

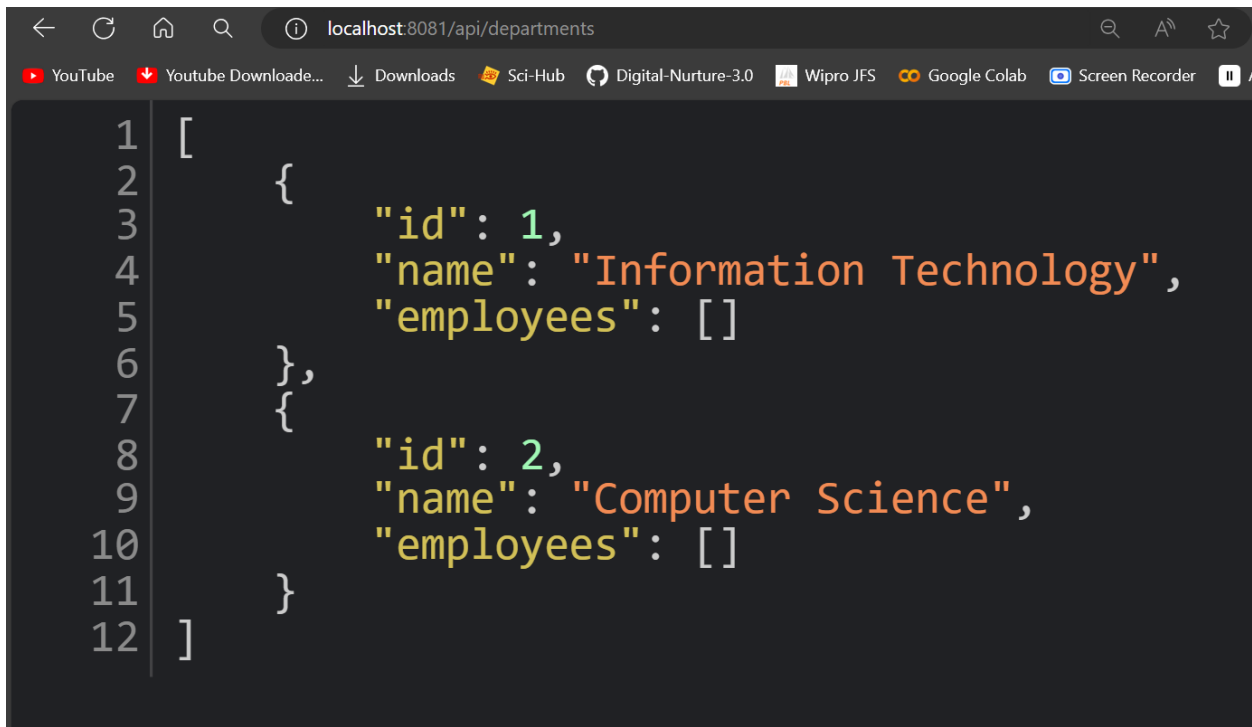
Exercise 4 - Implementing CRUD Operations

Output

Departments Entity:

```
C:\Users\USER>curl -X POST http://localhost:8081/api/departments -H "Content-Type: application/json" -d '{"name": "Information Technology"}'
{"id":1,"name":"Information Technology","employees":null}
C:\Users\USER>curl -X POST http://localhost:8081/api/departments -H "Content-Type: application/json" -d '{"name": "Computer Science"}'
{"id":2,"name":"Computer Science","employees":null}
```

Command Prompt curl commands



```
1  [
2      {
3          "id": 1,
4          "name": "Information Technology",
5          "employees": []
6      },
7      {
8          "id": 2,
9          "name": "Computer Science",
10         "employees": []
11     }
12 ]
```

Retrieve All - <http://localhost:8081/api/departments>

localhost:8081/h2-console/login.do?jsessionid=9d75094a3b5e5809d4c4ba6c62c49091

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

jdbc:h2:mem:testdb

- DEPARTMENTS
- EMPLOYEES
- INFORMATION_SCHEMA
- Users
- H2 2.2.224 (2023-09-17)

Run Run Selected Auto complete Clear SQL statement:

SELECT * FROM DEPARTMENTS

SELECT * FROM DEPARTMENTS;

ID	NAME
1	Information Technology
2	Computer Science

(2 rows, 3 ms)

Edit

Verifying through H2-Console

Employees Entity:

localhost:8081/api/employees

```
1 [
2   {
3     "id": 1,
4     "name": "Jeyakumar",
5     "email": "nkjeyakumar@gmail.com"
6   }
7 ]
```

Retrieve All - <http://localhost:8081/api/employees>

The screenshot shows the H2-Console web interface. On the left, a sidebar lists the database structure: jdbc:h2:mem:testdb, DEPARTMENTS, EMPLOYEES, INFORMATION_SCHEMA, Users, and H2 2.2.224 (2023-09-17). The main area has a toolbar with buttons like 'Run', 'Run Selected', 'Auto complete', and 'Clear'. Below the toolbar, the SQL statement 'Select * from employees' is entered. The execution result is displayed as a table with one row and four columns: DEPARTMENT_ID, ID, EMAIL, and NAME. The data shows DEPARTMENT_ID 1, ID 1, EMAIL nkjeyakumar@gmail.com, and NAME Jeyakumar. Below the table, it indicates '(1 row, 1 ms)' and an 'Edit' button.

DEPARTMENT_ID	ID	EMAIL	NAME
1	1	nkjeyakumar@gmail.com	Jeyakumar

Verifying through H2-Console

Deleting Records:

The top part of the image shows a Windows command prompt window with the following commands and output:

```
C:\Users\USER>curl -X DELETE http://localhost:8081/api/employees/1
C:\Users\USER>curl -X DELETE http://localhost:8081/api/departments/1
C:\Users\USER>
```

The bottom part shows a web browser window at localhost:8081. The left sidebar shows a list with one item, '1'. The main content area displays a JSON response:

```
[
  {
    "id": 2,
    "name": "Computer Science",
    "employees": []
  }
]
```

After Deletion – Employees Vs Departments