Lab Exercise 2- 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:

```
version: '3.8'

services:
  wordpress:
    image: wordpress:latest
    ports:
      - "8080:80"
    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:5.7
    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:
```

```
PS C:\Users\Asus\docker> notepad docker-compose.yml
```

Step 2: Start the Containers

1. Run the following command to start the containers:

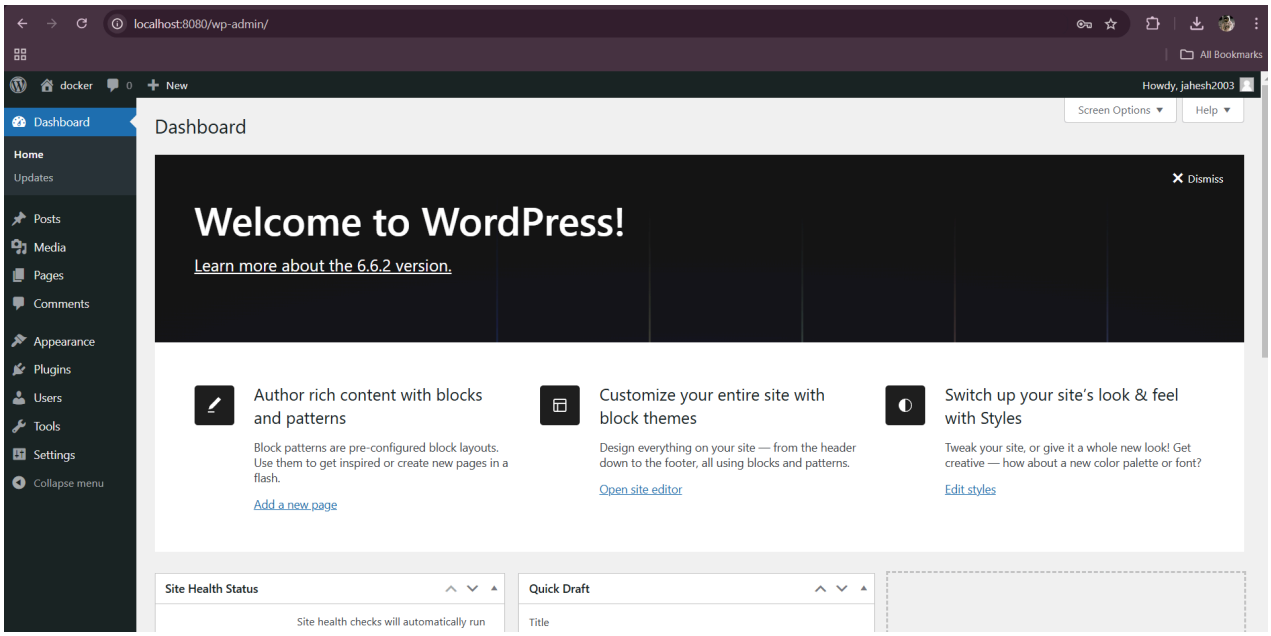
```
docker-compose up -d
```

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

```
PS C:\Users\Asus\docker> docker-compose up -d
time="2024-11-11T11:42:07+05:30" level=warning msg="C:\\Users\\Asus\\docker\\docker-compose.yml: the attribute `version` is obsolete, it will be ign
ease remove it to avoid potential confusion"
[+] Running 35/2
 ✔wordpress Pulled                                                                                                    149.9s
 ✔db Pulled                                                                                                           178.6s
[+] Running 4/4
 ✔Network docker_default        Created                                                                                 1.5s
 ✔Volume "docker_db_data"       Created                                                                                 0.1s
 ✔Container docker-db-1         Started                                                                                81.8s
 ✔Container docker-wordpress-1  Started                                                                                85.0s
PS C:\Users\Asus\docker> docker-compose ps
time="2024-11-11T11:47:02+05:30" level=warning msg="C:\\Users\\Asus\\docker\\docker-compose.yml: the attribute `version` is obsolete, it will be ign
ease remove it to avoid potential confusion"
NAME                IMAGE              COMMAND                  SERVICE     CREATED              STATUS              PORTS
docker-db-1         mysql:5.7          "docker-entrypoint.s…"   db          About a minute ago   Up About a minute   3306/tcp, 33060/tcp
docker-wordpress-1  wordpress:latest   "docker-entrypoint.s…"   wordpress   About a minute ago   Up 30 seconds       0.0.0.0:8080->80/tcp
```

Step 4: Access WordPress

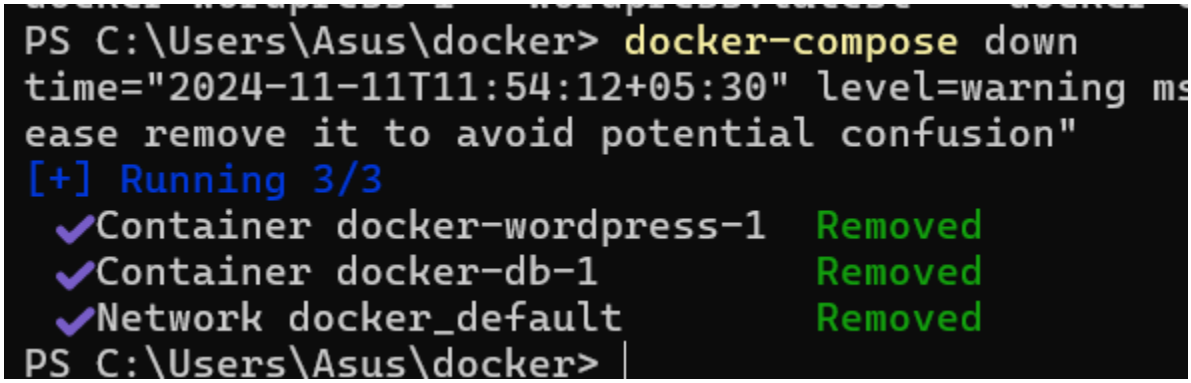
1. Open your web browser and go to http://localhost:8080.
2. Follow the WordPress installation steps to set up your site.



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 8080 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.