

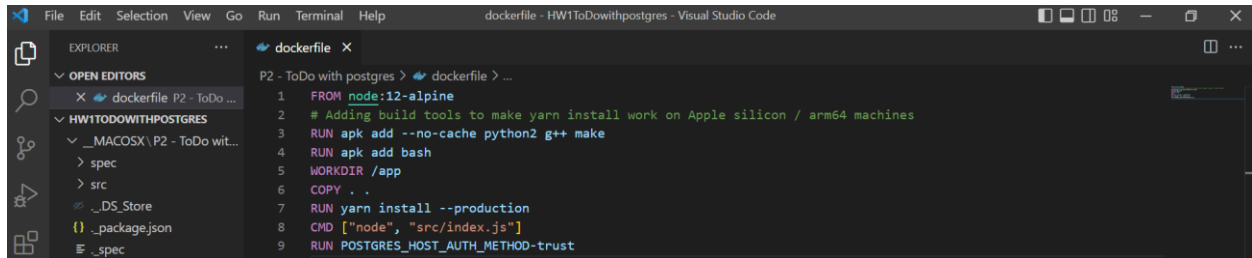
Docker Home-Work1

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Part1:

Open ToDo PostgreSQL in VS:



Run a MySQL server in a Docker container:

1)Install MySQL:

```
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows
Docker version 20.10.17, build 100c701
PS C:\Users\shipo\OneDrive\Desktop\HW1ToDowithpostgres> docker pull mysql:8
8: Pulling from library/mysql
d67a603b911a: Pull complete
0cf69c8f1492: Pull complete
a5ee239a0d3a: Pull complete
0f166cb3e327: Pull complete
882d294bf188: Pull complete
2649fc7eb806: Pull complete
bddb3394e2e3: Pull complete
93c83d9a2206: Pull complete
99d7f45787c0: Pull complete
234663a2e3ee: Pull complete
74531487bb7b: Pull complete
Digest: sha256:d4055451e7f42869e64089a60d1abc9e66eccde2910629f0dd666b53a5f230d8
Status: Downloaded newer image for mysql:8docker.io/library/mysql:8
PS C:\Users\shipo\OneDrive\Desktop\HW1ToDowithpostgres>
```

2)Run MySQL in Docker:

```
docker.io/library/mysql:8
PS C:\Users\shipo\OneDrive\Desktop\HW1ToDowithpostgres> docker run mysql:8
2022-10-28 16:05:54+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.31-1.el8 started.
2022-10-28 16:05:54+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
2022-10-28 16:05:54+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.31-1.el8 started.
2022-10-28 16:05:55+00:00 [ERROR] [Entrypoint]: Database is uninitialized and password option is not specified
You need to specify one of the following as an environment variable:
- MYSQL_ROOT_PASSWORD
- MYSQL_ALLOW_EMPTY_PASSWORD
- MYSQL_RANDOM_ROOT_PASSWORD
PS C:\Users\shipo\OneDrive\Desktop\HW1ToDowithpostgres>
```

3)

```
PS C:\Users\shipo\OneDrive\Desktop\HW1ToDowithpostgres> docker run -e MYSQL_ROOT_PASSWORD=123 -d mysql:8
64648d74d966538b61b9c600dbb7946dbb58e8d2c9d28f3038dcdb52c49d56ff
PS C:\Users\shipo\OneDrive\Desktop\HW1ToDowithpostgres>
```

4)MySQL running in background:

```
PS C:\Users\shipo\OneDrive\Desktop\HW1ToDowithpostgres> docker exec 64648d74d966538 mysql --version
mysql Ver 8.0.31 for Linux on x86_64 (MySQL Community Server - GPL)
PS C:\Users\shipo\OneDrive\Desktop\HW1ToDowithpostgres>
```

```
PS C:\Users\shipo\OneDrive\Desktop\HW1ToDowithpostgres> docker exec 64648d74d966538 mysql -uroot -p123 -e 'show databases;'
```

Database
information_schema
mysql
performance_schema
sys

```
PS C:\Users\shipo\OneDrive\Desktop\HW1ToDowithpostgres>
```

5)MySQL showing me:

```
PS C:\Users\shipo\OneDrive\Desktop\HW1ToDowithpostgres> docker exec -it 64648d74d966538 mysql -uroot -p123 -e 'show databases;'
```

Database
information_schema
mysql
performance_schema
sys

```
PS C:\Users\shipo\OneDrive\Desktop\HW1ToDowithpostgres>
```

6)Tried to create a new MySQL terminal:

```
PS C:\Users\shipo\OneDrive\Desktop\HW1ToDowithpostgres> docker exec -it 64648d74d966538 mysql -uroot -p123 -e 'show databases;'
```

Database
information_schema
mysql
performance_schema
sys

```
mysql: [Warning] Using a password on the command line interface can be insecure.
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 10
Server version: 8.0.31 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>
```

7) Tried to show the databases and create databases:

```
mysql> show databases;
```

