

Exercise 6 - Implementing Pagination and Sorting

Output

The screenshot shows the H2 console interface. On the left, the database schema is visible, including the DEPARTMENTS table. The SQL statement entered is `select * from DEPARTMENTS;`. The result is displayed as a table with 10 rows and 2 columns: ID and NAME.

ID	NAME
2	IT
3	Finance
4	Marketing
5	Engineering
6	Sales
7	Research
8	Legal
9	Customer Service
10	Administration

(9 rows, 0 ms)

Departments Table Data

The screenshot shows the H2 console interface. On the left, the database schema is visible, including the EMPLOYEES table. The SQL statement entered is `SELECT * FROM employees;`. The result is displayed as a table with 8 rows and 4 columns: DEPARTMENT_ID, ID, EMAIL, and NAME.

DEPARTMENT_ID	ID	EMAIL	NAME
2	2	bakkar@example.com	Bakkar
3	3	charan@example.com	Charan
4	4	diwakar@example.com	Diwakar
5	5	eswar@example.com	Eswar
6	6	feroin@example.com	Feroin
2	7	gowtham@example.com	Gowtham
7	9	naren@example.com	Naren
4	10	jeyakumar@example.com	Jeyakumar

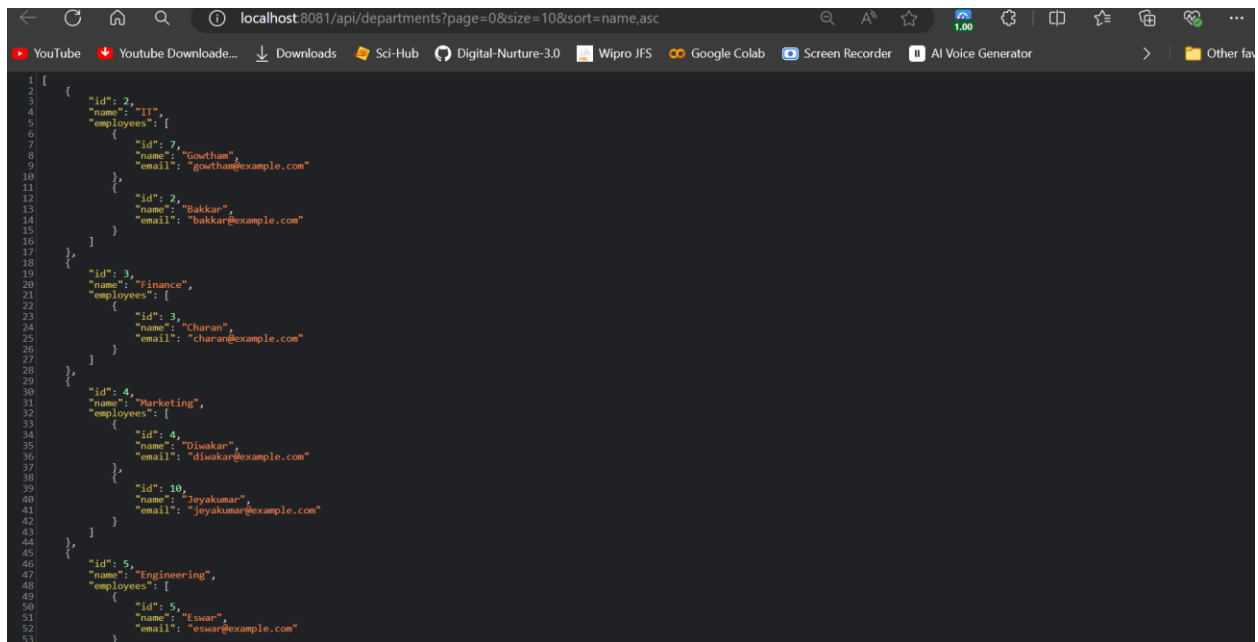
(8 rows, 0 ms)

