Application Description:

The Library Book Management System is an application developed using the Java programming language. Its purpose is to streamline the process of managing a library's collection of books. The application enables users to perform operations such as creating, reading, updating, and deleting book records within an SQLite database using the terminal interface. The present application utilizes various object-oriented programming principles, such as the implementation of an interface, an abstract class, composition, and polymorphism, to effectively manage and facilitate interactions with books inside a library setting.

Purpose:

The objective of this application is to optimize the efficiency of book inventory management in a library setting. This application provides value by offering librarians and staff with an intuitive means to add, retrieve, update, and remove book entries from a centralized database. The utilization of an object-oriented methodology facilitates the enhancement of code reusability, maintainability, and extensibility, so rendering it a great asset for libraries seeking to enhance their book management procedures.

Output:

The application provides crucial information to the terminal window, encompassing book particulars such as title, authorship, and ISBN. The system allows users to access the complete collection of books, read specific records for each book, and receive confirmation notifications for successful actions such as creating, updating, and deleting book entries. Furthermore, in the event of invalid actions or database errors, error messages are presented to guarantee a user experience that is both lucid and informative.

Data Storage:

The application utilizes an SQLite database to store book data. The database consists of a table in which each individual row corresponds to a book. The data that is kept encompasses several qualities, such as the title of the book, the author's name, and the International Standard Book Number (ISBN). The implementation of a structured data storage system facilitates the effective retrieval and administration of books housed in the library's collection, thereby enabling users to establish and maintain a well-ordered and readily available repository of books.