Advanced State Diagram: Library Management System



3. Library Management system.

**Library management system**

system initialized → idle —— user login → Enter credentials → validate users

login failed

login successful

Enter search query → Display results → select Book

List borrowed Books → Request Return

**Book management.**

Process ← Request return ← Borrow Book

update

proceed

update records

payment successful.

uploaded.

user logout

**payment processing.**

view overdue fines → process payment

unsuccessful

successful.

generate recipt

**LibraryManagementSystem**

System Initialized → **Idle** — User login →

**User Interaction**
- Enter credentials → Validate User
- Login failed

Login successful

**User Dashboard**
- Enter Search query → Display results → Select Book
- List Borrowed Books → Request return

Action Completed

**Payment Processing**
- View Overdue fines → Process Payment

Payment successful

**Update Records**

Updated

Processed

**Book Management**
- Borrow Book → Return Book → Process

Updated

**User Logout** →