

SQL Assignment: WHERE Clause and Operators Practice

Dataset: Retail Sales Data (150 rows, 8 columns)

Table Name: sales_data

Objective: Practice WHERE clause, AND/OR operators, and filtering conditions

Dataset Schema

Column	Data Type	Description
sale_id	INT	Unique sale identifier
date	DATE	Sale date (YYYY-MM-DD)
customer_name	VARCHAR(50)	Customer's full name
product	VARCHAR(30)	Product name
category	VARCHAR(20)	Product category
quantity	INT	Number of items sold
unit_price	DECIMAL(10,2)	Price per unit in dollars
city	VARCHAR(20)	City where sale occurred

Categories in Dataset:

- **Electronics:** TV, Mobile, Laptop, Tablet, Headphones, Speaker, Camera, Smartwatch
- **Apparel:** Jeans, T-shirt, Shirt, Jacket, Dress, Skirt, Shorts, Hoodie
- **Footwear:** Sneakers, Sandals, Boots, Flats, Heels, Slippers
- **Personal:** Shampoo, Toothpaste, Soap, Lotion, Perfume, Deodorant, Face Cream

Cities in Dataset:

Mumbai, Delhi, Bengaluru, Chennai, Hyderabad, Pune, Kolkata, Ahmedabad, Jaipur, Lucknow

30 Practice Questions

Basic WHERE Clause (Questions 1-5)

1. Display all sales records where the city is 'Mumbai'.

```
-- Write your query here
```

2. Show all records where the product is 'Laptop'.

```
-- Write your query here
```

3. List all transactions where the quantity is greater than 3.

```
-- Write your query here
```

4. Display sales where the unit_price is less than 50.

```
-- Write your query here
```

5. Find all sales made on '2025-07-15'.

```
-- Write your query here
```

AND Operator (Questions 6-10)

6. Show records where category is 'Electronics' AND unit_price is greater than 400.

```
-- Write your query here
```

7. List sales where product is 'T-shirt' AND quantity is 2.

```
-- Write your query here
```

8. Display transactions where city is 'Delhi' AND category is 'Apparel'.

```
-- Write your query here
```

9. Find sales where quantity is 1 AND unit_price is between 100 and 200.

```
-- Write your query here
```

10. Show records where customer_name starts with 'A' AND city is 'Pune'.

```
-- Write your query here
```

OR Operator (Questions 11-15)

11. List all sales in 'Mumbai' OR 'Delhi'.

```
-- Write your query here
```

12. Show records where category is 'Footwear' OR 'Personal'.

```
-- Write your query here
```

13. Display sales where product is 'Mobile' OR 'Tablet'.

```
-- Write your query here
```

14. Find transactions where quantity is 4 OR 5.

```
-- Write your query here
```

15. Show records where unit_price is less than 25 OR greater than 500.

```
-- Write your query here
```

Combined AND/OR (Questions 16-20)

16. List sales where (category is 'Electronics' OR 'Apparel') AND city is 'Bengaluru'.

```
-- Write your query here
```

17. Show records where product is 'Jeans' AND (city is 'Chennai' OR 'Hyderabad').

```
-- Write your query here
```

18. Display transactions where (quantity is 1 OR 2) AND unit_price is greater than 100.

```
-- Write your query here
```

19. Find sales where category is 'Personal' AND (quantity is 3 OR unit_price is less than 30).

```
-- Write your query here
```

20. Show records where (customer_name starts with 'S' OR ends with 'a') AND category is 'Footwear'.

-- Write your query here

NOT Operator (Questions 21-25)

21. Display all sales where category is NOT 'Electronics'.

-- Write your query here

22. List records where city is NOT 'Mumbai'.

-- Write your query here

23. Show sales where product is NOT 'TV' AND NOT 'Mobile'.

-- Write your query here

24. Find transactions where quantity is NOT 1 AND unit_price is NOT greater than 200.

-- Write your query here

25. Display records where customer_name does NOT contain 'Kumar'.

-- Write your query here

Advanced Filtering (Questions 26-30)

26. Show sales where city is IN ('Kolkata', 'Ahmedabad', 'Jaipur').

-- Write your query here

27. List records where product is IN ('Sneakers', 'Boots', 'Sandals') AND unit_price is BETWEEN 50 AND 150.

-- Write your query here

28. Display transactions where date is BETWEEN '2025-07-01' AND '2025-07-31'.

-- Write your query here

29. Find sales where (unit_price * quantity) is greater than 300.

```
-- Write your query here
```

30. Show records where customer_name LIKE '%Singh%' AND category is NOT 'Personal' AND quantity >= 2.

```
-- Write your query here
```

Instructions for Students

1. **Setup:** Load the provided CSV dataset into your SQL database system
2. **Syntax:** Use standard SQL SELECT statements with WHERE clauses
3. **Testing:** Verify your queries return the expected results
4. **Practice:** Try modifying the conditions to explore different filtering combinations

Grading Criteria

- **Correctness (70%):** Query returns accurate results
- **Syntax (20%):** Proper SQL syntax and formatting
- **Logic (10%):** Correct use of logical operators

Additional Practice

After completing these questions, try creating your own WHERE clause conditions using:

- LIKE operator with wildcards (% , _)
- IS NULL / IS NOT NULL
- Complex nested conditions with parentheses
- Combining multiple operators in single queries

Good Luck with your SQL Practice!