#### Lab6-Final

#### ติดตั้ง WSL แล้วเช็ค version

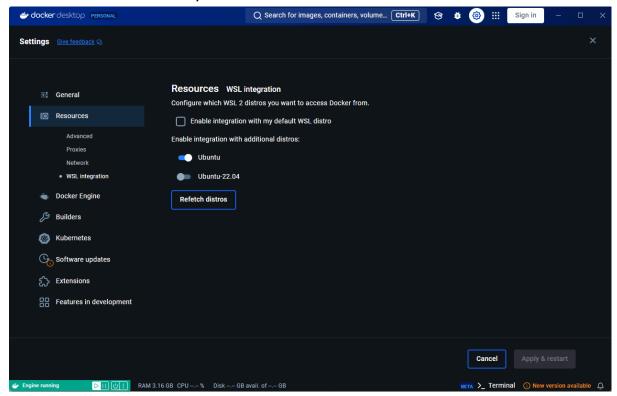
```
PS C:\Users\TUF> wsl --install
Installing: Ubuntu
Ubuntu has been installed.
Launching Ubuntu...
Installing, this may take a few minutes...
Please create a default UNIX user account. The username does not need to match your Windows username.
For more information visit: https://aka.ms/wslusers
Enter new UNIX username: Jirapat
err: Please enter a username matching the regular expression configured via the NAME_REGEX configuration variable. Use the
                `--allow-bad-names' option to relax this check or reconfigure
NAME_REGEX in configuration.
Enter new UNIX username: jirapat
New password:
Retype new password:
passwd: password updated successfully
Installation successful!
To run a command as administrator (user "root"), use "sudo <command>". See "man sudo_root" for details.
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 5.15.153.1-microsoft-standard-WSL2 x86_64)
 * Documentation: https://help.ubuntu.com

* Management: https://landscape.canonical.com

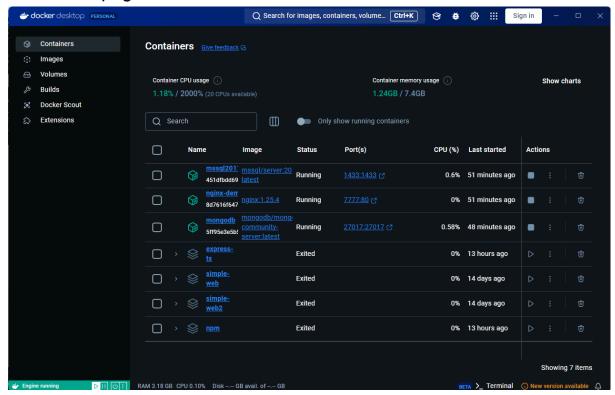
* Support: https://ubuntu.com/pro
 System information as of Sat Oct 19 01:22:51 +07 2024
  System load: 0.15 Processes: Usage of /: 0.1% of 1006.85GB Users logged in: Memory usage: 12% IPv4 address for
                                                                         51
                                            IPv4 address for eth0: 172.23.196.161
  Swap usage: 0%
This message is shown once a day. To disable it please create the
/home/jirapat/.hushlogin file.
jirapat@Asus:~$
```

PS C:\Users\TUF>	wsl -l -v	
NAME	STATE	VERSION
* Ubuntu-22.04	Running	2
docker-desktop	Running	2
Ubuntu	Running	2
PS C:\Users\TUF>		

# ตั้งค่าใน Docker Desktop



#### Containers page



#### ทำการ pull nginx

```
• jirapat@Asus:~/engse207/engse207-docker/docker-image$ docker image pull nginx:1.25.4

1.25.4: Pulling from library/nginx

Digest: sha256:9ff236ed47fe39cf1f0acf349d0e5137f8b8a6fd0b46e5117a401010e56222e1

Status: Image is up to date for nginx:1.25.4

docker.io/library/nginx:1.25.4

• jirapat@Asus:~/engse207/engse207-docker/docker-image$
```

