

## Where Clause :

- WHERE keyword is used for fetching filtered data in a result set.
- It is used to fetch data according to a particular criteria.
- WHERE keyword can also be used to filter data by matching patterns.

### Basic Syntax:

```
SELECT column1,column2 FROM table_name WHERE column_name operator value;
```

List of operators that can be used with where clause:

>	Greater Than
>=	Greater than or Equal to
<	Less Than
<=	Less than or Equal to
=	Equal to
<>	Not Equal to
BETWEEN	In an inclusive Range
LIKE	Search for a pattern
IN	To specify multiple possible values for a column

### **Example : Students Table**

Name	Class	Marks
Siri	9	570
Vaishnavi	8	450
Bunny	9	532
Harish	8	350
Avika	10	590
Swasthi	10	431
Tarun	6	389
Swathi	7	421

#### **1) Show all the student names who are in class 7 and class 9**

Select Name from Students where class = 7 and class = 9;

#### **2) Show who have scored less than 400 in class 8**

Select \* from Students where Marks < 400 and class = 8;

**3) Select Students who are studying in class 8 , retrieve only name and class of the student.**

Select Name , Class from Students where class = 8;

**4) Select Students whose name is starting with letter s**

Select Name from Students where Name Like = 's% ';

**5) Select Students whose name is ending with letter a**

Select Name from Students where Name Like = '%a ';

These are two examples for easy understanding.

## SQL Comparison Operators

Operator	Description
=	Equal to
>	Greater than
<	Less than
>=	Greater than or equal to
<=	Less than or equal to
<>	Not equal to

**Example : Employee Table**

Id	Name	Department	Salary
1001	Steven	IT	34000
2123	Lex	Support	20000
3321	Naina	IT	30000
4564	Valli	Analytics	63000
5112	David	Data	55000
6456	Smith	Web	40000
7098	Bruce	Support	29000
8543	Alex	Data	70000

**1. Select whose salary Is greater than 50000**

Select \* from Employee where Salary > 50000;

**2. Select whose salary Is less than 30000**

Select \* from Employee where Salary < 30000;

**3. Select whose salary Is greater than and equal to 30000**

Select \* from Employee where Salary >= 30000;

## IS NULL & IS NOT NULL

**Null Value :** A field with a NULL value is a field with no value.

The ISNULL() function returns a specified value if the expression is NULL. If the expression is NOT NULL, this function returns the expression.

**Note:** A NULL value is different from a zero value or a field that contains spaces. A field with a NULL value is one that has been left blank during record creation!

We can test null values as below :

It is not possible to test for NULL values with comparison operators, such as =, <, or <>.

**We will have to use the IS NULL and IS NOT NULL operators instead.**

### **IS NULL Syntax**

```
SELECT column_names  
FROM table_name  
WHERE column_name IS NULL;
```

### **IS NOT NULL Syntax**

```
SELECT column_names  
FROM table_name  
WHERE column_name IS NOT NULL;
```

### **Example : Students Table**

Name	Class	Marks
Siri	9	570
Vaishnavi	8	Null
Bunny	9	532
Harish	8	350
NULL	10	590
NULL	10	Null
Tarun	6	389
Swathi	7	421

#### **1) To retrieve the null values from the above table :**

Select \* from Students where Marks IS NULL;

#### **2) To retrieve the names from the above table which are not null**

Select \* from Students where Name IS NOT NULL

## LEFT JOIN

The SQL LEFT JOIN joins two tables based on a common column, and selects records that have matching values in these columns and remaining rows from the left table.

**Left Join Example :**

```
SELECT Customers.customer_id, Customers.first_name, Orders.amount
FROM Customers
LEFT JOIN Orders
ON Customers.customer_id = Orders.customer;
```



## **LEFT JOIN With WHERE Clause**

The SQL command can have an optional **WHERE clause** with the **LEFT JOIN** statement. For example,

```
SELECT Customers.customer_id, Customers.first_name, Orders.amount
FROM Customers
LEFT JOIN Orders
ON Customers.customer_id = Orders.customer
WHERE Orders.amount >= 500;
```