

MINI PROJECT

EEX3467 SOFTWARE ENGINEERING AND CONCEPTS

Batch 1 & 2

ACADEMIC YEAR 2022

BACHELOR OF SOFTWARE ENGINEERING

M.S.M Faizan
s92061108

Introduction

Developing of software is not just coding with the computer programming language. It's a big task and steps of processes to follow. If project team to get expected outcomes and satisfy the customer, initially they must get system requirement from customer. After that team must focus on divide functional and non-functional aspect of requirement to move to the next step. At the same time identify the business actors and start draw system diagram using Flowchart, Use Case Diagram and Data Flow diagram by using the above mentioned aspects. In this system, we have drawn Use Case Diagram.

System proposed by: Open university of Srilanka, Kandy reginal center library.

Library Contact number: 081 249 4495/081 249 4496

Stake holder of the system

Stake holders are the important part of any organization however it is a computerized or manual system. The organization has different type of stake holder, each stake holder type has different role in the organization. Likewise, staff of the library works in different role. They work as senior assistant librarian, deputy librarian, librarian, library assistant, labor and library attendant. Customers are the user who borrow books, e-booking and get advantage from library system. Another library stake holders are the book publisher who are publish books to library. They only touch with library staff through online mode and system librarian works on technical side of the library.

Requirements Elicitation Methodology

Initial part of develop computerized system is to gather requirement for system. It can be gotten in many ways, but requirement elicitation methodology should be gotten according to what system they are going make. In this library system, I have made the interview with one of the library member of open university of Srilanka, Kandy reginal center.

Functional Requirements-

- Search book by its title
- Fill application form & Register
- Login to system
- Login and reserve books in online
- Access E-Books
- Watch user history
- Access Audio/Video resources
- Lending books
- Watch user profile
- Provide barcode & read barcode
- Send alert message regarding book return
- Purchase books
- Lecture recommend librarian to buy books
- Student request library to buy books

