

## Graded Project - Spring Rest

### Group :6A-5S

**Group Members:** Gayathri Balachandran (group leader), Vinod Bhat, Vikash Kumar, Vandana Malhotra

### H2 Embedded DB SQL:

```
EmployeeManagementRest - EmployeeManagementRest/src/main/resources/data.sql - Eclipse IDE
File Edit Navigate Search Project Run Window Help
# EmployeeManagementRestWebApplication.java EmployeesRestController.java Employee.java Roles.java User.java data.sql x
Connection profile
Type: Name: Database: Status: Disconnected, Auto Commit
1 --password of admin is admin6as5
2 --password of user is user6as5
3
4 insert into users (user_id,password, username) values (1,'$2a$12$yni9G4b7r9mEsXFpPKL9.uFcCDFl8Mn8rBNsz0sy2B2uk2TJkQkW', 'admin');
5 insert into users (user_id,password, username) values (2,'$2a$12$Ty3ck0TpY412ra3ByNrBKuh.bsA0euVxqBNILKfvg67tWFUwGcOMm', 'user');
6
7 insert into roles (role_id,name) values (1,'ADMIN');
8 insert into roles (role_id,name) values (2,'USER');
9
10 insert into users_roles (user_id, role_id) values (1, 1);
11 insert into users_roles (user_id, role_id) values (2, 2);
12
13 insert into employee (id, first_name, last_name, email) values (1, 'gayathri', 'balachandran', 'gaya.bala@gmail.com');
14 insert into employee (id, first_name, last_name, email) values (2, 'vikas', 'agrawal', 'vikas.agrawal@gmail.com');
15 insert into employee (id, first_name, last_name, email) values (3, 'vikas', 'sharma', 'vikas.sharma@gmail.com');
16
```

### H2 DB Tables : Initial Data

localhost:8084/h2-console/login.do?sessionId=aa1d5b77c29d671c2e559b490825182d

Auto commit Max rows: 1000 Auto complete Off Auto select On

jdbc:h2:mem:employeeeanager Run Run Selected Auto complete Clear SQL statement:

EMPLOYEE ROLES USERS USERS\_ROLES INFORMATION\_SCHEMA Users

H2 2.1.214 (2022-06-13)

SELECT \* FROM EMPLOYEE

SELECT \* FROM EMPLOYEE;

ID	EMAIL	FIRST_NAME	LAST_NAME
1	gaya.bala@gmail.com	gayathri	balachandran
2	vikas.agrawal@gmail.com	vikas	agrawal
3	vikas.sharma@gmail.com	vikas	sharma

(3 rows, 6 ms)

Edit

← ↻ localhost:8084/h2-console/login.do?sessionId=aa1d5b77c29d671c2e559b490825182d

🔥 | 🛠️ | ☒ Auto commit | 🔄 | 📄 | Max rows: 1000 | 🟢 | 📄 | 📄 | Auto complete: Off | Auto select: On | ?

📁 jdbc:h2:mem:employeeemanager | Run | Run Selected | Auto complete | Clear | SQL statement:

📁 EMPLOYEE  
📁 ROLES  
📁 USERS  
📁 USERS\_ROLES  
📁 INFORMATION\_SCHEMA  
📁 Users  
📁 H2 2.1.214 (2022-06-13)

SELECT \* FROM ROLES

SELECT \* FROM ROLES;

ROLE_ID	NAME
1	ADMIN
2	USER

(2 rows, 1 ms)

Edit

← ↻ localhost:8084/h2-console/login.do?sessionId=aa1d5b77c29d671c2e559b490825182d

🔥 | 🛠️ | ☒ Auto commit | 🔄 | 📄 | Max rows: 1000 | 🟢 | 📄 | 📄 | Auto complete: Off | Auto select: On | ?

