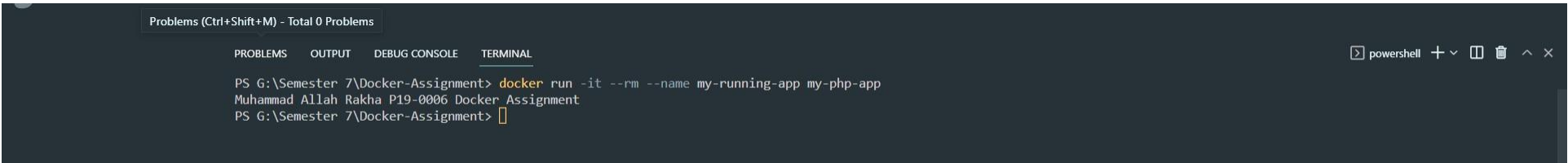
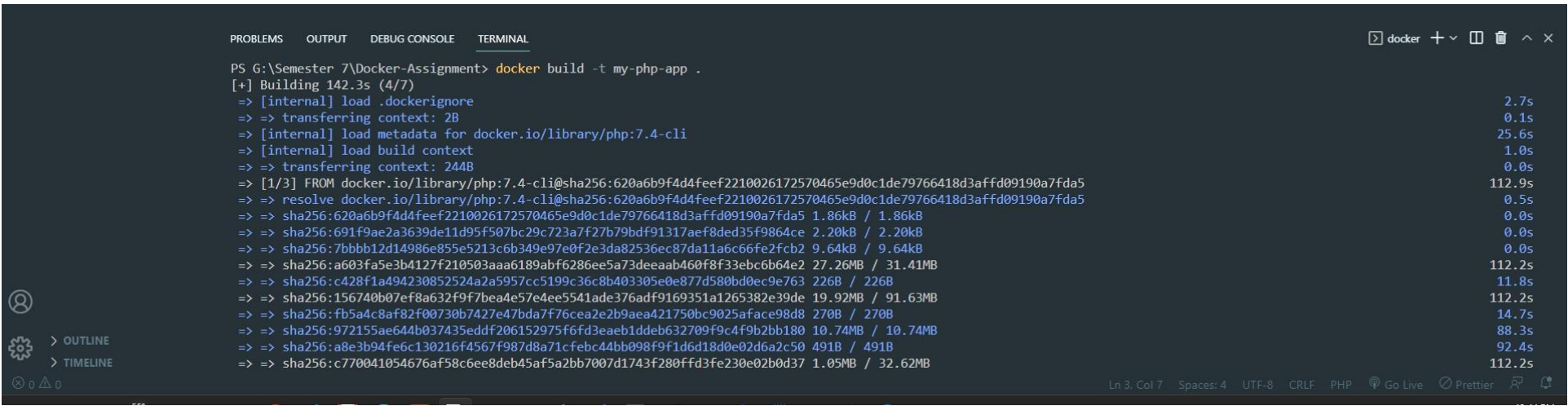
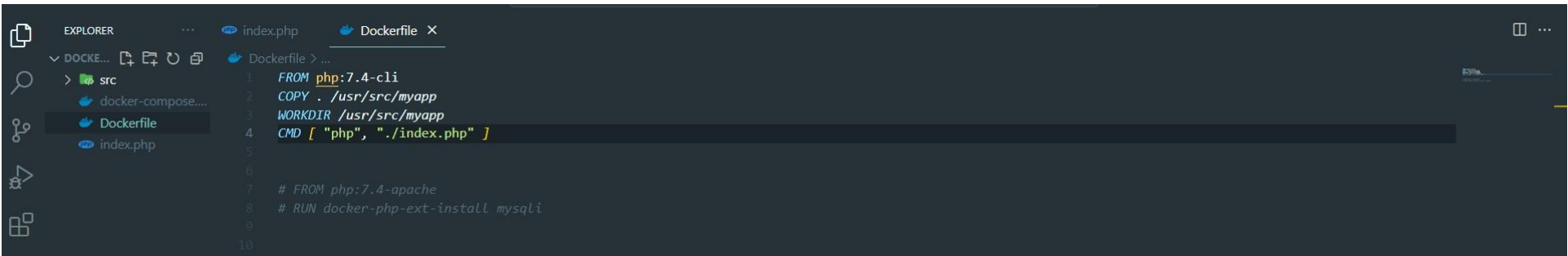
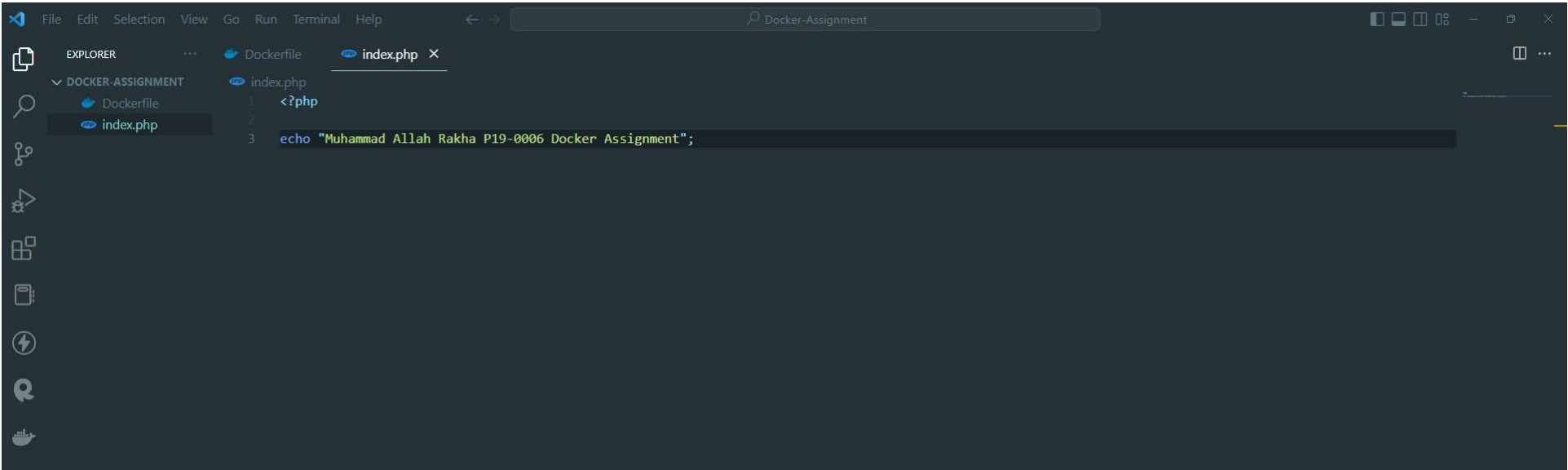


