Emily Weed
System Design and Implementation
5 October 2024

Customer Problem Statement & System Requirements (Library Management System)

Problem Statement:

Public libraries are essential community resources, offering free access to various forms of media that can have a profound impact on people of all ages. While they play a crucial role in fostering literacy and lifelong learning, many public libraries continue to operate with outdated management systems. Both staff and patrons deserve a modern, streamlined system that is not only efficient but also user-friendly and accessible. A unified library management system that integrates essential tools into a single platform, improves functionality, and provides easy access to information would significantly enhance the overall library experience, boosting both efficiency and productivity.

Glossary of Terms:

Patron: A library user, either one who borrows physical media from the library or uses a service provided by the library.

Media Inventory: A database of all materials available through the library.

Personalized Recommendation: Book and media suggestions tailored to the patron. Utilizes borrowed history to find related media.

Reminders: Automated notifications when patrons have had a loan out for a certain period of time.

Functional Requirements:

No.	Priority	Description
REQ - 1	High	Supports cataloging of media in order to present data available to the user.
REQ - 2	High	Patrons will be able to search media inventory for a specific piece of media. Once searched, the system will display availability.
REQ - 3	Med	Automated overdue reminders to notify users of possible late fees.
REQ - 4	High	Allow library staff to change and/or update inventory or records.
REQ - 5	Med	Member account management such as loan history, suggestions, etc.
REQ - 6	Med	Overdue reminders

Nonfunctional Requirements:

No.	Priority	Description
REQ - 1	Med	**Functionality:** System should be able to function regardless of platform.
REQ - 2	High	**Usability:** User interface should be simple and easy to use by staff and patrons.
REQ - 3	Med	**Reliability:** Should provide accurate information and update when necessary.
REQ - 4	High	**Performance:** Should be able to handle a large database with minimal to no issues.
REQ - 5	Med	**Supportability:** Easy to maintain with little-to-no upkeep. Should make everyone's job easier!

User-interface Requirements:

No.	Priority	Description
REQ - 1	High	Search and Filter
REQ - 2	Med	Member Account
REQ - 3	High	Inventory
REQ - 4	Med	Notification

Plan of Work:

Task	Status	Timeframe
Research and Planning	In progress	2 weeks
System Design	Not started	1-2 weeks
Development	Not started	8 weeks
User Testing	Not started	1-2 weeks
Improvements	Not started	1-2 weeks

| Launch | Not started | n/a |