SQL MODULE

LAB - 5

Mohammad Faraz Shaik

AF0366704

Questions

Database Schema

Already we have created an Employee table in day 2 lab,let's utilize this.

Task: Add two more columns in the Employee table named Salary and department and

add data into it. Now Imagine you work for a company with various departments, and

there is a need to analyze employee salaries within the IT department.Write a query to

retrieve all employees from the "employee" table who have a salary greater than 50000

and are in the 'IT' department

Hint: Use AND operator to retrieve details.

Submission:

Create an SQL script file containing your solutions for the task. Name the file

"lab_assignment1.sql" Provide comments above the query to indicate the query's

purpose.

Lab 2:

Database Schema

Use our database Ecommerce to complete the task.

Task: Imagine you are managing an e-commerce platform, and the holiday season is

approaching. To capitalize on the festive spirit and boost sales, you decide to organize a

special seasonal sale featuring electronics. The goal is to offer discounts on electronics

and include products with a price less than rs. 70,000 in the promotion.Write a query to

find products from the "product" table that are either in the 'Electronics' category or

have a price less than 70000.

Hint: Use Or operator to retrieve product details.

Submission:

Create an SQL script file containing your solutions for the task. Name the file

"lab_assignment2.sql" Provide comments above the query to indicate the query's

purpose.

Lab 3.

Task: Imagine you are an HR analyst responsible for conducting a comprehensive

analysis of average salaries across different departments within a company. The goal is

to understand and compare the average salaries of employees in various

departments.Write a query to Calculate the average salary of employee in each

department from the "employee" table.

Hint: Use AVG() function and GROUP BY clause to create the query.

Submission:

Create an SQL script file containing your solutions for the task. Name the file

"lab_assignment3.sql" Provide comments above the query to indicate the query's

purpose.

ChatGPT Exercise

Using ChatGPT generates SQL queries of the below problem .

Scenario 1: Determine the average age of employees in each department from the "employees" table.

We have an "Employee" table with the following columns: employee_id, employee_name, department, and salary and you want to find the average salary for each department. Generate the chatGPT prompt for the above scenario

ASSINGMENT -1&2

->

```
mysql> CREATE TABLE Employee (
    -> employee_id INT NOT NULL PRIMARY KEY,
    -> employee_name VARCHAR(50) NOT NULL,
    -> department VARCHAR(50),
    -> salary INT
    -> );
Query OK, 0 rows affected (0.80 sec)

mysql> INSERT INTO Employee (employee_id, employee_name, department, salary) VALUES
    -> (1, 'Alice', 'IT', 60000),
    -> (2, 'Bob', 'HR', 45000),
    -> (3, 'Charlie', 'IT', 70000),
    -> (4, 'David', 'Sales', 50000),
    -> (5, 'Eve', 'IT', 30000);
Query OK, 5 rows affected (0.17 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> select * from employee;
+-------------+---------------+------------+--------+
| employee_id | employee_name | department | salary |
+-------------+---------------+------------+--------+
|           1 | Alice         | IT         |  60000 |
|           2 | Bob           | HR         |  45000 |
|           3 | Charlie       | IT         |  70000 |
|           4 | David         | Sales      |  50000 |
|           5 | Eve           | IT         |  30000 |
+-------------+---------------+------------+--------+
```

->

```
mysql> SELECT * FROM Employee
    -> WHERE department = 'IT' AND salary > 50000;
+-------------+---------------+------------+--------+
| employee_id | employee_name | department | salary |
+-------------+---------------+------------+--------+
|           1 | Alice         | IT         |  60000 |
|           3 | Charlie       | IT         |  70000 |
+-------------+---------------+------------+--------+
2 rows in set (0.04 sec)
```

->

```
mysql> CREATE TABLE product (
    -> product_id INT NOT NULL PRIMARY KEY,
    -> product_name VARCHAR(100) NOT NULL,
    -> category VARCHAR(50),
    -> price INT
    -> );
Query OK, 0 rows affected (0.16 sec)

mysql> INSERT INTO product (product_id, product_name, category, price) VALUES
    -> (1, 'Laptop', 'Electronics', 65000),
    -> (2, 'Smartphone', 'Electronics', 55000),
    -> (3, 'Refrigerator', 'Home Appliances', 75000),
    -> (4, 'Microwave', 'Home Appliances', 30000),
    -> (5, 'Headphones', 'Electronics', 20000);
Query OK, 5 rows affected (0.16 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> select * from product;
+------------+--------------+----------------+-------+
| product_id | product_name | category       | price |
+------------+--------------+----------------+-------+
|          1 | Laptop       | Electronics    | 65000 |
|          2 | Smartphone   | Electronics    | 55000 |
|          3 | Refrigerator | Home Appliances | 75000 |
|          4 | Microwave    | Home Appliances | 30000 |
|          5 | Headphones   | Electronics    | 20000 |
+------------+--------------+----------------+-------+
```

->

```
mysql> SELECT * FROM product
    -> WHERE category = 'Electronics' OR price < 70000;
+------------+--------------+----------------+-------+
| product_id | product_name | category       | price |
+------------+--------------+----------------+-------+
|          1 | Laptop       | Electronics    | 65000 |
|          2 | Smartphone   | Electronics    | 55000 |
|          4 | Microwave    | Home Appliances | 30000 |
|          5 | Headphones   | Electronics    | 20000 |
+------------+--------------+----------------+-------+
4 rows in set (0.00 sec)
```

->

```
mysql> SELECT * FROM product
    -> WHERE category = 'Electronics' OR price < 70000;
+------------+--------------+----------------+-------+
| product_id | product_name | category       | price |
+------------+--------------+----------------+-------+
|          1 | Laptop       | Electronics    | 65000 |
|          2 | Smartphone   | Electronics    | 55000 |
|          4 | Microwave    | Home Appliances | 30000 |
|          5 | Headphones   | Electronics    | 20000 |
+------------+--------------+----------------+-------+
4 rows in set (0.00 sec)

mysql> SELECT department, AVG(salary) AS average_salary
    -> FROM Employee
    -> GROUP BY department;
+------------+----------------+
| department | average_salary |
+------------+----------------+
| IT         |     53333.3333 |
| HR         |     45000.0000 |
| Sales      |     50000.0000 |
+------------+----------------+
3 rows in set (0.10 sec)
```