

T-202-GAG1: Assignment 12

Readings and Lectures

Ramakrishnan & Gehrke: Chapter 21. Lecture: V11B.

<https://www.postgresql.org/docs/9.2/static/sql-createrole.html>

<https://www.postgresql.org/docs/9.5/static/sql-grant.html>

<https://www.postgresql.org/docs/9.5/static/sql-revoke.html>

Preparation

For this assignment, you can work groups of two or three. Do as much of the following as you can in the span of 90 minutes.

Create a new database called A12; this will contain the same data as used for Project 3. Use CREATE.sql and FILL.sql to create and fill the four relations.

The CODE.sql file then contains one trigger, two views and one function. Create them in the A12 database. These will be used to grant permissions to different users.

The Assignment

In this assignment, do as much as you can of the following, within the span of 90 minutes (if you run out of time, you can complete the assignment later).

Use SQL commands to create users, then use grant commands to grant permissions and revoke commands to revoke permissions.

1. Create a new user in the database, called “Stakeholder”, with a password of your choice. The stakeholder is not allowed to modify any data (no GRANT statement is executed).
2. Login as Stakeholder and open a query window for A12. (This can, for example be done, via File → Add Server in pgAdmin3.) Check whether you can use the Customers and Records views.
3. Grant Stakeholder permissions to query the Customers and Records View.
4. Check if you can now use the Customers and Records views and whether you can perform an insert on the People table.
5. Create another user called “Manager”. The manager is allowed to modify data in tables but not create new tables, views, triggers or procedures. This means a grant statement to give all privileges for all tables in the schema.
6. Login as the Manager and see whether you can perform an insert on the account records table via the NewCustomer procedure.
7. Grant Manager permissions to execute the NewCustomer procedure.
8. see whether you can perform an insert on the account records table via the NewCustomer procedure.
9. Revoke all the grant commands. Check whether privileges are indeed revoked.
10. Drop both users. Check whether access is indeed denied.

Deliverables

Submit one text file, containing the SQL code that you wrote for the assignment (CREATE, GRANT, REVOKE and DROP statements). Use comments to briefly explain what each code segment is doing.