Lab 8 Assignment

Working with DOCKER

Aim: Re-Do the problem of Lab 5 using docker compose. Also do assign a static IP address to WordPress container using subnetting.

Create two docker containers with front-end and back-end applications and connect these containers using docker compose.

1. **Running WordPress container normally**

```
PS C:\Users\harsh\OneDrive - pdpu.ac.in\HARSH\_PDEU\SEM 6\Cloud Computing\LAB\Practical_9>
 docker run --name wp1 -dp 127.0.0.1:3000:80 wordpress
ce430c434d09cd9ac7ec5d6892f1d79d64e1bd35f9a66f2953bbd0c0c0888fa1
PS C:\Users\harsh\OneDrive - pdpu.ac.in\HARSH\_PDEU\SEM 6\Cloud Computing\LAB\Practical_9>
```

2. **Creating *compose.yaml* file**

```
services:
  website1:
    image: wordpress
    ports:
      - "3000:80"
```

3. **Execute Docker Compose**

```
PS C:\Users\harsh\OneDrive - pdpu.ac.in\HARSH\_PDEU\SEM 6\Cloud Computing\LAB\Practical_9>
 docker-compose up -d
[+] Running 1/2
 - Network practical_9_default        Created                                        0.4s
 ✔Container practical_9-website1-1   Started                                         0.4s
```

```
PS C:\Users\harsh\OneDrive - pdpu.ac.in\HARSH\_PDEU\SEM 6\Cloud Computing\LAB\Practical_9>
 docker compose ls
NAME                 STATUS               CONFIG FILES
practical_9          running(1)           C:\Users\harsh\OneDrive - pdpu.ac.in\HARSH\_PDEU\S
EM 6\Cloud Computing\LAB\Practical_9\compose.yaml
PS C:\Users\harsh\OneDrive - pdpu.ac.in\HARSH\_PDEU\SEM 6\Cloud Computing\LAB\Practical_9>
```

```
PS C:\Users\harsh\OneDrive - pdpu.ac.in\HARSH\_PDEU\SEM 6\Cloud Computing\LAB\Practical_9>
 docker compose stop
[+] Stopping 1/1
 ✔Container practical_9-website1-1  Stopped                                        1.3s
PS C:\Users\harsh\OneDrive - pdpu.ac.in\HARSH\_PDEU\SEM 6\Cloud Computing\LAB\Practical_9>
 docker compose start
[+] Running 1/1
 ✔Container practical_9-website1-1  Started                                        0.3s
PS C:\Users\harsh\OneDrive - pdpu.ac.in\HARSH\_PDEU\SEM 6\Cloud Computing\LAB\Practical_9>
```

4. Running multiple containers

```
PS C:\Users\harsh\OneDrive - pdpu.ac.in\HARSH\_PDEU\SEM 6\Cloud Computing\LAB\Practical_9>
 docker-compose up -d
[+] Running 2/2
 ✔Container practical_9-website2-1  Started                                        0.8s
 ✔Container practical_9-website1-1  Started                                        0.8s
PS C:\Users\harsh\OneDrive - pdpu.ac.in\HARSH\_PDEU\SEM 6\Cloud Computing\LAB\Practical_9>
```

5. Configuring network

```
services:
  website1:
    image: wordpress
    ports:
      - "3100:80"
  website2:
    image: wordpress
    ports:
      - "3200:80"
    networks:
      wordpress_net:
        ipv4_address: 192.168.99.20
networks:
  wordpress_net:
    ipam:
      driver: default
      config:
        - subnet: "192.168.99.0/24"
```

```
PS C:\Users\harsh\OneDrive - pdpu.ac.in\HARSH\_PDEU\SEM 6\Cloud Computing\LAB\Practical_9>
 docker-compose up -d
[+] Running 2/4
 - Network practical_9_default        Created                                      0.8s
 - Network practical_9_wordpress_net  Created                                      0.8s
 ✔Container practical_9-website1-1    Started                                      0.7s
 ✔Container practical_9-website2-1    Started                                      0.7s
PS C:\Users\harsh\OneDrive - pdpu.ac.in\HARSH\_PDEU\SEM 6\Cloud Computing\LAB\Practical_9>
```

```
PS C:\Users\harsh\OneDrive - pdpu.ac.in\HARSH\_PDEU\SEM 6\Cloud Computing\LAB\Practical_9>
 docker inspect 0dd72c58403219edd0bed0b0c0b7791e6fd6b4ab35553b2ef7f5212b6e274e6b
[
    {
        "Id": "0dd72c58403219edd0bed0b0c0b7791e6fd6b4ab35553b2ef7f5212b6e274e6b",
        "Created": "2024-04-25T09:53:37.4892287Z",
        "Path": "docker-entrypoint.sh",
        "Args": [
            "apache2-foreground"
        ],
        "State": {
            "Status": "running",
            "Running": true,
            "Paused": false,
            "Restarting": false,
            "OOMKilled": false,
```

```
                "Gateway": "192.168.99.1",
                "IPAddress": "192.168.99.20",
                "IPPrefixLen": 24,
                "IPv6Gateway": "",
                "GlobalIPv6Address": "",
                "GlobalIPv6PrefixLen": 0,
                "DriverOpts": null,
                "DNSNames": [
                    "practical_9-website2-1",
                    "website2",
                    "0dd72c584032"
                ]
```

