

SQL Practice Problems - CASE WHEN & Aggregation (Extended Set)

1. Customers from East or West (age 30-39)

```
SELECT customer_name
FROM customers
WHERE region IN ('West', 'East')
AND age_group = '30-39';
```

2. North Region Orders with Quantity > 2

```
SELECT c.customer_name
FROM orders o
INNER JOIN customers c ON o.customer_id = c.customer_id
WHERE c.region = 'North' AND o.quantity > 2;
```

3. Total Revenue by Product Category

```
SELECT p.category, SUM(o.quantity * o.unit_price) AS total_revenue
FROM orders o
INNER JOIN products p ON o.product_id = p.product_id
GROUP BY p.category;
```

4. Regions with More Than 2 Orders

```
SELECT c.region, COUNT(*) AS num_orders
FROM orders o
INNER JOIN customers c ON o.customer_id = c.customer_id
GROUP BY c.region
HAVING COUNT(*) > 2;
```

5. Order Value Buckets (Small/Medium/Large)

```
SELECT
  CASE
    WHEN quantity * unit_price < 300 THEN 'Small'
    WHEN quantity * unit_price BETWEEN 300 AND 700 THEN 'Medium'
    ELSE 'Large'
  END AS value_bucket,
  COUNT(*) AS num_orders
```

```
FROM orders
GROUP BY value_bucket;
```

6. Product Price Tier Classification

```
SELECT
    product_name, category,
    CASE
        WHEN price < 150 THEN 'Budget'
        WHEN price BETWEEN 150 AND 300 THEN 'Standard'
        ELSE 'Premium'
    END AS price_tier
FROM products;
```

7. Order Value Category + Region Filter (South only)

```
SELECT
    c.customer_name,
    c.region,
    CASE
        WHEN o.quantity * o.unit_price < 300 THEN 'Low'
        WHEN o.quantity * o.unit_price BETWEEN 300 AND 700 THEN 'Mid'
        ELSE 'High'
    END AS value_label
FROM orders o
INNER JOIN customers c ON o.customer_id = c.customer_id
WHERE c.region = 'South'
ORDER BY o.quantity * o.unit_price DESC;
```

8. CASE WHEN + Aggregation + JOIN

```
SELECT
    CASE
        WHEN p.price < 200 THEN 'Affordable'
        WHEN p.price BETWEEN 200 AND 500 THEN 'Standard'
        ELSE 'Premium'
    END AS price_tier,
    COUNT(*) AS num_orders
FROM orders o
INNER JOIN products p ON o.product_id = p.product_id
GROUP BY price_tier;
```

9. Total Revenue by Region with Filter

```
SELECT c.region, SUM(o.quantity * o.unit_price) AS total_revenue
FROM orders o
INNER JOIN customers c ON o.customer_id = c.customer_id
GROUP BY c.region
HAVING SUM(o.quantity * o.unit_price) > 600;
```

10. Spending Category by Customer (Low/Mid/High)

```
SELECT
    c.customer_name,
    c.region,
    CASE
        WHEN o.quantity * o.unit_price < 300 THEN 'Low'
        WHEN o.quantity * o.unit_price BETWEEN 300 AND 700 THEN 'Mid'
        ELSE 'High'
    END AS value_category
FROM orders o
INNER JOIN customers c ON o.customer_id = c.customer_id;
```

11. Product Tier Using Product Price Alone

```
SELECT
    product_name, category, price,
    CASE
        WHEN price < 150 THEN 'Low Priced'
        WHEN price BETWEEN 150 AND 300 THEN 'Mid Priced'
        ELSE 'High Priced'
    END AS price_label
FROM products;
```

12. Order Count Per Region and Value Category

```
SELECT
    c.region,
    CASE
        WHEN o.quantity * o.unit_price < 300 THEN 'Low'
        WHEN o.quantity * o.unit_price BETWEEN 300 AND 700 THEN 'Mid'
        ELSE 'High'
    END AS value_category,
```

```
    COUNT(*) AS num_orders
FROM orders o
INNER JOIN customers c ON o.customer_id = c.customer_id
GROUP BY c.region, value_category;
```

13. Spending Bucket Per Customer Using SUM + CASE

```
SELECT
    region,
    spend_category,
    COUNT(*) AS num_customers
FROM (
    SELECT
        c.customer_id,
        c.region,
        CASE
            WHEN SUM(o.quantity * o.unit_price) < 1000 THEN 'Low Spenders'
            WHEN SUM(o.quantity * o.unit_price) BETWEEN 1000 AND 3000 THEN 'Moderate Spenders'
            ELSE 'High Spenders'
        END AS spend_category
    FROM orders o
    INNER JOIN customers c ON o.customer_id = c.customer_id
    GROUP BY c.customer_id, c.region
) AS customer_spending
GROUP BY region, spend_category
HAVING COUNT(*) > 2;
```