SQL Grant and Revoke Commands

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Overview

- DCL commands are used to enforce database security in a multiple database environment.

- Two types of DCL commands are
  - Grant
  - Revoke

- Database Administrator's or owner's of the database object can provide/remove privileges on a database object.

SQL Grant Command

- SQL Grant command is used to provide access or privileges on the database objects to the users.

- The syntax for the GRANT command is:

    GRANT privilege_name ON object_name

        TO {user_name | PUBLIC | role_name} [with GRANT option];

    Here, privilege_name: is the access right or privilege granted to the user.

    object_name: is the name of the database object like table, view etc.,.

    user_name: is the name of the user to whom an access right is being granted.

    Public is used to grant rights to all the users.

    With Grant option: allows users to grant access rights to other users.

SQL Revoke Command

- The revoke command removes user access rights or privileges to the database objects.

- The syntax for the REVOKE command is:

    REVOKE privilege_name ON object_name
    FROM {User_name | PUBLIC | Role_name}

- For Example:

    (a) GRANT SELECT ON employee TO user1

This command grants a SELECT permission on employee table to user1.

    (b) REVOKE SELECT ON employee FROM user1

This command will revoke a SELECT privilege on employee table from user1.

Privileges and Roles

- Privileges defines the access rights provided to a user on a database objects. There are two types of privileges:

  (a) System Privileges: This indicate user to CREATE, ALTER, or DROP database elements.

  (b) Object Privileges: This allows user to EXECUTE, SELECT, INSERT, or DELETE data from database objects to which the privileges apply.

- Roles are the collection of privileges or access rights. When there are many users in a database it becomes difficult to grant or revoke privileges to the users.

- So, if we define roles we can automatically grant/revoke privileges.

Reference

http://beginner-sql-tutorial.com/sql-grant-revoke-privileges-roles.htm