

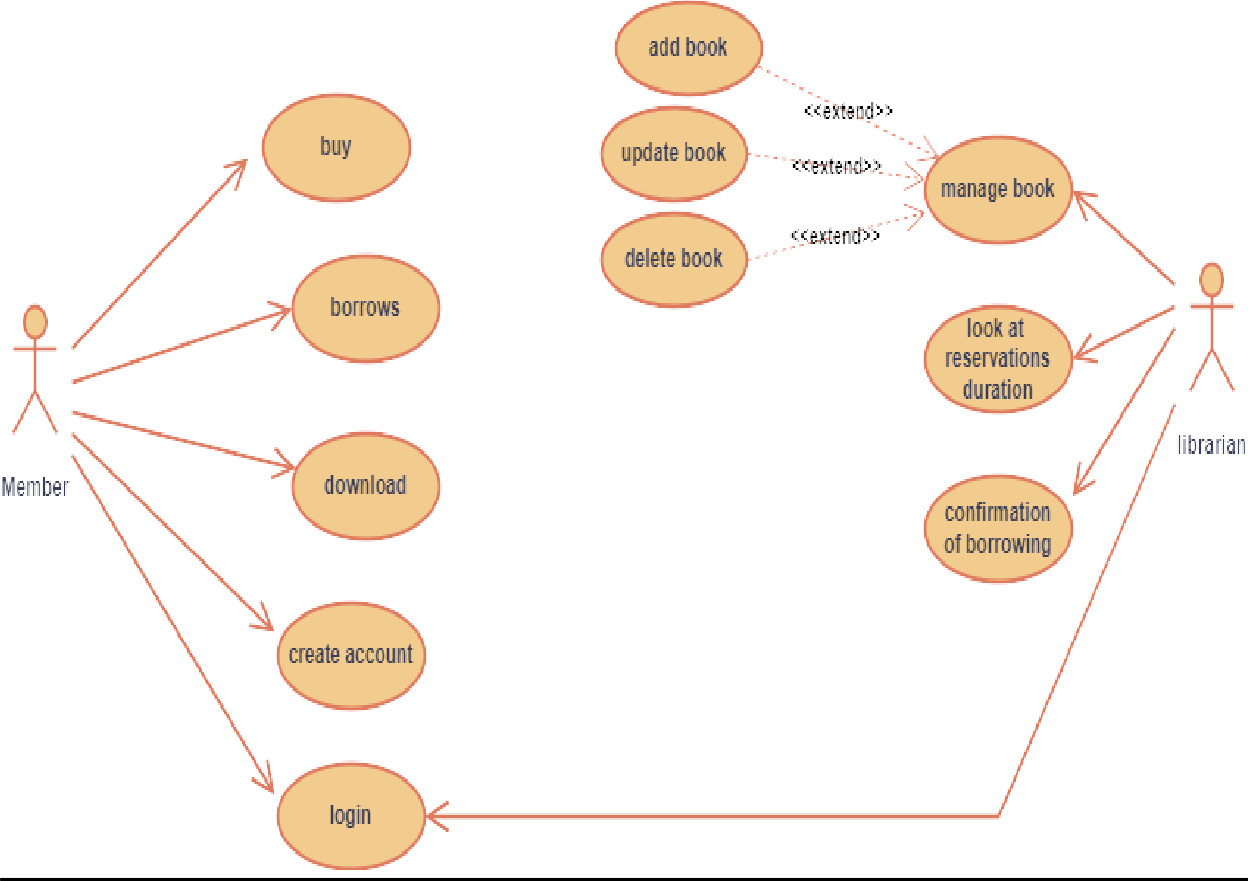
Project Name: Electronic Library Management System

**Project Members:**

1-Abdallah Samir Elsayed Elsharkawy

1. Abdellatif Osama Abdellatif Amer
2. Hagag Fawzi Hagag
3. Abdallah Mohamed Abdellwahab Elghonemy
4. Maha Samir Mekawy
5. Abdelrahman Maged Elsayed

