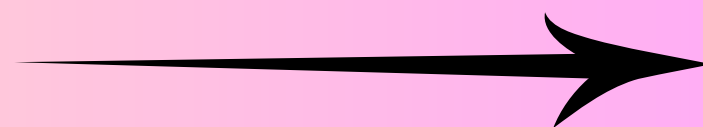


# **The CASE Statement in SQL!**

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## ❖ What is a **CASE Statement in SQL?**

- The CASE is a statement that operates if-then-else type of logical queries. This statement returns the value when the specified condition evaluates to True. When no condition evaluates to True, it returns the value of the ELSE part.
- When there is no ELSE part and no condition evaluates to True, it returns a NULL value



## ❖ Why Use the CASE Statement?

- 1 Embed Conditional Logic: Execute different actions based on specific conditions.
- 2 Simplify Complex Queries: Enhance readability and maintainability of your queries.
- 3 Transform Data: Dynamically change data values without altering the source



## ❖ Syntax of the CASE Statement :

```
CASE <expression>
  WHEN condition_1 THEN result_1
  WHEN condition_2 THEN result_2
  ...
  WHEN condition_N THEN result_N
  ELSE result
END;
```





## ❖ Example :

```
SELECT
  employee_id,
  sales_amount,
  CASE
    WHEN sales_amount > 10000 THEN 'High'
    WHEN sales_amount BETWEEN 5000 AND 10000 THEN 'Medium'
    ELSE 'Low'
  END AS performance_category
FROM
  sales;
```



**In Structured Query Language, CASE statement is used in SELECT, INSERT, and DELETE statements with the following three clauses:**

- 1. WHERE Clause**
- 2. ORDER BY Clause**
- 3. GROUP BY Clause**



## ❖ **Advantages :**

- **Versatility:** Useful in **SELECT**, **UPDATE**, **DELETE**, and **WHERE** clauses.
- **Efficiency:** Reduces the need for multiple query passes or temporary tables.
- **Readability:** Clearly outlines conditions and corresponding results.





## ❖ **Disadvantages :**

- **Complexity with Multiple Conditions:** Can become hard to read if there are many conditions.
- **Performance Impact:** May affect performance if used excessively in large datasets.







# Interview Questions

1. What is a CASE statement in SQL, and how is it used?
2. Can you explain the syntax of a CASE statement in SQL?
3. How does a CASE statement differ from the IF-ELSE logic in programming languages?
4. Provide an example of a simple CASE statement that categorizes products based on their price.



5. What happens if no `ELSE`` part is specified in a `CASE` statement and no condition evaluates to `TRUE`?
6. How can you use a `CASE` statement in a `SELECT` query to create a new computed column?
7. What is the difference between a simple `CASE` expression and a searched `CASE` expression?
8. How would you handle `NULL` values using a `CASE` statement in `SQL`?



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# Thank You

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