

Automated Library Circulation System

CSC470

Team Member:

Xxxx yyyy zzzz

Glossary

Account: a setting of functions that can be performed by the system for certain user

Check Out: borrowing books from the library

Check In: returning books to the library

Manage Books: adding or removing books from the library system by the librarian

Due Date: three weeks after checking out the book

Fine: the money accrued after the due date if the book is not returned, \$0.10 per day

Balance: the amount of fine still owing

Hold On: reserve a book currently checked out

Order Books: asking the library to purchase certain book if the budget permits

Budget: money available to buy books

Report: a list of certain information requested, such as books on order, loan frequency, etc.

Actor:

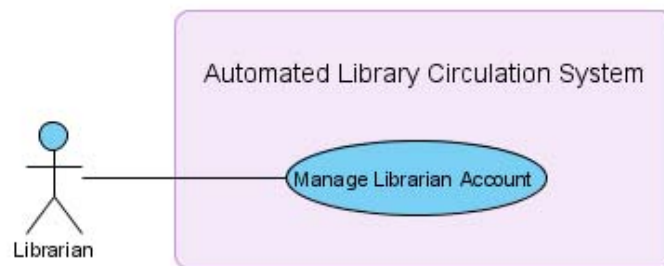
Borrower

Librarian

Administration

Use Case:

Manage Librarian Account



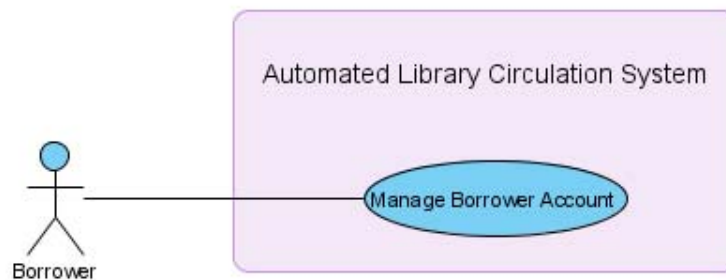
Brief Description

The *Manage Librarian Account* use case enables the Librarian to manage account for librarian.

Step-by-Step Description

Not available at this initial stage.

Manage Borrower Account



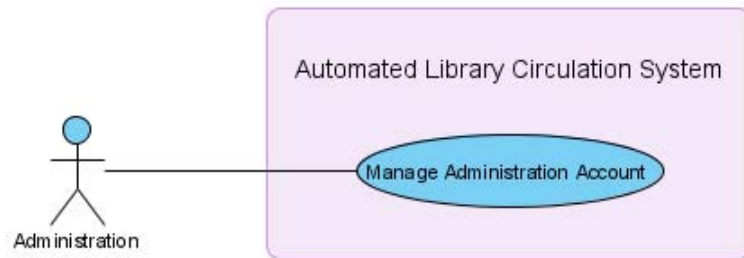
Brief Description

The *Manage Borrower Account* use case enables the Borrower to manage account for borrower.

Step-by-Step Description

Not available at this initial stage.

Manage Administration Account



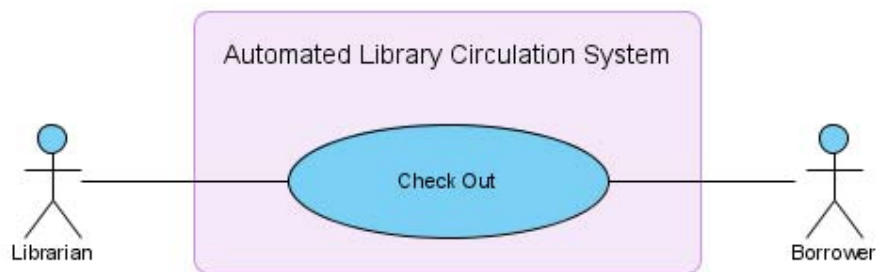
Brief Description

The *Manage Administration Account* use case enables the Administration to manage account for administration.

Step-by-Step Description

Not available at this initial stage.

Check Out a Book



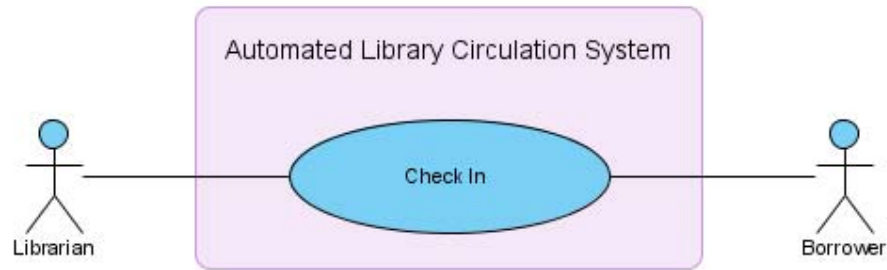
Brief Description

The *Check Out* use case enables the librarian to check out a book for the borrower.

Step-by-Step Description

Not available at this initial stage.

