## Exercise 3 - SQL Fundamentals (SQL Case Statements)

1. SELECT product_name, price
CASE WHEN price > 1000 THEN 'Expensive'
WHEN price BETWEEN 100 AND 1000 THEN 'Mid-range'
ELSE 'Budget'
END AS price_category
FROM products;

| product_name | price | price_category |
|---|---|---|
| Laptop | 1200 | Expensive |
| Phone | 300 | Mid-range |
| Keyboard | 45 | Budget |
| Monitor | 300 | Mid-range |
| Mouse | 25 | Budget |

2. SELECT Customer_name, amount
CASE WHEN amount >= 1000 THEN 'High Value'
WHEN amount BETWEEN 500 AND 999.99 THEN 'Medium Value'
ELSE 'Low Value'
END AS order_value_category
From orders;

| customer_name | amount | order_value_category |
|---|---|---|
| Alice | 150 | Low |
| Bob | 560 | Medium |
| Charlie | 999.99 | Medium |
| Diana | 49.50 | Low |
| Ethan | 1200 | High |

3. SELECT emp_name, department, salary
CASE WHEN department = 'IT' AND salary > 80 000 THEN 'Senior IT'
WHEN department = 'HR' AND salary > 55000 THEN 'Experienced HR'
ELSE 'Staff'
END AS position_level
FROM employees;

| emp_name | department | salary | position_level |
|---|---|---|---|
| John | IT | 85 000 | Senior IT |
| Sara | HR | 60 000 | Experienced HR |
| Mark | IT | 75 000 | Staff |
| Lucy | Finance | 65 000 | Staff |
| Tom | HR | 55000 | Staff |

4. SELECT student_name, score
CASE WHEN score >= 90 THEN 'A'
WHEN score BETWEEN 80 AND 89 THEN 'B'
WHEN score BETWEEN 70 AND 79 THEN 'C'
WHEN score BETWEEN 60 AND 69 THEN 'D'
ELSE 'F'
END AS grade
From students;

| student_name | score | grade |
|---|---|---|
| Anna | 92 | A |
| Ben | 76 | C |
| Cara | 54 | F |
| David | 83 | B |
| Ella | 68 | D |

5. SELECT delivery_id, delivery_time_minutes
CASE WHEN delivery_time_minutes <= 30 THEN 'Fast'
WHEN delivery_time_minutes BETWEEN 31 AND 60 THEN 'On Time'
ELSE 'Late'
END AS performance
From deliveries

| delivery_id | delivery_time_minutes | performance |
|---|---|---|
| 1 | 45 | On Time |
| 2 | 80 | Late |
| 3 | 30 | Fast |
| 4 | 65 | Late |
| 5 | 100 | Late |

6. SELECT issue_type, priority
CASE WHEN priority = 3 THEN 'High'
WHEN priority = 2 THEN 'Medium'
ELSE 'Low'
END AS priority_label
FROM tickets;

| issue_type | priority | priority_label |
|---|---|---|
| Login issue | 1 | Low |
| Server down | 3 | High |
| Slow system | 2 | Medium |
| Email error | 2 | Medium |
| Password reset | 1 | Low |

7. SELECT student_id, attendance_percentage
CASE WHEN days_present / total_days * 100 >= 90 THEN 'Excellent'
WHEN days_present / total_days * 100 BETWEEN 75 AND 89 THEN 'Good'
ELSE 'Needs Improvement'
END AS attendance_status;
FROM attendance

| student_id | attendance_percentage | attendance_status |
|---|---|---|
| 1 | 90 | Excellent |
| 2 | 60 | Needs Improvement |
| 3 | 96 | Excellent |
| 4 | 50 | Needs Improvement |
| 5 | 100 | Excellent |

8. SELECT product_id, stock_qty
CASE WHEN stock_qty = 0 THEN 'Out of stock'
WHEN stock_qty BETWEEN 1 AND 5 THEN 'Low stock'
ELSE 'In stock'
END AS 'stock_status'
FROM products_inventory;

| product_id | stock_qty | stock_status |
|---|---|---|
| 1 | 5 | In stock |
| 2 | 0 | Out of stock |
| 3 | 25 | In stock |
| 4 | 10 | In stock |
| 5 | 3 | Low stock |

9. SELECT subject, enrolled_students
CASE WHEN enrolled_students >= 25 THEN 'Large'
WHEN enrolled_students BETWEEN 10 AND 25 THEN 'Medium'
ELSE 'Small'
END AS class_size_category
From classes;

| subject | enrolled_students | class_size_category |
|---|---|---|
| Math | 30 | Large |
| English | 25 | Large |
| Science | 15 | Medium |
| Art | 5 | Small |
| History | 20 | Medium |

10. SELECT payment_id, payment_method, amount
CASE WHEN payment_method = 'Cash' AND amount >= 200
THEN 'Eligible for Discount'
ELSE 'Not Eligible'
END AS discount_eligibility
FROM payments;

| payment_id | payment_method | amount | discount_eligibility |
|---|---|---|---|
| 1 | Card | 50 | Not Eligible |
| 2 | Cash | 200 | Eligible for Discount |
| 3 | Card | 150 | Not Eligible |
| 4 | PayPal | 75 | Not Eligible |
| 5 | Cash | 300 | Eligible for Discount |