Database
information_schema
mysql
performance_schema
sys

```
4 rows in set (0.05 sec)

mysql> create database test1;
Query OK, 1 row affected (0.06 sec)

mysql>
```

8)Run App with MySQL:

```
PS C:\Users\shipo\OneDrive\Desktop\ToDoPostgresql\ToDoWithpostgres> ls

Directory: C:\Users\shipo\OneDrive\Desktop\ToDoPostgresql\ToDoWithpostgres

Mode                LastWriteTime         Length Name
----                -
da---l             10/29/2022   1:08 AM           P2 - ToDo with postgres
da---l             10/29/2022   1:08 AM           __MACOSX
```

Built docker file:

```
PS C:\Users\shipo\OneDrive\Desktop\ToDoPostgresql\ToDoWithpostgres> docker built -t getting-started .
unknown shorthand flag: 't' in -t
See 'docker --help'.

Usage: docker [OPTIONS] COMMAND

A self-sufficient runtime for containers

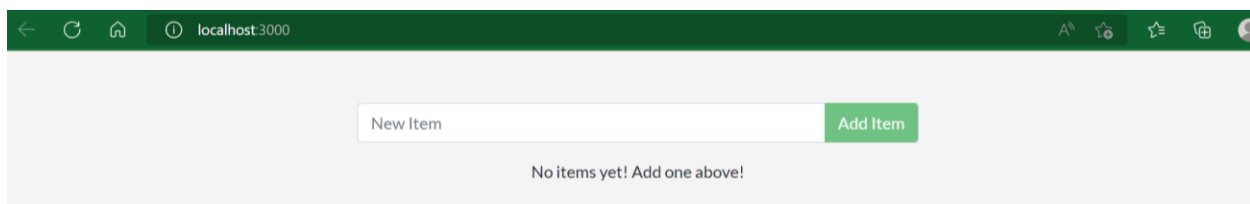
Options:
  --config string      Location of client config files (default
                        "C:\Users\shipo\docker")
  -c, --context string  Name of the context to use to connect to the
                        daemon (overrides DOCKER_HOST env var and
                        default context set with "docker context use")
  -D, --debug           Enable debug mode
  -H, --host list       Daemon socket(s) to connect to
  -l, --log-level string Set the logging level
```

Docker Images exist:

```
PS C:\Users\shipo\OneDrive\Desktop\ToDoPostgresql\ToDoWithpostgres> docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
mysql                8                   c2c2eba5ae85       29 hours ago       535MB
todo-shipon         latest             b24276a4eeb7       4 days ago         404MB
shiponnath/shipon_nath latest             b24276a4eeb7       4 days ago         404MB
<none>               <none>             c69ad4a54424       4 days ago         28.9MB
<none>               <none>             217af7b173c0       4 days ago         101MB
<none>               <none>             8ebde07e6a25       4 days ago         105MB
<none>               <none>             3c60835787a3       4 days ago         90.6MB
<none>               <none>             d03192eb2e00       4 days ago         448MB
web4page             latest             e754fd7da932       4 days ago         142MB
web3page             latest             0ec931290010       4 days ago         142MB
image_name           latest             af9da74af746       4 days ago         142MB
web1page             latest             af9da74af746       4 days ago         142MB
web2page             latest             af9da74af746       4 days ago         142MB
nginx                alpine             b997307a58ab       9 days ago         23.6MB
nginx                latest             5d58c024174d       9 days ago         142MB
postgres             latest             901a82b310d3       2 weeks ago        377MB
python               alpine             880fc229346e       2 weeks ago        48.7MB
```

Starting app container:

```
PS C:\Users\shipo\OneDrive\Desktop\ToDoWithPostgres\todoapp\app> docker run -dp 3000:3000 getting-started
7408799b2c7a088394d90413d1751d7a280946d59293604bb5ca617add01960e
PS C:\Users\shipo\OneDrive\Desktop\ToDoWithPostgres\todoapp\app>
```

