Task 6

University Library Database Analysis Task

As the database manager for a university library system, you are charged with the task of analyzing the library's database to optimize resource allocation, improve student and faculty access to materials, and support academic research activities. The library's database contains a **Books** table, which includes information about books such as **bookId**, **title**, **author**, **publicationYear**, **genre**, **shelfLocation**, and **isAvailable**.

Books Table Schema

Column Name	Data Type
bookId	Int(auto increment)
title	varchar
author	varchar
publicationYear	int
genre	varchar
shelfLocation	varchar
isAvailable	boolean

Your objectives are to design SQL queries to:

1. Retrieve the title and author of all books in the "Science Fiction" genre.
2. List the **bookId**, **title**, and **genre** for all books published before the year 2000.
3. Display all books, including their title and publication year, sorted first by publication year in ascending order and then by title in alphabetical order.
4. Identify books that are currently not available for borrowing (**isAvailable** is false).
5. Show the title, genre, and author for books in the "History" genre, ordered by author name in ascending order.

6. Calculate and present the number of books available in each genre, including the genre name and the book count.
7. Display the title and publication year for books published between 1980 and 1990, inclusive.
8. Find authors who have written more than five books, showing the author's name and the count of their books.
9. Determine the average number of books published by the library per year.
10. Identify the genre with the highest number of titles available and display the genre name along with the total number of available titles.
11. List all books that have never been borrowed, assuming there exists a **BorrowingRecords** table that tracks each borrowing instance with columns including **recordId**, **bookId**, **borrowDate**, and **returnDate**.

These tasks require the use of various SQL features such as selection, aggregation (count, average), sorting (ORDER BY), and advanced querying techniques (subqueries, JOIN operations) to provide a comprehensive analysis of the library's book collection and borrowing trends. The outcome of these queries will help the library management in decision-making processes related to book purchases, shelf organization, and promotion of genres among the library users.