Employees Table Data

Employees Table

```
C:\Users\USER>curl "http://localhost:8081/api/departments?page=0&size=10&sort=name,asc"
[{"id":2,"name":"IT","employees":[{"id":7,"name":"Gowtham","email":"gowtham@example.com"}, {"id":2,"name":"Bakkar","email":"bakkar@example.com"}]}, {"id":3,"name":"Finance","employees":[{"id":3,"name":"Charan","email":"charan@example.com"}]}, {"id":4,"name":"Marketing","employees":[{"id":4,"name":"Diwakar","email":"diwakar@example.com"}, {"id":10,"name":"Jeyakumar","email":"jeyakumar@example.com"}]}, {"id":5,"name":"Engineering","employees":[{"id":5,"name":"Eswar","email":"eswar@example.com"}]}, {"id":6,"name":"Sales","employees":[{"id":6,"name":"Ferozin","email":"ferozin@example.com"}]}, {"id":7,"name":"Research","employees":[{"id":9,"name":"Naren","email":"naren@example.com"}]}, {"id":8,"name":"Legal","employees":[]}, {"id":9,"name":"Customer Service","employees":[]}, {"id":10,"name":"Administration","employees":[]}]
```

Using CURL Command in CMD



```
localhost:8081/api/departments?page=0&size=10&sort=name,asc

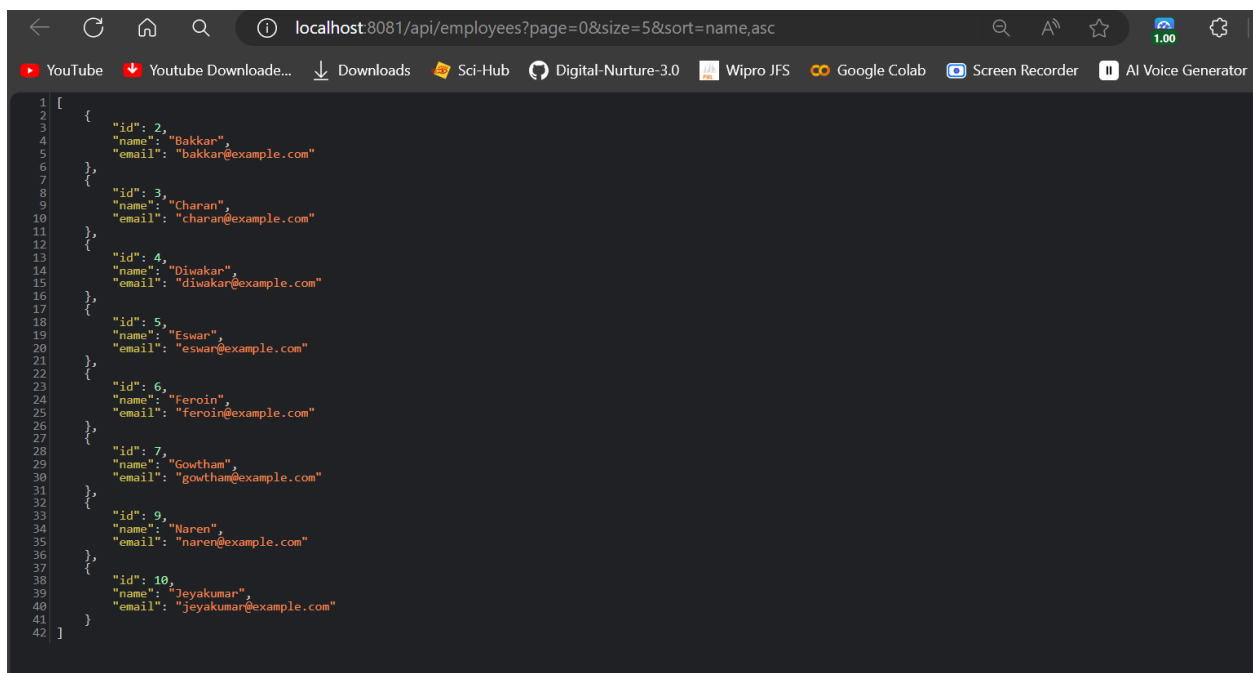
1 [
2   {
3     "id": 2,
4     "name": "IT",
5     "employees": [
6       {
7         "id": 7,
8         "name": "Gowtham",
9         "email": "gowtham@example.com"
10      },
11      {
12        "id": 2,
13        "name": "Bakkar",
14        "email": "bakkar@example.com"
15      }
16    ]
17  },
18  {
19    "id": 3,
20    "name": "Finance",
21    "employees": [
22      {
23        "id": 3,
24        "name": "Charan",
25        "email": "charan@example.com"
26      }
27    ]
28  },
29  {
30    "id": 4,
31    "name": "Marketing",
32    "employees": [
33      {
34        "id": 4,
35        "name": "Diwakar",
36        "email": "diwakar@example.com"
37      },
38      {
39        "id": 10,
40        "name": "Jeyakumar",
41        "email": "jeyakumar@example.com"
42      }
43    ]
44  },
45  {
46    "id": 5,
47    "name": "Engineering",
48    "employees": [
49      {
50        "id": 5,
51        "name": "Eswar",
52        "email": "eswar@example.com"
53      }
54    ]
55  }
56 ]
```

