04b Database Granular Access

Introduction

This is the documentation for Database Granular Access exercise for the System Integration class. The assignment was to access another student's (referred to as the exposee in this document) database with different levels of access and test that each of the provided users was able to only perform the queries that their access level allowed.

Link to exposee's documentation here

Documented Attempts

1st Attempt

2025-03-25 16:15

Documentation was missing information about where the database was hosted.

> Using pgAdmin or psql, connect to the PostgreSQL server with the provided server details:
>
> - Host: [REDACTED]
> - Port: 5432 (default for PostgreSQL)
> - Database: EmployeeData
> - Username and Password: Refer to the User List (Section 1.3).

I contacted the exposee asking them to update the documentation with missing host information.

2nd Attempt

2025-03-27 15:00

The documentation now contains the host name:

Step 2: Connect to PostgreSQL Server

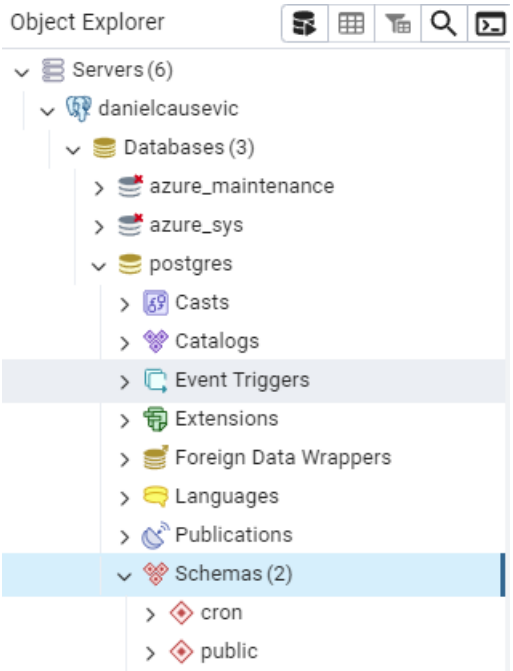
Using pgAdmin or psql, connect to the PostgreSQL server with the provided server details:

- Host: documentationforsi.postgres.database.azure.com
- Port: 5432
- Database: documentationforsi
- Username and Password: danielcausevic - DLSHomies123

But passwords are still marked [REDACTED]:

Username	Password (Redacted)	Permissions
read_only	[REDACTED]	Can only read (SELECT)
write_only	[REDACTED]	Can only write (INSERT, UPDATE, DELETE)
read_write	[REDACTED]	Can read and write (SELECT, INSERT, UPDATE, DELETE)
no_access	[REDACTED]	No access (Cannot connect to the database)

When login in the database with the sole username & password provided, the table described in the documentation is not accessible.



I contacted the exposee asking them for the missing passwords.

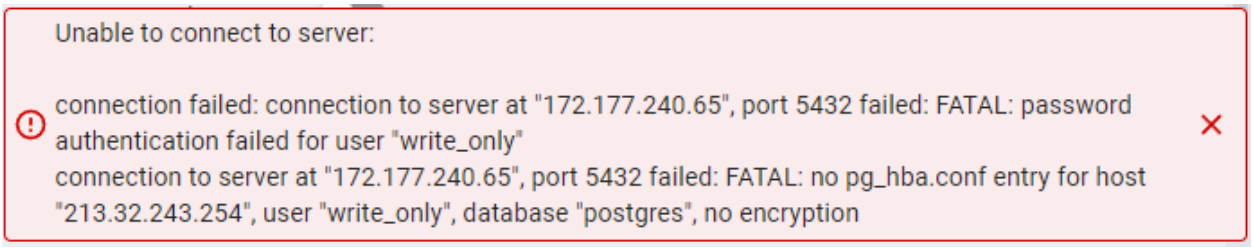
3rd Attempt

2025-03-28 12:00

Documentation now contains password for each user:

Username	Password (Redacted)	Permissions
read_only	DLSHomies	Can only read (SELECT)
write_only	DLSHomies	Can only write (INSERT, UPDATE, DELETE)
read_write	DLSHomies	Can read and write (SELECT, INSERT, UPDATE, DELETE)
no_access	DLSHomies	No access (Cannot connect to the database)

But none of them grant access to the database.



Since the password provided under server details is DLSHomies123 whereas the password in user details for each profile is DLSHomies, it could be that there was a copy-paste error. I tried to login with both passwords to no avail.

I contacted the exposee asking them to check that the provided usernames and passwords are correct.