#### run container Nginx

```
jirapat@Asus:~/engse207/engse207-docker/docker-image$ docker container run -d nginx:1.25.4 dd2ceaed1702d6c7177d94a706f32843ff1f0b76e4bd22b68741bdefe5a532d4
```

```
• jirapat@Asus:~/engse207-docker/docker-image$ docker images
                                                           IMAGE ID
  REPOSITORY
                                                                           CREATED
                                                                                            SIZE
  myapp
                                                latest
                                                           3b1d98ee43ba
                                                                           7 days ago
                                                                                            1.78GB
                                                          25bcd572f1ed 7 days ago
d2eb56950b84 2 weeks ago
1780881eaf81 3 months ago
                                                                                            1.78GB
  fifamyapp
                                                latest
                                                latest
                                                                                            279MB
  docker.frappet.com/training/oom express
                                                0.0.1
                                                                                            1.79GB
  jc21/nginx-proxy-manager
                                                latest
                                                           5bd2aae54ac0 3 months ago
                                                                                            1.58GB
 nginx
                                                1.25.4 9ff236ed47fe 8 months ago
                                                                                            272MB
```

#### port 7777

```
● jirapat@Asus:~/engse207-docker/docker-image$ docker ps

CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES

6a6411d4f2de nginx:1.25.4 "/docker-entrypoint..." 5 minutes ago Up 5 minutes 0.0.0.0:7777->80/tcp inspiring_blackburn
```

## Clone ENGSE207 Docker git repository ลงมา

```
jirapat@Asus:~/engse207$ git clone https://github.com/se-rmutl/engse207-docker.git
Cloning into 'engse207-docker'...
remote: Enumerating objects: 92, done.
remote: Counting objects: 100% (92/92), done.
remote: Compressing objects: 100% (77/77), done.
remote: Total 92 (delta 7), reused 86 (delta 4), pack-reused 0 (from 0)
Receiving objects: 100% (92/92), 5.30 MiB | 6.14 MiB/s, done.
Resolving deltas: 100% (7/7), done.
jirapat@Asus:~/engse207$
```

# ติดตั้ง MSSQL Image and Configuration pull image

```
$ docker pull mcr.microsoft.com/mssql/server:2017-latest
jirapat@Asus:/engse207/engse207-docker/docker-image$ docker pull mcr.microsoft.
2017-latest: Pulling from mssql/server
a6ec4b3b25ec: Download complete
ac40f1754a69: Download complete
699451820735: Download complete
Digest: sha256:896972291ff7bd8b7fc172df994fb8b35135b0a7614e97b9e892c18328bc1208
Status: Downloaded newer image for mcr.microsoft.com/mssql/server:2017-latest
mcr.microsoft.com/mssql/server:2017-latest
                                                                                                                            $ docker image ĺs
IMAGE ID
 REPOSITORY
                                                                                                                                                                          CREATED
                                                                                                     latest
latest
                                                                                                                                      3b1d98ee43ba
25bcd572f1ed
                                                                                                                                                                         8 days ago
8 days ago
2 weeks ago
3 weeks ago
                                                                                                                                                                                                              1.78GB
1.78GB
myapp
fifamyapp
                                                                                                                                                                                                             279MB
1.81GB
1.79GB
1.58GB
                                                                                                     latest
2017-latest
                                                                                                                                     d2eb56950b84
896972291ff7
 mcr.microsoft.com/mssql/server
                                                                                                                                                                         3 months ago
3 months ago
8 months ago
docker.frappet.com/training/oom_express
jc21/nginx-proxy-manager
                                                                                                    0.0.1
latest
                                                                                                                                      1780881eaf81
5bd2aae54ac0
 nginx
                                                                                                     1.25.4
                                                                                                                                      9ff236ed47fe
```

## Config SA Password

```
jirapat@Asus:~/engse207/engse207-docker/docker-image$ docker run -e "ACCEPT_EULA=Y" -e "MSSQL_SA_PASSWORD=P@ssw0rd"
-p 1433:1433 --name mssql2017 -d mcr.microsoft.com/mssql/server:2017-latest
c99484753fa99ef7a14b4bf89463b294cbb2b6793dcaa92af3a24c9d64164a49
```

ใครขึ้นแบบนี้ docker: Error response from daemon: Ports are not available: exposing port TCP 0.0.0.0:1433 -> 0.0.0.0:0: listen tcp 0.0.0.0:1433: bind: An attempt was made to access a socket in a way forbidden by its access permissions.

