6. Test Queries(Minimum 25 Queries)

1. Display the student name who issued the book "mathematics" type.

```
mysql> SELECT B.Title, B.Author, B.Category, A.student_ID, A.student_Name,C.Issue_ID
    -> FROM books B, student A, issue_status C
    -> where B.isbn=C.isbn_book
    -> And A.student_ID=C.studentID
    -> AND B.Category="Mathematics";
+-----------+-----------+-------------+------------+--------------+----------+
| Title     | Author    | Category    | student_ID | student_Name | Issue_ID |
+-----------+-----------+-------------+------------+--------------+----------+
| RD SHARMA | RD SHARMA | Mathematics |       2101 | Aarti Rathi  |     1374 |
+-----------+-----------+-------------+------------+--------------+----------+
1 row in set (0.00 sec)
```

2. Display the Issue ID, Student Name whose issued the book with isbn book number as 1003.

```
mysql> SELECT C.Issue_ID,A.student_Name
    -> FROM student A, issue_status C
    -> where A.student_ID=C.StudentID
    -> and C.isbn_book=1003;
+----------+--------------+
| Issue_ID | student_Name |
+----------+--------------+
|     1314 | Aditya Kumar |
+----------+--------------+
1 row in set (0.02 sec)
```

3. Display the name, student id and date of return of student who have returned the issued book.

```
mysql> SELECT A.student_Name, A.student_ID, C.Return_date
    -> FROM student A, return_status C
    -> where A.student_ID=C.Return_StudentID;
+--------------+------------+---------------------+
| student_Name | student_ID | Return_date         |
+--------------+------------+---------------------+
| Aditya Kumar |       2108 | 2020-07-15 12:05:20 |
| Isha tyagi   |       2111 | 2020-10-16 15:31:15 |
+--------------+------------+---------------------+
2 rows in set (0.00 sec)
```

4. Add a column called book rating in customer table.

```
mysql> Alter table books add B_ratings varchar(10) not null;
Query OK, 0 rows affected (3.25 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc books;
+-----------------+--------------+------+-----+---------------------+-----------------------------+
| Field           | Type         | Null | Key | Default             | Extra                       |
+-----------------+--------------+------+-----+---------------------+-----------------------------+
| isbn            | int          | NO   | PRI | NULL                |                             |
| Title           | varchar(25)  | NO   |     | NULL                |                             |
| Category        | varchar(50)  | NO   |     | NULL                |                             |
| Price           | int          | NO   |     | NULL                |                             |
| Status          | varchar(20)  | YES  |     | NULL                |                             |
| Author          | varchar(20)  | NO   |     | NULL                |                             |
| Publisher       | varchar(50)  | NO   |     | NULL                |                             |
| Updatation_Date | timestamp    | NO   |     | 0000-00-00 00:00:00 | on update CURRENT_TIMESTAMP |
| B_ratings       | varchar(10)  | NO   |     | NULL                |                             |
+-----------------+--------------+------+-----+---------------------+-----------------------------+
9 rows in set (0.25 sec)
```

5. Display the Name of books with book id which were issued after April 2020.

```
mysql> SELECT Issued_book, isbn_book
    -> FROM issue_status
    -> where Issue_date > "2020-04-30 00:00:00";
+-----------------+-----------+
| Issued_book     | isbn_book |
+-----------------+-----------+
| Half Girlfriend |      1001 |
| RD SHARMA       |      1004 |
+-----------------+-----------+
2 rows in set (0.01 sec)
```

6. Insert new issue entry at present day and time.

```
mysql> INSERT INTO issue_status (Issue_ID, StudentID,Issued_book,isbn_book) VALUES (1321, 2106,"HC Verma",1003);
Query OK, 1 row affected (0.55 sec)

mysql> select * from issue_status;
+----------+-----------+-----------------+---------------------+-----------+
| Issue_ID | StudentID | Issued_book     | Issue_date          | isbn_book |
+----------+-----------+-----------------+---------------------+-----------+
|     1302 |      2111 | Half Girlfriend | 2020-05-14 11:44:05 |      1001 |
|     1314 |      2108 | HC Verma        | 2020-03-28 10:30:29 |      1003 |
|     1321 |      2106 | HC Verma        | 2021-06-11 17:08:54 |      1003 |
|     1374 |      2101 | RD SHARMA       | 2021-11-18 15:12:25 |      1004 |
+----------+-----------+-----------------+---------------------+-----------+
4 rows in set (0.00 sec)
```

7. Try to insert value of a student in return table who haven't issued the book yet.

```
mysql> INSERT INTO return_status VALUES (1416, 2104,"HC Verma",'2020-09-15 12:05:20',1003);
ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails
(`mydb`.`return_status`, CONSTRAINT `return_status_ibfk_2` FOREIGN KEY (`Return_StudentID`)
REFERENCES `issue_status` (`StudentID`))
```

Since student_ID 2104 isn't taken any book, we cannot blindly give the input!!