**Use Case:**



|  |  |
| --- | --- |
| **Use Case Name:** | Buy a book |
| **Actors:** | Users |
| **Preconditions:** | 1. user has active account with **Library website.** 2. user has an activated ATM card. 3. Vodafone Cash Transfer Number. |
| **Postconditions:** | **Message:** Book Purchased Successfully |
| **Normal Flow:** | * From Home Page Select the book to be. * Click on buy. * Check Availability of a book * Choose a payment method. * Enter the payment code according to the chosen method. * Arrival of the confirmation message on the Purchase |
| **Alternative Flows:** | **During Purchase:**  **-** If a book not Available, Add a book to on demand list. |
| **Exceptions:** | **During Purchase:**   * a user doesn’t have enough money. * the ATM Card is not Activated. |

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| --- | --- |
| **Use Case Name:** | Borrow a book |
| **Actors:** | Users |
| **Preconditions:** | user has active account with **Library website.** |
| **Postconditions:** | **Message:** Book Borrowed Successfully |
| **Normal Flow:** | * From Home Page Select the book to be. * Click on Borrow. * Check Availability of a book * Arrival of the confirmation message on the Borrow |
| **Alternative Flows:** | **During Borrow:**  **-** If a book not Available, Add a book to on demand list. |
| **Exceptions:** | **During Borrow:**  **-** The User is not Verified for borrowing. |

|  |  |
| --- | --- |
| **Use Case Name:** | Login |
| **Actors:** | Users |
| **Preconditions:** | user has active account with **Library website.** |
| **Postconditions:** | **Message:** Login Done Successfully |
| **Normal Flow:** | * From Account Page Select the book to Login. * Enter Username and Password * Check if the Username and Password is Correct * Go to Home Page |
| **Alternative Flows:** | **During Login:**  **-** If a User doesn’t have an account, he must create one. |
| **Exceptions:** | **During Login:**  **-** Incorrect Password and Username |

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| --- | --- |
| **Use Case Name:** | Register |
| **Actors:** | Users |
| **Preconditions:** | * The user must have a valid phone number. * The User must have a national ID that is not Expired. * Enter the other Required Fields. |
| **Postconditions:** | **Message:** Register Done Successfully |
| **Normal Flow:** | * From Account Page Select Register. * After Entered the Required Fields Click Submit. * Go to Login Page |
| **Alternative Flows:** | **During Register:**  **-** If a User have an account, he must Login. |
| **Exceptions:** | **During Register:**  **-** Not All Fields Completed |

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| --- | --- |
| **Use Case Name:** | Download |
| **Actors:** | Users |
| **Preconditions:** | * Select The Required Book * Pay money for the required book. * Click on download Button |
| **Postconditions:** | **Message:** File downloaded Successfully |
| **Normal Flow:** | * Select The Required Book * Click on download Button. |
| **Alternative Flows:** |  |
| **Exceptions:** | **During Download:**   * Book is not selected. * Server is not running |

|  |  |
| --- | --- |
| **Use Case Name:** | Confirm of Borrowing |
| **Actors:** | Librarian |
| **Preconditions:** | **-** The Existence of Borrow request. |
| **Postconditions:** | **Message:** Borrow is Done Successfully |
| **Normal Flow:** | * Look at Reservation request. * Check Availability of a book. * Confirm a Borrow. |
| **Alternative Flows:** | **During Confirmation:**  **-** Send a message that informs user that a book is not found. |
| **Exceptions:** | **During Confirmation:**  **-** User cancel the request |

|  |  |
| --- | --- |
| **Use Case Name:** | Look at Reservation Duration |
| **Actors:** | Librarian |
| **Preconditions:** | **-** The Existence of reservation Requests |
| **Postconditions:** | knowledge of reservation Durations |
| **Normal Flow:** | * Look at Reservation Duration Table. * If the duration is end, Text the Borrower. |
| **Alternative Flows:** | **During exploring Reservations:**  **-** The user request to extend his borrow Duration |
| **Exceptions:** | **During exploring Reservations:**  **-** The user borrowing duration is end but he does not extend it |