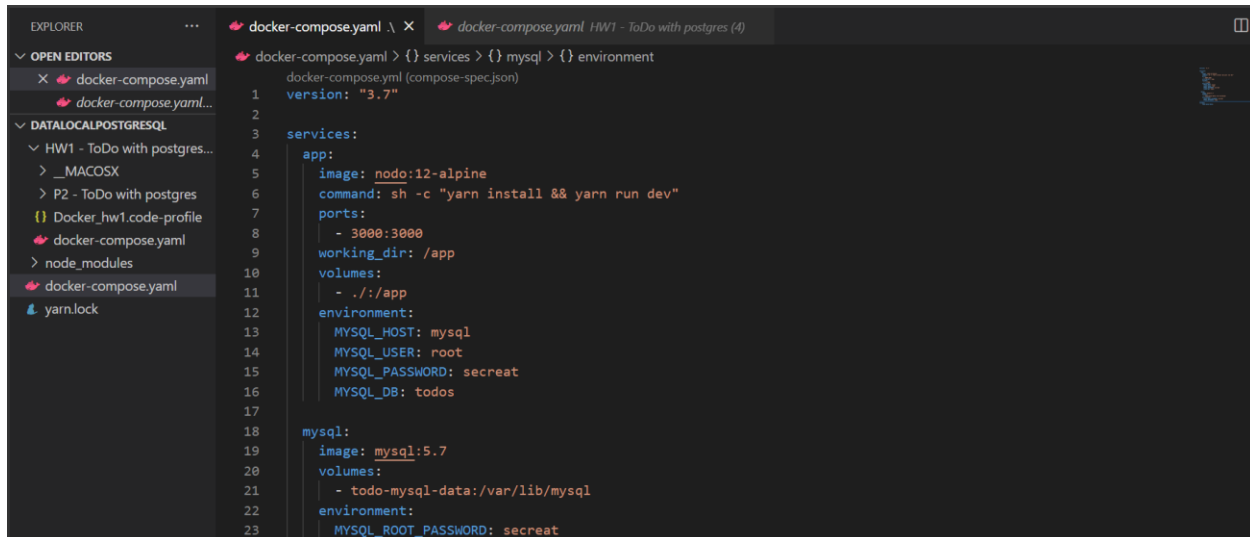


Part 2:

Install Docker Compose:

```
PS C:\Users\shipo\OneDrive\Desktop\ToDoWithPostgres\HW1 - ToDo with postgres (4)\__MACOSX> docker compose version
Docker Compose version v2.10.2
```

Create a new docker-compose.yaml file



```
EXPLORER
...
docker-compose.yaml \ X
docker-compose.yaml HW1 - ToDo with postgres (4)

OPEN EDITORS
X docker-compose.yaml
docker-compose.yaml...

DATALOCALPOSTGRES
  HW1 - ToDo with postgres...
    > __MACOSX
    > P2 - ToDo with postgres
    {} Docker_hw1.code-profile
    docker-compose.yaml
    > node_modules
    docker-compose.yaml
    yarn.lock

docker-compose.yaml > {} services > {} mysql > {} environment
docker-compose.yaml (compose-spec.json)
1 version: "3.7"
2
3 services:
4   app:
5     image: node:12-alpine
6     command: sh -c "yarn install && yarn run dev"
7     ports:
8       - 3000:3000
9     working_dir: /app
10    volumes:
11      - ./:/app
12    environment:
13      MYSQL_HOST: mysql
14      MYSQL_USER: root
15      MYSQL_PASSWORD: secret
16      MYSQL_DB: todos
17
18    mysql:
19      image: mysql:5.7
20      volumes:
21        - todo-mysql-data:/var/lib/mysql
22      environment:
23        MYSQL_ROOT_PASSWORD: secret
```

Define the app service:

```
PS C:\Users\shipo\OneDrive\Desktop\DataLocalpostgreSQL> docker run -dp 3000:3000 `
>> -w /app -v "$(pwd):/app" `
>> --network todo-app `
>> -e MYSQL_HOST=mysql `
>> -e MYSQL_USER=root `
>> -e MYSQL_PASSWORD=secret `
>> -e MYSQL_DB=todos `
>> node:12-alpine `
>> sh -c "yarn install && yarn run dev"
cc48434307e7f1ad1a6ed7c758b7a9c0af1bc55c01aa2bc19301d4f592c4a931
PS C:\Users\shipo\OneDrive\Desktop\DataLocalpostgreSQL>
```

Define the MySQL services:

```
PS C:\Users\shipo\OneDrive\Desktop\DataLocalpostgreSQL> docker run -d `
>> --network todo-app --network-alias mysql `
>> -v todo-mysql-data:/var/lib/mysql `
>> -e MYSQL_ROOT_PASSWORD=secret `
>> -e MYSQL_DATABASE=todos `
>> mysql:5.7
6aa718cd2c852d1eddc0e8e6670bb743cb2234fec0ce48b8025faed1cc53905e
PS C:\Users\shipo\OneDrive\Desktop\DataLocalpostgreSQL>
```

Run the application stack










```
PS C:\Users\shipo\OneDrive\Desktop\Data\localpostgresql> docker compose up -d
unknown shorthand flag: 'd' in -d
See 'docker --help'.
```

Usage: docker [OPTIONS] COMMAND

A self-sufficient runtime for containers

Options:

--config string	Location of client config files (default "C:\Users\shipo\.docker")
-c, --context string	Name of the context to use to connect to the daemon (overrides DOCKER_HOST env var and default context set with "docker context use")
-D, --debug	Enable debug mode
-H, --host list	Daemon socket(s) to connect to
-l, --log-level string	Set the logging level

<input type="checkbox"/>		epic_proskuriakova 6aa718cd2c85 	mysql:5.7	Running	-	27 minutes ago			
<input type="checkbox"/>	> 	lets_itproduct 1 container	-	Running (1/1)	-				

Github_link

Github_link: https://github.com/Shipon9/Dockerfile_HW1_CloudSystem