BRIGHTLIGHT TUTORIALS

DATA ANALYTICS

EXERCISE 3 : SQL CASE Statements

1. Table : products

Classify each product by price

Syntax :

```
SELECT product_name,
       price,
CASE
 WHEN price > 1000 THEN 'Expensive'
 WHEN price BETWEEN 100 AND 1000 THEN
 'Mid_range'
 WHEN price < 100 THEN 'Budget'
END AS price-category
FROM products;
```

Output :

product_name	price	price_category
Laptop	1200.00	Expensive
Phone	800.00	Mid-range
Keyboard	45.00	Budget
Monitor	300.00	Mid-range
Mouse	25.00	Budget

2. Table : orders

Label each order

Syntax :

```
SELECT customer_name,
       amount,
CASE
```

```
WHEN amount < 500 THEN 'Low value'
WHEN amount BETWEEN 500 AND 999.99
 THEN 'Medium value'
ELSE 'High value'
END AS order_value_category
FROM orders;
```

Output :

Customer_name	amount	order_value_category
Alice	150.00	Low value
Bob	560.00	Medium value
Charlie	999.999	Medium value
Diana	45.50	Low value
Ethan	1200.00	High value

3. Table : employees
Categorize employee position

Syntax :

```
SELECT emp_name,
       department,
       Salary,
CASE
   WHEN department = 'IT' AND Salary > 80000
   THEN 'Senior IT'
   WHEN department = 'HR' AND salary > 55000
   THEN 'Experienced HR'
ELSE 'Staff'
END AS position_level
FROM employees;
```

Output :

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. Table : Students
Assign a letter grade

Syntax :

```
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;
```

Output :

Student_name	score	grade
Anna	92	A
Ben	76	C
Cara	59	F
David	83	B
Ella	68	D

5. Table : deliveries
Label delivery performance

Syntax :

```
SELECT delivery_id,
       delivery_time_minutes,
CASE
WHEN delivery_time_minutes <= 30 THEN 'Fast'
WHEN delivery_time_minutes BETWEEN 31
 AND 59 THEN 'On time'
ELSE 'Late'
END AS performance
FROM deliveries;
```

Output :

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

6. Table : tickets
Convert priority to labels

Syntax :

```
SELECT issue_type,
       priority,
CASE
 WHEN priority = 3 THEN 'High'
 WHEN priority = 2 THEN 'Now Medium'
```

```
    WHEN priority = 1 THEN 'Low'
END AS priority_label
FROM tickets;
```

Output :

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. Table : attendance
Calculate attendence % and classify

Syntax :

```
SELECT student_id,
 ((days_present/total_days)*100) AS
  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;
```

Output :

Student_id	attendance_percentage	attendance_status
1	90	Excellent
2	60	Needs Improvement
3	96	Excellent
4	50	Needs Improvement
5	100	Excellent

8. Products_Inventory Table
Label stock status

Syntax :

```
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 products_inventory;
```

Output :

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. Table : classes
classify by size

Syntax :

```
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;
```

Output :

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

10. Table : payments
Apply discount flag

Syntax :

```
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;
```

Output :

payment_id	payment_method	amount	discount_eligibility
1	Card	50.00	Not Eligible
2	Cash	200.00	Eligible for discount
3	Card	150.00	Not Eligible
4	paypal	75.00	Not Eligible
5	cash	300.00	Eligible for discount