**SQL operator types**

## 1. ****Comparison Operators****

|  |  |  |
| --- | --- | --- |
| Operator | Meaning | Example |
| = | Equal | price = 500 |
| != or <> | Not equal | city != 'Delhi' |
| > | Greater than | price > 1000 |
| < | Less than | quantity < 2 |
| >= | Greater than or equal | price >= 9000 |
| <= | Less than or equal | price <= 150 |

### Example:

SELECT \* FROM products WHERE price > 1000;

## 2. ****Logical Operators****

|  |  |
| --- | --- |
| Operator | Meaning |
| AND | All conditions must be true |
| OR | At least one condition is true |
| NOT | Negates a condition |

### Example:

-- Get products cheaper than 200 OR with name 'Monitor'

SELECT \* FROM products

WHERE price < 200 OR name = 'Monitor';

## 3. ****BETWEEN Operator****

Find values within a range (inclusive)

### Example:

SELECT \* FROM products

WHERE price BETWEEN 500 AND 9000;

## 4. ****IN Operator****

Match any value in a list

### Example:

SELECT \* FROM customers

WHERE city IN ('Delhi', 'Mumbai');

## 5. ****LIKE Operator****

Pattern matching using % (wildcard for any characters)

### Example:

SELECT \* FROM customers

WHERE name LIKE 'A%'; -- Starts with A

SELECT \* FROM products

WHERE name LIKE '%top'; -- Ends with 'top'

## 6. ****IS NULL / IS NOT NULL****

### Example:

SELECT \* FROM orders

WHERE customer\_id IS NULL;

SELECT \* FROM products

WHERE price IS NOT NULL;

## 7. ****EXISTS Operator****

Checks if a subquery returns results

### Example:

SELECT \* FROM customers c

WHERE EXISTS (

SELECT 1 FROM orders o WHERE o.customer\_id = c.customer\_id

);

→ Lists only customers who placed at least one order.

## 8. ****ANY / ALL Operators****

### Example: ANY

SELECT \* FROM products

WHERE price > ANY (

SELECT price FROM products WHERE name = 'USB Cable'

);

→ Products priced higher than **any** USB Cable (i.e., > 150).

### Example: ALL

SELECT \* FROM products

WHERE price > ALL (

SELECT price FROM products WHERE name = 'Mouse'

);

→ Products priced higher than **all** Mice (i.e., > 500).

## 9. ****CASE Statement**** (Conditional operator)

### Example:

SELECT name, price,

CASE

WHEN price >= 10000 THEN 'Expensive'

WHEN price >= 1000 THEN 'Moderate'

ELSE 'Cheap'

END AS price\_category

FROM products;

## Summary Table

|  |  |
| --- | --- |
| Type | Example |
| Comparison | price > 1000 |
| Logical | price > 500 AND quantity < 5 |
| BETWEEN | BETWEEN 1000 AND 5000 |
| IN | IN ('Delhi', 'Mumbai') |
| LIKE | LIKE '%top%' |
| IS NULL | IS NULL, IS NOT NULL |
| EXISTS | EXISTS (SELECT …) |
| ANY / ALL | > ANY (…), < ALL (…) |
| CASE | CASE WHEN … THEN … END |