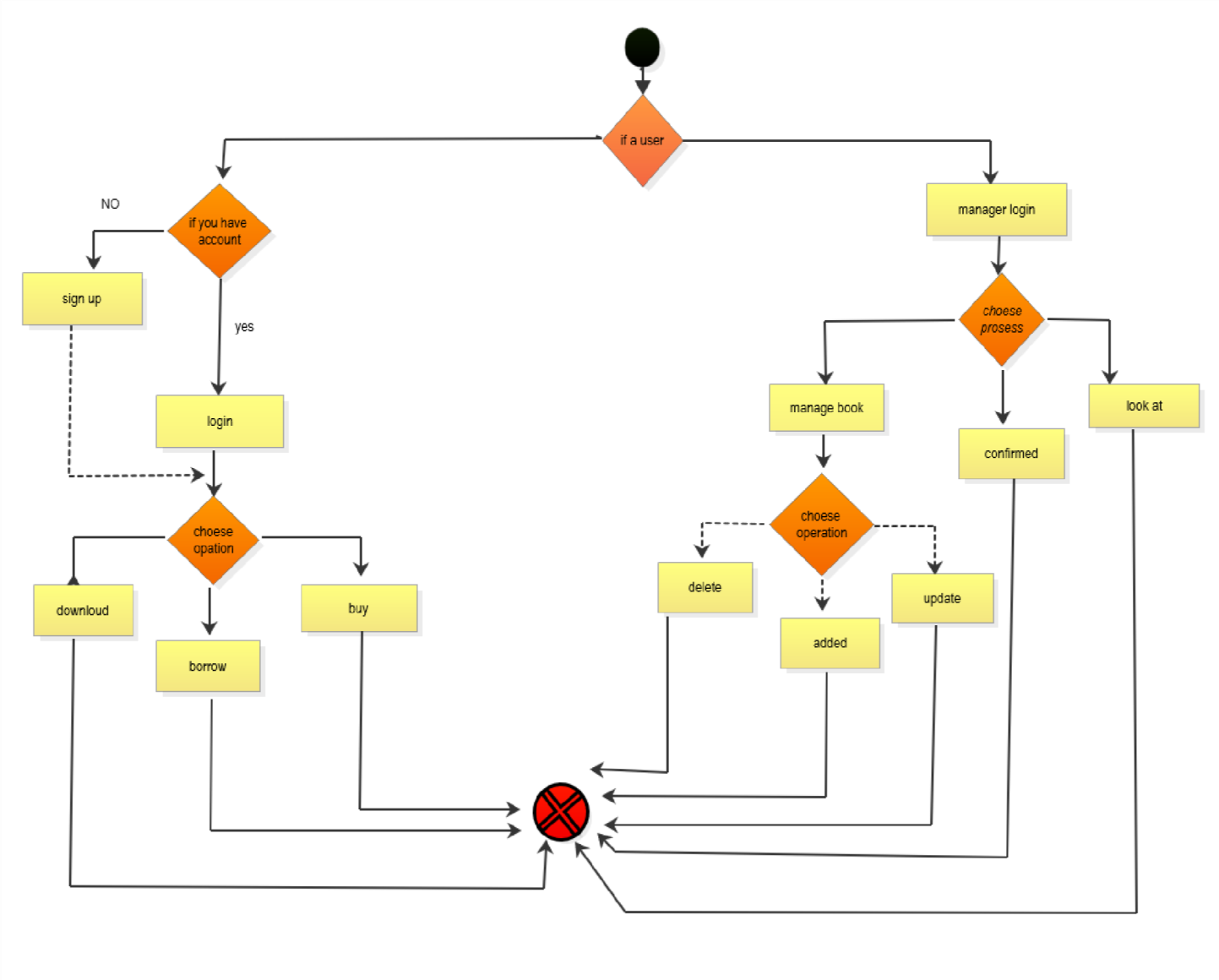
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| --- | --- |
| **Use Case Name:** | Manage book |
| **Actors:** | Librarian |
| **Preconditions:** | * Librarian must be login into the system. * select one book at least. |
| **Postconditions:** | transfer into page that can select operation from it on book. |
| **Normal Flow:** | * select one from 3 operations (update, delete, add) book. |
| **Alternative Flows:** | - |
| **Exceptions:** | does not select any book. |

|  |  |
| --- | --- |
| **Use Case Name:** | Add book |
| **Actors:** | Librarian |
| **Preconditions:** | **-** Librarian Have Book info to Add |
| **Postconditions:** | **Message:** Book is Added Successfully |
| **Normal Flow:** | * Add Book Required Fields. * Upload the book as PDF. * Click on Add Button. |
| **Alternative Flows:** | The book has been found Before, go to see it’s info |
| **Exceptions:** | **During Login:**  Not all Fields Were Added. |

|  |  |
| --- | --- |
| **Use Case Name:** | Update book |
| **Actors:** | Librarian |
| **Preconditions:** | **-** The book has been found in system |
| **Postconditions:** | **Message:** Book is Updated Successfully |
| **Normal Flow:** | * Add Updated Book Required Fields. * Upload the book as PDF as Updated. * Click on Update Button. |
| **Alternative Flows:** | - |
| **Exceptions:** | **During Update:**   * Not all Fields Were Added. * The Required book for updated is not found. |

