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**Q1: Using Docker Desktop or Docker Playground, perform the following: a. Create a Container with PostgresDB or mySQL database installed (5 Marks)**

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### **Install PostgreSQL Container**

`docker run --name pgdb -e POSTGRES_PASSWORD=mysecretpassword -d -p 5432:5432 postgres`

### **Access Postgres inside the container**

`docker exec -it pgdb psql -U postgres`

d00h36gl\_d00h75ol2o9000c4j3ag

IP


192.168.0.23

OPEN PORT


Memory

CPU

SSH

ssh ip172-18-0-189-d00h36gl2o9000c4j35g@direct.labs.pl 

DELETE

 EDITOR

```
# The PWD team.                                     #
#####
[node1] (local) root@192.168.0.23 ~
$ ^[[200~docker run --name pgdb -e POSTGRES_PASSWORD=mysecretpassword -d -p 5432:5432 postgres
bash: $'\E[200~docker': command not found
[node1] (local) root@192.168.0.23 ~
$ docker run --name pgdb -e POSTGRES_PASSWORD=mysecretpassword -d -p 5432:5432 postgres
Unable to find image 'postgres:latest' locally
latest: Pulling from library/postgres
8a628cdd7ccc: Pull complete
e4847368ad17: Pull complete
97cdd47d9131: Pull complete
2817206b0512: Pull complete
3a6f8814136c: Pull complete
07db60713289: Pull complete
0c942aac37b1: Pull complete
8c63b71925de: Pull complete
97f28320a07a: Pull complete
2a08aad74366: Pull complete
6cea4d95608f: Pull complete
c1b7de8085d1: Pull complete
f15c43cffa70: Pull complete
```

## Install MySQL Container

```
docker run --name mysqlldb -e MYSQL_ROOT_PASSWORD=rootpass -d -p 3306:3306 mysql
```

## Access MySQL shell

```
docker exec -it mysqlldb mysql -u root -p
```

```
f15c43cffa70: Pull complete
6948dc7760c1: Pull complete
Digest: sha256:fe3f571d128e8efadcd8b2fde0e2b73ebab6dbec33f6bfe69d98c682c7d8f7bd
Status: Downloaded newer image for postgres:latest
26412826f434d8b611e6c65e07fba761c57e12f6363b4c2301ee6b9ec23855de
[node1] (local) root@192.168.0.23 ~
$ docker exec -it pgdb psql -U postgres
psql (17.4 (Debian 17.4-1.pgdgl20+2))
Type "help" for help.

postgres=# docker ps
postgres=# \l
```

List of databases									
Name	Owner	Encoding	Locale Provider	Collate	Ctype	Locale	ICU Rules	Access privileges	
postgres	postgres	UTF8	libc	en_US.utf8	en_US.utf8				
template0	postgres	UTF8	libc	en_US.utf8	en_US.utf8			=c/postgres	+
template1	postgres	UTF8	libc	en_US.utf8	en_US.utf8			=c/postgres	+
								postgres=Ct/postgres	

```
(3 rows)
```

We are inside the PostgreSQL shell running in your Docker container.

We can now execute SQL commands.

1. Create a Database nitt
2. Create table student
3. Add student data in table
4. Print table data
5. exit

```
postgres=# CREATE DATABASE nitt;
ERROR:  syntax error at or near "docker"
LINE 1: docker ps
       ^

postgres=# create database nitt;
CREATE DATABASE
postgres=# \c nitt
You are now connected to database "nitt" as user "postgres".
nitt=# create table student( id serial primary key,name varchar(100),age int);
CREATE TABLE
nitt=# insert into student (name,age) values ('Neha',09),('Atharv',30);
INSERT 0 2
nitt=# select * from student;
 id | name  | age
----+-----+----
  1 | Neha  |   9
  2 | Atharv |  30
(2 rows)

nitt=# \q
[node1] (local) root@192.168.0.23 ~
```

