

## Scenario2 SQL ANS:

### 1. Identify Consistent High performers

Find employees who have consistently received a salary increase for the past 3 years.

. Doing self-join on hr salary table using employee\_id,  
Compare salary data for consecutive years using the year column,  
Ensure each employee's salary has increased every year.

### Customer Retention Analysis

Find customers who made purchases in the last 6 months but not in the previous 6 months.

Logic

Doing two subqueries to find customers who purchased within specific time frames using the orders table.

### Identify products with Declining sales

Find products whose sales decreased by more than 30% compared to the previous month

Perform self join on the sales table using product\_id

Compare sales data of the current month and the previous month.

Calculate the percentage decreases and filter products with a decline greater than 30%

### Calculate moving average of sales

Calculate a 3 month moving average for product sales.

Logic;

Use a WINDOW FUNCTION to calculate the moving average using the AVG() function.

Partition the data by product\_id

Order the data by sales\_date.

### Detect duplicate records

Find all duplicate records from a customer table based on email and phone number.

Logic

Group records using the GROUP BY clause.

Use HAVING to filter groups with more than one occurrence.

Identify products with No sales for 3 Consecutive months

List products that have not had any sales for 3 consecutive months.

Logic

Perform subquery using LEFT JOIN to find missing sales data.

Use date functions to check for gaps in sales data.

Identify products with no sales for the required period