

CDEC B24

Name – Vaibhav Navneet Jorvekar

Hosting 3 tier studentapp via docker compose

1. Create EC2 instance with ubuntu image and connect it.
2. Install docker in the instance terminal using root user (sudo -i) and after installing docker start the docker using systemctl start docker

Link - <https://docs.docker.com/engine/install/ubuntu/>

3. Firstly create data base in MySQL for this use command.

- `docker run -d -p 3306:3306 MYSQL_ROOT_PASSWORD=1234 mysql:latest`

```
root@ip-172-31-43-219:~# docker run -d -p 3306:3306 -e MYSQL_ROOT_PASSWORD=1234 mysql:latest
Unable to find image 'mysql:latest' locally
latest: Pulling from library/mysql
9a5c778f631f: Pull complete
9e77c3a95bf2: Pull complete
8b279a2086e0: Pull complete
c8bfbcde7882: Pull complete
d35b074b68ec: Pull complete
beea5014e6af: Pull complete
dc3791a61558: Pull complete
52f9323b9f0e: Pull complete
7f7391eab49b: Pull complete
8d2f04b287ee: Pull complete
Digest: sha256:9d1c923e5f66a89607285ee2641f8a53430a1ccd5e4a62b35eb8a48b74b9ff48
Status: Downloaded newer image for mysql:latest
be0dc3d9935c8fed58ebf8c87023c6df71bc08a0ed9ee0db8b876623bfbbadc3
```

- docker ps

```
root@ip-172-31-43-219:~# docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS                               NAME
be0dc3d9935c   mysql:latest "docker-entrypoint.s..." 4 seconds ago  Up 3 seconds  0.0.0.0:3306->3306/tcp, :::3306->3306/tcp, 33060/tcp  gift
```

- docker exec -it mysql -u root -p1234

4. After entering this command you enter into the mysql use commands to create database.

- create database studentapp;
- use studentapp;

```
root@ip-172-31-43-219:~# docker exec -it be0 mysql -u root -p1234
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 8
Server version: 8.3.0 MySQL Community Server - GPL

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owners.

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

mysql> create database studentapp;
Query OK, 1 row affected (0.00 sec)

mysql> create database studentapp;
ERROR 1007 (HY000): Can't create database 'studentapp'; database exists
mysql> use studentapp;
Database changed
```

```
CREATE TABLE if not exists students(student_id INT NOT
NULL
AUTO_INCREMENT,
student_name VARCHAR(100) NOT NULL,
student_addr VARCHAR(100) NOT NULL,
student_age VARCHAR(3) NOT NULL,
student_qual VARCHAR(20) NOT NULL,
student_percent VARCHAR(10) NOT NULL,
student_year_passed VARCHAR(10) NOT NULL,
PRIMARY KEY (student_id)
);
```

- desc students;
- exit

```
mysql> desc students;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| student_id     | int           | NO   | PRI | NULL    | auto_increment |
| student_name   | varchar(100)  | NO   |     | NULL    |                |
| student_addr   | varchar(100)  | NO   |     | NULL    |                |
| student_age    | varchar(3)    | NO   |     | NULL    |                |
| student_qual   | varchar(20)   | NO   |     | NULL    |                |
| student_percent | varchar(10)   | NO   |     | NULL    |                |
| student_year_passed | varchar(10)   | NO   |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> exit
Bye
```

- **docker inspect |grep "IP"**

Database will be created

```
root@ip-172-31-43-219:~# docker inspect be0dc3d9935c |grep "IP"
      "LinkLocalIPv6Address": "",
      "LinkLocalIPv6PrefixLen": 0,
      "SecondaryIPAddresses": null,
      "SecondaryIPv6Addresses": null,
      "GlobalIPv6Address": "",
      "GlobalIPv6PrefixLen": 0,
      "IPAddress": "172.17.0.2",
      "IPPrefixLen": 16,
      "IPv6Gateway": "",
      "IPAMConfig": null,
      "IPAddress": "172.17.0.2",
      "IPPrefixLen": 16,
      "IPv6Gateway": "",
      "GlobalIPv6Address": "",
      "GlobalIPv6PrefixLen": 0,
root@ip-172-31-43-219:~# git clone https://github.com/vaibhavjorvekar2306/three-tier.git
Cloning into 'three-tier'...
remote: Enumerating objects: 36, done.
remote: Counting objects: 100% (36/36), done.
remote: Compressing objects: 100% (34/34), done.
remote: Total 36 (delta 10), reused 0 (delta 0), pack-reused 0
```