ให้เข้าไปที่ cmd(ต้องเข้าที่ run as administrator) ของ windows 11 แล้วให้ใช้คำสั่งนี้ net stop winnat

# เข้าไปที่ mssql command line

```
jirapat@Asus:~/engse207/engse207-docker/docker-image$ docker exec -it mssql2017 "bash"
root@451dfbdd69d8:/#
```

#### สร้าง Database

net start winnat

```
master
tempdb
(4 rows affected)
 Network packet size (bytes): 4096
l xact[s]:
     avg 1.0 (1000.0 xacts per sec.)
 Network packet size (bytes): 4096
1 xact[s]:
                                                 206 avg 206.0 (4.9 xacts per sec.)
1> use team/_web_tabbb;
2> go
Changed database context to 'team7_web_labDB'.
  etwork packet size (bytes): 4096
xact[s]:
lock Time (ms.): total 1 avg 1.0 (1000.0 xacts per sec.)
> CREATE TABLE dbo.Inventory ( id INT, name VARCHAR(50), quantity INT, PRIMARY KEY (id));
Network packet size (bytes): 4096
1 xact[s]:
Clock Time (ms.): total
11 avg 11.0 (90.9 xacts per sec.)
1> INSERT INTO dbo.Inventory VALUES (1, 'banana', 150);
2> INSERT INTO dbo.Inventory VALUES (2, 'orange', 154);
3> go
(1 rows affected)
  etwork packet size (bytes): 4096
xact[s]:
lock Time (ms.): total 9 avg 9.0 (111.1 xacts per sec.)
> SELECT * FROM dbo.Inventory;
                                                                                                                     150
154
                1 banana
2 orange
(2 rows affected)
Network packet size (bytes): 4096
1 xact[s]:
Clock Time (ms.): total 3
                                                   3 avg 3.0 (333.3 xacts per sec.)
```

#### Import SQL Data

- Import data โดยเรียกโปรแกรม mssql

```
jirapat@Asus:~/engse207/engse207-docker/docker-image$ docker exec -it mssql2017 "bash"
root@451dfbdd69d8:/# /opt/mssql-tools/bin/sqlcmd -S localhost -U sa -p -d team7_web_labDB -i /home/dbo.OnlineAgents.Table.sql
Network packet size (bytes): 4096
1 xact[s]:
Clock Time (ms.): total 1
                   1 avg 1.0 (1000.0 xacts per sec.)
Network packet size (bytes): 4096
1 xact[s]:
Clock Time (ms.): total 6 avg 6.0 (166.7 xacts per sec.)
Network packet size (bytes): 4096
1 xact[s]:
Clock Time (ms.): total 81 avg 81.0 (12.3 xacts per sec.)
(1 rows affected)
(1 rows affected)
(1 rows affected)
(1 rows affected)
Network packet size (bytes): 4096
1 xact[s]:
Clock Time (ms.): total 5 avg 5.0 (200.0 xacts per sec.)
Network packet size (bytes): 4096
1 xact[s]:
Clock Time (ms.): total 2 avg 2.0 (500.0 xacts per sec.)
Network packet size (bytes): 4096
1 xact[s]:
Clock Time (ms.): total
                                         2 avg 2.0 (500.0 xacts per sec.)
root@451dfbdd69d8:/#
```

```
root@451dfbdd69d8:/# /opt/mssql-tools/bin/sqlcmd -S localhost -U sa -p
Password:
1> use team7_web_labDB;
2> go
Changed database context to 'team7_web_labDB'.
Network packet size (bytes): 4096
l xact[s]:
1 avg 1.0 (1000.0 xacts per sec.)
 > SILEEF
> go
nlineAgent_id agent_id agent_code
AgentName
AgentStatus IsLogin LastUpdated
                                                          DIDQueueID StartOnline
                          NULL 9999
2023-08-31 13:56:26.033
NULL 3891
2023-09-05 14:27:35.483
                                                                   NULL 2023-08-31 13:56:26.033 cb40f193-1317-4b17-a360-506cd89700f7
                                                                   NULL 2023-09-05 14:27:35.483 0a9c6366-5ec7-4727-8698-045b977afe61
                                                                                                                                                                      Dev2
                         2023-09-05 14:27:35.483
NULL 9998
2023-09-07 14:05:20.360
NULL 99998
2023-09-08 10:08:16.063
NULL 3723
2023-09-13 13:45:22.167
NULL 3748
2023-09-13 17:20:07.890
                                                                   NULL 2023-09-07 14:05:20.360 5ac956de-560b-4888-8b69-d77dfdf3191d
                                                                   NULL 2023-09-08 10:08:16.063 b195cf34-b69a-46c8-8ef6-f4d31429bae8
                                                                                                                                                                      Dev2
                                                                   NULL 2023-09-13 13:45:22.167 7cd54ecf-f29f-44cf-8e84-17a86151b3c2
                                                                                                                                                                      Dev2
                                                                   NULL 2023-09-13 17:20:07.890 db3197c3-5624-41bd-8655-916a5a1040f7
      1
                          NULL 3746
2023-09-13 17:20:13.613
NULL 3773
2023-09-13 17:20:55.317
                                                                   NULL 2023-09-13 17:20:13.613 01b735a3-9bfb-4246-ae67-06d2177a76cd
                                                                                                                                                                      Dev2
                                                                   NULL 2023-09-13 17:20:55.317 ec1fbb94-fc47-4fe0-84bf-a8cf292e6a04
      1
                         2023-09-13

NULL 3772

2023-09-13 17:21:01.337

NULL 3822

2023-09-13 17:21:14.643
               9
                                                                   NULL 2023-09-13 17:21:01.337 2b61affc-0940-46dd-ad36-7122210208de
                                                                                                                                                                      Dev2
              10
                                                                   NULL 2023-09-13 17:21:14.643 585bea48-8fc4-4e8f-964a-347f72e0649f
                                                                                                                                                                       Dev2
                          NULL 3801
2023-09-13 17:21:20.837
                                                                   NULL 2023-09-13 17:21:20.837 6b420e3c-f1c9-4d45-ace3-2755ae2075d6
                                                                                                                                                                       Dev2
                                                                   NULL 2023-09-13 17:21:36.893 1da06967-168b-4380-b6fa-c8a35fb7e5f5
```

