EXERCISE NO.5>

Terminal (top)

```
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ vim mydb.sql
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ vim Dockerfile
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ docker image buil
d -t mydb .
[+] Building 0.0s (2/2) FINISHED                docker:default
 => [internal] load build definition from Dockerfile   0.0s
 => => transferring dockerfile: 134B                    0.0s
 => [internal] load .dockerignore                       0.0s
 => => transferring context: 2B                         0.0s
Dockerfile:1
--------------------
   1 | >>> ENV MYSQL_ROOT_PASSWORD=root
   2 |     ENV MYSQL_DATABASE=mydb
   3 |     COPY mydb.sql /docker-entrypoint-initdb.d/
--------------------
ERROR: failed to solve: no build stage in current context
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ docker container
run -itd --name mydb mydb
Unable to find image 'mydb:latest' locally
^[[Adocker: Error response from daemon: pull access denied f
or mydb, repository does not exist or may require 'docker lo
gin': denied: requested access to the resource is denied.
See 'docker run --help'.
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ docker container
run -itd --name mydb01 mydb
Unable to find image 'mydb:latest' locally
docker: Error response from daemon: pull access denied for m
ydb, repository does not exist or may require 'docker login'
: denied: requested access to the resource is denied.
See 'docker run --help'.
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ docker image buil
d -t mydb .
```

PDF Viewer (top) — 5_docker.pdf

- stop and remove the container
- create a new container with the same volume attached at /app
- verify if you can access the files created earlier

exercise 5

- create a container of mysql image
- make sure that this container is persisting the database
- create a database named mydb and table named companies in mydb
- insert 5 company records
- destroy the container
- create a new container and get the mydb database and companies table

exercise 6

- create a docker-compose.yml file with following images
  - busybox
  - httpd (port 9090)
  - nginx (port 8080)
  - mysql (port 3306)
- start all the containers
- verify you can see the httpd output on 9090, nginx output on port 8080 and mysql database on p
  3306

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- stop all containers

Terminal (bottom)

```
ydb, repository does not exist or may require 'docker login'
: denied: requested access to the resource is denied.
See 'docker run --help'.
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ vim Dockerfile
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ docker image buil
d -t mydb .
[+] Building 0.2s (7/7) FINISHED                docker:default
 => [internal] load build definition from Dockerfile   0.0s
 => => transferring dockerfile: 145B                    0.0s
 => [internal] load .dockerignore                       0.0s
 => => transferring context: 2B                         0.0s
 => [internal] load metadata for docker.io/library/my   0.0s
 => [internal] load build context                       0.0s
 => => transferring context: 357B                       0.0s
 => [1/2] FROM docker.io/library/mysql                  0.1s
 => [2/2] COPY mydb.sql /docker-entrypoint-initdb.d/    0.0s
 => exporting to image                                  0.0s
 => => exporting layers                                 0.0s
 => => writing image sha256:5b7eaad45c318d813a8e49ad9   0.0s
 => => naming to docker.io/library/mydb                 0.0s
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ docker container
run -itd --name mydb-con1 mydb
18c8f8788496c51b62ffb63b3a198ae379bfd884476c32d07bd8a83e5991
3832
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ docker container
run -itd --name mydb -v mysql-volume:/var/lib/mysql/ mydb
8b185746957a7501644f63e218e9b289c67343c85f798b7fb7902455e5f4
1975
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ docker container
exec -it mydb bash
bash-4.4# mysql -u root -p
Enter password:
```

PDF Viewer (bottom) — 5_docker.pdf

- stop and remove the container
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exercise 5

- create a container of mysql image
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  3306

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exercises.md   202

- stop all containers

Top window — Terminal:

```
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ docker container
exec -it mydb bash
bash-4.4# mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.2.0 MySQL Community Server - GPL

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r its
affiliates. Other names may be trademarks of their respectiv
e
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the curren
t input statement.

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mydb               |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
5 rows in set (0.01 sec)

mysql> use mydb;
```

Top window — Document (5_docker.pdf):

stop and remove the container
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  3306

exercises.md   202

- stop all containers

Bottom window — Terminal:

```
mysql> use mydb;
Reading table information for completion of table and column
 names
You can turn off this feature to get a quicker startup with
-A

Database changed
mysql> show tables;
+----------------+
| Tables_in_mydb |
+----------------+
| company        |
+----------------+
1 row in set (0.00 sec)

mysql> desc person;
ERROR 1146 (42S02): Table 'mydb.person' doesn't exist
mysql> select * from person;
ERROR 1146 (42S02): Table 'mydb.person' doesn't exist
mysql> ^DBye
bash-4.4# exit
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ vim Dockerfile
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ vim mydb.sql
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ docker container
exec -it mydb bash
bash-4.4# mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 8.2.0 MySQL Community Server - GPL

Copyright (c) 2000, 2023, Oracle and/or its affiliates.
```

Bottom window — Document (5_docker.pdf):

stop and remove the container
- create a new container with the same volume attached at /app
- verify if you can access the files created earlier

exercise 5

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exercises.md   202

- stop all containers

```
mysql> ^DBye
bash-4.4# exit
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ vim Dockerfile
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ vim mydb.sql
sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6:~$ docker container
exec -it mydb bash
bash-4.4# mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 9
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mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mydb               |
| mysql              |
| performance_schema |
| sys                |
```

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exercises.md   202

- stop all containers

```
+--------------------+
| information_schema |
| mydb               |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
5 rows in set (0.00 sec)

mysql> use mydb;
Reading table information for completion of table and column
 names
You can turn off this feature to get a quicker startup with
-A

Database changed
mysql> use mydb;
Database changed
mysql> use mydb;
Database changed
mysql> show tables;
+----------------+
| Tables_in_mydb |
+----------------+
| company        |
+----------------+
1 row in set (0.00 sec)

mysql> desc person;
ERROR 1146 (42S02): Table 'mydb.person' doesn't exist
mysql> desc company;
+--------+--------------+------+-----+---------+-------+
| Field  | Type         | Null | Key | Default | Extra |
```

- stop and remove the container
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exercise 5

- create a container of mysql image
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exercises.md   202

- stop all containers

Terminal — sunbeam@sunbeam-IdeaPad-Gaming-3-15ACH6: ~

```
mysql> show tables;
+----------------+
| Tables_in_mydb |
+----------------+
| company        |
+----------------+
1 row in set (0.00 sec)

mysql> desc person;
ERROR 1146 (42S02): Table 'mydb.person' doesn't exist
mysql> desc company;
+-------+--------------+------+-----+---------+-------+
| Field | Type         | Null | Key | Default | Extra |
+-------+--------------+------+-----+---------+-------+
| id    | int          | YES  |     | NULL    |       |
| name  | varchar(100) | YES  |     | NULL    |       |
+-------+--------------+------+-----+---------+-------+
2 rows in set (0.00 sec)

mysql> select * from company;
+------+-----------+
| id   | name      |
+------+-----------+
|    1 | PUMA      |
|    2 | ADIDAS    |
|    3 | SKETCHERS |
|    4 | CONVERSE  |
|    5 | NIKE      |
+------+-----------+
5 rows in set (0.00 sec)

mysql> 
```

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- stop all containers