

SQL LAB -5

(Operators,OrderBy and Group By Clause)

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Lab 1-

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

```
mysql> use StudentManagementSystem;  
Database changed
```

```
mysql> SELECT *  
-> FROM student  
-> ORDER BY LastName ASC;
```

StudentID	FirstName	LastName	DateOfBirth	Gender	Email	Phone
103	Raman	Bhalla	2002-03-03	Male	Bhalla@gmail.com	9282726252
102	Ishitha	Iyer	2001-02-02	Female	Ishitha@gmail.com	9123456789
104	Ruhi	Khan	2003-04-04	Female	Ruhi@gmail.com	9325649871
105	Vidyuth	Sahay	2004-05-05	Male	Vidyuth@gmail.com	9563214789
101	Jane	Smith	2000-01-01	Male	jane_Smith@example.com	9876543210

```
5 rows in set (0.06 sec)
```

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

```
mysql> SELECT Gender, COUNT(*) AS StudentCount
-> FROM Student
-> GROUP BY Gender;
+-----+-----+
| Gender | StudentCount |
+-----+-----+
| Male   | 3           |
| Female | 2           |
+-----+-----+
2 rows in set (0.00 sec)
```

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.

SELECT

author_id,

COUNT(book_id) AS BooksCount

FROM

books

GROUP BY

author_id

ORDER BY

author_id;

Explanation:

- **SELECT statement:** We select the 'author_id' column to group the data and use the COUNT(book_id) function to count the number of books written by each author.
- **GROUP BY clause:** We use the GROUP BY clause to group the rows of the table based on the 'author_id' column.
- **ORDER BY clause:** We use the ORDER BY clause to sort the results by the author's ID.

This query will return the count of books written by each author, ordered by the author's ID.