# Data Control Language (DCL)

## Database Design

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# Introduction

# Data Controlling Language

❑ **Creating a New User**
  ○ `CREATE USER your_new_username WITH PASSWORD 'your_password';`

❑ **If you want to grant superuser privileges to the user, you can modify the command like this:**
  ○ `CREATE USER your_new_username WITH PASSWORD 'your_password' SUPERUSER;`

❑ **Verifying User Creation:**
  ○ `SELECT * FROM pg_user WHERE usename = 'your_new_username';`

# DCL

# Data Controlling Language

❑ DCL (Data Controlling Language) is a query language that allows users to retrieve and edit data held in databases. The types of Data Controlling Language commands include Grant and Revoke.

# GRANT Command

❑ User access privileges to a database are given by this command. It can be used to grant SELECT, INSERT, UPDATE, and DELETE privileges to a user on a single table or several tables.

❑ Syntax: GRANT SELECT, UPDATE ON MY_TABLE TO SOME_USER, ANOTHER_USER;

- ○ Example: GRANT INSERT, SELECT on accounts to Alex
- ○ Using this command, Alex has been granted permissions on accounts database objects like he can query or insert into accounts.

# REVOKE Command

❑ To take back permissions from the user REVOKE command is used. It is used to revoke a privilege (by default) or a specific command, such as UPDATE or DELETE, depending on the situation.

❑ Syntax: REVOKE privilege_name ON object_name FROM {user_name|PUBLIC |role_name}
  ○ Example: REVOKE INSERT, SELECT on accounts from John
  ○ Using this command, the permissions of John like query or insert on accounts database objects has been removed.