8. Display the Issue ID, Student Name who's issued the book with isbn book number as 1004.

```
mysql> SELECT C.Issue_ID , A.student_Name
    -> FROM student A , issue_status C
    -> where A.student_ID = C.StudentID
    -> and C.isbn_book = 1004;.
+----------+--------------+
| Issue_ID | student_Name |
+----------+--------------+
|     1374 | Aarti Rathi  |
+----------+--------------+
1 row in set (0.18 sec)
```

9. Add a column called edition in customer table.

```
mysql> Alter table books add Edition varchar(10) not null;
Query OK, 0 rows affected (0.70 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc books ;
+-----------------+-------------+------+-----+---------------------+-----------------------------+
| Field           | Type        | Null | Key | Default             | Extra                       |
+-----------------+-------------+------+-----+---------------------+-----------------------------+
| isbn            | int(20)     | NO   | PRI | NULL                |                             |
| Title           | varchar(25) | NO   |     | NULL                |                             |
| Category        | varchar(50) | NO   |     | NULL                |                             |
| Price           | int(8)      | NO   |     | NULL                |                             |
| Status          | varchar(20) | YES  |     | NULL                |                             |
| Author          | varchar(20) | NO   |     | NULL                |                             |
| Publisher       | varchar(50) | NO   |     | NULL                |                             |
| Updatation_Date | timestamp   | NO   |     | 0000-00-00 00:00:00 | on update CURRENT_TIMESTAMP |
| Edition         | varchar(10) | NO   |     | NULL                |                             |
+-----------------+-------------+------+-----+---------------------+-----------------------------+
9 rows in set (0.19 sec)
```

10. Display name and department in ascending order of registration date

```
mysql> SELECT student_Name , Dept
    -> FROM student ORDER BY Regd_date ASC ;
+---------------+------+
| student_Name  | Dept |
+---------------+------+
| Isha tyagi    | IT   |
| Aditya Kumar  | ENTC |
| Nishu Rai     | MECH |
| Aarti Rathi   | ENTC |
| Shambhavi     | IT   |
| Riya Singh    | COMP |
+---------------+------+
6 rows in set (0.00 sec)
```

11. Insert new issue entry at present day and time.

```
mysql> INSERT INTO issue_status(Issue_ID , StudentID , Issued_Book , isbn_book)
    -> VALUES (1321 , 2106 , "HC Verma" , 1003);
Query OK, 1 row affected (0.07 sec)

mysql> select * from issue_status ;
+----------+-----------+-----------------+---------------------+-----------+
| Issue_ID | StudentID | Issued_book     | Issue_date          | isbn_book |
+----------+-----------+-----------------+---------------------+-----------+
|     1302 |      2111 | Half Girlfriend | 2020-05-14 11:44:05 |      1001 |
|     1314 |      2108 | HC Verma        | 2020-03-28 10:30:29 |      1003 |
|     1321 |      2106 | HC Verma        | 2021-06-11 18:27:06 |      1003 |
|     1374 |      2101 | RD SHARMA       | 2021-11-18 15:12:25 |      1004 |
+----------+-----------+-----------------+---------------------+-----------+
4 rows in set (0.00 sec)
```

12. Display books with price greater than Rs. 1000

```
mysql> select Title , isbn
    -> from books
    -> where price > 1000;
+----------------------------+------+
| Title                      | isbn |
+----------------------------+------+
| PHP And MySql programming  | 1002 |
| RD SHARMA                  | 1004 |
+----------------------------+------+
2 rows in set (0.02 sec)
```

13. Display the student name who issued the book "science" type.

```
mysql> SELECT B.Title , B.Author , B.Category , A.student_ID , A.student_Name , C.Issue_ID
    -> FROM books B , student A , issue_status C
    -> where B.isbn = C.isbn_book
    -> And A.student_ID = C.studentID
    -> AND B.Category = "Science";
+----------+----------+----------+------------+--------------+----------+
| Title    | Author   | Category | student_ID | student_Name | Issue_ID |
+----------+----------+----------+------------+--------------+----------+
| HC Verma | HC Verma | Science  |       2108 | Aditya Kumar |     1314 |
| HC Verma | HC Verma | Science  |       2106 | Riya Singh   |     1321 |
+----------+----------+----------+------------+--------------+----------+
2 rows in set (0.19 sec)
```

14. Display the names in alphabetical order

```
mysql> SELECT student_name FROM student ORDER BY student_name ASC;
+--------------+
| student_name |
+--------------+
| Aarti Rathi  |
| Aditya Kumar |
| Isha tyagi   |
| Nishu Rai    |
| Riya Singh   |
| Shambhavi    |
+--------------+
6 rows in set (0.02 sec)
```