# Assignment # 2 (Dockers Multi Container)

- On this assignment we have create first PHP demo Docker image and run in console & local host.
- Further applied Docker Compose method to compose PHP code with local php code and database my-sql apache.
- Create & managed my-sql database (make database entity and attributes) and access by PHP code in local host.



PS G:\Semester\_7\Docke...> docker stop \$(docker ps -a -q) 8913d1d13fe3 PS G:\Semester\_7\Docke...> docker ps CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES PS G:\Semester\_7\Docke...>

File Edit Selection View Go Run Terminal Help Docker-Assignment

EXPLORER index.php docker-compose.yml x

DOCKER-ASSIGNMENT src index.php docker-compose... Dockerfile

docker-compose.yml 1 # Use root/example user/password credentials 2 version: "3.1" 3 4 services: 5 php: 6 image: php:7.4-apache 7 ports: 8 - 0:80 9 volumes: 10 - ./src:/var/www/html/ 11

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

PS G:\Semester\_7\Docke...> docker-compose up -d [+] Running 1/1 - Container docker-assignment-php-1 Started PS G:\Semester\_7\Docke...>

6.9s

PS G:\Semester\_7\Docke...> docker-compose up -d [+] Running 1/1 - Container docker-assignment-php-1 Started PS G:\Semester\_7\Docke...> docker-compose down [+] Running 2/2 - Container docker-assignment-php-1 Removed - Network docker-assignment\_default Removed PS G:\Semester\_7\Docke...>

