

# BASIC

# SQL

- What is SQL?

- ✓ SQL stands for Structured Query Language. It is used for storing and managing data in relational database management system (RDBMS)

- SQL Commands:

- SELECT - Extract data from database.

- ✓ The data returned is stored in a result table, called the result - set.

## SELECT Syntax

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```
SELECT Column1, Column2, ...  
FROM table_name,
```

Here, column 1, column 2, ... are the field names of the table you want to select data from.

If you want to select all the fields available in the table use the following syntax:

```
SELECT * FROM table_name
```

## SELECT columns Example

The following SQL statement selects the "Customer Name", "City", and "Country" columns from the "customers" table:

### Example

```
SELECT Customer Name, City ,  
Country FROM Customers;
```

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## UPDATE

Updates data in a database.

The UPDATE statement is used to modify the existing records in a table.

### UPDATE Syntax

```
UPDATE table_name  
SET Column 1 = value 1 ,  
    Column 2 = value 2,....  
WHERE Condition;
```

### Example

```
UPDATE Customer  
SET Contact Name = 'Kanth'  
    City = Frankfurt
```



## ● DELETE

Deletes data from a database.

The DELETE statement is used to delete existing records in a table.

### DELETE Syntax

```
DELETE FROM table_name  
WHERE Condition;
```

### Example

```
DELETE FROM Customers  
WHERE customer  
      name = 'Kanth';
```

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## ● INSERT INTO

Inserts new data into a database.

The INSERT INTO statement is used to insert new records in a table.

### INSERT INTO Syntax

It is possible to write the INSERT INTO statement in two ways:

- ① Specify the both the column names and the values to be inserted:

```
INSERT INTO table_name  
(column1, column2, column3, ....)  
VALUES (value1, value2, value3, ....);
```

Continue →

②

```
INSERT INTO table_name
VALUES (value1, value2, value3, ...);
```

Example

```
INSERT INTO customers (customer name,
contact name, Address, city,
postal code, country)
VALUES ('Kanth', 'Tom B.', 'Skagen 21',
'stavanger', '4006', 'Norway');
```

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● CREATE DATABASECreates a new Database.

The CREATE DATABASE statement is used to create a new SQL Database.

Syntax

```
CREATE DATABASE database name;
```

Example

```
CREATE DATABASE text DB;
```

● ALTER TABLEModifies a table

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

Continue →



## ALTER TABLE - ADD column.

```
ALTER TABLE table_name  
ADD Column_name data type
```

### Example

```
ALTER TABLE Customer  
ADD Email varchar(255 )
```

## DROP column

```
ALTER TABLE table_name  
DROP COLUMN column_name;
```

### Example

```
ALTER TABLE Customers  
DROP COLUMN Email;
```

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## ● CREATE TABLE

Creates a new table.

The CREATE TABLE statement is used to create a new table in a database.

### Syntax

```
CREATE TABLE table_name (  
  Column1 datatype ,  
  Column2 datatype ,  
  Column3 datatype ,  
  ....  
);
```

Continue →

## → Example

```
CREATE TABLE Person (  
  Person ID int  
  Last Name varchar (255 ),  
  First Name varchar (255 ),  
  Address varchar (255 ),  
  City varchar (255 )  
);
```

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## ● DROP TABLE

Deletes a table.

The DROP TABLE statement is used to drop an existing table in a data base.

### Syntax

```
DROP TABLE table_name;
```

### Example

```
DROP TABLE shippers;
```

## ● CREATE INDEX

Creates an Index (Search key)

The CREATE INDEX statement is used to create Indexes in table.

Indexes are used to retrieve data from the data base more quickly than otherwise.

The users cannot see the indexes, they are just used to speed up searches / queries.

Continue →





## Syntax

```
CREATE INDEX Index_name  
ON table_name  
(column 1, column 2, .....);
```

## Example

```
CREATE INDEX idx_lastname  
ON person (LastName, FirstName);
```

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## ● DROP INDEX

Deletes an Index

The DROP INDEX statement is used to delete an index in a table.

```
ALTER TABLE table_name  
DROP INDEX index_name;
```