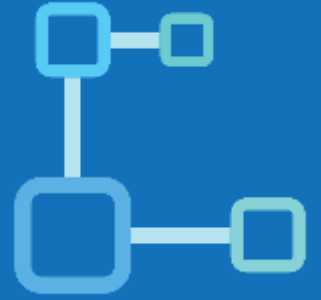




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# DATABASE



# Data Control Language

- DCL stands for Data control language
- DCL is used to control user access in a database
- **This command is related to security issues**
- DCL commands are used to grant and take back authority from any database user .
- Using DCL command it allows or restricts the user from accessing data in database schema



Grant

Revoke

# DCL Commands

## Grant

It is used to give user access privileges to a database.

### Syntax

- GRANT privilege [, ...]
- ON object [, ...]
- TO { PUBLIC | GROUP  
group | username }

## Revoke

It is used to take back permissions from the user.

### Syntax

- REVOKE privilege [, ...]
- ON object [, ...]
- FROM { PUBLIC | GROUP  
groupname | username }

**privilege** – values could be: SELECT, INSERT, UPDATE, DELETE, RULE, ALL.

**object** – The name of an object to which to grant access. The possible objects are: table, view, sequence

**PUBLIC** – A short form representing all users.

**Group** – A group to whom to grant privileges.

**username** – The name of a user to whom to grant privileges. PUBLIC is a short form representing all users.

The privileges can be revoked using the REVOKE command.

# TCL Commands

## Begin

**The BEGIN keyword is used to start a transaction block.**

A database transaction is a single unit of work that consists of one or more operations.

## Syntax

- 1.BEGIN TRANSACTION;
- 2.BEGIN WORK;
- 3.BEGIN;

## Commit

**The COMMIT keyword saves changes to the database.**

## Syntax

- 1.COMMIT TRANSACTION;
- 2.COMMIT WORK;
- 3.COMMIT;

## RollBack

**As the name suggests, ROLLBACK undoes the changes that were issued in the transaction block before it.**

## Syntax

- 1.ROLLBACK TRANSACTION;
- 2.ROLLBACK WORK;
- 3.ROLLBACK ;

# TCL Commands

## SAVEPOINT

**SAVEPOINT is a boundary defined within a transaction that allows for a partial rollback. It gives the user the ability to roll the transaction back to a certain point without rolling back the entire transaction. It is like Bookmarks.**

## Syntax

1. **SAVEPOINT savepoint\_name;**

```
BEGIN;  
  savepoint inse;  
  insert into links( title, url) values ('database','www.database.com');  
  SAVEPOINT upd;  
  update links set title = 'PostgreSQL'where id = 3;  
  savepoint del;  
  delete from links where id = 4;  
  rollback to inse;  
COMMIT;
```

# Data Query Language

DQL is used to fetch the data from the database.

**PostgreSQL evaluates the FROM clause before the SELECT clause in the SELECT statement:**

**It uses only one command:**

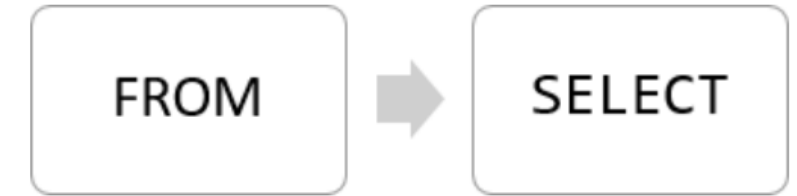
## •SELECT

**1) Using PostgreSQL SELECT statement to query data from one and more than one column example**

```
SELECT select_list FROM table_name;
```

**2) Using PostgreSQL SELECT statement to query data from all columns of a table example**

```
SELECT * FROM table_name;
```



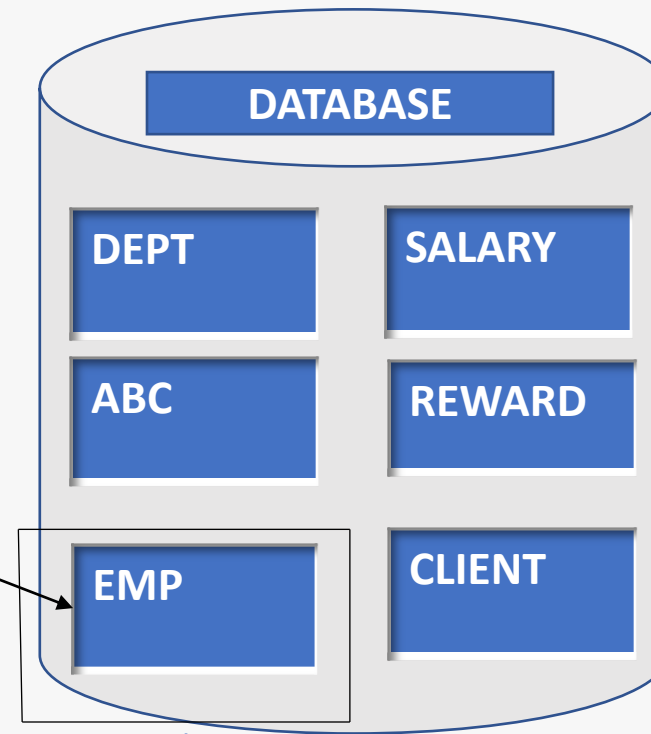
**Note : Order of selection of table is also important.**

# Query work Flow

Select Name  
From EMP;

EMP Table		
ID	Name	Dept No
1	Sandhya	10
2	Sager	20

Name
sandhya
sager



Search the table and  
put it under execution

Search the table which is  
under execution



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*Thank you*