SQL MODULE LAB

BY

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Questions

Lab 1:

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.

Lab 1:

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:

Already we are having salary and department columns in the employee table.

```
mysql> desc employee;
+-------------+---------------+------+-----+---------+-------+
| Field       | Type          | Null | Key | Default | Extra |
+-------------+---------------+------+-----+---------+-------+
| employee_id | int           | NO   | PRI | NULL    |       |
| first_name  | varchar(50)   | NO   |     | NULL    |       |
| last_name   | varchar(50)   | NO   |     | NULL    |       |
| department  | varchar(50)   | NO   |     | NULL    |       |
| salary      | decimal(10,2) | NO   |     | NULL    |       |
| hire_date   | date          | NO   |     | NULL    |       |
+-------------+---------------+------+-----+---------+-------+
6 rows in set (0.01 sec)
```

```
mysql> select * from employee
    -> where salary>50000 and department='it';
+-------------+------------+-----------+------------+----------+------------+
| employee_id | first_name | last_name | department | salary   | hire_date  |
+-------------+------------+-----------+------------+----------+------------+
|           5 | Harsha     | madireddy | it         | 60000.00 | 2024-03-01 |
+-------------+------------+-----------+------------+----------+------------+
1 row in set (0.00 sec)
```

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.

purpose.

```
mysql> select * from product
    -> where product_type='electronics' or product_price<70000;
+--------+-----------+--------------------+------------+------------+--------------+---------------+
| SaleID | ProductID | DiscountPercentage | StartDate  | EndDate    | product_type | product_price |
+--------+-----------+--------------------+------------+------------+--------------+---------------+
|      1 |         1 |              10.00 | 2024-05-20 | 2024-05-30 | electronics  |         80000 |
|      2 |         2 |               6.00 | 2024-05-20 | 2024-05-30 | home decor   |          2000 |
|      3 |         3 |               8.00 | 2024-05-20 | 2024-05-30 | electonics   |         50000 |
|      4 |         4 |              10.00 | 2024-05-20 | 2024-05-30 | beauty       |         10000 |
|      5 |         5 |              15.00 | 2024-05-20 | 2024-05-30 | electronics  |         90000 |
+--------+-----------+--------------------+------------+------------+--------------+---------------+
5 rows in set (0.01 sec)
```

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.

```
mysql> SELECT Department, AVG(Salary) AS AverageSalary
    -> FROM Employee
    -> GROUP BY Department;
+------------+---------------+
| Department | AverageSalary |
+------------+---------------+
| sales      |  52500.000000 |
| engineer   |  75000.000000 |
| IT         |  55000.000000 |
+------------+---------------+
3 rows in set (0.00 sec)
```

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.

```
mysql> SELECT department, AVG(salary) AS AverageSalary
    -> FROM Employees
    -> GROUP BY department;
+-------------+---------------+
| department  | AverageSalary |
+-------------+---------------+
| Engineering |  65000.000000 |
| Marketing   |  73500.000000 |
| Sales       |  49000.000000 |
| HR          |  81000.000000 |
| Finance     |  65000.000000 |
+-------------+---------------+
5 rows in set (0.00 sec)
```