Check In a Book



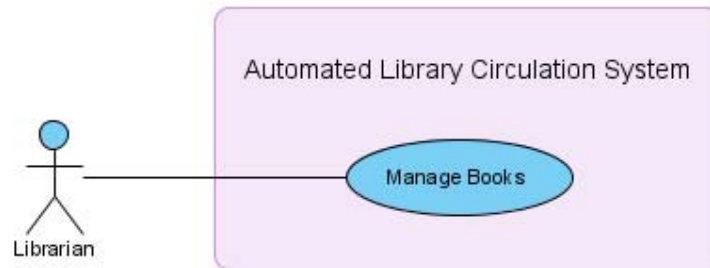
Brief Description

The *Check In* use case enables the librarian to check in a book from the borrower.

Step-by-Step Description

Not available at this initial stage.

Manage Books



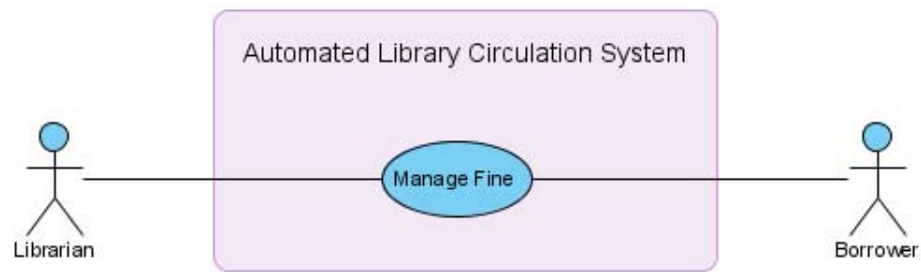
Brief Description

The *Manage Books* use case enables the librarian to add books to the library collection or remove them.

Step-by-Step Description

Not available at this initial stage.

Manage Fine



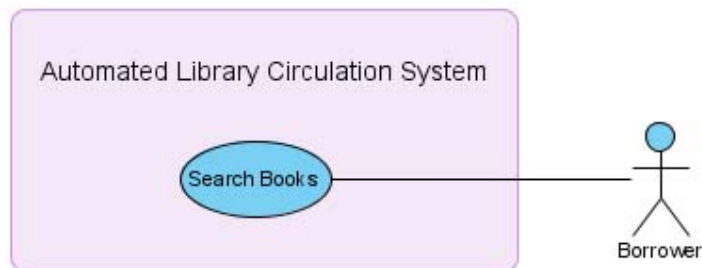
Brief Description

The *Manage Fine* use case enables the librarian and Borrower to manage fine generated after due date.

Step-by-Step Description

Not available at this initial stage.

Search Books



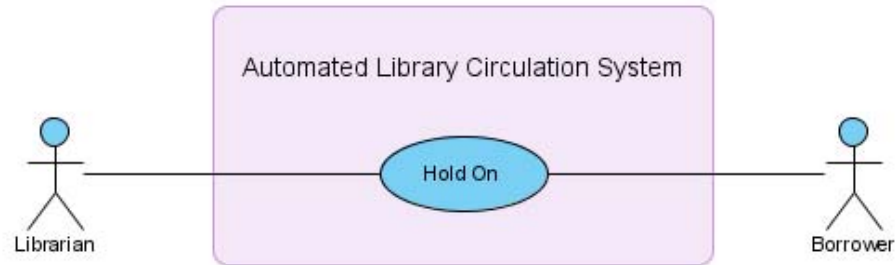
Brief Description

The *Search Books* use case enables the Borrower to search books.

Step-by-Step Description

Not available at this initial stage.

Hold On a Book



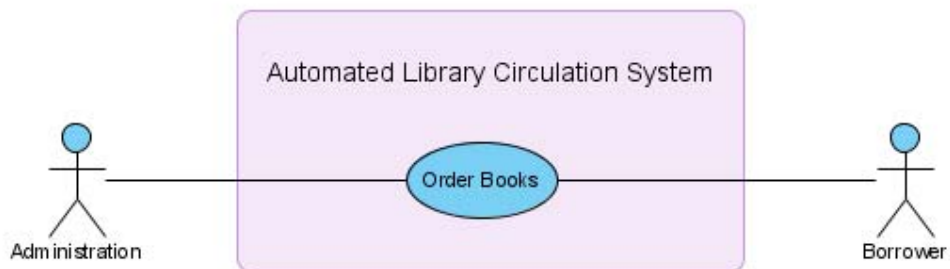
Brief Description

The *Hold On* use case enables the Borrower to reserve the book he or she wants.

Step-by-Step Description

Not available at this initial stage.

Order Books



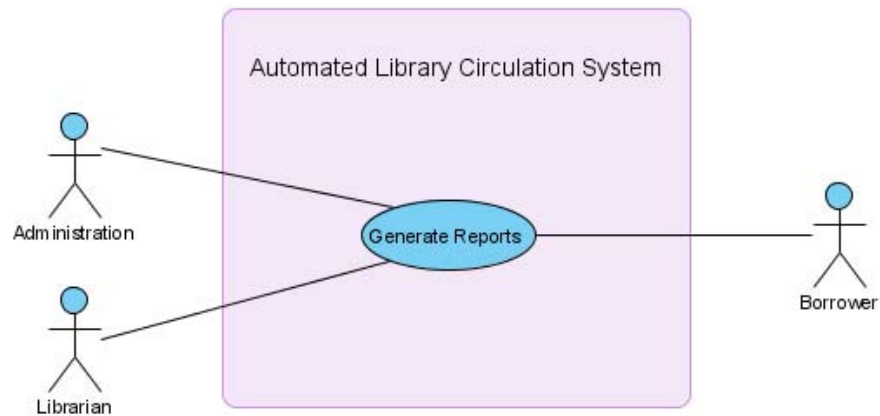
Brief Description

The *Order Books* use case enables the Borrower to order the book he or she wants.

