Scenario based SQL set 1 Ans;

1. Employee salary Analysis
2. Find the names and salaries of employees who earn more than the average salary in the company

Logic

First calculate the average salary using the Avg() function

Use WHERE to filter employees whose salary is greater than the calculated average salary

Use SELECT to display the employee name and salary

Ensure the salary users the correct table and columns.

Concepts used,

Aggregate Functions (AVG())

Filtering (WHERE)

3. Customer orders without Matching Records
4. Retrieve a list of customer names who have not placed any orders.

Doing LEFT JOIN between the customers table and orders table using customer_id as a common field

After the join, filter records using WHERE orders.customer_id is null to find customers

Without any matching orders.

Select the customer_name from the customers table

Conscepts used;

Joins (LEFT JOIN)

Filtering with Null Values

3.product sales summary

Display the total sales amount for each product

Logic

Doing an INNER JOIN between the products table and the sales table using product_id

Use sum() function to calculate the total sales amount for each product

Apply Group BY clause on product_name to aggregate the sales data.

4.Department-wise Employee Court

List each department name with the number of employees working in it.

Display product_name and the total amount

Concepts used;

Joins (INNER JOIN)

AGGREGATE(SUM)

GROUPING)GROUP BY)

Perform LEFT JOIN between the employees table and the departments table using the department_id

Use the COUNT() function to count the number of employees in each department.

Apply a GROUP BY on the department_name to aggregate the data.

Select the department name and the employee count.

Concepts used;

LEFT JOIN

COUNT

GROUP BY

5.Top 3 highest sales

Select the necessary columns like sale_id, customer_id, and amount from the sales table.

Use the ORDER BY clause on the amount column in descending order to list the highest sales first.

Use LIMIT 3 to restrict the output to the top records.

Concepts used;

Sorting (ORDER BY)

Limiting results (LIMIT)

5. Calculate Employee salary ranks by department
6. TABLE employee
7. Employee_id(Primary key)
8. Name
9. Age

10. Salary
11. Department_id
12. TABLE departments
13. department_id (primary ket)
14. department_name
15. Task;
16. Write a query to display each employee’s name ,department name, salary,and their salary rank within their respective department
17. Logic;
18. Use RANK() window function to rank employees based on theirs alary within each department
19. Perform INNER JOIN to combine employee data with department information using
20. Department_id
21. Display employee details with their salary rank using the ORDER BY clause