# ติดตั้ง MongoDB Image and Configuration

```
jirapat@Asus:~/engse207/engse207/docker/docker-image$ docker pull mongodb/mongodb-community-server:latest
latest: Pulling from mongodb/mongodb-community-server
6414378b6477: Download complete
ea9f76730df0: Download complete
4a38c01437f4: Download complete
4f4fb700ef54: Already exists
3561320b1d22: Download complete
6892f94b5cc5: Download complete
2579002e66c4: Download complete
09218eb43544: Download complete
dbf20f635577: Download complete
c43c894ea6e9: Download complete
923f72ee8d96: Download complete
Digest: sha256:9c913685357d8c373743097fdd7892a699cf1e42d4d2562f10a8afc72386b8c5
Status: Downloaded newer image for mongodb/mongodb-community-server:latest
docker.io/mongodb/mongodb-community-server:latest
```

```
irapat@Asus:-/engse207/engse207/engse207/docker/docker-image$ docker exec -it mongodb mongosh

Current Mongosh Log ID: 67133b66d830f347e6fe6910

Connecting to: mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.3.2

Using MongoDB: 7.0.14

Using MongoSh: 2.3.2

For mongosh info see: https://www.mongodb.com/docs/mongodb-shell/

To help improve our products, anonymous usage data is collected and sent to MongoDB periodically (https://www.mongodb.com/legal/privacy-policy).

You can opt-out by running the disableTelemetry() command.

The server generated these startup warnings when booting 2024-10-19704;53:47.265+00:00: Using the XFS filesystem is strongly recommended with the WiredTiger storage engine. See http://dochub.mongodb.org/core/prodnotes-filesystem 2024-10-19704;53:47.803+00:00: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted 2024-10-19704;53:47.803+00:00: /sys/kernel/mm/transparent_hugepage/enabled is 'always'. We suggest setting it to 'never' in this binary version 2024-10-19704;53:47.803+00:00: vm.max_map_count is too low

Test>
```

```
test> show dbs
admin 40.00 KiB
config 12.00 KiB
local 40.00 KiB
test>
```

## Create Database MongoDB

#### show database list after created

```
wallboarddb> use admin switched to db admin admin> show dbs admin 132.00 KiB config 12.00 KiB local 40.00 KiB admin>
```

## create example collection

```
admin> use wallboarddb
switched to db wallboarddb
wallboarddb> db.createCollection("log", { capped : true, size : 5242880, max : 5000 } )
{ ok: 1 }
wallboarddb> db.log.insertOne({ capped : true, size : 5242880, max : 5000 })
{
   acknowledged: true,
   insertedId: ObjectId('67133c73d830f347e6fe6911')
}
wallboarddb>
```

