Dt: 18-03-2024

# SQL Training Session – 4

***Topics Covered:***

1. Create Table
2. Alter Table
3. Insert Data into Table

**Create Table:**

To create a table, we use a SQL command called CREATE. CREATE is a DDL command used to create databases, tables, triggers and other database objects.

**DDL:** DDL is an abbreviation of **Data Definition Language**. The DDL Commands in SQL are used to create and modify the schema of the database and its objects.

**Syntax to Create a Database:**

CREATE Database DatabaseName;

**Syntax to Create a Table:** The CREATE TABLE statement is used to create a new table in a database.

CREATE TABLE table\_name (  
    column1 datatype,  
    column2 datatype,  
    column3 datatype,  
   ....  
);

* The column parameters specify the names of the columns of the table.
* The datatype parameter specifies the type of data the column can hold (e.g. varchar, integer, date, etc.).

**Ex:**

CREATE TABLE Persons (  
    PersonID int,  
    LastName varchar (255),  
    FirstName varchar (255),  
    Address varchar (255),  
    City varchar (255)  
);

* The PersonID column is of type int and will hold an integer.
* The LastName, FirstName, Address, and City columns are of type varchar and will hold characters, and the maximum length for these fields is 255 characters.

**Create Table using another Table:** A copy of an existing table can also be created using CREATE TABLE.

* The new table gets the same column definitions. All columns or specific columns can be selected.
* If you create a new table using an existing table, the new table will be filled with the existing values from the old table.

**Syntax:**

CREATE TABLE new\_table\_name AS  
     SELECT column1, column2,...  
     FROM existing\_table\_name  
     WHERE ....;

**SQL Primary Key with CREATE TABLE statement:**

**Ex:**

CREATE TABLE Persons (  
    PersonID int NOT NULL PRIMARY KEY,  
    LastName varchar(255),  
    FirstName varchar(255),  
    Address varchar(255),  
    City varchar(255)  
);

*Ref:* [*https://www.javatpoint.com/sql-create-table*](https://www.javatpoint.com/sql-create-table)*,* [*https://www.w3schools.com/sql/sql\_create\_table.asp*](https://www.w3schools.com/sql/sql_create_table.asp)

**Alter Table:**

ALTER is a DDL command used to add, delete, or modify columns in an existing table. We can also add and drop constraints of the table using the ALTER command.

* **Alter Table – Add Column:**

To add a column in a table, the syntax we use is as follows:

**Syntax:** ALTER TABLE table\_name ADD column\_name datatype;

**Ex:** ALTER TABLE Persons ADD Email varchar (155);

* **Alter Table – Drop Column:**

To delete a column in table, the syntax is as follows:

**Syntax:** ALTER TABLE table\_name DROP column\_name;

**EX:** ALTER TABLE Persons DROP COLUMN Email;

* **Alter Table –** **Rename Column:**

To rename a column in table, the syntax is as follows:

**Syntax:** EXEC sp\_rename ‘table\_name.old\_name’, ‘new\_name’, ‘COLUMN’;

* **Alter Table – Alter/Modify datatype**

To change the datatype of a column, the syntax is as follows:

**Syntax:** ALTER TABLE table\_name MODIFY COLUMN column\_name datatype;

*Ref:* [*https://www.javatpoint.com/sql-alter-table*](https://www.javatpoint.com/sql-alter-table)*,* [*https://www.w3schools.com/sql/sql\_alter.asp*](https://www.w3schools.com/sql/sql_alter.asp)

**Insert Into Table:**

INSERT is another most important data manipulation command in SQL, which allows user to insert data/records into tables.

**DML:** DML is an abbreviation of **Data Manipulation Language.** The DML commands in SQL change the data present in the SQL database. We can easily access, insert, modify, update and delete the existing records from the database using DML commands.

**Syntax:** INSERT INTO table\_name (column1, column2, column3, ...) VALUES (value1, value2, value3, ...);

* If we’re adding values for all the columns of the table, we don’t need to specify the column names in SQL query. However, make sure the order of the values is in the same order as the columns in the table. Here, the INSERT INTO syntax is as follows:

**Syntax:** INSERT INTO table\_name VALUES (value1, value2, value3, ...);

**Ex:** INSERT INTO Persons (FirstName, LastName, Address, City) VALUES (‘Rajeev’, ‘Zed’, ‘Madhapur’, ‘Hyd’);

**Insert data into specified columns:**

**Ex:** INSERT INTO Persons (FirstName, LastName) VALUES (‘John’, ‘David’);

*Ref:* [*https://www.javatpoint.com/sql-insert*](https://www.javatpoint.com/sql-insert)*,* [*https://www.w3schools.com/sql/sql\_insert.asp*](https://www.w3schools.com/sql/sql_insert.asp)