Identifying Uses Cases & Actors

A. Objective

> Develop a comprehensive system for managing a single library.

B. Actors

> 1. Librarian
> 2. Member
> 3. Manager

C. Use Cases

C.1 Librarian

> The system should allow a Librarian:
>
> 1. To **manage the catalog of books**.
> 2. To **track book loans**.
> 3. To **manage member registrations**.
> 4. To **add a book to the catalog**.
> 5. To **update a book in the catalog**.
> 6. To **remove a book from the catalog**.
> 7. To **assign a book** to a member.
> 8. To **update the availability status** of a book.
> 9. To **manage fine payments**.
> 10. To **clear dues** when payments are made.
> 11. To **generate reports** on the library's **inventory**.
> 12. To **generate reports** on available books.
> 13. To **generate reports** on checked-out books.
> 14. To **generate reports** on borrowed books.
> 15. To **generate reports** on overdue books.
> 16. To **generate reports** on fines.
> 17. To **generate usage** statistics on most borrowed books.
> 18. To **generate usage** statistics on popular genres.
> 19. To **generate usage** statistics on member borrowing trends.
> 20. To **oversee check-ins** of books.
> 21. To **oversee check-outs** of books.
> 22. To **manage fines**.

C.2 Member

> The system should allow a Member:
>
> 1. To **search for books**, by title, author, genre or ISBN.

2. To **reserve an available book**.
3. To **register for a library account**.
4. To **view their profile**.
5. To **update their profile**.
6. To **access their borrowing history**.
7. To **access their current loans**.

D. Objects / Data

D.1 Book

1. Title
2. Author
3. ISBN
4. Genre
5. Availability Status
6. Publication Date
7. Publisher
8. Brief Description about the book.
9. Quantity

D.2 Member

1. First Name
2. Middle Name
3. Last Name
4. House Number and Street Name
5. Suburb or Township
6. City or Town
7. Postal Code
8. Province
9. Phone Number
10. Email
11. Membership ID
12. User Role
13. Password

D.3 Reserved Book

1. Date Reserved.
2. Due Date.
3. Books ISBN
4. Member ID

D.4 Librarian

1. First Name
2. Middle Name

   3. Last Name
   4. House Number and Street Name
   5. Suburb or Township
   6. City or Town
   7. Postal Code
   8. Province
   9. Phone Number
  10. Email
  11. Staff ID
  12. User Role

D.5 Overdue Book

1. Date Reserved.
2. Due Date.
3. Books ISBN
4. Member ID
5. Fine Amount (everyday that passes after the due date, a member gets charged at least R50 per day)
6. Number of days past due return.

D.7 Borrowed Books History

1. Date Reserved.
2. Books ISBN
3. Member ID

D.8 Settled Book

1. Date Reserved.
2. Due Date.
3. Settled Date
4. Books ISBN
5. Member ID