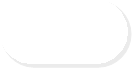
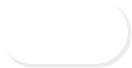
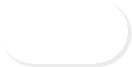
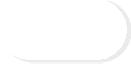
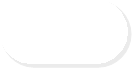
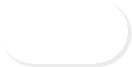
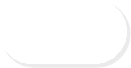
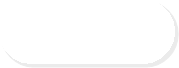
|  |  |
| --- | --- |
| **Use Case Name:** | Delete book |
| **Actors:** | Librarian |
| **Preconditions:** | **-** The book has been found in system |
| **Postconditions:** | **Message:** Book is Deleted Successfully |
| **Normal Flow:** | * enter The Book Id to find book to delete. * Delete The Book. * Click on Delete Button. |
| **Alternative Flows:** | - |
| **Exceptions:** | **During Delete:**   * The Required book for Delete is not found. * The book as Reservation Duration. |

**Activity Diagram For A System**



**Activity diagrams**

Sign up



choose is admin or user

enter username

enter password

confirmpasswo rd

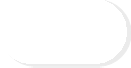
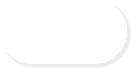
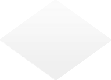
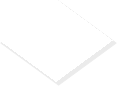
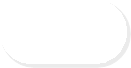
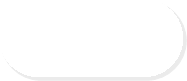
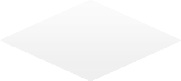
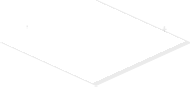
enter email

enter phonenumber

sunmit

set of database

Login



sign\_up

is there an account

sign up

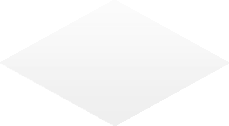
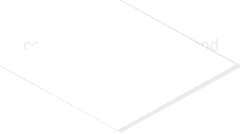
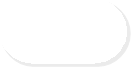
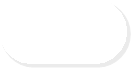
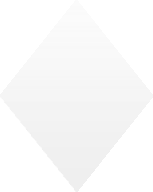
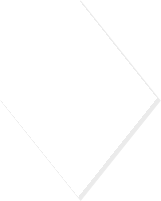
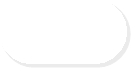
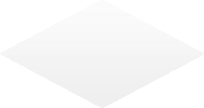
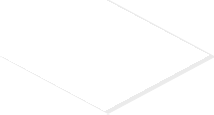
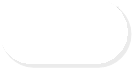
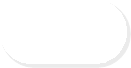
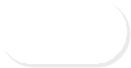
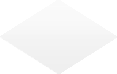
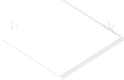
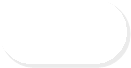
enter username

