

Project: Library Management System

Description:

Create a system that manages books, borrowers, and transactions in a library. This system allows librarians to manage book cataloging, borrowing, returning, and overdue book notifications.

Features:

1. Book Management:

- Add new books to the library catalog.
- Update book details (title, author, ISBN, etc.).
- Remove books from the catalog.

2. Borrower Management:

- Register new borrowers (students, faculty, etc.).
- Update borrower information (name, contact details).
- Remove borrowers from records.

3. Transaction Handling:

- Check out books to borrowers.
- Return books and update availability.
- Calculate overdue fines for late returns.

4. Search and Display:

- Search books by title, author, or genre.
- Display available books and their current status (checked out or available).

5. Notifications:

- Send notifications for overdue books to borrowers and librarians.

Source Code :

```
class Book {  
    private String title;  
    private String author;  
    private String isbn;  
    private boolean available;  
}  
  
class Borrower {  
    private String name;  
    private String contactInfo;  
    private List<Book> borrowedBooks;
```

```
}
```

```
class Transaction {
```

```
    private Book book;
```

```
    private Borrower borrower;
```

```
    private Date checkoutDate;
```

```
    private Date returnDate;
```

```
    private boolean returned;
```

```
}
```

```
public class LibrarySystem {
```

```
    private List<Book> catalog;
```

```
    private List<Borrower> borrowers;
```

```
    private List<Transaction> transactions;
```

```
public static void main(String[] args) {
```

```
    }
```

```
}
```