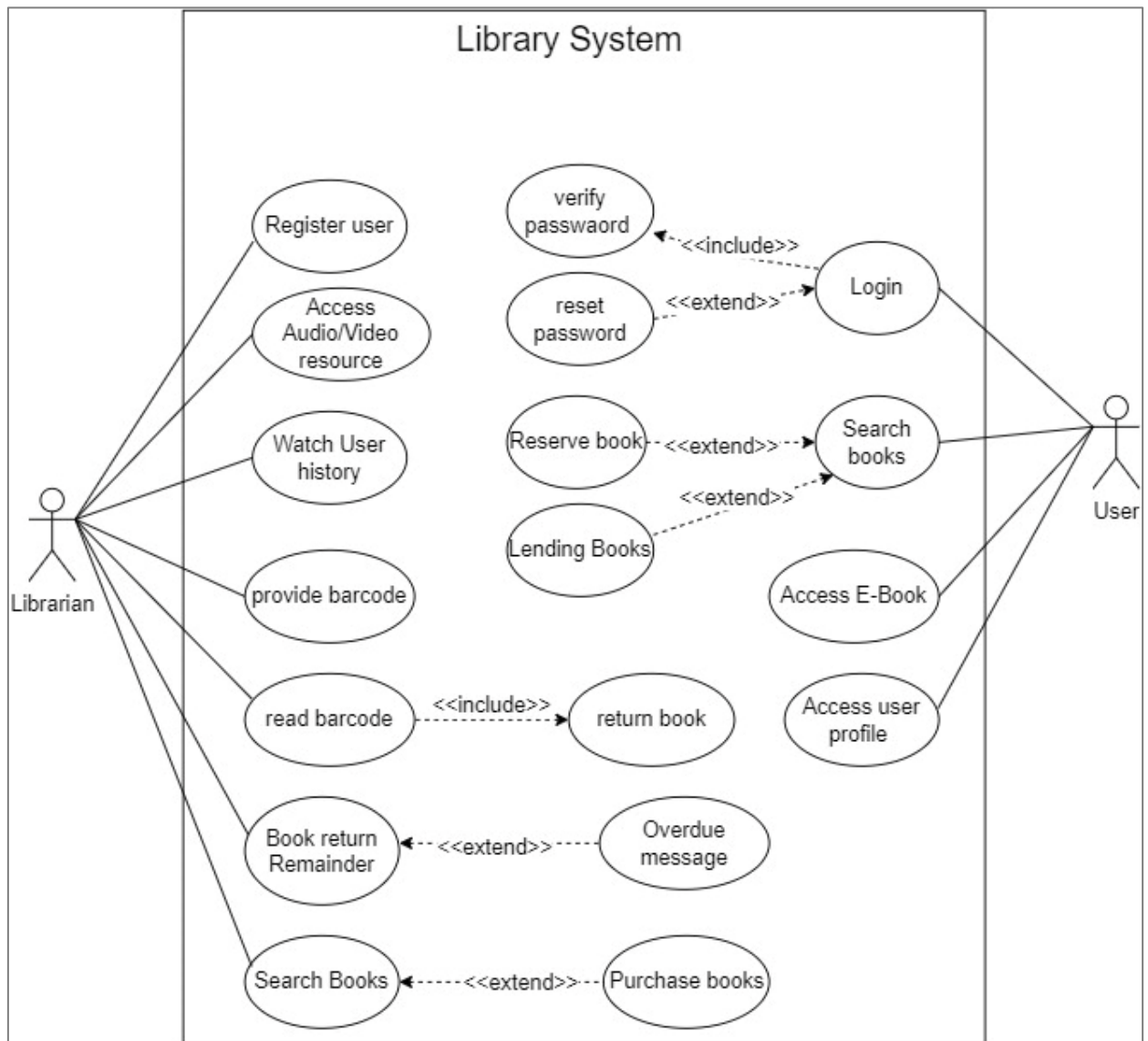
Non-Functional Requirements-

- User friendly
- Security
- Efficient
- Accurate

Business Actors

Business actors will be included in the stake holder but business actors who are frequently engage in a system. In our library system, library staff and users- student and lectures are the business actors.

Use Case Diagram of the System



Use Case Narrative

Register User : - when register new member, librarian ask the member to fill a library membership form. After that librarian paste the details to the computer system and give username and password to the member.

Book return remainder : - Before five days, there is a automatic email send to user's inbox regarding overdue.

System discussion

In the library, all student and lecture can read the books, but if they want to lend the book, initially they must register and get library membership card. Librarians ask the students and lecturers to fill the application form manually and ask them pay refundable 500 rupees, as well as application form is differ from students to lecturers. Then librarian enter the details into the computer system. After that generate library account to offer them username and password as well as give them barcode and membership card for verification. Every year user wants to renew the membership card to continue lend books. User can be login to the system anywhere by enter the username and password, they can change their password if they wish.

After login, user can observe name, member id, address, book they lent and overdue amount to pay in the profile. User can tap the search button to search books by its title whether it is available in the library. If it available, user can lend the book for maximum 14 days and user can reserve the book on online to lend from library physically. Librarians allow user to get maximum 2 books separately on library and online system at the same time. System will send a remainder by email before due date to return the book. If the user forgot to return the book before due date, they will be fined 10 rupees per day. Likewise, if user lost the book, he/she must inform the librarian immediately and user must return same book, if they could not return it, can pay the money for the book. This system contains E-books which is open source, user can browse the system to read these book anytime.

There are three divisions in the library. Acquisition is the division which is deal with book publishers to purchase books in online. In the cataloging division, librarians work on books to make book number, book class, make barcode for books and upload books to online system with book details. In the circulation division, librarian touch with user to provide books. When provide books, read the book barcode, and save the book barcode in the user's barcode which is pasted in the student record book and lecturer record book. Librarian can browse the system to watch user's profile, lent books history and total overdue amount of users etc. At the same time, only librarians can access the audio/video resource, users can watch it by the permission of the librarians.

When buy books to library, librarians ask every faculty of the university to recommend books to buy. Then faculty pass the message to every department to recommend books. After that library accept the recommendation and check them on publishers whether it available and determine about buy them. Likewise, student can also request the library to buy books, but librarian ask the department about requested book. If they give approve for the books, library order them in online.

Conclusion

In this mini project, we have gotten requirement to change manual library system of the open university Sri Lanka, Kandy regional center to computerized system. For that we met a staff of the library, gathered information about the system and gathered features of the library which we are going to implement. After that identified the business actors, functional requirement, and non-functional requirement to draw use case diagram. To get expected outcome we have drawn use case diagram and described the system below.