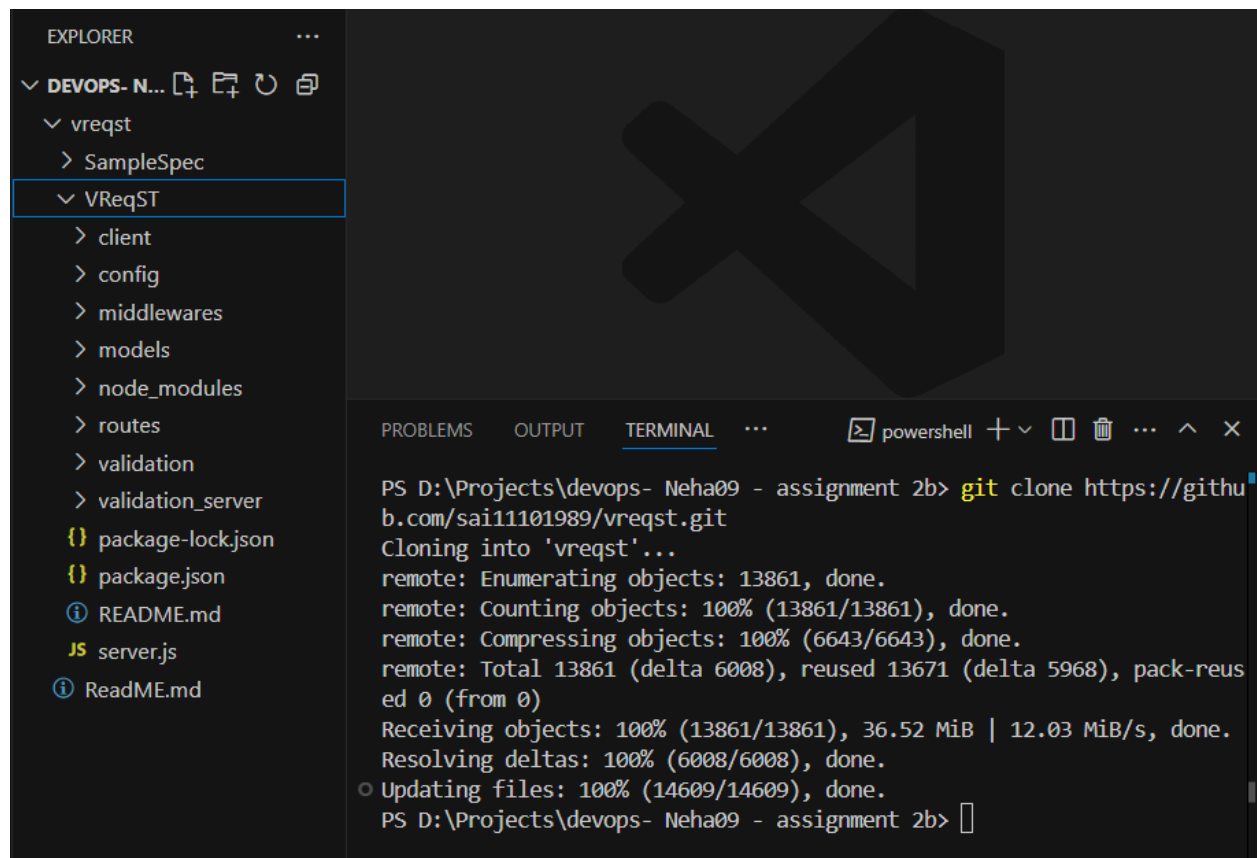
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**Q2. Deploy VReqST – A requirement specification tool in a container. All the artifacts required for the tool as listed here -**

**[https://docs.google.com/viewer?url=https://raw.githubusercontent.com/sai11101989/sai11101989.github.io/main/Course/DevOps\\_NIT\\_Spring2025/VReqST\\_ICSE2025\\_Artifacts.pdf](https://docs.google.com/viewer?url=https://raw.githubusercontent.com/sai11101989/sai11101989.github.io/main/Course/DevOps_NIT_Spring2025/VReqST_ICSE2025_Artifacts.pdf)**

