SQL | SELECT Query

The SELECT Statement in SQL is used to retrieve or fetch data from a database.

We can fetch either the entire table or according to some specified rules. The data returned is stored in a result table. This result table is also called the result set. With the SELECT clause of a SELECT command statement, we specify the columns that we want to be displayed in the query result and, optionally, which column headings we prefer to see above the result table.

The select clause is the first clause and is one of the last clauses of the select statement that the database server evaluates. The reason for this is that before we can determine what to include in the final result set, we need to know all of the possible columns that could be included in the final result set.

CREATE TABLE:


```
CREATE TABLE Customer(
    CustomerID INT PRIMARY KEY,
    CustomerName VARCHAR(50),
    LastName VARCHAR(50),
    Country VARCHAR(50),
    Age int(2),
  Phone int(10)
);
-- Insert some sample data into the Customers table
INSERT INTO Customer (CustomerID, CustomerName, LastName, Country, Age, Phone)
VALUES (1, 'Shubham', 'Thakur', 'India','23','xxxxxxxxxx'),
       (2, 'Aman ', 'Chopra', 'Australia','21','xxxxxxxxxx'),
       (3, 'Naveen', 'Tulasi', 'Sri lanka','24','xxxxxxxxxx'),
```

```
(4, 'Aditya', 'Arpan', 'Austria','21','xxxxxxxxxx'),
(5, 'Nishant. Salchichas S.A.', 'Jain', 'Spain','22','xxxxxxxxxx');
```

Output:

CustomerID	CustomerName	LastName	Country	Age	Phone
1	Shubham	Thakur	India	23	xxxxxxxxxx
2	Aman	Chopra	Australia	21	xxxxxxxxxx
3	Naveen	Tulasi	Sri lanka	24	xxxxxxxxxx
4	Aditya	Arpan	Austria	21	xxxxxxxxxx
5	Nishant. Salchichas S.A.	Jain	Spain	22	xxxxxxxxxx

To fetch any column in the table.

Syntax:

SELECT column1,column2 FROM table_name

column1 , column2: names of the fields of the table

table_name: from where we want to apply query

This query will return all the rows in the table with fields column1 and column2.

SELECT Statement in SQL

To fetch the entire table or all the fields in the table:

Syntax:

*SELECT * FROM table_name;*

— asterisks represent all attributes of the table

Query to fetch the fields CustomerName, LastName from the table Customer:

```
SELECT CustomerName, LastName FROM Customer;
```

Output:

CustomerName	LastName
Shubham	Thakur
Aman	Chopra
Naveen	Tulasi
Aditya	Arpan
Nishant. Salchichas S.A.	Jain

To fetch all the fields from the table Customer:

```
SELECT * FROM Customer;
```

Output:

CustomerID	CustomerName	LastName	Country	Age	Phone
1	Shubham	Thakur	India	23	xxxxxxxxxx
2	Aman	Chopra	Australia	21	xxxxxxxxxx
3	Naveen	Tulasi	Sri lanka	24	xxxxxxxxxx
4	Aditya	Arpan	Austria	21	xxxxxxxxxx
5	Nishant. Salchichas S.A.	Jain	Spain	22	xxxxxxxxxx

SELECT Statement with WHERE Clause

Suppose we want to see table values with specific conditions then Where Clause is used with select statement.

Query:

```
SELECT CustomerName FROM Customer where Age = '21';
```

Output:

CustomerName
Aman
Aditya

SQL SELECT Statement with GROUP BY Clause

Query:

```
SELECT COUNT (item), Customer_id FROM Orders GROUP BY order_id;
```

Output:

COUNT (item)	customer_id
1	4
1	4
1	3
1	1
1	2

SELECT Statement with HAVING Clause

Consider the following database for Having Clause:

Results Messages

	EmployeeId	Name	Gender	Salary	Department	Experience
1	1	Rachit	M	50000	Engineering	6 year
2	2	Shobit	M	37000	HR	3 year
3	3	Isha	F	56000	Sales	7 year
4	4	Devi	F	43000	Management	4 year
5	5	Akhil	M	90000	Engineering	15 year

Query:

```
SELECT Department, sum(Salary) as Salary
FROM employee
GROUP BY department
HAVING SUM(Salary) >= 50000;
```

Output:

Results Messages

	Department	Salary
1	Engineering	140000
2	Sales	56000

SELECT Statement with ORDER BY clause in SQL

Query:

```
SELECT * FROM Customer ORDER BY Age DESC;
```

Output:

CustomerID	CustomerName	LastName	Country	Age	Phone
3	Naveen	Tulasi	Sri lanka	24	xxxxxxxxxx
1	Shubham	Thakur	India	23	xxxxxxxxxx
5	Nishant. Salchichas S.A.	Jain	Spain	22	xxxxxxxxxx
2	Aman	Chopra	Australia	21	xxxxxxxxxx
4	Aditya	Arpan	Austria	21	xxxxxxxxxx

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81

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