#### wallboarddb

```
wallboarddb> db.log.find()
  {
    _id: ObjectId('67133c73d830f347e6fe6911'),
    capped: true,
    size: 5242880,
    max: 5000
  }
wallboarddb> show collections
wallboarddb> show dbs
            132.00 KiB
admin
config
            60.00 KiB
             40.00 KiB
local
wallboarddb
            40.00 KiB
wallboarddb>
```

# ติดตั้ง Nodejs Image and Configuration

```
jirapat@Asus:~/engse207/engse207-docker/docker-image$ docker pull node:20
20: Pulling from library/node
e07e01c8fd93: Download complete
8ba0b3d08b81: Download complete
898ee3ab8d89: Download complete
2c430d81b800: Download complete
7d98d813d54f: Download complete
5f57b3eca258: Download complete
27bc85537ac7: Download complete
d0c5f3b3f727: Download complete
Digest: sha256:196a5fcd13db4362fb9c0ec5391db36ec954c65d6b0d0e5d37f59c7dc9920690
Status: Downloaded newer image for node:20
docker.io/library/node:20
```

```
image$ docker image ls
                                           TAG
REPOSITORY
                                                         IMAGE ID
                                                                         CREATED
                                                                                         SIZE
                                                          9c913685357d
mongodb/mongodb-community-server
                                           latest
                                                                         23 hours ago
                                                                                         1.67GB
                                                          3b1d98ee43ba
myapp
fifamyapp
                                           latest
                                                                         8 days ago
                                                                                         1.78GB
                                                                        8 days ago
                                                         25bcd572f1ed
                                                                                         1.78GB
                                           latest
                                                         196a5fcd13db
                                                                         2 weeks ago
node
                                           20
                                                                                         1.58GB
nginx
                                           latest
                                                          d2eb56950b84
                                                                         2 weeks ago
                                                                                         279MB
                                           2017-latest
                                                                        3 weeks ago
mcr.microsoft.com/mssql/server
                                                         896972291ff7
                                                                                         1.81GB
                                                                        3 months ago
3 months ago
                                                                                         1.79GB
docker.frappet.com/training/oom_express
                                                         1780881eaf81
                                           0.0.1
                                                         5bd2aae54ac0
jc21/nginx-proxy-manager
                                           latest
                                                                                         1.58GB
                                           1.25.4
                                                          9ff236ed47fe
                                                                        8 months ago
                                                                                         272MB
jirapat@Asus:~/engse207/engse207-docker/docker-image$
```

git clone <a href="https://github.com/se-rmutl/engse207.git">https://github.com/se-rmutl/engse207.git</a> ลงมา

```
jirapat@Asus:~/engse207$ git clone https://github.com/se-rmutl/engse207.git
Cloning into 'engse207'...
remote: Enumerating objects: 738, done.
remote: Counting objects: 100% (77/77), done.
remote: Compressing objects: 100% (58/58), done.
remote: Total 738 (delta 26), reused 61 (delta 17), pack-reused 661 (from 1)
Receiving objects: 100% (738/738), 7.06 MiB | 7.76 MiB/s, done.
Resolving deltas: 100% (211/211), done.
jirapat@Asus:~/engse207$
```

#### cd เข้าไปที่

engse207/engse207/n-tier architecture/backend/endpoint-api/

npm install

```
jirapat@Asus:-/engse207/engse207/n-tier_architecture/backend/endpoint-api$ npm install
npm warn deprecated har-validator@5.1.5: this library is no longer supported
npm warn deprecated request@2.88.2: request has been deprecated, see the this://github.com/request/request/issues/3142
npm warn deprecated uuid@3.4.0: Please upgrade to version 7 or higher. Older versions may use Math.random() in certain circumstances, whic
h is known to be problematic. See https://v8.dev/blog/math-random for details.

added 242 packages, and audited 243 packages in 37s

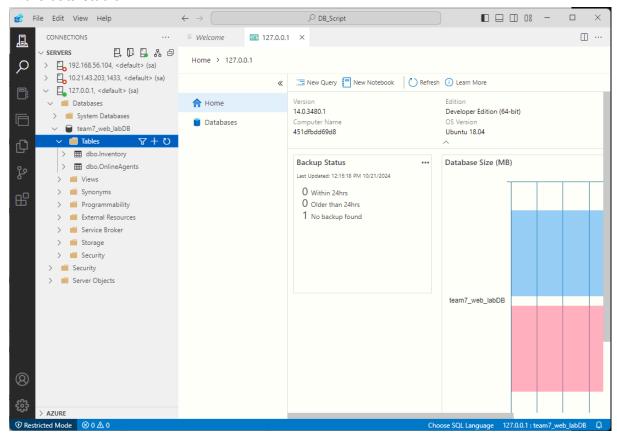
24 packages are looking for funding
run 'npm fund' for details

2 moderate severity vulnerabilities

Some issues need review, and may require choosing
a different dependency.

Run 'npm audit' for details.
jirapat@Asus:-/engse207/engse207/n-tier_architecture/backend/endpoint-api$
```

#### Azure data studio



## build container endpoint-api

- docker build -t endpoint-api .

