

## **ALTER Command**

### **Definition**

The **ALTER** command is a DDL command used to **modify the structure of an existing database object**, mainly tables.

It allows changes **without deleting the table or existing data**.

### **Purpose of ALTER**

- Add new columns
- Modify existing columns
- Rename columns
- Drop existing columns

### **Common ALTER Variations (Very Important for Revision)**

#### **1 ADD Column**

Used to add a new column to an existing table.

ALTER TABLE students

ADD email VARCHAR(100);

📌 Adds a new column email to the students table.

#### **2 MODIFY / ALTER Column Datatype**

Used to change the datatype or size of an existing column.

ALTER TABLE students

ALTER COLUMN name TYPE VARCHAR(100);

📌 Increases the size of the name column.

#### **3 RENAME Column**

Used to rename an existing column.

ALTER TABLE students

RENAME COLUMN course TO course\_name;

📌 Only the column name changes, data remains safe.

#### **4 DROP Column**

Used to permanently remove a column from a table.

```
ALTER TABLE students
```

```
DROP COLUMN age;
```

 Column and its data are permanently deleted.

### Key Points to Remember (ALTER)

- Works on existing tables
- Does **not delete the entire table**
- Existing data remains safe (except dropped columns)
- Used after CREATE during database design

### Quick Revision Summary

- CREATE → create structure
- ALTER → modify structure
- ALTER is flexible but must be used carefully