

SQL MODULE

LAB - 10

Mohammad Faraz Shaik

AF0366704

Questions

Lab: Use the same student management system Database and table from previous lab. Perform the following commands on the table Student and Enrollment.

1. Assume a university where students can enroll in various courses. Now, write down a FULL outer JOIN query to retrieve the details.
2. Assume a university where students can enroll in various courses. Now, write down a Natural JOIN query to retrieve the details.

Submission:

Create an SQL script file containing your solutions for all tasks (queries). Name the file "lab_assignment1.sql" Provide comments above each query to indicate the query's purpose.

ChatGPT Exercise

Using ChatGPT generates SQL queries of the below problem .

Scenario 1: We have an "inventory" Table with following columns: ProductID, ProductName, StockQuantity and "sales" Table with following columns: SaleID, ProductID (foreign key), SaleQuantity, SaleDate. Now you need to use full outer join to generate a report that includes all products in the inventory and their sales, displaying NULL values for products that haven't been sold. Generate the chatGPT prompt for the above scenario.

TASK -1

```
MySQL 8.0 Command Line Cli x + v
s.Stude' at line 8
mysql> SELECT
  -> s.StudentID,
  -> s.StudentName,
  -> e.EnrollmentID,
  -> e.CourseID,
  -> e.EnrollmentDate
  -> FROM
  -> student_table s
  -> LEFT JOIN
  -> enrollment_table e
  -> ON
  -> s.StudentID = e.StudentID
  -> UNION
  -> SELECT
  -> s.StudentID,
  -> s.StudentName,
  -> e.EnrollmentID,
  -> e.CourseID,
  -> e.EnrollmentDate
  -> FROM
  -> student_table s
  -> RIGHT JOIN
  -> enrollment_table e
  -> ON
  -> s.StudentID = e.StudentID;
```

StudentID	StudentName	EnrollmentID	CourseID	EnrollmentDate
1	John Doe	1	101	2024-06-06
2	Alice	2	102	2024-02-15
3	Bob	3	103	2024-03-12
4	Charlie	NULL	NULL	NULL

4 rows in set (0.11 sec)

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TASK -2

```
mysql> SELECT
  -> *
  -> FROM
  -> student_table
  -> NATURAL JOIN
  -> enrollment_table;
```

StudentID	StudentName	EnrollmentID	CourseID	EnrollmentDate
1	John Doe	1	101	2024-06-06
2	Alice	2	102	2024-02-15
3	Bob	3	103	2024-03-12

3 rows in set (0.00 sec)

TASK -3

```
MySQL 8.0 Command Line Cli x + v
mysql> SELECT
  -> i.ProductID,
  -> i.ProductName,
  -> i.StockQuantity,
  -> s.SaleID,
  -> s.SaleQuantity,
  -> s.SaleDate
  -> FROM
  -> inventory i
  -> LEFT JOIN
  -> sales s
  -> ON
  -> i.ProductID = s.ProductID
  -> UNION
  -> SELECT
  -> i.ProductID,
  -> i.ProductName,
  -> i.StockQuantity,
  -> s.SaleID,
  -> s.SaleQuantity,
  -> s.SaleDate
  -> FROM
  -> inventory i
  -> RIGHT JOIN
  -> sales s
  -> ON
  -> i.ProductID = s.ProductID;
```

ProductID	ProductName	StockQuantity	SaleID	SaleQuantity	SaleDate
1	Laptop	50	201	5	2023-05-01
2	Mouse	150	NULL	NULL	NULL
3	Keyboard	100	203	7	2023-05-03
3	Keyboard	100	202	10	2023-05-02

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