File Edit Selection View Go Run Terminal Help Docker-Assignment

EXPLORER index.php docker-compose.yml x

DOCKER-ASSIGNMENT src index.php docker-compose... Dockerfile

docker-compose.yml 1 # Use root/example user/password credentials 2 version: "3.1" 3 4 services: 5 php: 6 image: php:7.4-apache 7 ports: 8 - 0:80 9 volumes: 10 - ./src:/var/www/html/ 11 db: 12 image: mysql 13 command: --default-authentication-plugin=mysql\_native\_password 14 restart: always 15 environment: 16 MYSQL\_ROOT\_PASSWORD: example 17 volumes: 18 - mysql-data:/var/lib/mysql 19 20 adminer: 21 image: adminer 22 restart: always 23 ports: 24 - 8080:8080 25

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

PS G:\Semester\_7\Docke...> docker-compose up -d [+] Running 1/1 - Container docker-assignment-php-1 Started PS G:\Semester\_7\Docke...> docker-compose down [+] Running 2/2 - Container docker-assignment-php-1 Removed - Network docker-assignment\_default Removed PS G:\Semester\_7\Docke...>

6.9s

- 3c76b37a5dd7 Pull complete - 6491a80416fc Pull complete - ff1b30214647 Pull complete - e447fcad8764 Pull complete - 3814f2022577 Pull complete - e2bcacf3bd070 Pull complete - be31139c5821 Pull complete - d183076dd611 Pull complete - db Pulled - 0ed027b72ddc Pull complete - 0296159747f1 Pull complete - 3d2f9b664bd3 Pull complete - df6519f81c26 Pull complete - 36bb5e56d458 Pull complete - 054e8fde88d0 Pull complete - f2b494c50c7f Pull complete - 132bc0d471b8 Pull complete - 135ec7033a05 Pull complete - 5961f0272472 Pull complete - 75b5f7a3d3a4 Pull complete [+] Running 5/5 - Network docker-assignment\_default Created - Volume "docker-assignment\_mysql-data" Created - Container docker-assignment-php-1 Started - Container docker-assignment-db-1 Started - Container docker-assignment-adminer-1 Started PS G:\Semester\_7\Docke...> docker-compose up -d

File Edit Selection View Go Run Terminal Help Docker-Assignment

EXPLORER index.php docker-compose.yml x

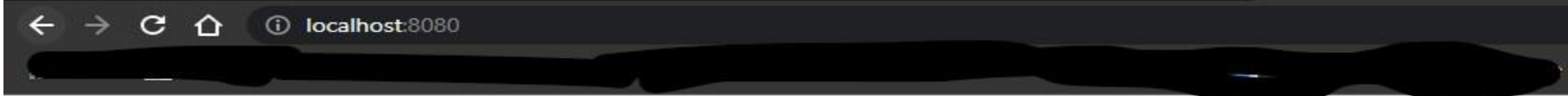
DOCKER-ASSIGNMENT src index.php docker-compose... Dockerfile

docker-compose.yml 23 ports: 24 - 8080:8080 25 26 volumes: 27 mysql-data: 28

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

- 3c76b37a5dd7 Pull complete - 6491a80416fc Pull complete - ff1b30214647 Pull complete - e447fcad8764 Pull complete - 3814f2022577 Pull complete - e2bcacf3bd070 Pull complete - be31139c5821 Pull complete - d183076dd611 Pull complete - db Pulled - 0ed027b72ddc Pull complete - 0296159747f1 Pull complete - 3d2f9b664bd3 Pull complete - df6519f81c26 Pull complete - 36bb5e56d458 Pull complete - 054e8fde88d0 Pull complete - f2b494c50c7f Pull complete - 132bc0d471b8 Pull complete - 135ec7033a05 Pull complete - 5961f0272472 Pull complete - 75b5f7a3d3a4 Pull complete [+] Running 5/5 - Network docker-assignment\_default Created - Volume "docker-assignment\_mysql-data" Created - Container docker-assignment-php-1 Started - Container docker-assignment-db-1 Started - Container docker-assignment-adminer-1 Started PS G:\Semester\_7\Docke...> docker-compose up -d

180.4s 182.3s 194.5s 202.0s 205.4s 206.7s 208.8s 211.6s 230.6s 49.4s 50.7s 51.5s 53.1s 53.8s 54.5s 116.8s 117.8s 221.7s 222.7s 223.5s 1.6s 0.2s 19.3s 18.1s 18.4s



Language: English

Adminer 4.8.1

Login

System	MySQL
Server	db
Username	
Password	
Database	

Login ☐ Permanent login



FileEditSelectionViewGoRunTerminalHelp

←→

Docker-Assignment

EXPLORER

DOCKER-ASSIGNMENT

src

index.php

docker-compose....