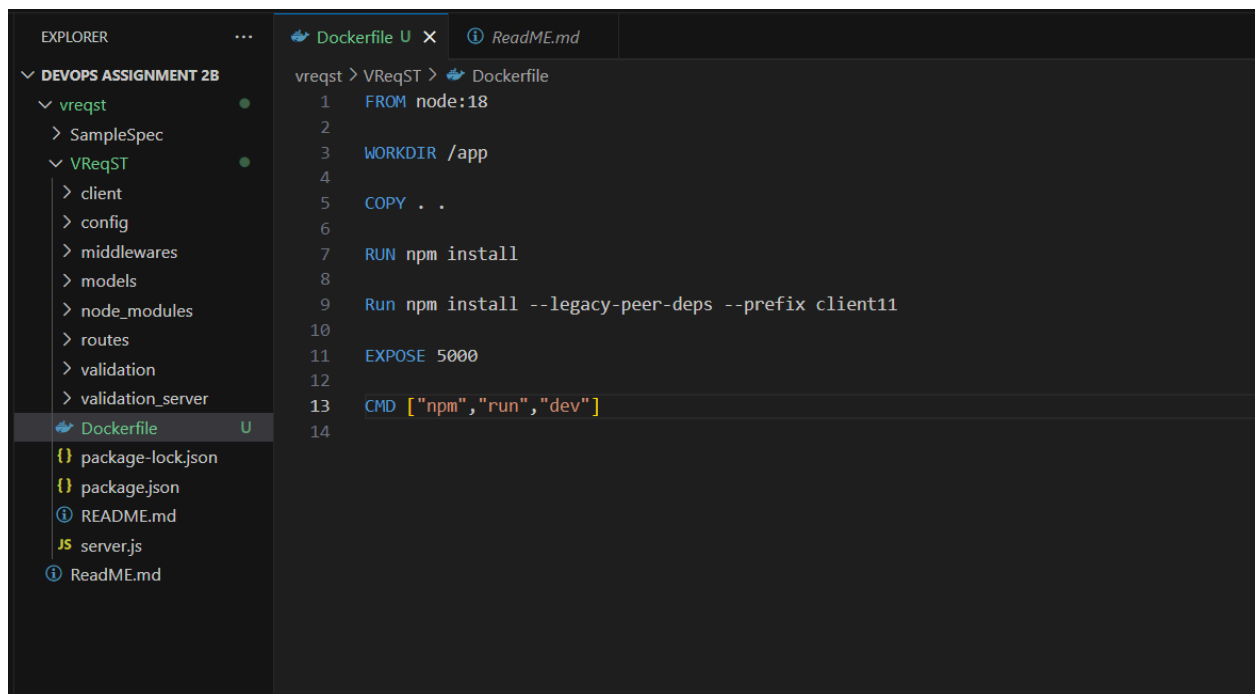
---

**Clone the repo** : `git clone https://github.com/sai11101989/VReqST.git`

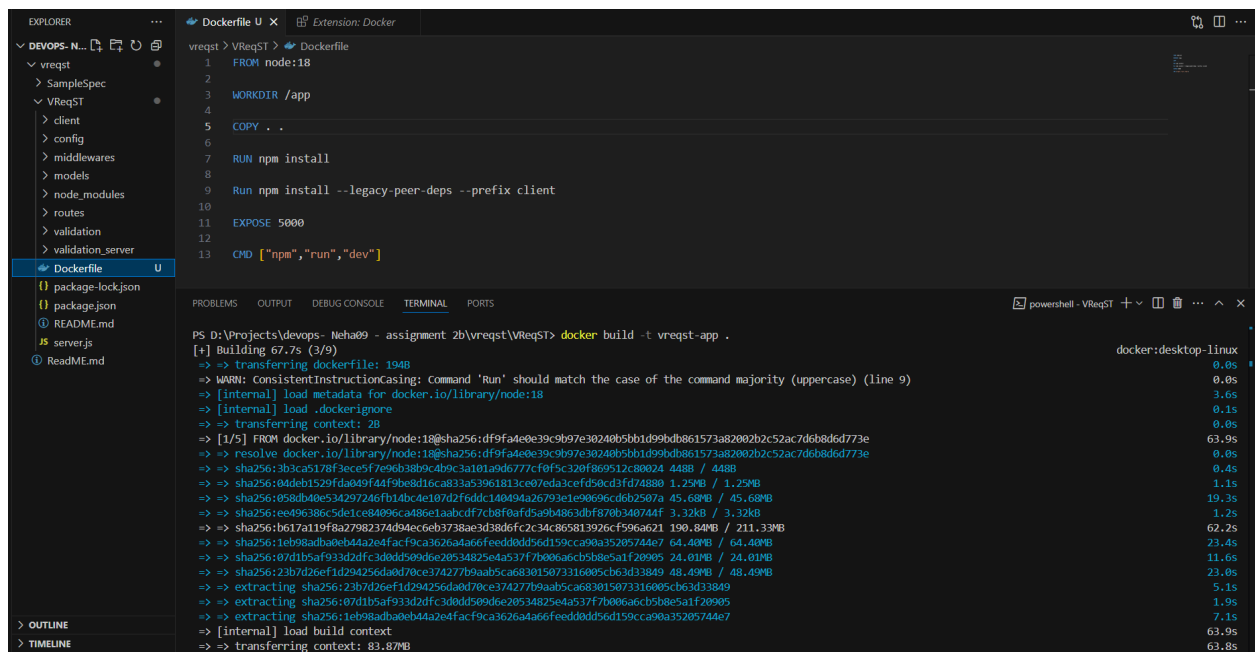


`cd VReqST/VReqST`

**Create a Dockerfile**



Build the Docker image : `docker build -t vreqst-app .`



```

$ docker build -t vreqst:vreqst .
[+] Building 122.5s (10/10) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 194B
=> [internal] load metadata for docker.io/library/node:18
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/5] FROM docker.io/library/node:18@sha256:df9fa4e0e39c9b97e30240b5bb1d99bdb861573a82002b2c52ac7d6b8d6d773e
=> => resolve docker.io/library/node:18@sha256:df9fa4e0e39c9b97e30240b5bb1d99bdb861573a82002b2c52ac7d6b8d6d773e
=> [internal] load build context
=> => transferring context: 1.14MB
=> CACHED [2/5] WORKDIR /app
=> [3/5] COPY . .
=> [4/5] RUN npm install
=> [5/5] RUN npm install --legacy-peer-deps --prefix client
=> exporting to image
=> => exporting layers
=> => exporting manifest sha256:491c0d02037001953c0a07831babfb2c8b16b169b15486093bd58af8840f3ca0
=> => exporting config sha256:53fb63823b62d52d1702355100e84a82270aa5d940b9e5630ea8f452227155ea