Result in Web Browser

Employees Table

```
C:\Users\USER>curl "http://localhost:8081/api/employees?page=0&size=10&sort=name,asc"
[{"id":2,"name":"Bakkar","email":"bakkar@example.com"}, {"id":3,"name":"Charan","email":"charan@example.com"}, {"id":4,"name":"Diwakar","email":"diwakar@example.com"}, {"id":5,"name":"Eswar","email":"eswar@example.com"}, {"id":6,"name":"Feroin","email":"feroin@example.com"}, {"id":7,"name":"Gowtham","email":"gowtham@example.com"}, {"id":9,"name":"Naren","email":"naren@example.com"}, {"id":10,"name":"Jeyakumar","email":"jeyakumar@example.com"}]
C:\Users\USER>curl "http://localhost:8081/api/employees?page=0&size=5&sort=name,asc"
[{"id":2,"name":"Bakkar","email":"bakkar@example.com"}, {"id":3,"name":"Charan","email":"charan@example.com"}, {"id":4,"name":"Diwakar","email":"diwakar@example.com"}, {"id":5,"name":"Eswar","email":"eswar@example.com"}, {"id":6,"name":"Feroin","email":"feroin@example.com"}, {"id":7,"name":"Gowtham","email":"gowtham@example.com"}, {"id":9,"name":"Naren","email":"naren@example.com"}, {"id":10,"name":"Jeyakumar","email":"jeyakumar@example.com"}]
C:\Users\USER>
```

Using CURL Command in CMD



The screenshot shows a web browser window with the address bar displaying `localhost:8081/api/employees?page=0&size=5&sort=name,asc`. The browser's developer tools are open, showing the JSON response of the API call. The response is a JSON array of 5 employee objects, each with an `id`, `name`, and `email` property. The employees listed are Bakkar, Charan, Diwakar, Eswar, and Feroin.

```
1 [
2   {
3     "id": 2,
4     "name": "Bakkar",
5     "email": "bakkar@example.com"
6   },
7   {
8     "id": 3,
9     "name": "Charan",
10    "email": "charan@example.com"
11  },
12  {
13    "id": 4,
14    "name": "Diwakar",
15    "email": "diwakar@example.com"
16  },
17  {
18    "id": 5,
19    "name": "Eswar",
20    "email": "eswar@example.com"
21  },
22  {
23    "id": 6,
24    "name": "Feroin",
25    "email": "feroin@example.com"
26  },
27  {
28    "id": 7,
29    "name": "Gowtham",
30    "email": "gowtham@example.com"
31  },
32  {
33    "id": 9,
34    "name": "Naren",
35    "email": "naren@example.com"
36  },
37  {
38    "id": 10,
39    "name": "Jeyakumar",
40    "email": "jeyakumar@example.com"
41  }
42 ]
```

Result in Web Browser