15. Display all student name in upper case

```
mysql> SELECT UPPER (student_Name) AS student_Name from student;
+--------------+
| student_Name |
+--------------+
| AARTI RATHI  |
| NISHU RAI    |
| RIYA SINGH   |
| ADITYA KUMAR |
| ISHA TYAGI   |
| SHAMBHAVI    |
+--------------+
6 rows in set (0.04 sec)
```

16. Create a view consisting of employee name and position.

```
mysql> CREATE VIEW information AS SELECT E_name , Position from employee ;
Query OK, 0 rows affected (0.15 sec)

mysql> select * from information;
+----------------+-----------+
| E_name         | Position  |
+----------------+-----------+
| Rakesh Kumar   | Admin     |
| Rupali Singh   | Assistant |
| Ranbir Rathore | Manager   |
+----------------+-----------+
3 rows in set (0.03 sec)
```

17. Display name of students starting with 'A'

```
mysql> SELECT * from student
    -> WHERE student_Name LIKE 'A%';
+------------+------+--------------+----------------------+-----------------+---------------------+
| student_ID | Dept | student_Name | student_Email        | student_Address | Regd_date           |
+------------+------+--------------+----------------------+-----------------+---------------------+
|       2101 | ENTC | Aarti Rathi  | aartirathi@gmail.com | Pune            | 2019-07-08 11:30:29 |
|       2108 | ENTC | Aditya Kumar | adiKumar@gmail.com   | Bhopal          | 2018-04-10 12:03:51 |
+------------+------+--------------+----------------------+-----------------+---------------------+
2 rows in set (0.14 sec)
```

18. Display the total number of issued books till date

```
mysql> SELECT COUNT(isbn_book) from issue_status;
+------------------+
| COUNT(isbn_book) |
+------------------+
|                4 |
+------------------+
1 row in set (0.03 sec)
```

19) Display name and department of students having 'S' in their name

```
mysql> select Dept,student_Name from student where student_Name like '%S%';
+------+--------------+
| Dept | student_Name |
+------+--------------+
| MECH | Nishu Rai    |
| COMP | Riya Singh   |
| IT   | Isha tyagi   |
| IT   | Shambhavi    |
+------+--------------+
4 rows in set (0.00 sec)
```

20) Display sum of price of all the books from 'Books' table.

```
mysql> select sum(price) from books;
+------------+
| sum(price) |
+------------+
|       4700 |
+------------+
1 row in set (0.00 sec)
```

21) Display the Title of book having minimum price

```
mysql> select min(price),Title from books;
+------------+----------------+
| min(price) | Title          |
+------------+----------------+
|        500 | Half Girlfriend |
+------------+----------------+
1 row in set (0.00 sec)
```

22) Group the students according to their branch

```
mysql> select Dept,student_name from student group by dept;
+------+--------------+
| Dept | student_name |
+------+--------------+
| ENTC | Aarti Rathi  |
| MECH | Nishu Rai    |
| COMP | Riya Singh   |
| IT   | Isha tyagi   |
+------+--------------+
4 rows in set (0.00 sec)
```

23) Create a view having attributes name, email, and student address.

```
mysql> create view student_detail as select student_Name,student_Address,student_Email from student;
Query OK, 0 rows affected (0.02 sec)

mysql> select * from student_detail;
+--------------+-----------------+---------------------+
| student_Name | student_Address | student_Email       |
+--------------+-----------------+---------------------+
| Aarti Rathi  | Pune            | aartirathi@gmail.com |
| Nishu Rai    | Bangalore       | RaiNishu@gmail.com  |
| Riya Singh   | Jaipur          | riya@gmail.com      |
| Aditya Kumar | Bhopal          | adiKumar@gmail.com  |
| Isha tyagi   | Ambala          | isha_here@gmail.com |
| Shambhavi    | New Delhi       | shambhavi@gmail.com |
+--------------+-----------------+---------------------+
6 rows in set (0.01 sec)
```

24) Select details of the books whose category name is starting with 'M'

```
mysql> select Title,category from books where category like 'M%';
+-----------------------------+-------------+
| Title                       | category    |
+-----------------------------+-------------+
| PHP And MySql programming   | Management  |
| RD SHARMA                   | Mathematics |
+-----------------------------+-------------+
2 rows in set (0.00 sec)
```

25) Select name of student having 10 digits in their name

```
mysql> select * from student where student_name like '_____';
+------------+------+--------------+---------------------+-----------------+---------------------+
| student_ID | Dept | student_Name | student_Email       | student_Address | Regd_date           |
+------------+------+--------------+---------------------+-----------------+---------------------+
|       2106 | COMP | Riya Singh   | riya@gmail.com      | Jaipur          | 2019-10-18 16:02:22 |
|       2111 | IT   | Isha tyagi   | isha_here@gmail.com | Ambala          | 2018-03-16 13:40:21 |
+------------+------+--------------+---------------------+-----------------+---------------------+
2 rows in set (0.00 sec)
```