Step-by-Step Description

Not available at this initial stage.

Generate Reports



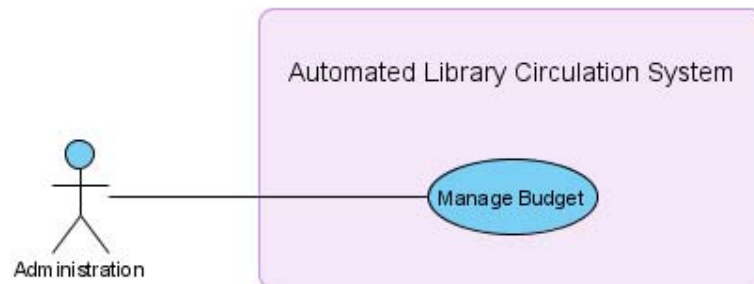
Brief Description

The *Generate Reports* use case enables the system to generate certain reports for Administration, Librarian, and Borrower.

Step-by-Step Description

Not available at this initial stage.

Manage Budget



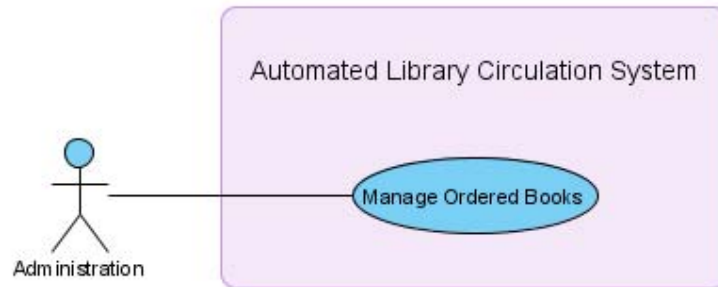
Brief Description

The *Manage Budget* use case enables the Administration to make changes to the available budget.

Step-by-Step Description

Not available at this initial stage.

Manage Ordered Books



Brief Description

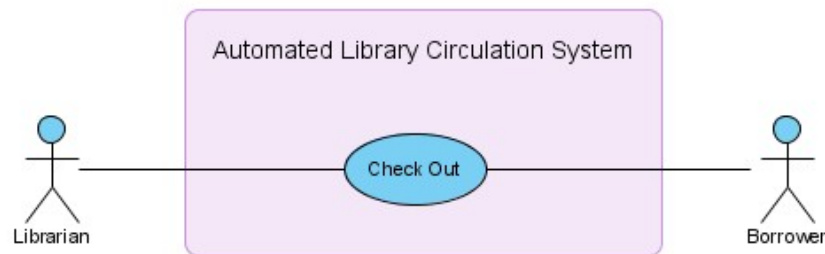
The *Manage Ordered Books* use case enables the Administration to manage the books ordered by the borrowers depending on the budget available.

Step-by-Step Description

Not available at this initial stage.

Refinement:

Check-out a book



Brief Description

The *Check Out* use case enables the librarian to check out a book for the borrower.

Step-by-Step Description

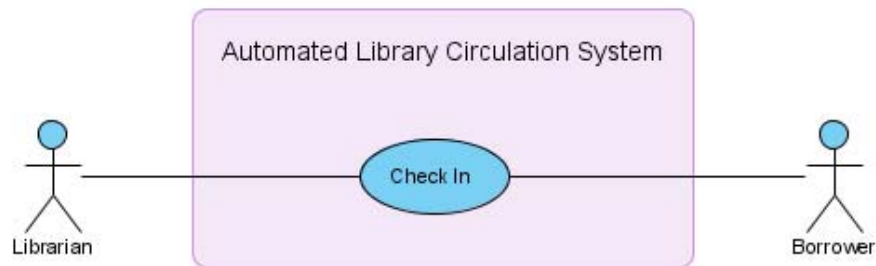
When check out, the system will record two aspects:

the borrower information (borrower ID number, borrower name, borrower gender, borrower school/major) and

the book information (book name, book number, book authority, check-in date, check-out date, book price, subject area)

It also adds the book to current check-out

Check-in a book



Brief Description

The *Check In* use case enables the librarian to check in a book from the borrower.

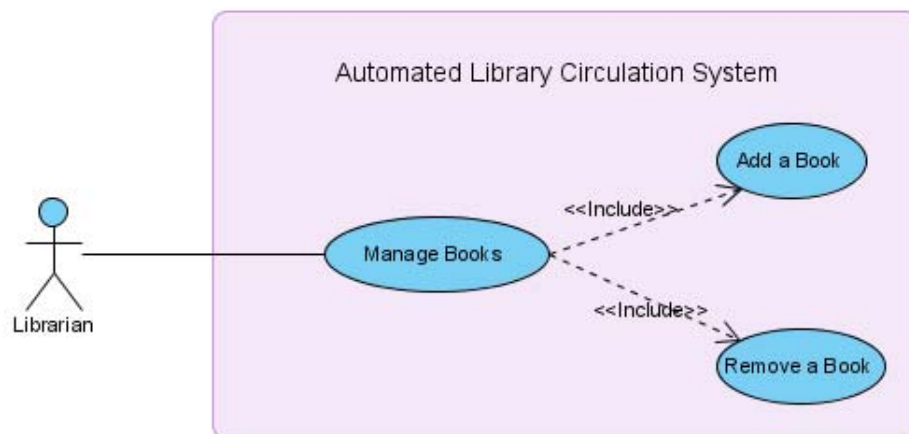
Step-by-Step Description

when borrower check-in book, the system will record two aspects:

the borrower information: borrower ID number, borrower name, borrower gender, borrower school/major

the book information: book name, book number, book authority, check-in date, check-out date, book price, fine. add the book to past check-in, subject area

