

# SQL WHERE

The SQL **WHERE** clause is used to specify a condition while fetching the data from single table or joining with multiple tables.

If the given condition is satisfied, then only it returns specific value from the table. You would use **WHERE** clause to filter the records and fetching only necessary records.

The **WHERE** clause is not only used in **SELECT** statement, but it is also used in **UPDATE**, **DELETE** statement, etc.,

Format:

The basic format of **SELECT** statement with **WHERE** clause is as follows:

```
SELECT column1, column2, column N
FROM table_name
WHERE [condition]
```

You can specify a condition using comparison or logical operators like **>**, **<**, **=**, **LIKE**, **NOT** etc. Below examples would make this concept clear.

Example:

Consider the **CUSTOMERS** table having the following records:

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	32	Ahmedabad	2000.00
2	Khilan	25	Delhi	1500.00
3	kaushik	23	Kota	2000.00
4	Chaitali	25	Mumbai	6500.00
5	Hardik	27	Bhopal	8500.00
6	Komal	22	MP	4500.00
7	Muffy	24	Indore	10000.00

Following is an example, which would fetch ID, Name and Salary fields from the CUSTOMERS table where salary is greater than 2000:

```
SELECT ID, NAME, SALARY
FROM CUSTOMERS
WHERE SALARY > 2000;
```

This would produce the following result

ID	NAME	SALARY
4	Chaitali	6500.00
5	Hardik	8500.00
6	Komal	4500.00
7	Muffy	10000.00

Following is an example, which would fetch ID, Name and Salary fields from the CUSTOMERS table for a customer with name **Hardik**. Here, it is important to note that all the strings should be given inside single quotes (") where as numeric values should be given without any quote as in above example:

```
SELECT ID, NAME, SALARY
FROM CUSTOMERS
WHERE NAME = 'Hardik';
```

This would produce the following result:

ID	NAME	SALARY
5	Hardik	8500.00

# SQL AND and OR Operators

The SQL **AND** and **OR** operators are used to combine multiple conditions in an SQL statement. These two operators are called conjunctive operators.

These operators provide a means to make multiple comparisons with different operators in the same SQL statement.

The AND Operator:

The **AND** operator allows the existence of multiple conditions in an SQL statement's WHERE clause.

Format:

The basic format of AND operator with WHERE clause is as follows:

```
SELECT column1, column2, columnN
FROM table_name
WHERE [condition1] AND [condition2]...AND [conditionN];
```

You can combine N number of conditions using AND operator. For an action to be taken by the SQL statement, all conditions separated by the AND must be TRUE.

Example:

Consider the CUSTOMERS table having the following records:

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	32	Ahmedabad	2000.00
2	Khilan	25	Delhi	1500.00
3	kaushik	23	Kota	2000.00
4	Chaitali	25	Mumbai	6500.00
5	Hardik	27	Bhopal	8500.00
6	Komal	22	MP	4500.00
7	Muffy	24	Indore	10000.00

Following is an example, which would fetch ID, Name and Salary fields from the CUSTOMERS table where salary is greater than 2000 AND age is less than 25 years:

```
SELECT ID, NAME, SALARY
FROM CUSTOMERS
WHERE SALARY > 2000 AND age < 25;
```

This would produce the following result:

ID	NAME	SALARY
6	Komal	4500.00
7	Muffy	10000.00

The OR Operator:

The OR operator is used to combine multiple conditions in an SQL statement's WHERE clause.

Format:

The basic format of OR operator with WHERE clause is as follows:

```
SELECT column1, column2, columnN  
FROM table_name  
WHERE [condition1] OR [condition2]...OR [conditionN]
```

You can combine N number of conditions using OR operator. For an action to be taken by the SQL statement, only any ONE of the conditions separated by the OR must be TRUE.

