

### Problem Statement:

You have been hired as a developer to create a program that simulates a library management system. Your task is to create a Java program that implements the following requirements:

1. The program must be able to maintain a collection of books. Each book has a title, author, and ISBN.
2. The program must be able to add new books to the collection, remove books from the collection, and search for books in the collection.
3. The program must be able to maintain a collection of users. Each user has a name, email address, and a unique user ID.
4. The program must be able to add new users to the collection, remove users from the collection, and search for users in the collection.
5. The program must be able to maintain a record of which books have been borrowed by which users, and when they were borrowed.
6. The program must be able to check whether a particular book is available or not.
7. The program must be able to display the list of all books in the collection, the list of all users, and the list of books borrowed by a particular user.
8. The program must be able to calculate fines for late return of books.
  - The fine for each day is \$0.50.
  - If a book is returned more than 7 days late, the fine is doubled.
  - If a user has fines outstanding, they cannot borrow more books until the fines are paid.

You need to implement the following classes:

1. **Book** - This class should have instance variables for the title, author, and ISBN of the book. It should also have methods to get and set these variables.
2. **User** - This class should have instance variables for the name, email address, and user ID of the user. It should also have methods to get and set these variables.
3. **Library** - This class should have instance variables for the collections of books and users, as well as the records of books borrowed by users. It should have methods to add and remove books and users from the collections, search for books and users, and check whether a particular book is available or not. It should also have methods to display the lists of books and users, and the list of books borrowed by a particular user. Finally, it should have a method to calculate fines for late return of books.

You can use any data structure to store the books, users, and records, but it should be able to efficiently perform the required operations.

Your Java program should have a main method that allows the user to interact with the library management system by adding and removing books and users, borrowing and returning books, and paying fines. The program should display appropriate messages and menus to guide the user through these operations.