enter password

check vailddata

login issuccessful

buy



login

enter a bookname

is there abook

request tolibrarian

trackcomplaint s

show book

pay price

credit card

correct pin and ismoney enough

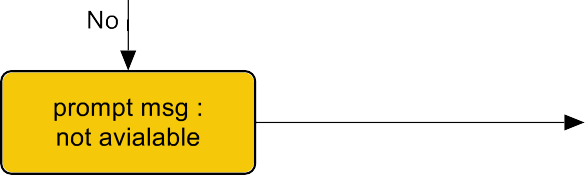
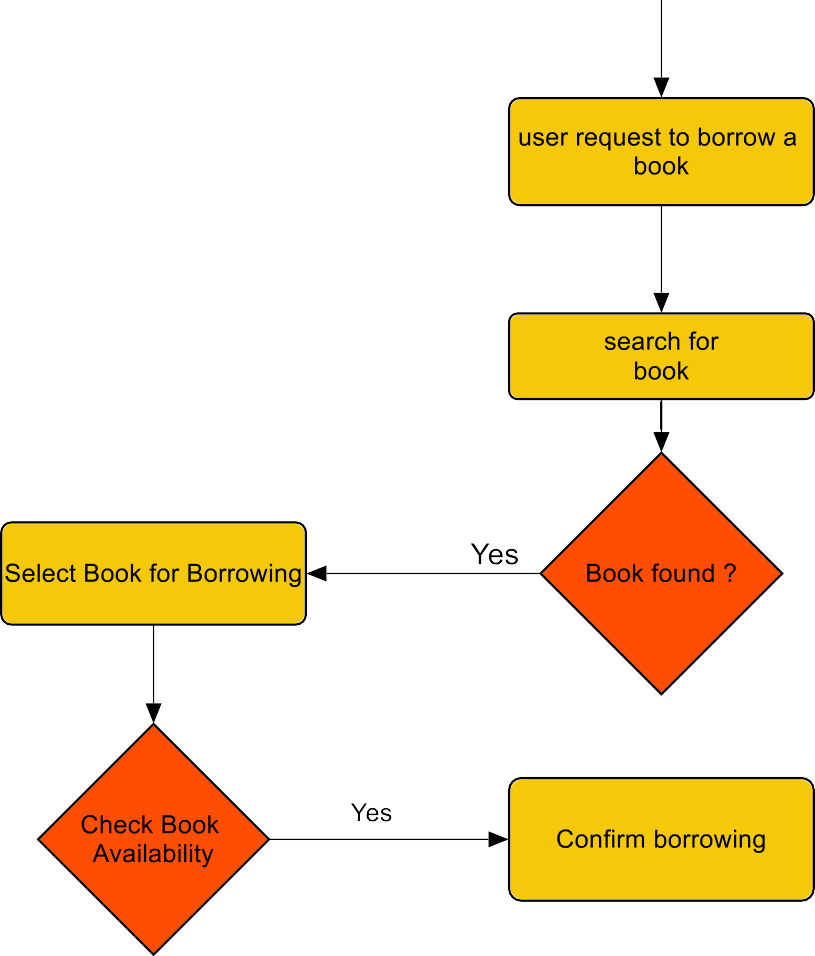
confirm buy abook

vodafone cash

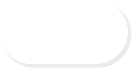
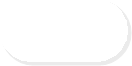
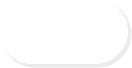
correct phone number and ismoney enough

download

borrow



Download



buy

select a book

is bookavail able

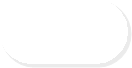
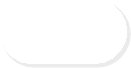
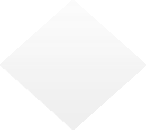
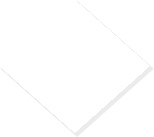
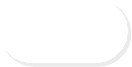
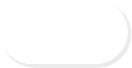
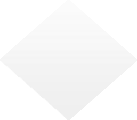
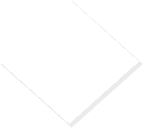
cancel

click

ofdownload

select alocation

Manager login



is there anaccount

enter managername

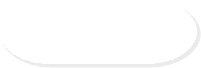
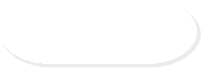
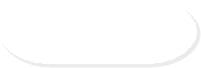
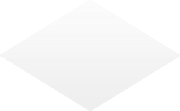
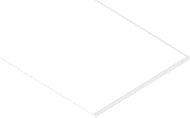
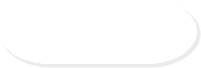
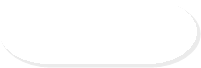
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verify managername andpassword

