

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