Dockerfile

docker-compose.yml

Dockerfile

Dockerfile > ...

1FROM php:7.4-apache

2RUN docker-php-ext-install mysqli

3

4# FROM php:7.4-cli

5# COPY ./usr/src/myapp

6# WORKDIR /usr/src/myapp

7# CMD [ "php", "./index.php" ]

8

9

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PS G:\Semester\_7\Docker-Assignment> docker-compose down

[+] Running 4/4

- Container docker-assignment-db-1Removed8.7s

- Container docker-assignment-php-1Removed7.4s

- Container docker-assignment-adminer-1Removed3.6s

- Network docker-assignment\_defaultRemoved1.3s

PS G:\Semester\_7\Docker-Assignment>

FileEditSelectionViewGoRunTerminalHelp

←→

Docker-Assignment

EXPLORER

DOCKER-ASSIGNMENT

src

index.php

docker-compose....

Dockerfile

docker-compose.yml

Dockerfile

docker-compose.yml

1# Use root/example user/password credentials

2version: "3.1"

3

4services:

5php:

6# image: php:7.4-apache'

7build:

8context: .

9dockerfile: Dockerfile

10ports:

11- 0:80

12volumes:

13- ./src:/var/www/html/

14db:

15image: mysql

16command: --default-authentication-plugin=mysql\_native\_password

17restart: always

18environment:

19MYSQL\_ROOT\_PASSWORD: example

20volumes:

21- mysql-data:/var/lib/mysql

22

23adminer:

24image: adminer

25restart: always

26ports:

27- 8080:8080

28

29volumes:

30mysql-data:

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PS G:\Semester\_7\Docker-Assignment> docker-compose up -d

[+] Building 53.6s (6/6) FINISHED

=> [internal] load build definition from Dockerfile

=> => transferring dockerfile: 202B

=> [internal] load .dockerignore

=> => transferring context: 2B

=> [internal] load metadata for docker.io/library/php:7.4-apache

=> [1/2] FROM docker.io/library/php:7.4-apache

=> [2/2] RUN docker-php-ext-install mysqli

=> exporting to image

=> => exporting layers

=> writing image sha256:fcbdd81dc176e3f1c6bc888fba57b865a7838556d2c8c226675a7c7eddac664d

=> naming to docker.io/library/docker-assignment-php

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

[+] Running 4/4

- Network docker-assignment\_defaultCreated1.1s

- Container docker-assignment-db-1Started6.2s

- Container docker assignment adminer 1Started7.7s

- Container docker-assignment-php-1Started7.4s

PS G:\Semester\_7\Docker-Assignment>

EXPLORER

DOCKER-ASSIGNMENT

src

index.php

docker-compose....

Dockerfile

docker-compose.yml

Dockerfile

docker-compose.yml

1# Use root/example user/password credentials

2version: "3.1"

3

4services:

5php:

6# image: php:7.4-apache'

7build:

8context: .

9dockerfile: Dockerfile

10ports:

11- 0:80

12volumes:

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PS G:\Semester\_7\Docker-Assignment> docker-compose up -d

[+] Building 53.6s (6/6) FINISHED

=> [internal] load build definition from Dockerfile

=> => transferring dockerfile: 202B

=> [internal] load .dockerignore

=> => transferring context: 2B

=> [internal] load metadata for docker.io/library/php:7.4-apache

=> [1/2] FROM docker.io/library/php:7.4-apache

=> [2/2] RUN docker-php-ext-install mysqli

=> exporting to image

=> => exporting layers

=> writing image sha256:fcbdd81dc176e3f1c6bc888fba57b865a7838556d2c8c226675a7c7eddac664d

=> naming to docker.io/library/docker-assignment-php

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

[+] Running 4/4

- Network docker-assignment\_defaultCreated1.1s

- Container docker-assignment-db-1Started6.2s

- Container docker assignment adminer 1Started7.7s

- Container docker-assignment-php-1Started7.4s

PS G:\Semester\_7\Docker-Assignment>

Language: English

Adminer 4.8.1

Login

System	MySQL
Server	db
Username	root
Password	*****
Database	

Login☐ Permanent login

Language: English

Adminer 4.8.1

DB:

SQL command  
Export

MySQL » db

Logout

Select database

Create databasePrivilegesProcess listVariablesStatus

MySQL version: 8.0.31 through PHP extension MySQLi

Logged as: root@172.20.0.4

Database - Refresh	Collation	Tables	Size - Compute
<input type="checkbox"/> information_schema	utf8mb3_general_ci	?	?
<input type="checkbox"/> mysql	utf8mb4_0900_ai_ci	?	?
<input type="checkbox"/> performance_schema	utf8mb4_0900_ai_ci	?	?
<input type="checkbox"/> sys	utf8mb4_0900_ai_ci	?	?

Selected (0)

Drop

Create table

Table name:  (engine)  (collation)

Column name	Type	Length	Options	NULL	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/>
name	varchar	25	(collation)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
fav_color	varchar	25	(collation)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	int			<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

Auto Increment:  ☐ Default values ☐ Comment

Save

Partition by

## Table: users

Table has been created. 19:23:10 SQL command

Select data Show structure Alter table New item

Column	Type	Comment
name	varchar(25)	
fav_color	varchar(25)	

## Indexes

## Alter indexes

### Foreign keys

Add foreign key

## Triggers

Add trigger

The image shows a VS Code editor with a file explorer on the left and a terminal at the bottom. The file explorer shows a project named 'DOCKER-ASSIGNMENT' with a subdirectory 'src' containing 'index.php', 'docker-compose...', and 'Dockerfile'. The 'index.php' file is open in the editor, showing a PHP script that connects to a MySQL database, inserts user data, and displays it.

```
1 <?php
2
3 // echo "Muhammad ALLah Rakha P19-0006 Docker Assignment";
4
5 echo "Hello from the docker yooooo container";
6
7 $mysqli = new mysqli("db", "root", "example", "company");
8
9 $sql = "INSERT INTO users (name, fav_color) VALUES('Lil Sneazy', 'Yellow')";
10 $result = $mysqli->query($sql);
11 $sql = "INSERT INTO users (name, fav_color) VALUES('Nick Jonas', 'Brown')";
12 $result = $mysqli->query($sql);
13 $sql = "INSERT INTO users (name, fav_color) VALUES('Maroon 5', 'Maroon')";
14 $result = $mysqli->query($sql);
15 $sql = "INSERT INTO users (name, fav_color) VALUES('Tommy Baker', '043A2B')";
16 $result = $mysqli->query($sql);
17
18
19 $sql = 'SELECT * FROM users';
20
21 if ($result = $mysqli->query($sql)) {
22     while ($data = $result->fetch_object()) {
23         $users[] = $data;
24     }
25 }
26
27 foreach ($users as $user) {
28     echo "<br>";
29     echo $user->name . " . " . $user->fav_color;
30     echo "<br>";
31 }
```

The terminal window shows the following commands and output:

```
PS G:\Semester_7\Docker-Assignment> docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                               NAMES
f7942ce3e706   docker-assignment-php   "docker-php-entrypoin..." 17 minutes ago   Up 17 minutes   0.0.0.0:49160->80/tcp             docker-assignment-php-1
d5674d638291   mysql          "docker-entrypoint.s..." 17 minutes ago   Up 17 minutes   3306/tcp, 33060/tcp              docker-assignment-db-1
8bd959cda820   adminer        "entrypoint.sh docke..." 17 minutes ago   Up 17 minutes   0.0.0.0:8080->8080/tcp            docker-assignment-adminer-1

PS G:\Semester_7\Docker-Assignment> docker stop f7942ce3e706
f7942ce3e706

PS G:\Semester_7\Docker-Assignment> docker stop d5674d638291
d5674d638291

PS G:\Semester_7\Docker-Assignment> docker stop 8bd959cda820
8bd959cda820

PS G:\Semester_7\Docker-Assignment> docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                               NAMES
PS G:\Semester_7\Docker-Assignment> docker rm f7942ce3e706
f7942ce3e706

PS G:\Semester_7\Docker-Assignment> docker rm d5674d638291
d5674d638291

PS G:\Semester_7\Docker-Assignment> docker rm 8bd959cda820
8bd959cda820

PS G:\Semester_7\Docker-Assignment>
```