check vaild data

success login

Manage book



manager login

active asystem

open database

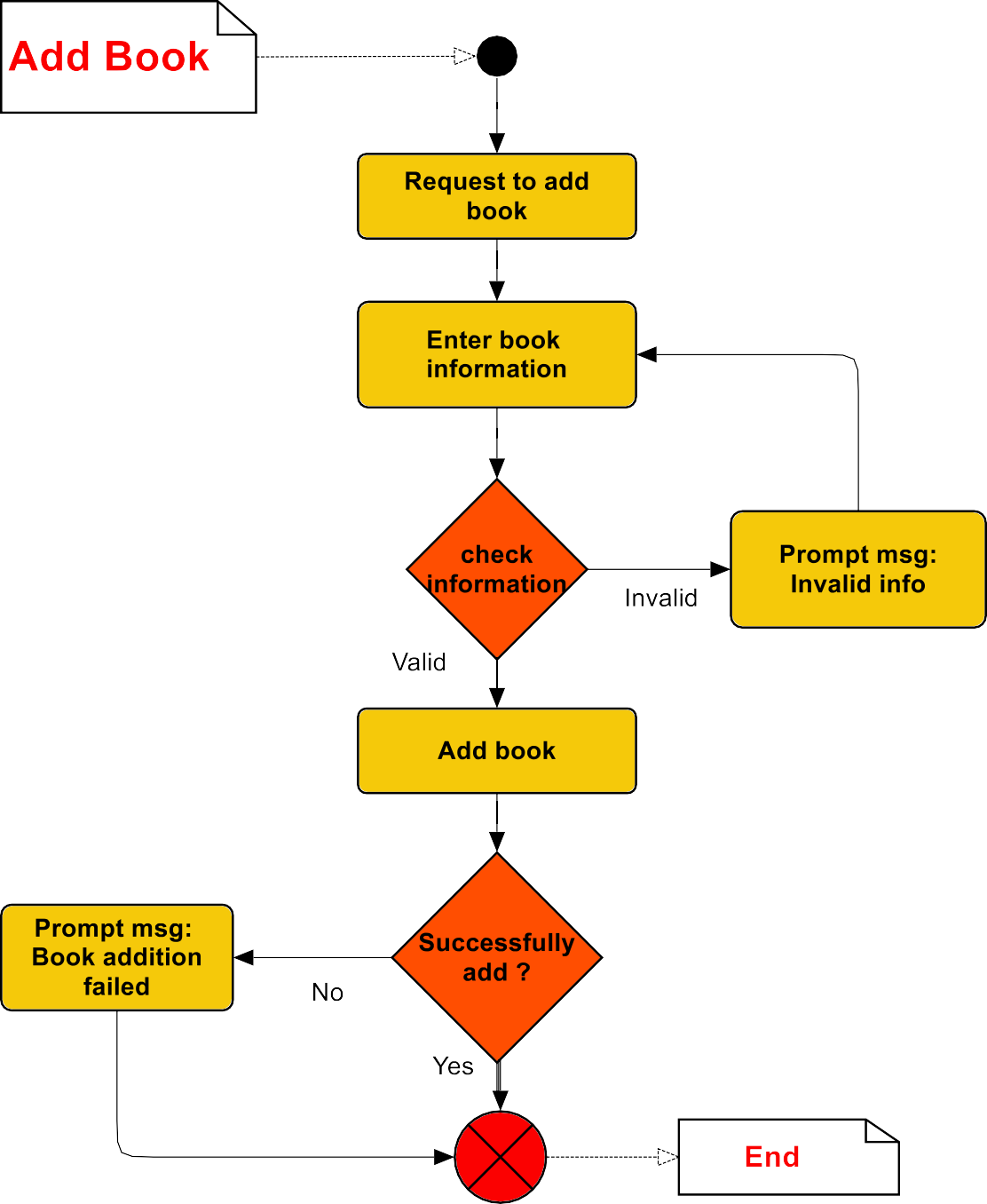
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choose anoperation

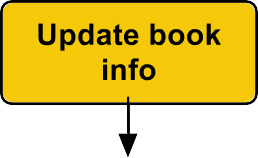
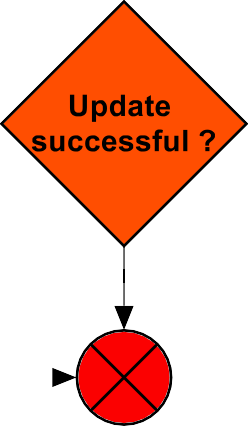
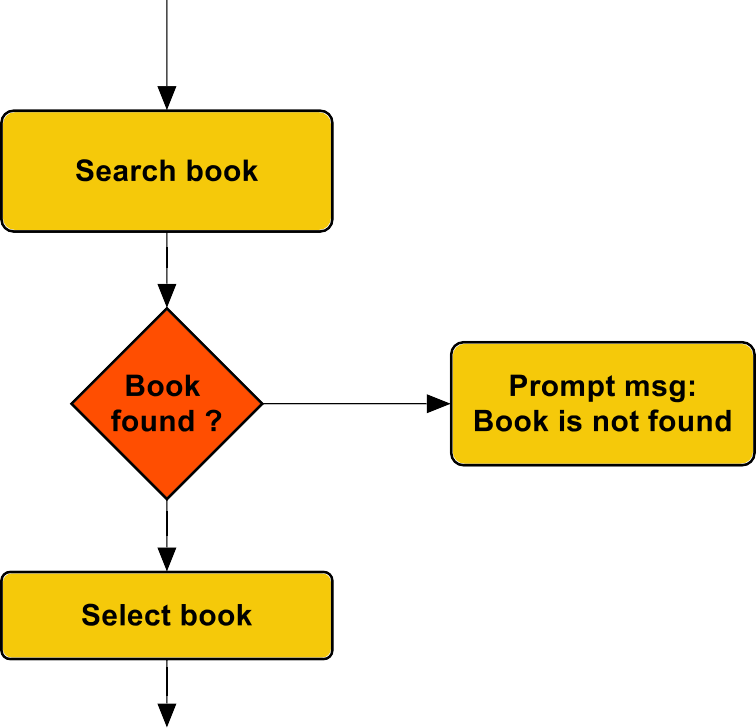
add

