Musawakhe Andrew Nzama

SQL Fundamentals (SQL CASE STATEMENT)

1) Products – Classify each product by Price

```
Select product_name, price,
  CASE
    When price > 1000 THEN 'Expensive'
    When price Between 100 AND 1000 THEN 'Mid-ran
    When price < 100 THEN 'Budget'
  END AS price_category
  FROM products;
```

Product Name	Price	Price Category
Laptop	1200	Expensive
Phone	800	Mid-range
Keyboard	45	Budget
Monitor	300	Mid-range
Mouse	25	Budget

② CASE Statement – ORDERS – High, Meel, LOW Value

```
Select customer_name,
       amount
  CASE
    When amount >= 1000 THEN 'High Value'
    When amount between 500 AND 999.99 THEN 'medium Value'
    When amount < 500 THEN 'Low Value'
  END AS Order_value_category
  FROM orders;
```

Customer_Name	AMOUNT	Order Value Category
Alice	150	Low Value
Bob	560	Medium Value
Charlie	999.99	Medium Value
Diana	45.5	Low Value
Ethan	1200	High Value

③ Employees – Position Level

```
Select Emp_name, department, Salary
  CASE
      When department = 'IT' AND salary > 8000 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	85000	Senior IT
Sara	HR	60000	Experienced HR
Mark	IT	75000	Staff
Lucy	Finance	95000	Staff
Tom	HR	55000	Staff

④ Students – Assign a Letter Grade

```
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	59	F
David	83	B
ELLA	68	D

⑤ Deliveries – LABEL delivery performance

```
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'
    When delivery_time_minutes > 60 THEN '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 Tickets – Convert priority to Labels

```
Select issue_type, priority,
CASE
    When priority = 3 THEN 'High'
    When priority = 2 THEN 'Medium'
    When priority = 1 THEN '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 Attendance - Calculate attendance% and Classify

```
Select student_id,
    (days_present * 100.0 / total days) AS Attendance,
CASE
  When (days_present * 100.0/total_days) >=90 THEN 'Excellent'
When (days_present * 100.0/total days) 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

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SQL Fundamentals: (SQL CASE Statement)

⑧ Product Inventory - Label Stock Status

```
Select product_id, stock_qty,
CASE
When stock_qty = 0 THEN 'out of stock'
When stock_qty between 1 AND 4 THEN 'Low Stock'
Else 'in stock'
END AS Stock_Status
From product_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 Classes - Classify by Size

```
Select Subject, Enrolled_students,
CASE
When enrolled_students >= 25 THEN 'Large'
When enrolled_students between 10 AND 24 THEN 'medium'
ELSE 'small'
END AS Class_size_category.
FROM CLASSES;
```

Subject	Enrolled-students	'class size Cat'
Math	30	Large
English	25	Large
Science	15	Medium
Art	5	Small
History	20	Medium

(10) Payments – Apply discount flag

```
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 ___
1	Card	50	Not Eligible
2	Cash	200	Eligible for Discou
3	Card	150	Not Eligible
4	PayPal	75	Not Eligible
5	Cash	300	Eligible for Discount