## docker run container and port

docker run -p 8700:8700 -p 8701:8701 endpoint-api

jirapat@Asus:~/engse207/Lab6-Final/endpoint-api\$ docker run -p 8700:8700 -p 8701:8701 endpoint-api

# create image dockerfile



# Docker compose with port



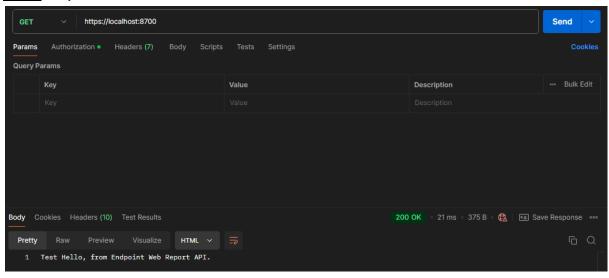
#### Dockerfile

```
Dockerfile

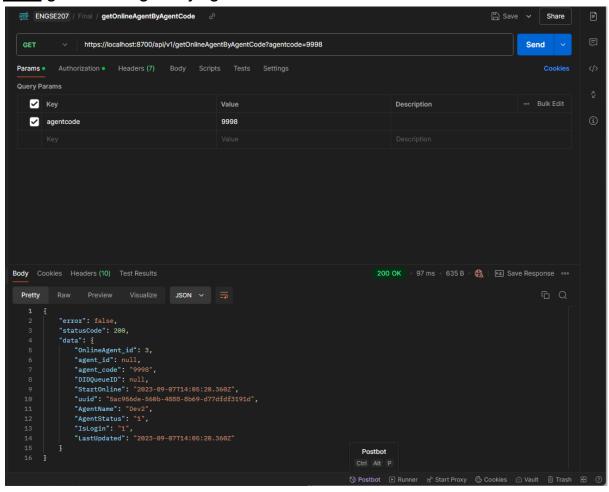
1  FROM node:20
2  WORKDIR /app
3  RUN git clone https://github.com/jirapatfifa/endpoint-api.git /app
4  RUN git pull
5  RUN npm install
6  COPY ./server.key /app
7  COPY ./server.crt /app
8  EXPOSE 8700 8701
9  CMD ["node", "webreport-api-https"]
```

## Test api

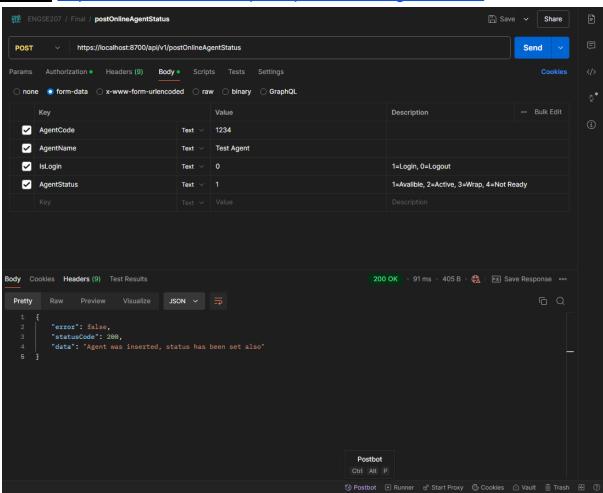
GET https://localhost:8700/



# **GET** getOnlineAgentByAgentCode



# POSE <a href="https://localhost:8700/api/v1/postOnlineAgentStatus">https://localhost:8700/api/v1/postOnlineAgentStatus</a>



#### Parse-server

## docker run -d -p 8705:8705 parse-server

| jirapat@Asus:~/engse207/Lab6-Final/Parse-server-api\$ docker run -d -p 8705:8705 parse-server 2962a95f1176b0ddba63db8c8b9b20b59d701830915962d63c21435048901597