update

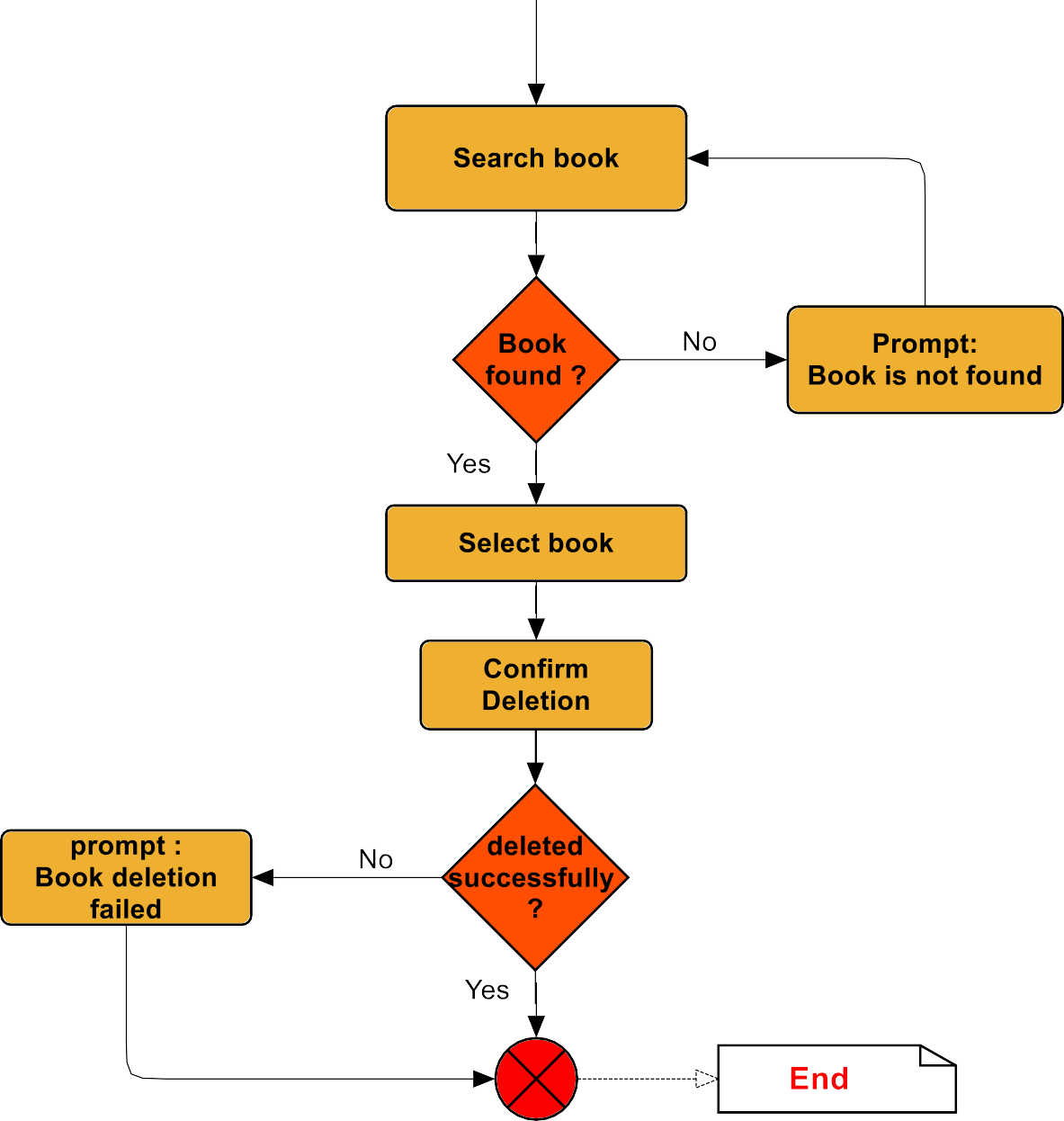
add



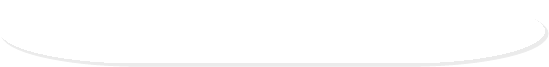
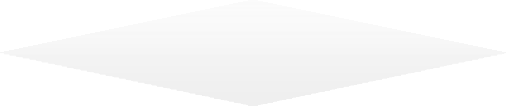
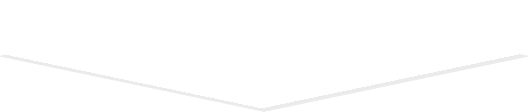
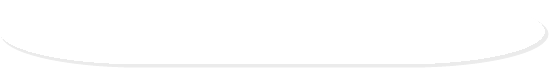
Update



Delete



Look at



know Booksthat have beenborrowing

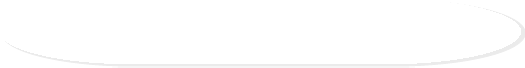
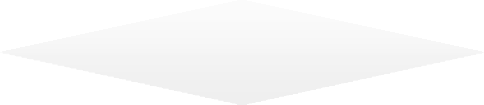