- **Create docker compose file with extension yaml (docker-compose.yml)**
- **The docker-compose.yml file must be separate as shown in photo.**

github.com/vaibhavjorvekar2306/three-tier

vaibhavjorvekar2306 / three-tier

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vaibhavjorvekar2306 Update index.html 38cbfa4 · 39 minutes ago 9 Commits

backend	Delete backend/docker-compose.yml	1 hour ago
frontend	Update index.html	39 minutes ago
README.md	Initial commit	11 hours ago
docker-compose.yml	Update docker-compose.yml	1 hour ago

three-tier / docker-compose.yml

vaibhavjorvekar2306 Update docker-compose.yml

Code Blame 19 lines (16 loc) · 344 Bytes Code 55% faster with GitHub Copilot

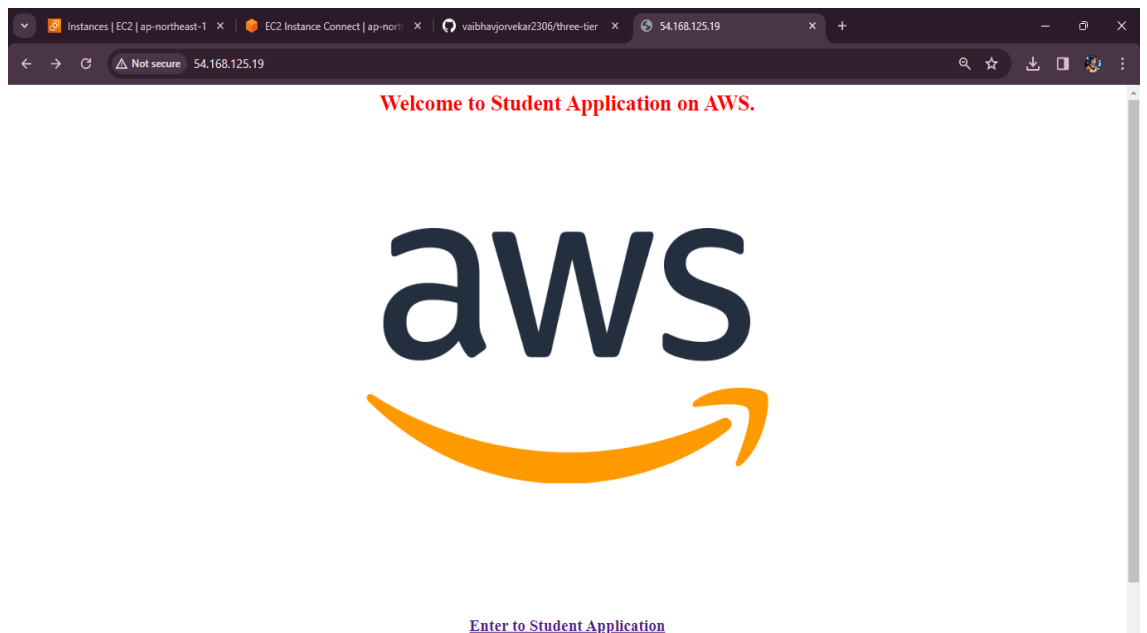
```
1
2  version: "2.25.0"
3
4  services:
5    frontending:
6      build: /root/three-tier/frontend
7      container_name : frontend
8      ports:
9        - 80:80
10     network_mode: bridge
11
12    backending:
13      build: /root/three-tier/backend
14      container_name: backend
15      ports:
16        - 8080:8080
17      network_mode: bridge
18      depends_on :
19        - "frontending"
```

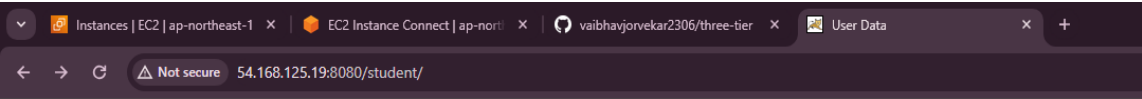
1. **Git push or pull**
2. **Cd <repo name>**
3. **docker compose up -d -> use command**

-docker compose up -d

```
=> [backendingg 9/9] RUN yum install java -y
=> [backendingg] exporting to image
=> => exporting layers
=> => writing image sha256:ce951da3b26de728
=> => naming to docker.io/library/three-tier
[+] Running 2/2
✓ Container frontend Started
✓ Container backend Started
```

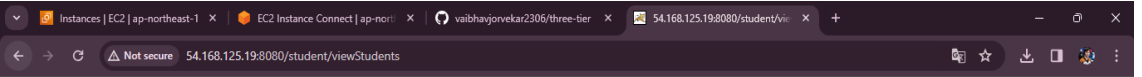
Hit the ip in web





Student Registration Form

Student Name	<input type="text" value="Vaibhav Jorvekar"/>
Student Address	<input type="text" value="pune"/>
Student Age	<input type="text" value="21"/>
Student Qualification	<input type="text" value="bachelor of science"/>
Student Percentage	<input type="text" value="7.91"/>
Year Passed	<input type="text" value="2023"/>
<input type="button" value="register"/>	



[Register Student](#)

Students List

Student ID	StudentName	Student Addr	Student Age	Student Qualification	Student Percentage	Student Year Passed	Edit	Delete
1	Vaibhav Jorvekar	pune	21	bachelor of science	7.91	2023	edit	delete