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**C/Y/S:** BSCpE – 2 B2

### **Laboratory Activity 3:**

**Laboratory Title:** Structured Query Language (SQL) - Basic Queries

**Chapter No. and Topic:** Chapter 2 - Structured Query Language (SQL)

#### **Discussions:**

This activity covers the basics of querying data from a table using SQL.

#### **Activity Description:**

Learn how to retrieve data using SELECT, filter with WHERE clauses, and sort results using ORDER BY.

#### **Objectives:**

- Write basic SQL queries using SELECT.
- Apply filters using WHERE clauses.
- Sort results using ORDER BY.

#### **Materials:**

- MySQL Workbench or SQL client

#### **Procedure:**

1. Open MySQL Workbench and connect to the LibraryManagement database.
2. Retrieve all columns from the Books table:

sql

Copy code

```
SELECT * FROM Books;
```

1. Retrieve books with the genre 'Fiction':

sql

Copy code

```
SELECT * FROM Books WHERE Genre = 'Fiction';
```

1. Sort the books by Title in ascending order:

sql

Copy code

```
SELECT * FROM Books ORDER BY Title ASC;
```

## Result:

Basic queries to retrieve and filter data from the Books table.

The screenshot shows the MySQL Workbench interface. The 'SQL Editor' window contains the query: `SELECT * FROM Books ORDER BY Title ASC;`. The 'Result Grid' displays the results of the query, sorted by Title in ascending order. The results are as follows:

| BookID | Title                       | Author             | ISBN          | Genre              |
|--------|-----------------------------|--------------------|---------------|--------------------|
| 3      | 1984                        | George Orwell      | 9780451524935 | Dystopian          |
| 157    | 1984                        | George Orwell      | 9780451524935 | Dystopian          |
| 80     | 1984                        | George Orwell      | 9780451524935 | Dystopian          |
| 175    | A Game of Thrones           | George R.R. Martin | 9780553103940 | Fantasy            |
| 21     | A Game of Thrones           | George R.R. Martin | 9780553103940 | Fantasy            |
| 98     | A Game of Thrones           | George R.R. Martin | 9780553103940 | Fantasy            |
| 28     | A Tale of Two Cities        | Charles Dickens    | 9780141192545 | Historical Fiction |
| 182    | A Tale of Two Cities        | Charles Dickens    | 9780141192545 | Historical Fiction |
| 105    | A Tale of Two Cities        | Charles Dickens    | 9780141192545 | Historical Fiction |
| 48     | All the Light We Cannot See | Anthony Doerr      | 9781501173219 | Historical Fiction |
| 202    | All the Light We Cannot See | Anthony Doerr      | 9781501173219 | Historical Fiction |
| 125    | All the Light We Cannot See | Anthony Doerr      | 9781501173219 | Historical Fiction |
| 126    | Anna Karenina               | Leo Tolstoy        | 9780140035008 | Literary Fiction   |
| 101    | Anna Karenina               | Leo Tolstoy        | 9780140035008 | Literary Fiction   |
| 24     | Anna Karenina               | Leo Tolstoy        | 9780140035008 | Literary Fiction   |
| 75     | Anxious People              | Frederik Backman   | 9781501160783 | Contemporary ...   |
| 229    | Anxious People              | Frederik Backman   | 9781501160783 | Contemporary ...   |
| 152    | Anxious People              | Frederik Backman   | 9781501160783 | Contemporary ...   |
| 60     | Becoming                    | Michelle Obama     | 9781524763138 | Memoir             |
| 214    | Becoming                    | Michelle Obama     | 9781524763138 | Memoir             |
| 137    | Becoming                    | Michelle Obama     | 9781524763138 | Memoir             |
| 89     | Before We Were Strangers    | Ramona Carling     | 9781501135101 | Romance            |
| 223    | Before We Were Strangers    | Ramona Carling     | 9781501135101 | Romance            |
| 146    | Before We Were Strangers    | Ramona Carling     | 9781501135101 | Romance            |
| 147    | Behind Closed Doors         | B.A. Paris         | 9781250130921 | Thriller           |

## Additional Questions/Discussions:

- How do WHERE and ORDER BY improve the functionality of SQL queries?

Ans: where and order by improves the functionality by specifying the data's to be selected in order for the data to be sorted easily and for easy selection of data.

## Conclusions:

This activity taught us to display selected data to pick the data needed and to sort the data.

