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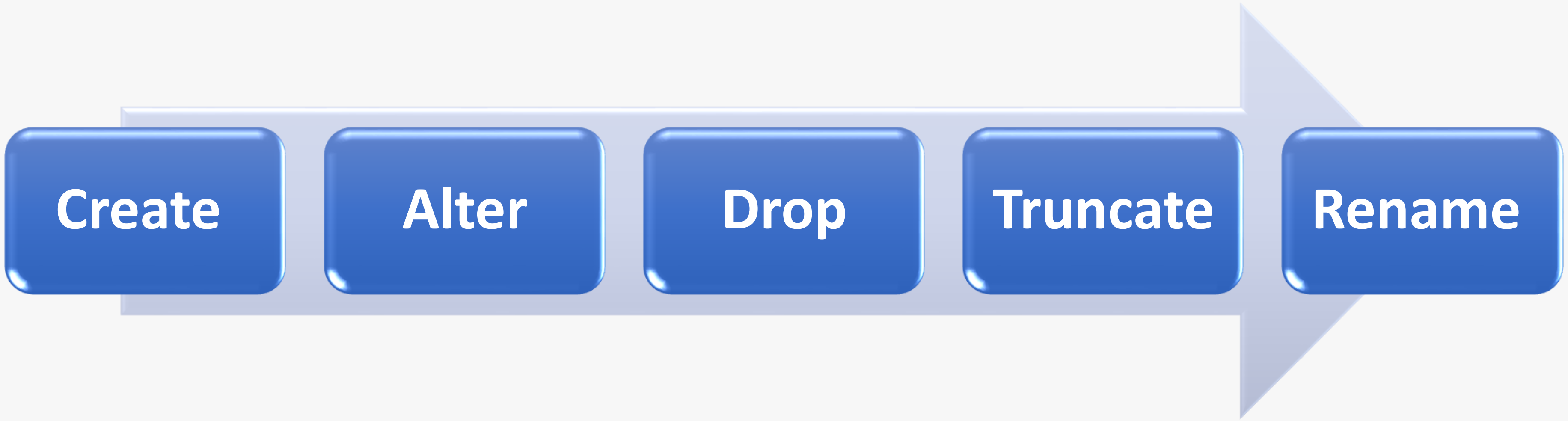
DATABASE

Data Definition Language (DDL)

Data Definition Language is used for defining the structure or schema of the database. It is also used for creating tables, indexes, applying constraints, etc. in the database.

The main purpose of **DDL** is used to store the information of metadata like the number of schemas and tables, their names, indexes, constraints, columns in each table, etc.

This language is used by the conceptual schema to access and retrieve the records from/to the database respectively, where these records describe entities, relationship, and attributes.



Create

Alter

Drop

Truncate

Rename

DDL Commands

Create

This command is used to create a new table or a new database.

Syntax

```
CREATE TABLE [IF NOT EXISTS] table_name (
   column1 datatype(length) column_contraint,
   column2 datatype(length) column_contraint,
   column3 datatype(length) column_contraint,
   table_constraints
);
```

- Example

```
CREATE TABLE EMPLOYEE(
 Name VARCHAR(25),
 Email VARCHAR100),
 DOB DATE
);
```

Name	Email	DOB

DDL Commands

Drop

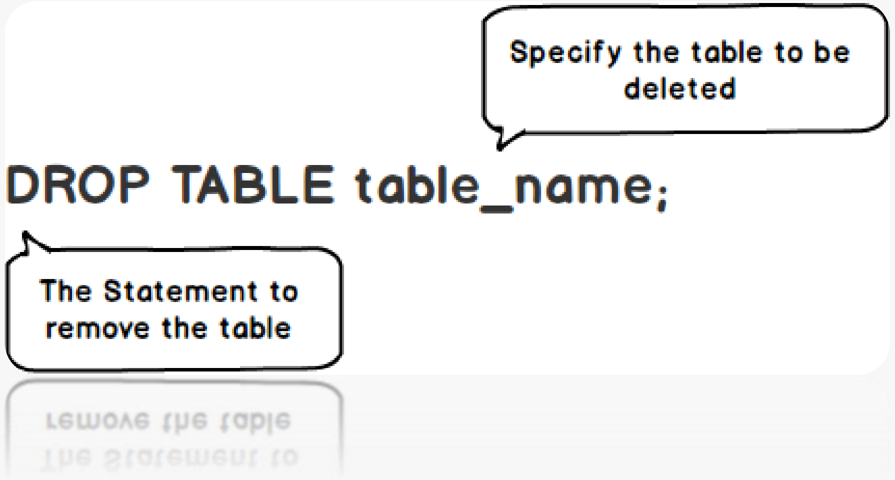
This command is used to is used to delete both the structure and record stored in the table.

Syntax

```
DROP TABLE table_name;
DROP TABLE table_name CASCADE;
```

- **Example :**

  DROP TABLE EMPLOYEE;



```
DROP TABLE table_name;
```

Specify the table to be deleted
The Statement to remove the table

Summary

- Use the DROP   TABLE statement to drop a table.
- Use the CASCADE option to drop a table and all of it dependent objects.

DDL Commands

Alter

This command is used to alter the structure of the database. This change could be either to modify the characteristics of an existing attribute or probably to add a new attribute.

Syntax

To add a new column to a table, you use `ALTER TABLE ADD COLUMN` statement:

```
ALTER TABLE table_name
ADD COLUMN column_name datatype column_constraint;
```

Syntax

To drop a column from a table, you use `ALTER TABLE DROP COLUMN` statement:

```
ALTER TABLE table_name
DROP COLUMN column_name;
```

Syntax

PostgreSQL change column data type examples

```
ALTER TABLE table_name
ALTER COLUMN column_name TYPE new_data_type;
```

DDL Commands

Syntax

To rename a column, you use the ALTER TABLE RENAME COLUMN TO statement:

```
ALTER TABLE table_name
RENAME COLUMN column_name TO new_column_name;
```

Syntax

To change a default value of the column, you use ALTER TABLE ALTER COLUMN SET DEFAULT or DROP DEFAULT

```
ALTER TABLE table_name
ALTER COLUMN column_name [SET DEFAULT value | DROP DEFAULT];
```

Syntax

To change the NOT NULL constraint, you use ALTER TABLE ALTER COLUMN statement:

```
ALTER TABLE table_name
ALTER COLUMN column_name [SET NOT NULL| DROP NOT NULL];
```

DDL Commands

Syntax

To add a CHECK constraint, you use ALTER TABLE ADD CHECK statement:

```
ALTER TABLE table_name
ADD CHECK expression;
```

Syntax

To add a constraint to a table, you use ALTER TABLE ADD CONSTRAINT statement:

```
ALTER TABLE table_name
ADD CONSTRAINT constraint_name   constraint_definition;
```

Syntax

To rename a table you use ALTER TABLE RENAME TO statement:

```
ALTER TABLE table_name
RENAME TO new_table_name;
```

DDL Commands

- **Example :**

```
ALTER TABLE EMPLOYEE
ADD Address VARCHAR(255);
```

Name	Email	DOB	Address

DDL Commands

TRUNCATE

It is used to delete all the rows from the table and free the space containing the table.

Syntax

1.TRUNCATE TABLE table_name;

Example

```
TRUNCATE TABLE student;
```

Id	Name	DOB
1	Alex	19/08/1998
2	Flex	20/08/1998

id	name	DOB

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Thank you

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