Manage Books



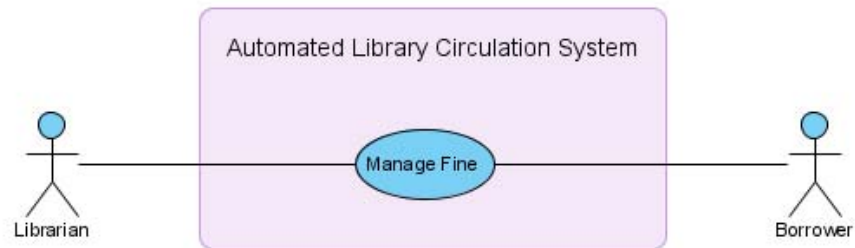
Brief Description

The *Manage Books* use case enables the librarian to add books to the library collection or remove them.

Step-by-Step Description

After search, the librarian can add/delete/change/edit the books.

Manage Fine



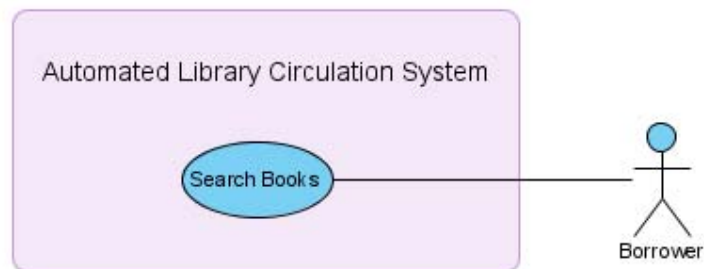
Brief Description

The *Manage Fine* use case enables the librarian and Borrower to manage fine generated after due date.

Step-by-Step Description

If a checked-out book is not returned in the due date, a fine will be added to the borrower account with \$0.10 per day (F = followed by the borrower's name). Any borrower who has a balance of over \$5.00 is not allowed to check out any book until the fine is paid off.

Search book



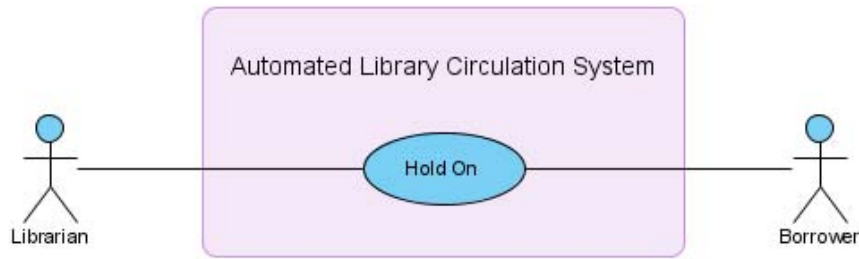
Brief Description

The *Search Books* use case enables the Borrower to search books.

Step-by-Step Description

Borrowers can go to a terminal and determine all the books in the library by a particular author, a specific title, in a particular subject area or the book number.

Hold on a book



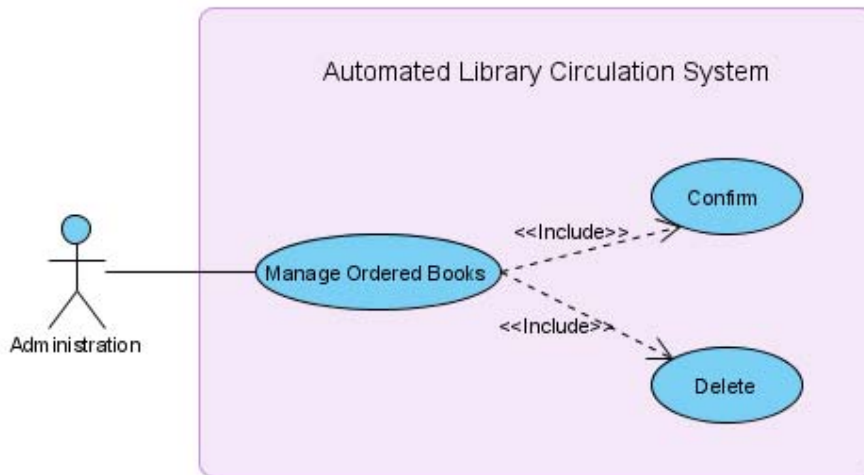
Brief Description

The *Hold On* use case enables the Borrower to reserve the book he or she wants.