#### Dockerfile

```
Dockerfile > ...

1  FROM node:20
2  WORKDIR /app
3  RUN git clone https://github.com/jirapatfifa/Parse-server-Api.git /app
4  RUN git pull
5  RUN npm install
6  COPY ./server.key /app
7  COPY ./server.crt /app
8  EXPOSE 8705
9  CMD ["node", "api-wallboard-https.js"]
10
11
```

#### React

```
EXPLORER
                                                        J₅ wbconfig.js X
COREUI-FREE-REACT
                      다 타 강 회 src > Js wbconfig.js
                                          1 v const wbconfig = {
> 🧓 public
hosturl: 'https://localhost:8705/api',
 > iii assets
                                                     wsurl : 'wss://https://localhost:8705',
 > Procomponents
                                                     masterKey : 'wallboardapi',
clientKey : 'wallboardapi',
 > 📻 layout
 > 📭 scss
                                                       javascriptKey : 'wallboardapi',
                                                        appId : "wallboardapi"
 > 🐚 views
   Js _nav.js
   Js App.js
                                                        hosturl : 'https://localhost:8705/api',
wsurl : 'wss://localhost:8705',
   us index.js
   † routes.js
                                                        masterKey : 'wallboardapi',
clientKey : 'wallboardapi',
   us store.js
                                                        javascriptKey : 'wallboardapi',
   Js wbconfig.js
                                                        appId : "wallboardapi"
  .browserslistrc
  .editorconfig
  eslintrc.js
                                              export default wbconfig;
  .gitattributes
```

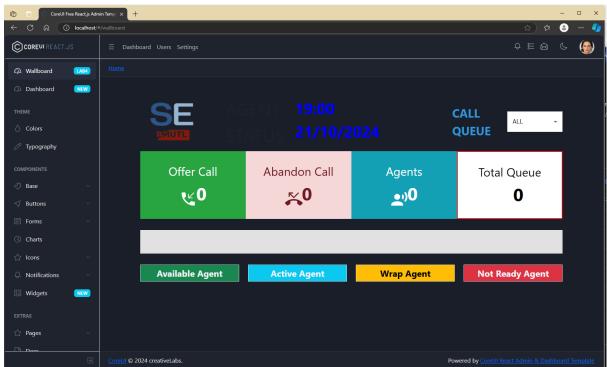
#### Dockerfile

#### Docker build -t react

#### run container port 80:80

jirapat@Asus:~/engse207/Lab6-Final/react\$ docker run -d -p 80:80 react 196ed5dbad15dc5b0fca933b366c2f01a9110ab8123b8ef875b01e24e58b6130

## Web Page



#### Docker container

9	jolly_swanson 196ed5dbad15 🌣	react: <none></none>	Running	<u>80:80</u> ♂	0%	1 hour ago	•	:	Ū
9	<u>upbeat_elion</u> 409d5f689612 🗇	endpoint-api: <none></none>	Running	8700:8700 (?) Show all ports (2)	0%	1 hour ago	•		
	mssql2017 451dfbdd69d8 🗇	mssql/server:2017- latest	Running	1433:1433 C	1.36%	1 hour ago	•		
9	nginx-demo 8d7616f647df 🗇	nginx:1.25.4	Exited (255)	7777:80	0%	2 hours ago	D		
9	mongodb c8e234c975b9 🎁	mongodb/mongodb- community- server:latest	Running	<u>27017:27017</u> 간	0.38%	1 hour ago	•		
	intelligent_mccar 2962a95f1176 🗇	parse-server: <none></none>	Running	<u>8705:8705</u> <u>7</u>	0.05%	31 minutes ago	•		

# config Agent Notification

```
success: function (response) {
 console.log("Status updated successfully:", response);
   url: "https://localhost:8705/api/functions/postOnlineAgentListByTeam",
   type: "post",
   contentType: "application/json",
   headers: {
     "X-Parse-Application-Id": "wallboardapi",
     "X-Parse-Master-Key": "wallboardapi",
     "Content-Type": "application/json",
   data: JSON.stringify({
     AgentCode: $("#agent").val(),
     AgentName: "test agent",
     Queue: 5, // ใส่ TeamCode ที่ต้องการ
     AgentStatus: agentStatusValue, // ใช้ค่า agentStatusValue จากการเลือกสถานะ
     AgentStatusCode: "5",
     IsLogin :1,
```

## **Agent Notification**

