SQL MODULE

LAB - 5

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Questions

Database Schema:

Use the same database scheme created in Previous Lab.

Task: Let's consider a scenario where you want to retrieve information about students

from a database table named student and display the results in ascending order
based

on their last names.

Hint: Use orderBy clause in a ascending Order

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 the same database scheme created in Previous Lab.

Task: Let's consider a scenario where you want to count the number of students
based

on their gender from a database table named Student.

Hint: use GroupBy clause and Count() function

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.

ChatGPT Exercise

Using ChatGPT generates SQL queries of the below problem .

Scenario 1:

Library Books Given a table called books with columns book_id, title, and author_id, write a query to count the number of books written by each author, ordering the results by the author's name without using a join clause.

ASSIGNMENT -1

```
mysql> SELECT * FROM Student
    -> ORDER BY lastname ASC;
+--------+-----------+----------+------------+--------+---------------------+------------+
| stuId  | firstname | lastname | DOB        | gender | email               | ph         |
+--------+-----------+----------+------------+--------+---------------------+------------+
|     3  | mahi      | dhoni    | 1990-02-01 | M      | mahi@dho07ex.com    | 0998974670 |
|     5  | Rahul     | Kl       | 1990-05-07 | M      | rah@kl01ex.com      | 0998974120 |
|     2  | virat     | kohli    | 1996-06-19 | M      | virat@koh18ex.com   | 0912954670 |
|     1  | Rohit     | Sharma   | 1994-02-19 | M      | rohit@sham45ex.com  | 0998954670 |
|     4  | yuvraj    | singh    | 1990-01-11 | M      | traj@yv12ex.com     | 0991974670 |
+--------+-----------+----------+------------+--------+---------------------+------------+
5 rows in set (0.00 sec)
```

ASSINGMENT -2

```
mysql> SELECT gender, COUNT(*) AS student_count
    -> FROM Student
    -> GROUP BY gender;
+--------+---------------+
| gender | student_count |
+--------+---------------+
| M      |             5 |
+--------+---------------+
1 row in set (0.11 sec)
```

```
mysql> CREATE TABLE books (
    -> book_id INT NOT NULL PRIMARY KEY,
    -> title VARCHAR(255) NOT NULL,
    -> author_id INT NOT NULL
    -> );
Query OK, 0 rows affected (0.38 sec)

mysql> INSERT INTO books (book_id, title, author_id) VALUES

    -> (1, 'Book One', 1),
    -> (2, 'Book Two', 2),
    -> (3, 'Book Three', 1),
    -> (4, 'Book Four', 3),
    -> (5, 'Book Five', 2);
Query OK, 5 rows affected (0.18 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> describe books
    -> ^C
mysql> describe books;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| book_id   | int          | NO   | PRI | NULL    |       |
| title     | varchar(255) | NO   |     | NULL    |       |
| author_id | int          | NO   |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
3 rows in set (0.08 sec)
```

```
mysql> select *from books;
+---------+------------+-----------+
| book_id | title      | author_id |
+---------+------------+-----------+
|       1 | Book One   |         1 |
|       2 | Book Two   |         2 |
|       3 | Book Three |         1 |
|       4 | Book Four  |         3 |
|       5 | Book Five  |         2 |
+---------+------------+-----------+
5 rows in set (0.00 sec)

mysql> select * from student;
+-------+-----------+----------+------------+--------+--------------------+------------+
| stuId | firstname | lastname | DOB        | gender | email              | ph         |
+-------+-----------+----------+------------+--------+--------------------+------------+
|     1 | Rohit     | Sharma   | 1994-02-19 | M      | rohit@sham45ex.com | 0998954670 |
|     2 | virat     | kohli    | 1996-06-19 | M      | virat@koh18ex.com  | 0912954670 |
|     3 | mahi      | dhoni    | 1990-02-01 | M      | mahi@dho07ex.com   | 0998974670 |
|     4 | yuvraj    | singh    | 1990-01-11 | M      | traj@yv12ex.com    | 0991974670 |
|     5 | Rahul     | Kl       | 1990-05-07 | M      | rah@kl01ex.com     | 0998974120 |
+-------+-----------+----------+------------+--------+--------------------+------------+
5 rows in set (0.00 sec)

mysql> select* from books;
+---------+------------+-----------+
| book_id | title      | author_id |
+---------+------------+-----------+
|       1 | Book One   |         1 |
|       2 | Book Two   |         2 |
|       3 | Book Three |         1 |
|       4 | Book Four  |         3 |
|       5 | Book Five  |         2 |
+---------+------------+-----------+
5 rows in set (0.00 sec)
```

```
mysql> select author_id count(book_id) as book_count
    -> from books
    -> group BY author_id
    -> order BY author_id;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use
 near 'count(book_id) as book_count
from books
group BY author_id
order BY author_id' at line 1
mysql> SELECT author_id, COUNT(book_id) AS book_count
    -> FROM books
    -> GROUP BY author_id
    -> ORDER BY author_id;
+-----------+------------+
| author_id | book_count |
+-----------+------------+
|         1 |          2 |
|         2 |          2 |
|         3 |          1 |
+-----------+------------+
3 rows in set (0.00 sec)
```