**Project Initiation – Library Management API**

This document provides an overview of the high-level requirements, their priorities, and estimates of their size.

1. **Actors**

Provide a numbered list that names and briefly describes each actor in the system.

1. User - anyone who uses the system, any user can search for books, even if they are not a member
2. Member - person who can rent books and make use of the library
3. Associate - checks username for new members and deals with renting out books to members
4. Manager - can create employee accounts and manage the library
5. The System- the system itself, it doles out passwords and keeps track of fines.
6. **Use Case Diagram**

|  |  |
| --- | --- |
| Actor |  |
| User | 1. Search for book 2. Become a member   18. Request to be a member |
| Member | 3. Check out a book (up to ten)  4. Pay fines  5. Login/out  6. Renew books  7 Report lost books  8. Hold a Book |
| Associate | 9. Scans books/library card  10. Create Members  11. View Member Information  19. Display a member's checked out books  20. Display fines  21. Notify member of held book |
| Manager | 12. add, edit, delete book listings  13. Suspend/activate accounts  14. Create employee accounts  15. access overdue fines |
| System | 16. Create password and pin for new users  17. Keep track of fines |

NOTE: Everyone can do anything Users can do and Managers can do anything Associates can do.

1. **User Stories**

Provide a user story for each use case in the format shown below. Remove sub-sections (Functional…, Non-…, Notes) if not needed. The numbers (*e.g.* US 1) should correspond to the use cases above.

US 1 – *Search books*

As a User Person, I want to search for books so I can find books

US 2 – *Become Member*

As a User Person, I want to become a member so I can check out books

US 3– *Rent Books*

As a member, I want to be able to rent a book, so I can take it out of the library.

US 4 – *Pay Fines*

As a member, I want to pay my fines so I can rent another book.

US 5– *Login/Logout*

As a member, I want to login/out so I can browse my account.

US 6– *Renew Books*

As a member, I want to renew my rented book so I won’t get extra fees.

US 7 – *Report Books*

As a member, I want to report a lost book so I can get a replacement.

US 8 – *Hold Books*

As a member, I want to hold a book so I can rent the book once it’s available.

US 9 – *Scan Books*

As an Associate, I want to scan books to check out them out

US 10 – *Create Member*

As an Associate, I want to create a Member

US 11 – *View Member Information*

As an Associate, I want to view a Members account so I can see their information

US 12 – *Edit Listings*

As a Manager, I would like to edit book listings to keep an updated library

US 13 – *Suspend Accounts*

As a Manager, I would like to suspend accounts to prevent some users from checking out books

US 14– *Create Employee Accounts*

As a Manager, I would like to create employee accounts so I can keep track of current employees

US 15 – *Access Fines*

As a Manager, I would like to access overdue fines so I can reactivate user accounts after fines are paid

US 16 – *Create Passwords/Pins*

As a System, I would like to create create passwords and pins for new users so they can access their new accounts

US 17 – *Keep Track of Fines*

As a System, I would like to keep track of fines so I can keep suspend users who have fines over $25

US 18 – Request Membership

As a User, I would like to request membership so that I can rent books

US 19 – Display Checked Out Books

As an Associate, I would like to see which books others have checked out so I know who has them.

US 20 – Display Fines

As an Associate, I would like to display fines to see who owes money.

US 21 – Notify of Held Book

As an Associate, I would like to notify members of books they held so they can pick up.

**User Story Prioritization & Size Estimates**

You will do two independent tasks here. First you will prioritize the user stories then you will estimate their size with *story points*. Neither task should influence the other, thus the order you do them is not important. However, the prioritization will probably be quicker.

|  |  |  |  |
| --- | --- | --- | --- |
| US ID | Title | Priority | Size (Story Points) |
| 12 | Edit Book listings | 1 | 5 |
| 1 | Search Books | 2 | 1 |
| 14 | Create Employee Accounts | 3 | 5 |
| 10 | Create Member | 4 | 5 |
| 5 | Login/out | 5 | 8 |
| 16 | Create pins/pwd | 6 | 5 |
| 2 | Become Member | 7 | 5 |
| 3 | Check out book | 8 | 1 |
| 9 | Scan books/cards | 9 | 3 |
| 18 | Request Member | 10 | 1 |
| 6 | Renew Books | 11 | 1 |
| 8 | Hold a book | 12 | 2 |
| 19 | Display checked out books | 13 | 1 |
| 15 | Access fines | 14 | 5 |
| 20 | Display fines | 15 | 1 |
| 13 | Suspend Members | 16 | 2 |
| 17 | Track fines | 17 | 3 |
| 4 | Pay fines | 18 | 3 |
| 21 | Notify of held book | 19 | 2 |
| 7 | Report lost book | 20 | 2 |
| 11 | View Member Information | 21 | 2 |

**Write a paragraph explaining the rationale behind your prioritization. You don’t have to explain every single US, but should give some general idea why some are prioritized higher.**

To start prioritizing, we decided that the first thing that would be being able to edit book listings. This is because without being able to add, delete or edit books that were in the library and then we went from there. A lot of our prioritization was based on what you needed to access first before you could more on to more complicated tasks. Size of the project or story points didn’t factor into what needed to be done first. A good example is that to search the system, you need to be able to create the system, which would be editing the book listings. Without being able to edit books, you can’t create the system to search. That is the logic that went behind organizing our list’s priority

**Write a paragraph explaining the technique you used to determine your story point estimates. Also explain the difference in points between at least two user stories of your choice**

For story points we pick one that we thought would be relatively easy like scan books and library cards and went from there. Things that we thought were more difficult, we assigned a higher point value, while things that seemed less difficult, we assigned a lower point value. Since Story points really is an arbitrary system, the points only give us a rough estimate of the size of the project that we need done. Two of our user stories are Access Fines and Display fines. Access is 5 story points while display is only one. The reason in this difference is because with displaying, you don’t change anything, you simply recall the amount. Accessing the fines is bigger because not only do you display the fines, you can edit and change the fines which requires much more coding that simply recalling the fines.