Step-by-Step Description

If a borrower wants a book currently checked out, the librarian can place a hold on the book so that, when it returned, it will be held for the borrower who requested it. you give the

Manage Ordered Books



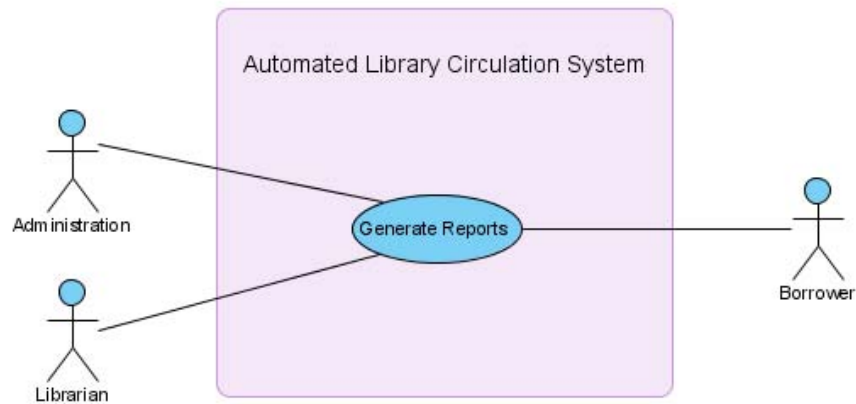
Brief Description

The *Manage Ordered Books* use case enable the administration to determine the order books

Step-by-Step Description:

The administration can determine to confirm or delete a book order.

Generate report



Brief Description

The *Generate Reports* use case enables the system to generate certain reports for Administration, Librarian, and Borrower.

Step-by-Step Description

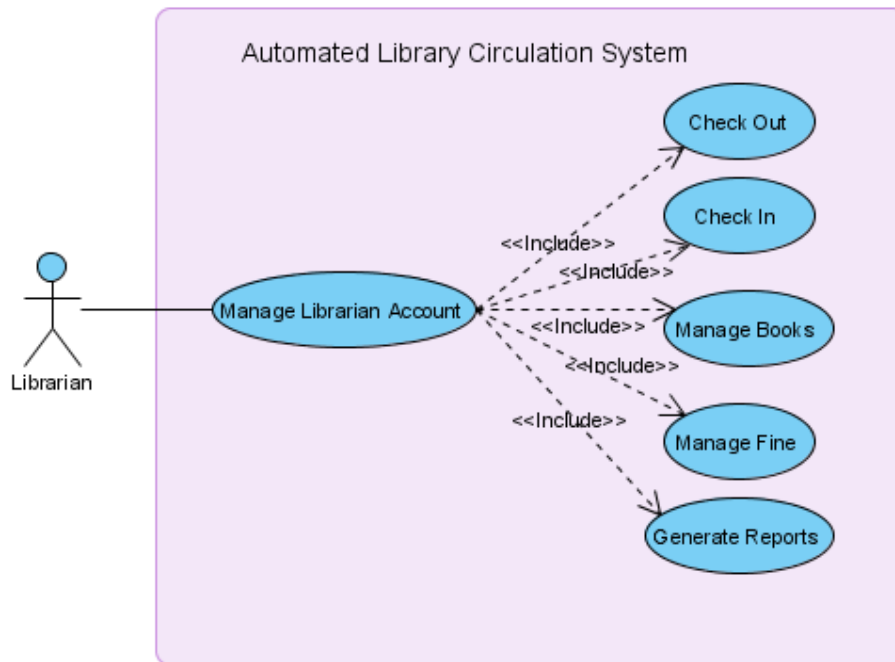
The administration, librarian and borrower can generate certain reports of their willing.

borrower: Personal books on order, personal loan frequency, current/past checkouts, check out/in date, books on hold, fine

librarian: information of particular borrower(include Personal books on order, loan frequency, current/past checkouts, check out/in date, books on hold, fine and so on),books on order, total loan frequency(books seldom/ frequency used), total current checkouts/check in ,total past checkouts/check in ,books hold on

administration: information of particular borrower(include Personal books on order, loan frequency, current/past checkouts, check out/in date, books on hold, fine and so on),books on order, total loan frequency(books seldom/ frequency used), total current checkouts/check in ,total past checkouts/check in, budget on ,books hold on

Manage Librarian Account



Brief Description:

The *Manage Librarian Account* use case enable the Librarian to check-out ,check-in, Manage Fine, Manage books and Generate reports.

Step-by-Step Description:

In this use case, the Librarian can do this function:

Check-out:

When the book check-out ,the system will record:

The borrower information :borrower ID number ,borrower name ,borrower gender, borrower school/major

the book information :book name, book number, book authority, check-in date, check-out date, book price , subject area

add the book to current check-out

Check-in:

When the book check-in ,the system will record:

the borrower information :borrower ID number ,borrower name ,borrower gender, borrower school/major

the book information :book name, book number, book authority, check-in date, check-out date, book price ,fine. add the book to past check-in, subject area

Manage book:

After search , librarian can add /delete/change/edit the books.

