Creating and Modifying Database Objects SQL

SQL (Structured Query Language) is a standard language for managing and manipulating relational databases. In SQL, you can create, modify, and manipulate various database objects such as tables, views, indexes, sequences, procedures, and triggers, among others.

CREATE TABLE table\_name (

column1 datatype,

column2 datatype,

column3 datatype,

...

);

**Example:**

create table student(

id int,

[name] varchar(25),

age int,

teacher varchar(25)

)

See table structure

select \* from student

Check Table Column, datatypes

1. **Complete detail of Table**

**\_\_ 1st way \_\_**

sp\_help 'tableName'

**\_\_ 2nd way \_\_\_**

alt + f1 short key

**\_\_ list of tables \_\_\_\_\_**

SELECT \*

FROM information\_schema.tables

1. **Only Column Detail**

SELECT column\_name, data\_type

FROM information\_schema.columns

WHERE table\_name = 'student';

Modify Table (Alter)

1. **Add Column**

ALTER TABLE table\_name ADD column\_name

Example:

Alter table student

add class varchar(25)

Rename Table

sp\_rename 'c','customer'

select \* from customer

1. **Modify column datatype**

ALTER TABLE table\_name ALTER TABLE column\_name datatype

Example:

Alter table student

alter column teacher int

1. **Modify column 🡺 Rename ColumnName**

(In MS SQL no any query to change Name of Column)

(we used System SP) for this.

sp\_rename 'table\_name.old\_column\_name', 'new\_column\_name', 'COLUMN';

Example:

sp\_rename 'student.depId' , 'teacherId','COLUMN'

1. **Drop Column**

ALTER TABLE table\_name DROP COLUMN column\_name

Example:

Alter table student

drop column studentTeacher

**\_\_\_ Note \_\_\_**

1. **Add Constraint *🡪 🡪 Constraint Detail me Aga parhain ga***

* **Add Column & constraint**

create table customer(

id int primary key identity,

name varchar(25),

)

--\_\_\_\_\_\_\_ 1. Add Column + Constriant \_\_\_\_\_\_\_\_\_\_\_\_\_\_

select \* from customer

alter table customer

add orderId int

constraint cns\_orderId\_def default 4

--Insert

insert into customer (name) values ('Rashid'),('Akram'),('Ahamd'),('Noman')

select \* from customer

* **Add constraint on Existing Column**

--\_\_\_\_\_\_\_ 2. Add Constriant in Existig Column \_\_\_\_\_\_\_\_\_\_\_\_\_\_

create table customer(

id int primary key identity,

name varchar(25),

genderId int

)

--Constriaint

alter table customer

add constraint cns\_genderId --constriant Name

default 4 for genderId

--insert

insert into customer (name) values ('Pakistna')

select \* from customer

--\_\_\_\_\_\_\_ 3. Add Check Constraint \_\_\_\_\_\_\_\_\_\_\_\_\_\_

alter table customer

add constraint cns\_name\_check check (Len(name)>=3)--3 lenght kaa name lazmi hona chyaaa

* **Alter Constraint on Existing Column**

*No Alter option (drop, create new constraint)*

* **Drop Constraint**

alter table customer

drop constraint cns\_genderId

--insert

insert into customer (name) values ('Pakistna')

select \* from customer

* **List of Constraint**

SELECT

name AS constraint\_name,

type\_desc AS constraint\_type

FROM sys.objects

WHERE parent\_object\_id = OBJECT\_ID('table\_name')

**OR**

sp\_help 'customer'

**OR**

exec sp\_helpconstraint 'customer'

1. **Adding Foreign Key *🡺 🡺 Foreign key hum 🡪 Foreign key me Parhin ga***

**Step\_1 : Add Column 1st using Alter**

ALTER TABLE orders

ADD customer\_id INT;

**Step\_2 : Add 2nd Foreign Key**

ALTER TABLE orders

ADD CONSTRAINT FK\_customer\_id FOREIGN KEY (customer\_id)

REFERENCES customers (id);

drop table

The **DROP TABLE** statement is used to delete an existing table from a database in SQL. Here's the syntax for using **DROP TABLE**:

DROP TABLE YourTable\_Name