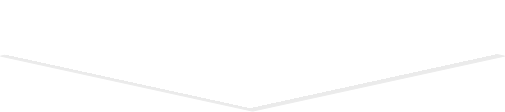
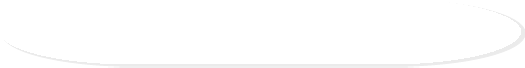
number ofbooks <5

request a addbooks to thesystem

Confirm







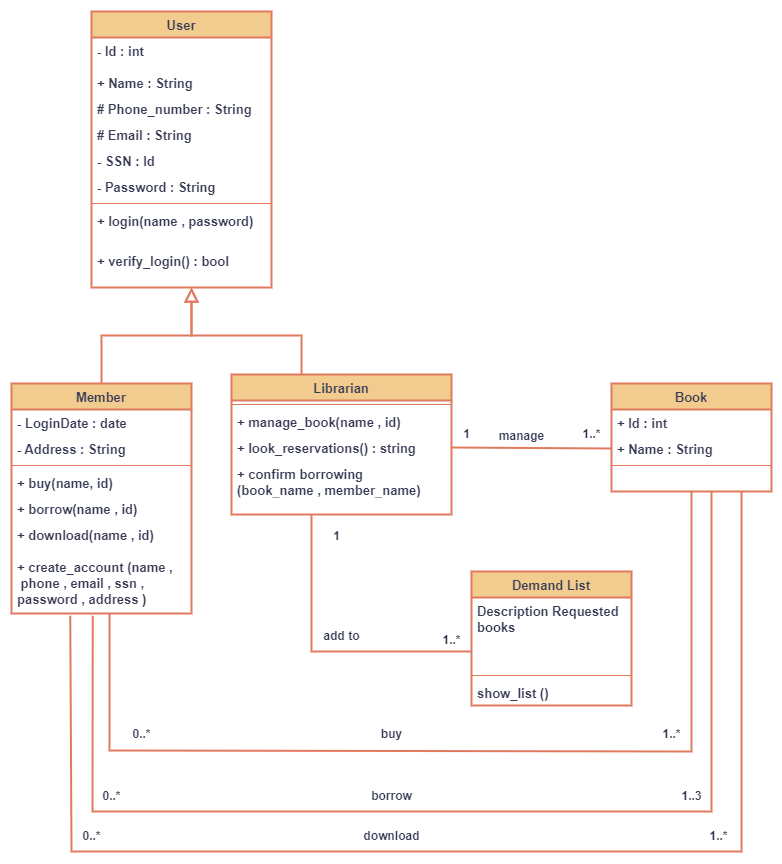
know Booksthat have beenborrowing

number ofbooks <5

request a addbooks to thesystem



**Class Diagram**

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