

Database Creation and Data Population

Objective: Create a database schema for a library management system and populate it with sample data.

Tasks:

1. **Table Creation:** Write SQL statements to create the following tables in the **db_LibraryManagement** database:
 - **tbl_publisher**
 - **tbl_book**
 - **tbl_library_branch**
 - **tbl_borrower**
 - **tbl_book_loans**
 - **tbl_book_copies**
 - **tbl_book_authors**
2. **Data Population:** Insert sample data into the tables using appropriate SQL **INSERT** statements.



1. Find the titles of all books published by "Bloomsbury."
2. List the names of borrowers whose phone numbers start with the area code "212."
3. Retrieve the titles of books with more than 10 copies available.
4. Display the names of borrowers who have borrowed books from the "Central" branch.
5. List the titles of books borrowed by borrower "Joe Smith."
6. Find the names of publishers for the books authored by "J.K. Rowling."
7. Count the total number of books available in the library.
8. Calculate the average number of copies available per book across all branches.
9. Find the branch with the highest number of books loaned out.
10. Insert a new book titled "The Catcher in the Rye" by "J.D. Salinger" into the database.

11. Update the address of the "Sharpstown" library branch to "45 West Side Avenue, New York, NY 10012."
12. Remove all books published by "Pan Books" from the database.
13. Retrieve the names of borrowers who have borrowed the same book more than once.
14. Find the title of the book with the earliest due date.
15. List the names of borrowers who have borrowed books authored by both "Stephen King" and "J.K. Rowling."
16. Find the names of borrowers who have borrowed books published by "Bloomsbury."
17. Retrieve the titles of books borrowed by borrowers located in New York.
18. Calculate the average number of books borrowed per borrower.
19. Find the branch with the highest average number of books borrowed per borrower.
20. Rank library branches based on the total number of books borrowed, without grouping
21. Calculate the percentage of books borrowed from each branch relative to the total number of books borrowed across all branches.
22. Find the names of borrowers who have borrowed books authored by "Stephen King" and "J.K. Rowling" from the same library branch.
23. Retrieve the names of borrowers who have borrowed books from branches located in New York and have more than 5 books checked out.
24. How many copies of the book titled "The Lost Tribe" are owned by the library branch whose name is "Sharpstown"?
25. How many copies of the book titled "The Lost Tribe" are owned by each library branch?
26. Retrieve the names of all borrowers who do not have any books checked out.
27. For each book that is loaned out from the "Sharpstown" branch and whose DueDate is today, retrieve the book title, the borrower's name, and the borrower's address.
28. For each library branch, retrieve the branch name and the total number of books loaned out from that branch.