**Situation (Continued):** Besides borrow and return of books, a library must also handle the addition and removal of members and purchase of new books. To become a member, a person must submit his particulars on the membership form obtained from the library, along with the library membership fee. Library administrator can register/update/delete a library user. He can view and print the outstanding books also. He can also add/update/view the information of a specific book.

**c- Question:** Write at least 4 more functional requirements of the library system. Update the previous use case model to accommodate the new requirements.

D - Write elaborated use case (at least two more) for the above system.

**(c)The Functional Requirements:**

1. The System shall be able to issue book to the borrower.
2. The System shall be able to return book borrowed by the borrower.
3. The System shall be able to add a new members
4. The System shall be able to remove old members
5. The System shall be able to purchase of new books

**Use case Model:**

Librarian

***Use case Name: add members***

*Actor: Librarian*

*Precondition:* member not exist

Post condition: member is added .

**User Actions System Response**

|  |  |
| --- | --- |
| 1. The user submit his particulars and membership fee | 1. System responses with the validation message. **Exp1,Exp2, Exp3** |

**Exception 1:** member is exist**. No** member **is added. Use case ends**

**Exception 2:** particulars **not fill .No** member **is added. Use case ends**

**Exception 3:** membership fee **not fill .No** member **is added. Use case ends**

***Use case Name: remove members***

*Actor: Librarian*

*Precondition:* member is exist

Post condition: member is removed.

**User Actions System Response**

|  |  |
| --- | --- |
| 1. The user click “remove member” | 1. System responses with the removing membership |

***Use case Name: purchase books***

*Actor: Librarian*

*Precondition:* Book is unissued and available

Post condition: Book is purchased.

**User Actions System Response**

|  |  |
| --- | --- |
| 1. The user enters the book’s information (title, ISBN, author) to check its availability. | 1. System responses with the purchasing the book. **Exp1** |

**Exception 1: Book is not available. Go to step ii or ends the use case.**