EXPERIMENT-10

Implementation of joins, subquery, constraints and other SQL function

Schema:

Books Table

Column	Description
BookID	INT, Primary Key
Title	VARCHAR(100), NOT NULL
Author	VARCHAR(100), NOT NULL
PublishedYear	INT, CHECK (PublishedYear >= 1800)
ISBN	VARCHAR(20), UNIQUE

BorrowedBooks Table

Column	Description
BorrowID	INT, Primary Key
BookID	INT, Foreign Key referencing Books(BookID)
MemberName	VARCHAR(100), NOT NULL
BorrowDate	DATE, NOT NULL
ReturnDate	DATE, CHECK (ReturnDate >= BorrowDate OR ReturnDate IS NULL)

Questions

1. Find Books Borrowed by Members Using Inner Join

Question: Write a query to retrieve a list of books along with the names of members who have borrowed them. Display BookID, Title, and MemberName.

---

2. Find Members Who Borrowed Books Published After 2000

Question: Using a **subquery**, retrieve the MemberName and BorrowDate for members who have borrowed books published after the year 2000. Display results sorted by BorrowDate in descending order.

---

3. Get Count of Borrowed Books Per Member Using Left Join

Question: Write a query to display the names of all library members along with the count of books they have borrowed. Include members who haven't borrowed any books.

---

4. Identify Books That Have Not Been Borrowed

Question: Using an **outer join** and **IS NULL** operator, find the BookID and Title of all books that have not been borrowed by any member.

---

5. Find Top 3 Most Recently Borrowed Books Using Subquery and LIMIT

Question: Write a query to display the BookID, Title, and BorrowDate of the top 3 most recently borrowed books. Use a **subquery** to sort the borrowing records and limit the results to the top 3.