml.
2. Add the following content to docker-compose.yml:

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
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# |
```



```
File Edit Selection View Go Run Terminal Help
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:
25
26
27
```

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\WindowsAp  x  +  v
docker-desktop: /tmp/docker-desktop-root/run/desktop/mnt/host/c/Users/HP/Desktop/COAS_Lab/Lab_5# exit
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 36/36
  ✓ db Pulled
    ✓ 6f92d9f2f65a Pull complete
    ✓ 4a3afd2b6b75 Pull complete
    ✓ 359d294926a1 Pull complete
    ✓ c21bb7e51cd3 Pull complete
    ✓ 012d138a56c4 Pull complete
    ✓ 5fdc017098ae Pull complete
    ✓ b6c26b04681b Pull complete
    ✓ d07d4e0fa091 Pull complete
    ✓ 86342a2e065 Pull complete
    ✓ 8cf746d6e600 Pull complete
  ✓ wordpress Pulled
    ✓ f6da1b14cfc6 Pull complete
    ✓ 119d43eec815 Pull complete
    ✓ 0c8190b486bc Pull complete
    ✓ fd8d2946b911 Pull complete
    ✓ f888ecc1552d Pull complete
    ✓ d851cc61e688 Pull complete
    ✓ 1e82d9b5f876 Pull complete
    ✓ 9f7c018cbf82 Pull complete
    ✓ 1622fb96c75e Pull complete
    ✓ bb65f8b7b06b Pull complete
    ✓ 367b027a2920 Pull complete
    ✓ a7ac8f681c14 Pull complete
    ✓ b4be800bc148 Pull complete
    ✓ 6bdb3709272f Pull complete
    ✓ 4f4fb700ef54 Pull complete
    ✓ c6d68c8cf7be Pull complete
    ✓ 0bbc512aa4f9 Pull complete
    ✓ a8be71f05569 Pull complete
    ✓ 9728c0f605d8 Pull complete
    ✓ b5c8ca40f4f5 Pull complete
    ✓ a192efa6c713 Pull complete
    ✓ f40e018d0724 Pull complete
    ✓ 9c3d28e85308 Pull complete
    ✓ ddc1c2038b99 Pull complete

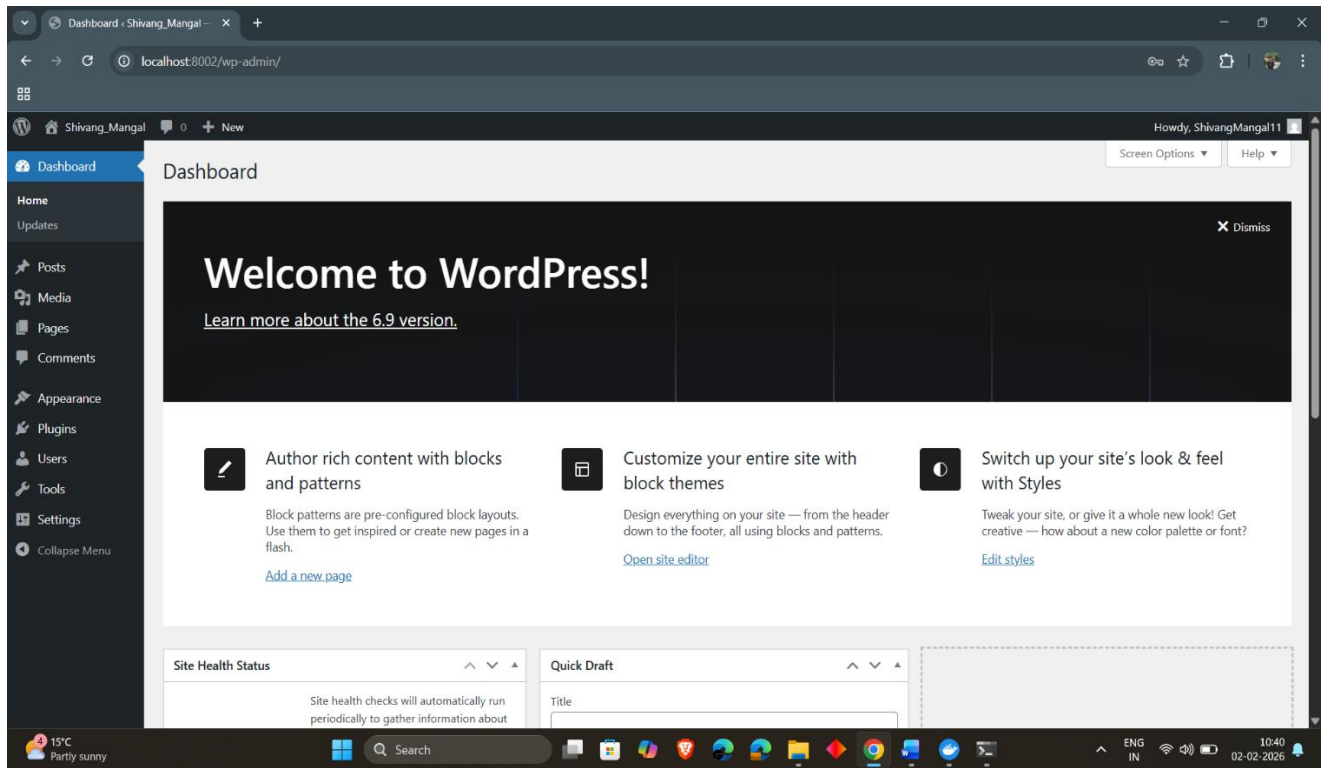
  ✓ a7ac8f681c14 Pull complete
  ✓ b4be800bc148 Pull complete
  ✓ 6bdb3709272f Pull complete
  ✓ 4f4fb700ef54 Pull complete
  ✓ c6d68c8cf7be Pull complete
  ✓ 0bbc512aa4f9 Pull complete
  ✓ a8be71f05569 Pull complete
  ✓ 9728c0f605d8 Pull complete
  ✓ b5c8ca40f4f5 Pull complete
  ✓ a192efa6c713 Pull complete
  ✓ f40e018d0724 Pull complete
  ✓ 9c3d28e85308 Pull complete
  ✓ ddc1c2038b99 Pull complete

[+] Running 4/4
  ✓ Network lab_5_default Created
  ✓ Volume "lab_5_db_data" Created
  ✓ Container lab_5-db-1 Started
  ✓ Container lab_5-wordpress-1 Started
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.