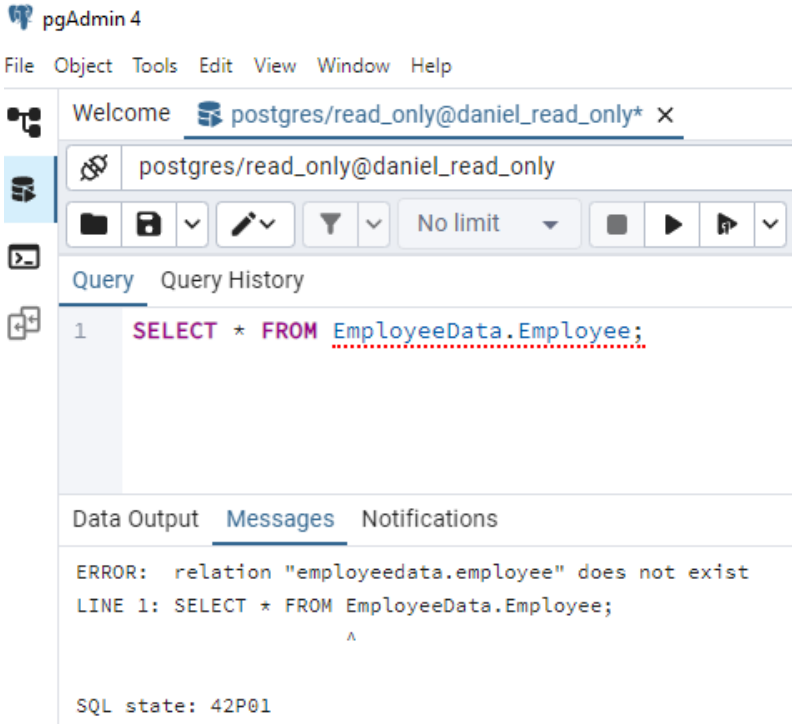
4th Attempt

2025-03-28 12:30

The documentation now contains updated passwords for each profile.

Username	Password (Redacted)	Permissions
read_only	DLSHomies123	Can only read (SELECT)
write_only	DLSHomies123	Can only write (INSERT, UPDATE, DELETE)
read_write	DLSHomies123	Can read and write (SELECT, INSERT, UPDATE, DELETE)
no_access	DLSHomies123	No access (Cannot connect to the database)

Login now works for each of the four profiles, but there are no database tables available for viewing for any of them. The ERROR: “relation "employeedata.employee" does not exist” is displayed.



No_access user is working as intended, as it is possible to login, but not view anything.

I contacted the exposed asking them to ensure that the intended database table is accessible.

5th Attempt

2025-03-28 15:06

The schema is called public, not EmployeeData like in the documentation.

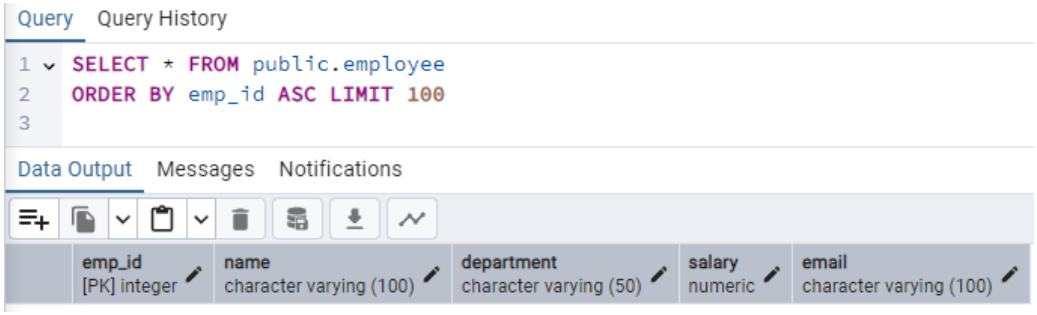
Provided example queries:

```
INSERT INTO EmployeeData.Employee (name, department, salary, email)
VALUES ('John Doe', 'Engineering', 85000, 'john.doe@example.com');
```

Select Operation:

```
SELECT * FROM EmployeeData.Employee;
```

The employee table is now visible to read_only and read_write users, but queries return no data.



Read_write user is also unable to view any data in the table.

When attempting to insert a new employee into the employee table as read_write user, permission is denied.

I contacted the exposee a final time to ask them to update the schema and table name in the documentation, and to let them know that the information in the database table is not available with any of the provided credentials.

Conclusion

I made several requests for corrections in the exposee's documentation, but had not gained access to the data in the database by the deadline.