Comparison Operators | WHERE Clause

Comparison Operators within the WHERE Clause are used to filter data in SQL queries based on specific conditions. They compare values in a database column with a specific value or another column.

Here are the common comparison operators:

1. Equal to (=)

- **Usage:** Checks if a value matches exactly.

- **Example:**

```sql
SELECT *
FROM employees
WHERE department = 'HR';
```

2. Not Equal to (<> or !=)

- **Usage:** Checks if a value does not match.

- **Example:**

```sql
SELECT *
FROM employees
WHERE department <> 'HR';
```

3. Greater than (>)

- **Usage:** Filters records where a value is greater than the specified value.

- **Example:**

```sql
SELECT *
```

```
2   FROM orders
3   WHERE order_amount > 1000;
4
```

4. Less than (<)

- **Usage:** Filters records where a value is less than the specified value.

- **Example:**

SQL

```
1   SELECT *
2   FROM orders
3   WHERE order_amount < 500;
4
```

5. Greater than or Equal to (>=)

- **Usage:** Filters records where a value is greater than or equal to the specified value.

- **Example:**

SQL

```
1   SELECT *
2   FROM orders
3   WHERE order_amount >= 1000;
4
```

6. Less than or Equal to (<=)

- **Usage:** Filters records where a value is less than or equal to the specified value.

- **Example:**

SQL

```
1   SELECT *
2   FROM orders
3   WHERE order_amount <= 500;
4
```

7. BETWEEN

- **Usage:** Filters records within a specific range (inclusive).

- **Example:**

```sql
SELECT *
FROM orders
WHERE order_amount BETWEEN 500 AND 1000;
```

8. IN

- **Usage:** Filters records that match any value in a given set.

- **Example:**

```sql
SELECT *
FROM employees
WHERE department IN ('HR', 'IT', 'Finance');
```

9. NOT IN

- **Usage:** Filters records that do not match any value in a given set.

- **Example:**

```sql
SELECT *
FROM employees
WHERE department NOT IN ('HR', 'IT', 'Finance');
```

10. LIKE

- **Usage:** Performs pattern matching.

- **Example:**

```sql
SELECT *
FROM employees
WHERE name LIKE 'A%'; -- Names starting with 'A'
```

11. IS NULL

- **Usage:** Filters records where a column value is `NULL` .

- **Example:**

```sql
SELECT *
FROM employees
WHERE manager_id IS NULL;
```

12. IS NOT NULL

- **Usage:** Filters records where a column value is not `NULL` .

- **Example:**

```sql
SELECT *
FROM employees
WHERE manager_id IS NOT NULL;
```

Key Notes:

- You can combine these operators using logical operators like `AND` , `OR` , and `NOT` for more complex conditions.

- Always test your `WHERE` clause to ensure it filters the correct data without missing or including unintended rows.

Would you like detailed examples or a step-by-step exercise?