📁 jdbc:h2:mem:employeeemanager | Run | Run Selected | Auto complete | Clear | SQL statement:

📁 EMPLOYEE  
📁 ROLES  
📁 USERS  
📁 USERS\_ROLES  
📁 INFORMATION\_SCHEMA  
📁 Users  
📁 H2 2.1.214 (2022-06-13)

SELECT \* FROM USERS

SELECT \* FROM USERS;

USER_ID	PASSWORD	USERNAME
1	\$2a\$12\$yni9G4b7r9mEsXfPFKL9.uFcCDP18Mn8rBNszz0syzB2ukZTJkQkW	admin
2	\$2a\$12\$Ty3ckOTpY4l2ra3EyNrBKuh.bsA0euVxqBNILKfvg67iWfUwGcOIm	user

(2 rows, 1 ms)

Edit

← ↻ localhost:8084/h2-console/login.do?sessionId=aa1d5b77c29d671c2e559b490825182d

🔥 | 🛠️ | ☒ Auto commit | 🔄 | 📄 | Max rows: 1000 | 🟢 | 📄 | 📄 | Auto complete: Off | Auto select: On | ?

📁 jdbc:h2:mem:employeeemanager | Run | Run Selected | Auto complete | Clear | SQL statement:

📁 EMPLOYEE  
📁 ROLES  
📁 USERS  
📁 USERS\_ROLES  
📁 INFORMATION\_SCHEMA  
📁 Users  
📁 H2 2.1.214 (2022-06-13)

SELECT \* FROM USERS\_ROLES

SELECT \* FROM USERS\_ROLES;

USER_ID	ROLE_ID
1	1
2	2

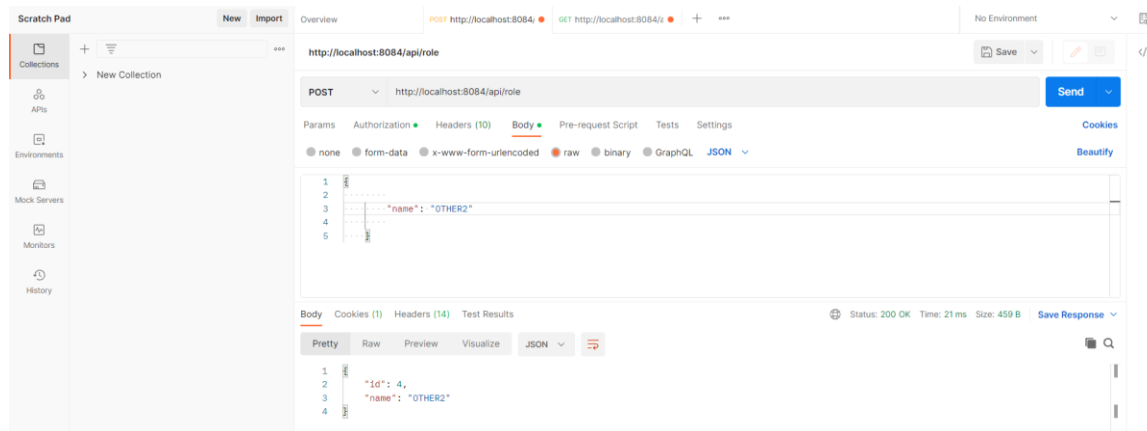
(2 rows, 2 ms)