6. Connection Database with Container

```
version: "3"
services:
  mariadb_db:
    container_name: mariadb_container
    image: mariadb
    restart: always
    environment:
      MARIADB_ROOT_PASSWORD: password
      MARIADB_DATABASE: testdb
      MARIADB_USER: harsh
      MARIADB_PASSWORD: wp_password
    volumes:
    - mariadb_vol:/var/lib/mysql


  wordpress:
    depends_on:
```

```
      - mariadb_db
   image: wordpress:latest
   restart: always
   ports:
     - "8000:80"
   environment:
     WORDPRESS_DB_HOST: mariadb_db:3306
     WORDPRESS_DB_NAME: testdb
     WORDPRESS_DB_USER: harsh
     WORDPRESS_DB_PASSWORD: wp_password
   volumes:
     ["./:/var/www/html"]


volumes:
 mariadb_vol: {}
```
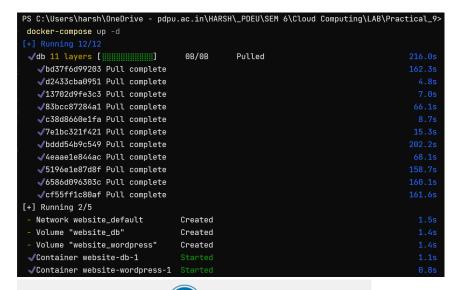
```
PS C:\Users\harsh\OneDrive - pdpu.ac.in\HARSH\_PDEU\SEM 6\Cloud Computing\LAB\Practical_9>
 docker-compose up -d
[+] Running 12/12
 ✓db 11 layers [##############]    0B/0B     Pulled                          216.0s
   ✓bd37f6d99203 Pull complete                                               162.3s
   ✓d2433cba0951 Pull complete                                                 4.8s
   ✓13702d9fe3c3 Pull complete                                                 7.0s
   ✓83bcc87284a1 Pull complete                                                66.1s
   ✓c38d8660e1fa Pull complete                                                 8.7s
   ✓7e1bc321f421 Pull complete                                                15.3s
   ✓bddd54b9c549 Pull complete                                               202.2s
   ✓4eaae1e844ac Pull complete                                                68.1s
   ✓5196e1e87d8f Pull complete                                               158.7s
   ✓6586d096303c Pull complete                                               160.1s
   ✓cf55ff1c80af Pull complete                                               161.6s
[+] Running 2/5
 - Network website_default       Created                                      1.5s
 - Volume "website_db"           Created                                      1.4s
 - Volume "website_wordpress"    Created                                      1.4s
 ✓Container website-db-1         Started                                      1.1s
 ✓Container website-wordpress-1  Started                                      0.8s
```

Below you should enter your database connection details. If you are not sure about these, contact your host.

Database Name | wordpress |
The name of the database you want to use with WordPress.

Username | username |
Your database username.

Password | password | 👁 Show
Your database password.

Database Host | localhost |
You should be able to get this info from your web host, if localhost does not work.

Table Prefix | wp_ |
If you want to run multiple WordPress installations in a single database, change this.

Submit

All right, sparky! You've made it through this part of the installation. WordPress can now communicate with your database. If you are ready, time now to...

Run the installation

Welcome

Welcome to the famous five-minute WordPress installation process! Just fill in the information below and you'll be on your way to using the most extendable and powerful personal publishing platform in the world.

Information needed

Please provide the following information. Do not worry, you can always change these settings later.

Site Title
Sample Site

Username
harsh

Usernames can have only alphanumeric characters, spaces, underscores, hyphens, periods, and the @ symbol.

Password
harsh123
👁 Hide

Very weak

Important: You will need this password to log in. Please store it in a secure location.

Confirm Password
☑ Confirm use of weak password

Your Email
harsh.sce21@sot.pdpu.ac.in

Double-check your email address before continuing.

Search engine visibility
☑ Discourage search engines from indexing this site

It is up to search engines to honor this request.

Install WordPress

Success!

WordPress has been installed. Thank you, and enjoy!

Username   harsh

Password   *Your chosen password.*

Log In

7. Access Website on HostIP:PORT

http://127.0.0.1:3300/