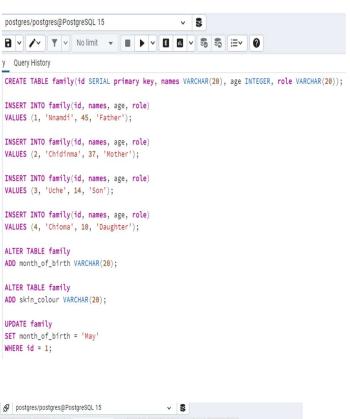# Day 2: Types of SQL statements

A common way to categorize SQL statements is to divide them according to the functions they perform. SQL can be separated into three types of statements:

1. Data Definition Language (DDL) is used to create, modify, or delete database objects such as tables, views, etc. The SQL keywords most often used with DDL statements are CREATE, ALTER, and DROP.
2. Data Control Language (DCL) allows one to control who or what has access to specific objects in the database. The two primary DCL statements are GRANT and REVOKE.
3. Data Manipulation Language (DML) is used to retrieve, add, modify, or delete data stored in a database object. The primary keywords used in DML statements are SELECT, INSERT, UPDATE, and DELETE.

Examples using the DDL and DML languages


```sql
CREATE TABLE family(id SERIAL primary key, names VARCHAR(20), age INTEGER, role VARCHAR(20));

INSERT INTO family(id, names, age, role)
VALUES (1, 'Nnamdi', 45, 'Father');

INSERT INTO family(id, names, age, role)
VALUES (2, 'Chidinma', 37, 'Mother');

INSERT INTO family(id, names, age, role)
VALUES (3, 'Uche', 14, 'Son');

INSERT INTO family(id, names, age, role)
VALUES (4, 'Chioma', 10, 'Daughter');

ALTER TABLE family
ADD month_of_birth VARCHAR(20);

ALTER TABLE family
ADD skin_colour VARCHAR(20);

UPDATE family
SET month_of_birth = 'May'
WHERE id = 1;
```

```sql
UPDATE family
SET month_of_birth = 'February'
WHERE id = 2;

UPDATE family
SET month_of_birth = 'June'
WHERE id = 3;

UPDATE family
SET month_of_birth = 'October'
WHERE id = 4;

UPDATE family
SET skin_colour = 'grey'
WHERE id = 3;

DELETE
FROM family
WHERE skin_colour = 'grey';

ALTER TABLE family
DROP COLUMN "skin_colour";

SELECT *
FROM family;
```


id [PK] integer	names character varying (20)	age integer	role character varying (20)	month_of_birth character varying (20)	skin_colour character varying (20)
1	1 Nnamdi	45 Father		May	[null]
2	2 Chidinma	37 Mother		February	[null]
3	4 Chioma	10 Daughter		October	[null]
4	3 Uche	14 Son		June	grey

id [PK] integer	names character varying (20)	age integer	role character varying (20)	month_of_birth character varying (20)
1	1 Nnamdi	45 Father		May
2	2 Chidinma	37 Mother		February
3	4 Chioma	10 Daughter		October