## ENDPOINTS TESTING USING POSTMAN REQUIREMENTS 1 TO 3:

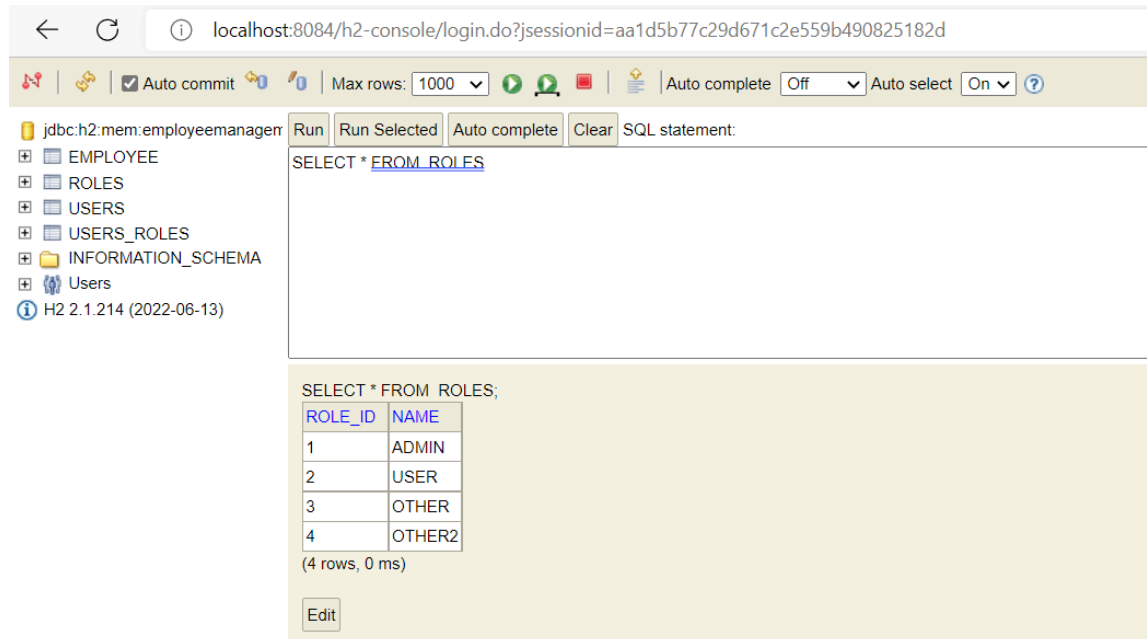
1. // 1. Your application should be able to add roles in the database dynamically in

// the db.

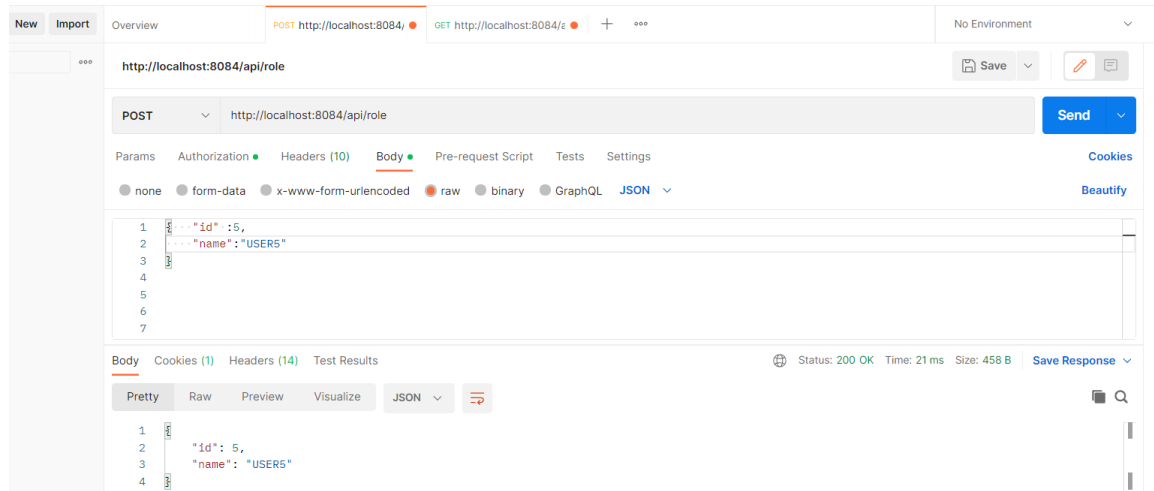
Role "OTHER2" has been added dynamically as below successfully



H2 DB after adding the role OTHER2 dynamically:

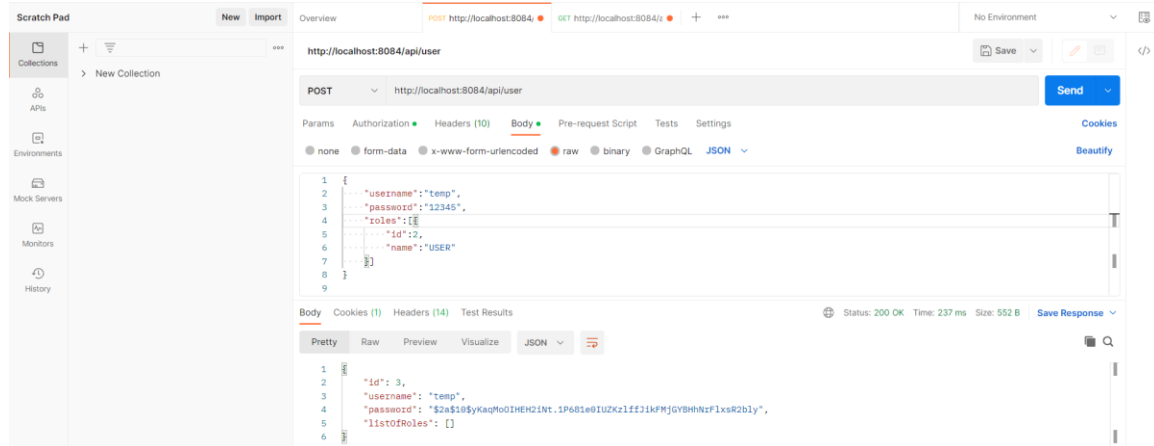


We can also provide id in the JSON Payload as below if needed to directly add role for id 5:



2.// Your application should be able to add Users in the db which can be used  
// for authentication purposes

user "temp" has been added dynamically to db using given json payload



H2 DB after adding user "temp"

localhost:8084/h2-console/login.do?sessionId=aa1d5b77c29d671c2e559b490825182d

Auto commit Max rows: 1000 Auto complete Off Auto select On

jdbc:h2:mem:employeemanager Run Run Selected Auto complete Clear SQL statement:

EMPLOYEE  
ROLES  
USERS  
USERS\_ROLES  
INFORMATION\_SCHEMA  
Users  
H2 2.1.214 (2022-06-13)

SELECT \* FROM USERS

SELECT \* FROM USERS;

USER_ID	PASSWORD	USERNAME
1	\$2a\$12\$yni9G4b7r9mEsXfPFKL9.uFcCDP18Mn8rBNszz0syZB2ukZTJkQkW	admin
2	\$2a\$12\$Ty3ckOTpY4l2ra3EyNrBKuh.bsA0euVxqBNILKfvg67tWFUwGcOMm	user
3	\$2a\$10\$yKaqMoOIHEH2iNt.1P681e0IUZKzlfJikFMjGYBHhNrFlxsR2bly	temp

(3 rows, 1 ms)

Edit

If id is known say id=4, we can also send id in the JSON payload for the POST api as below:

Overview POST http://localhost:8084/ GET http://localhost:8084/ No Environment

http://localhost:8084/api/user Save

POST http://localhost:8084/api/user Send

Params Authorization Headers (10) Body Pre-request Script Tests Settings Cookies Beautify

none form-data x-www-form-urlencoded raw binary GraphQL JSON

```
1
2 {
3   "id": 4,
4   "username": "temp1",
5   "password": "123456",
6   "roles": [
7     {
8       "id": 2,
9       "name": "USER"
10    }
11  ]
12 }
```

Body Cookies (1) Headers (14) Test Results Status: 200 OK Time: 215 ms Size: 553 B Save Response