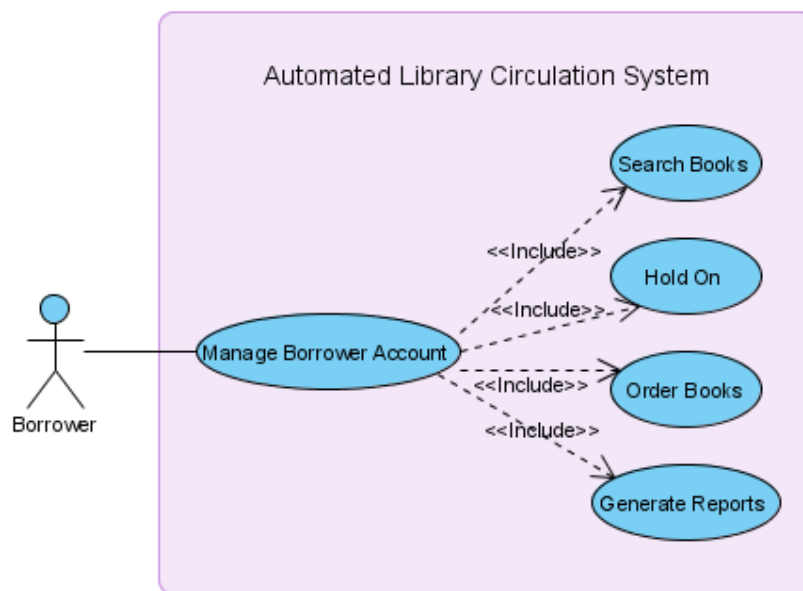
Manage Fine:

If a checked-out book is not returned in the due date, a fine will be added to the borrower's account with \$0.10 per day (F= followed by the borrower's name). Any borrower who has a balance of over \$5.00 is not allowed to check out any book until the fine is paid off.

Generate reports:

The librarian can generate reports on information of particular borrower(include Personal books on order, loan frequency, current/past checkouts, check out/in date, books on hold, fine and so on),books on order, total loan frequency(books seldom/ frequency used), total current checkouts/check in ,total past checkouts/check in ,books hold on

Manage Borrower Account



Manage Administration Account

Brief Description:

The *Manage Borrower Account* use case enable the Borrower to search Books ,Hold on, Order books and Generate reports

Step-by-Step Description:

In this use case, the Borrower can do this function:

Search Books:

Borrowers can go to a terminal and determine all the books in the library by a particular author, a specific title, in a particular subject area or the book number.

Hold on:

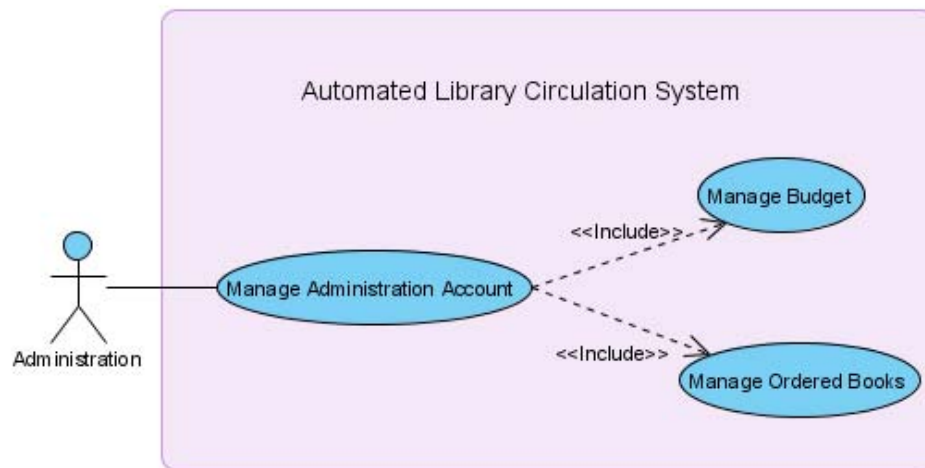
If a borrower wants a book currently checked out, the librarian can place a hold on the book so that, when it returned, it will be held for the borrower who requested it .

Order Books:

Borrowers can determine whether to order a book, when you don't want the book ,you can also cancel the order .

Generate Reports:

The Borrower can generate reports on Personal books on order, personal loan frequency, current/past checkouts, check out/in date, books on hold, fine



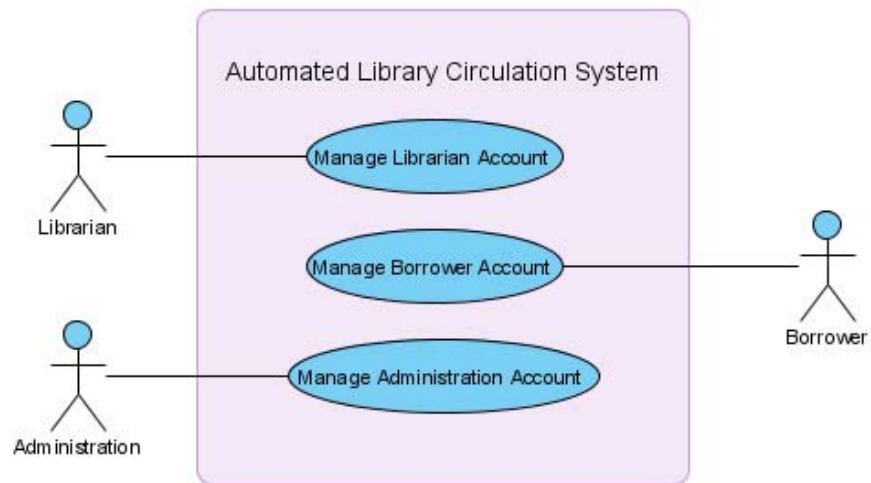
Automated Library Circulation System

Brief Description:

The *Manage Administration Account* use case enable the Administration to Manage Budget and Manage Ordered Books

Step-by-Step Description:

In this use case, the Administration can determine whether to order the book by the consideration of the budget, he can confirm or conceal the order .