Example:

Consider the CUSTOMERS table having the following records:

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	32	Ahmedabad	2000.00
2	Khilan	25	Delhi	1500.00
3	kaushik	23	Kota	2000.00
4	Chaitali	25	Mumbai	6500.00
5	Hardik	27	Bhopal	8500.00
6	Komal	22	MP	4500.00
7	Muffy	24	Indore	10000.00

Following is an example, which would fetch ID, Name and Salary fields from the CUSTOMERS table where salary is greater than 2000 OR age is less than 25 years:

```
SELECT ID, NAME, SALARY  
FROM CUSTOMERS  
WHERE SALARY > 2000 OR age < 25;
```

This would produce the following result:

ID	NAME	SALARY
3	kaushik	2000.00
4	Chaitali	6500.00
5	Hardik	8500.00
6	Komal	4500.00
7	Muffy	10000.00

## SQL UPDATE Query

The SQL **UPDATE** Query is used to modify the existing records in a table.

You can use **WHERE** clause with **UPDATE** query to update selected rows, otherwise all the rows would be affected.

Format:

The basic format of **UPDATE** query with **WHERE** clause is as follows:

```
UPDATE table_name
SET column1 = value1, column2 = value2..., columnN = valueN
WHERE [condition];
```

You can combine N number of conditions using **AND** or **OR** operators.

Example:

Consider the **CUSTOMERS** table having the following records:

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	32	Ahmedabad	2000.00
2	Khilan	25	Delhi	1500.00
3	kaushik	23	Kota	2000.00
4	Chaitali	25	Mumbai	6500.00
5	Hardik	27	Bhopal	8500.00
6	Komal	22	MP	4500.00
7	Muffy	24	Indore	10000.00

Following is an example, which would update ADDRESS for a customer whose ID is 6:

```

UPDATE CUSTOMERS
SET ADDRESS = 'Pune'
WHERE ID = 6;

```

Now, CUSTOMERS table would have the following records:

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	32	Ahmedabad	2000.00
2	Khilan	25	Delhi	1500.00
3	kaushik	23	Kota	2000.00
4	Chaitali	25	Mumbai	6500.00
5	Hardik	27	Bhopal	8500.00
6	Komal	22	Pune	4500.00
7	Muffy	24	Indore	10000.00

If you want to modify all ADDRESS and SALARY column values in CUSTOMERS table, you do not need to use WHERE clause and UPDATE query would be as follows:

```
UPDATE CUSTOMERS
SET ADDRESS = 'Pune', SALARY = 1000.00;
```

Now, CUSTOMERS table would have the following records:

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	32	Pune	1000.00
2	Khilan	25	Pune	1000.00
3	kaushik	23	Pune	1000.00
4	Chaitali	25	Pune	1000.00
5	Hardik	27	Pune	1000.00
6	Komal	22	Pune	1000.00
7	Muffy	24	Pune	1000.00

## SQL DELETE Query

The SQL DELETE Query is used to delete the existing records from a table.

```
DELETE FROM table_name
WHERE [condition];
```

You can combine N number of conditions using AND or OR operators.

## Example:

Consider the CUSTOMERS table having the following records:

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	32	Ahmedabad	2000.00
2	Khilan	25	Delhi	1500.00
3	kaushik	23	Kota	2000.00
4	Chaitali	25	Mumbai	6500.00
5	Hardik	27	Bhopal	8500.00
6	Komal	22	MP	4500.00
7	Muffy	24	Indore	10000.00



You can use WHERE clause with DELETE query to delete selected rows, otherwise all the records would be deleted.

Format:

The basic format of DELETE query with WHERE clause is as follows:

Following is an example, which would DELETE a customer, whose ID is 6:

```
DELETE FROM CUSTOMERS
WHERE ID = 6;
```

Now, CUSTOMERS table would have the following records:

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	32	Ahmedabad	2000.00
2	Khilan	25	Delhi	1500.00
3	kaushik	23	Kota	2000.00
4	Chaitali	25	Mumbai	6500.00
5	Hardik	27	Bhopal	8500.00
7	Muffy	24	Indore	10000.00

If you want to DELETE all the records from CUSTOMERS table, you do not need to use WHERE clause and DELETE query would be as follows:

```
DELETE FROM CUSTOMERS;
```

Now, CUSTOMERS table would not have any record.