Pretty Raw Preview Visualize JSON

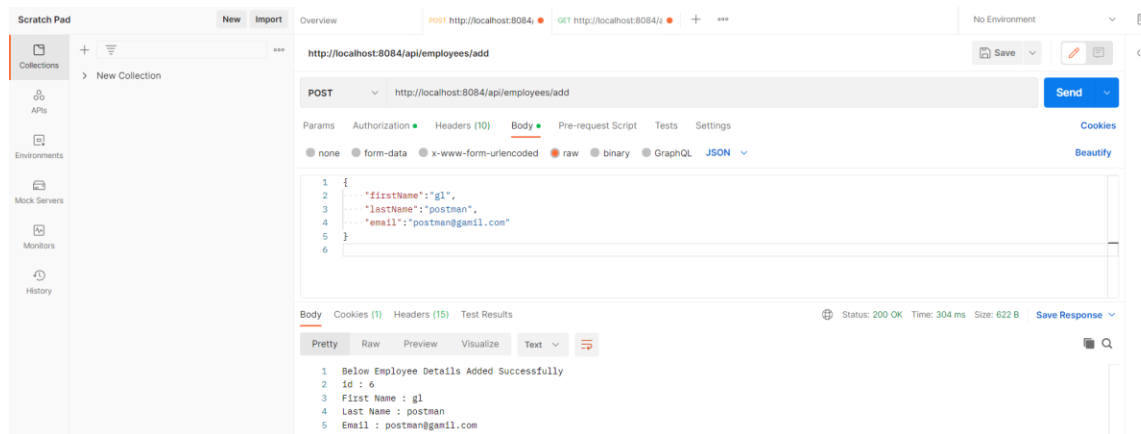
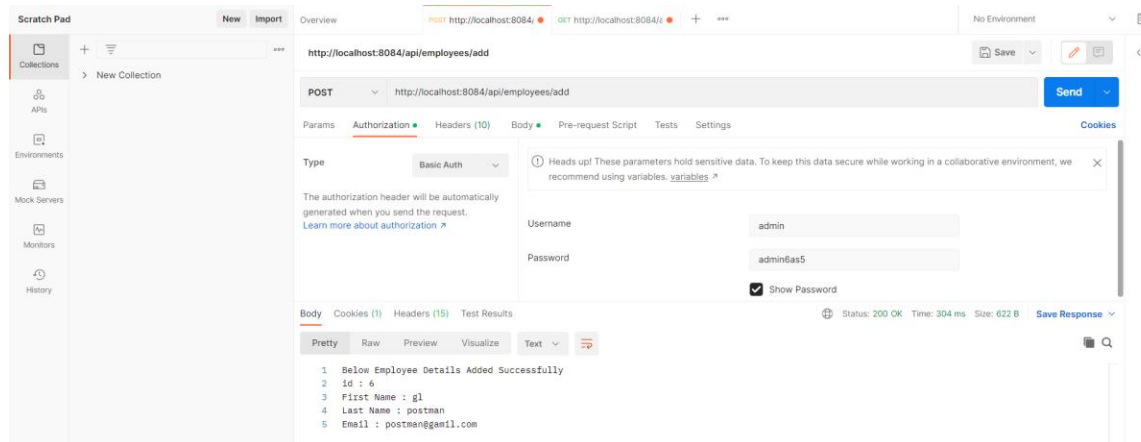
```
1 {
2   "id": 4,
3   "username": "temp1",
4   "password": "$2a$10$nogDgc70u8IKlA09w8jTLe/YQXYfjLaxIhdKIqn4QEsDQkhX.zL7C",
5   "listOfRoles": []
6 }
```

3.//. Now Your application should be able to add employees data in the db

// if and

// only if the authenticated user is ADMIN

By logging in using the admin authorization, we added the individual in problem statement as below



H2 DB:

localhost:8084/h2-console/login.do?sessionId=d5f0df5e3d1bb2236af276211cbad0bc

Auto commit Max rows: 1000 Auto complete Off Auto select On

jdbc:h2:mem:employeeanager Run Run Selected Auto complete Clear SQL statement:

EMPLOYEE ROLES USERS USERS\_ROLES INFORMATION\_SCHEMA Users H2 2.1.214 (2022-06-13)

SELECT \* FROM EMPLOYEE

SELECT \* FROM EMPLOYEE;

ID	EMAIL	FIRST_NAME	LAST_NAME
1	gaya.bala@gmail.com	gayathri	balachandran
2	vikas.agrawal@gmail.com	vikas	agrawal
3	vikas.sharma@gmail.com	vikas	sharma
4	vikash.bala@gmail.com	vikash	balan
5	vinod.kala@gmail.com	vinod	kalan
6	postman@gamil.com	gl	postman

(6 rows, 1 ms)

Edit

if the authorization is not of admin but of user, we get below 403 forbidden:

Scratch Pad New Import Overview POST http://localhost:8084/ GET http://localhost:8084/ No Environment

http://localhost:8084/api/employees/add Save Send

POST http://localhost:8084/api/employees/add

Params Authorization Headers (10) Body Pre-request Script Tests Settings Cookies

Type Basic Auth

Username user Password user@as5 Show Password

Status: 403 Forbidden Time: 347 ms Size: 570 B Save Response

```
1 {
2   "timestamp": "2022-10-29T17:49:00.539+00:00",
3   "status": 403,
4   "error": "Forbidden",
5   "message": "Forbidden",
6   "path": "/api/employees/add"
7 }
```