Prototype:

Log in:

A screenshot of a 'Library Log in' window. The window has a title bar with the text 'Library Log in' and standard window controls (minimize, maximize, close). The main area contains two rows of input fields and buttons. The first row has a label 'User Name:', an empty text input field, and a button labeled 'Log in'. The second row has a label 'Password:', an empty text input field, and a button labeled 'Exit'.

Use a login system to distinguish the borrower, librarian ministrantion.

Log in as administration:

The 'Administration' window contains two data tables and a set of action buttons. The 'Order' table has three columns and one row. The 'Budget' table has three columns and one row. To the right of the tables are five buttons: 'Buy', 'Cancel', 'Delete', 'Report', and 'Log out'.

Order		

Budget		

Buy
Cancel
Delete
Report
Log out

We will make the relationship between order and budget so that the administration can decide if he will buy the books.

The 'Administration Report' window features a large table with three columns and one row. To the right of the table is a dropdown menu with 'Select' as the current selection. Below the dropdown are two buttons: 'Report' and 'Back'.

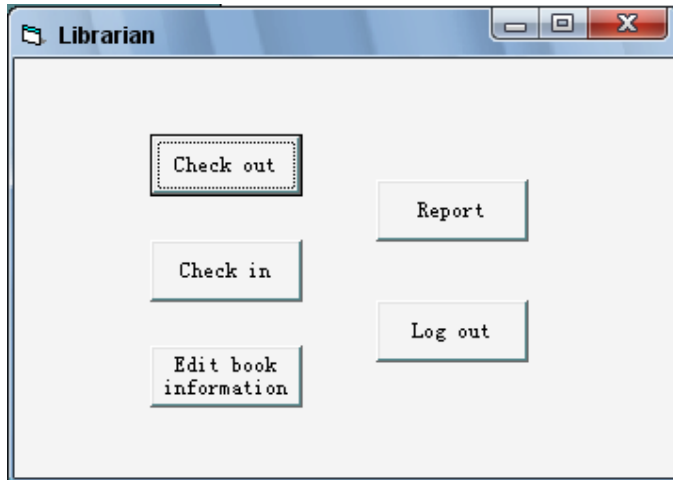
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Select
Report
Back

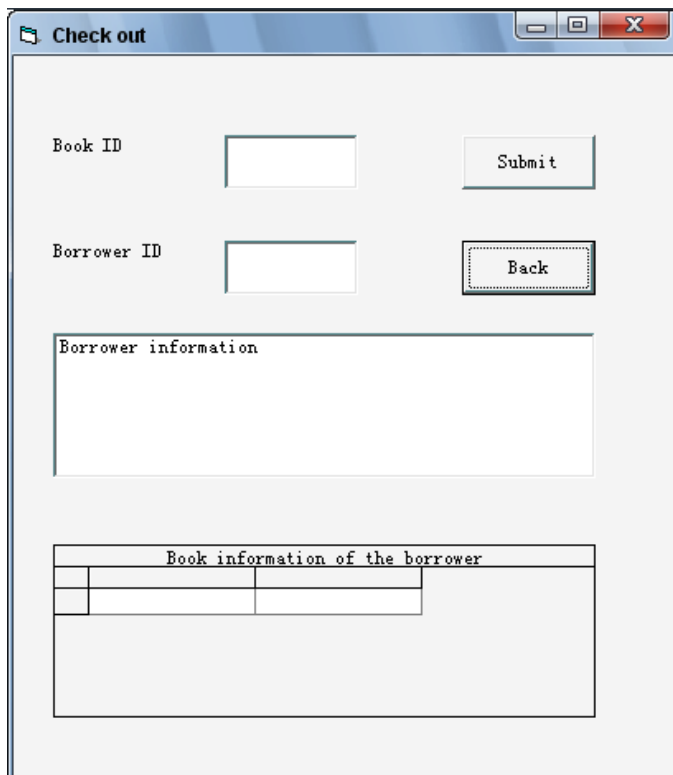
Administration can select information of particular student(include Personal books on order, loan frequency, current/past checkouts, check out/in date, books on hold, fine), books on order, total loan frequency(books seldom/ frequency used), total current

checkouts/check in ,total past checkouts/check in, budget on.

Log in as Librarian:



A window titled "Librarian" with a standard Windows-style title bar (minimize, maximize, close buttons). The window contains five buttons arranged in two columns. The left column has three buttons: "Check out", "Check in", and "Edit book information". The right column has two buttons: "Report" and "Log out".



A window titled "Check out" with a standard Windows-style title bar. The window contains the following elements:

- A "Book ID" label followed by a text input field and a "Submit" button.
- A "Borrower ID" label followed by a text input field and a "Back" button.
- A "Borrower information" label followed by a large text area.
- A "Book information of the borrower" label followed by a table.

