DAY 02

**MySQL / MODIFY ALTER TABLE Statements**

The ALTER TABLE statement is used to add, delete, or modify columns in an existing table. The ALTER TABLE statement is also used to add and drop various constraints on an existing table.

**ALTER TABLE - ADD Column**

ALTER TABLE table_name ADD column_name datatype;

Ex: ALTER TABLE Customer ADD Email VARCHAR(25);

**ALTER TABLE - DROP Column**

ALTER TABLE table_name DROP COLUMN column_name;

ALTER TABLE Customer DROP Email;

**ALTER TABLE - RENAME Column**

ALTER TABLE table_name RENAME COLUMN old_name TO new_name;

Ex: ALTER TABLE Customer RENAME COLUMN Email TO Gmail;

**ALTER TABLE – ALTER/MODIFY DATA TYPE**

ALTER TABLE table_name MODIFY COLUMN column_name datatype;

Ex: ALTER TABLE Customer MODIFY COLUMN Email char(25);

**ALTER TABLE – RENAME TABLE NAME**

ALTER TABLE table_name RENAME new_table_name;

Ex: ALTER TABLE Customer RENAME CustomerDetails;

## SQL Constraints

SQL constraints define rules for table data, ensuring accuracy and reliability by limiting the types of data allowed in a table.

**NOT NULL** - Ensures that a column cannot have a NULL value.

**UNIQUE** - Ensures that all values in a column are different

**UNIQUE NOT NULL** – Ensures that all values in a column are different and a column cannot have a NULL value

**PRIMARY KEY** - a combination of a NOT NULL and UNIQUE. And uniquely identifies each row in a table

          a table can have only ONE primary key

**CONSTRAINT PRIMARY KEY** – Another method of define the PRIMARY key field.

                    Ex: CONSTRAINT PRIMARY KEY (CustomerID)

**CONSTRAINT COMPOSITE PRIMARY KEY** – Another method of define the PRIMARY key field.

                    Ex: CONSTRAINT PRIMARY KEY (CustomerID, name)

**FOREIGN KEY** – The FOREIGN KEY constraint is a key used to link two tables together.

            Ex: CONSTRAINT FOREIGN KEY(CustomerID) REFERENCES Customer(CustomerID)

**CHECK** - Ensures that the values in a column satisfies a specific condition.

      Ex: address VARCHAR(30) CHECK (address="Galle")

**DEFAULT** - Sets a default value for a column if no value is specified.

      Ex: address VARCHAR(30) DEFAULT 'Galle',

## Other Commands

Remove Primary key

ALTER TABLE Customer DROP PRIMARY KEY;

Add Primary key

ALTER TABLE Customer ADD PRIMARY KEY(CustomerID, Name)

Add UNIQUE

ALTER TABLE Customer ADD CONSTRAINT UNIQUE (contact);

Add NOT NULL

ALTER TABLE Customer MODIFY address VARCHAR(30) NOT NULL;

Remove NOT NULL

ALTER TABLE Customer MODIFY address VARCHAR(30) ;