=> => exporting attestation manifest sha256:73d28743cd5852feb61e1c3a05bec5f5218858fe1e5248c7324bd7f5c0b966fb
=> => exporting manifest list sha256:55fd656534426ae3faa24fe32c232127b950d672528d90944998fe0466b3be99
=> => naming to docker.io/library/vreqst-app:latest
=> => unpacking to docker.io/library/vreqst-app:latest
View build details: docker-desktop://dashboard/build/desktop-linux/desktop-linux/liivq698im86547m9y2ow8bz2
PS D:\Projects\devops- Neha09 - assignment 2b\vreqst\VReqST>

```

Run the container :

```
docker run --name vreqst-container -p 5000:5000 vreqst-app
```

Build history

Active builds

Q Search

Show only my builds

<input type="checkbox"/>	Name	ID	Builder	Duration	Created	Author	
<input type="checkbox"/>	✓ VReqST	liivq6	desktop-linux	2m 02s	7 minutes ago	N/A	

Check If the Image Is Built

docker images

Images

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Local

Docker Hub repositories

1.87 GB / 0 Bytes in use

1 images

Last refresh: 17 minutes ago

Q Search

<input type="checkbox"/>	Name	Tag	Image ID	Created	Size	Actions
<input type="checkbox"/>	● vreqst-app	latest	55fd65653442	8 minutes ago	2.45 GB	<div><div></div><div></div><div></div></div>