Book information of the borrower		

The borrower information: borrower ID number, borrower name, borrower gender, borrower school/major

The book information: book name, book number, book authority, check-in date, check-out date, book price , subject area

Check in

Book ID

Submit

Borrower ID

Back

Borrower information

Book information of the Borrower (With fine information)		

The borrower information: borrower ID number, borrower name, borrower gender, borrower school/major

The book information: book name, book number, book authority, check-in date, check-out date, book price, fine, add the book to past check-in, subject area

Edit

Select ▼

Search

Add

Delete

Back

Librarian can search by selecting a particular author, a specific title, in a particular subject

area or the book number.

The screenshot shows a window titled "Librarian Report". It features a large empty rectangular area on the left, likely for a report or data table. To the right of this area, there is a "Select" dropdown menu, a "Report" button, and a "Back" button at the bottom right. At the top left of the main area, there is a small table with two columns and two rows.

Librarian can select information of particular student(include Personal books on order, loan frequency, current/past checkouts, check out/in date, books on hold, fine), books on order, total loan frequency(books seldom/ frequency used), total current checkouts/check in ,total past checkouts/check in

Log in as Borrower:

The screenshot shows a window titled "Borrower". It has a similar layout to the Librarian Report window but with additional functionality. It features two main sections: "Library" at the top and "My Book" at the bottom, each with a table and a large empty area. To the right of the "Library" section are buttons for "Hold", "Report", and "Log out". Below the "Library" section is a "Select" dropdown, a text input field, a "Search" button, and an "Order a book" button. To the right of the "My Book" section is a "Cancel Hold/Order" button.

Library	

My Book	

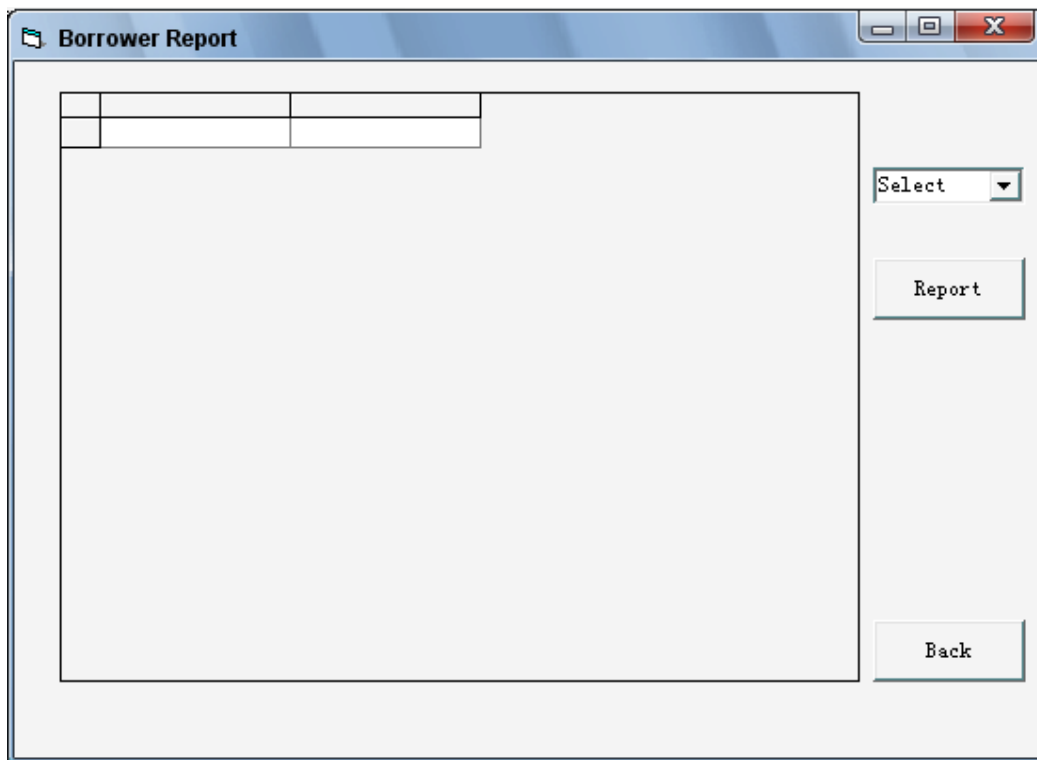
The borrower can search book by selecting and put in some key information.

The borrower can hold books and also can cancel the held books.

The borrower can order books and also can cancel the ordered book.

The held book and the ordered book can be showed at the frame of My Book.

Borrower can search by selecting a particular author, a specific title, in a particular subject area or the book number.



Borrower can select personal books on order, personal loan frequency, current/past, checkouts, check out/in date, books on hold, fine.

Log:

2009-10-22 The beginning of the project and we divide the work.

The beginning of the requirement workflow

xxx for the UML graph and the glossary

yyy for the UML description

zzz for the prototype

2009-10-26 The UML graph, brief description and the prototype are built.

Use Visual Paradigm for UML 7.1 Community Edition to build UML.

Use Microsoft Visual Basic 6.0 to build prototype

The prototype does not link to any database.

2009-10-27 Have a discuss about the our UML and detail function of the project
Change part of UML graph in order to satisfy the requirement.
Change part of the prototype according to the change of UML graph.

2009-10-28 The glossary and detail description is built.

2009-10-29 Meeting and combine our work together.