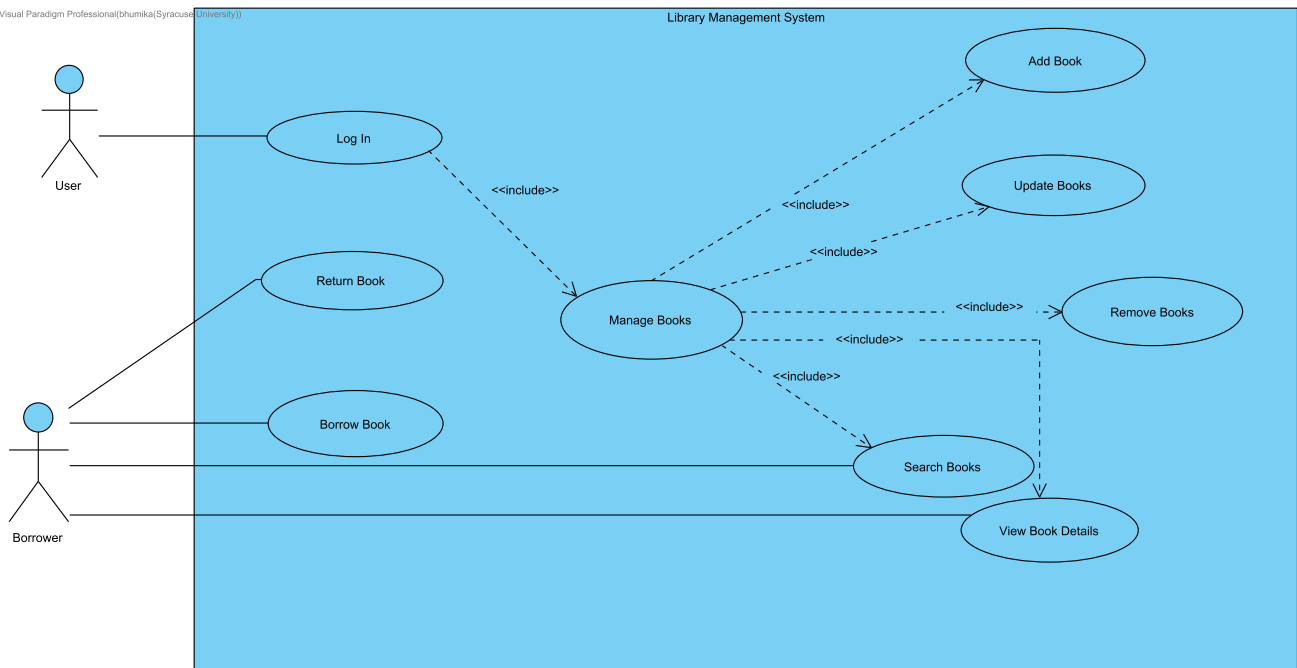




# 1. Analysis Model Use Case Diagram

Visual Paradigm Professional(bhumika(Syracuse University))



## 1.1. Add Book

ID: UC06

This function allows the user to add a new book to the library's collection.

### 1.1.1. Details

Level	N/A
Complexity	N/A
Use Case Status	N/A
Implementation Status	N/A
Preconditions	N/A
Post-conditions	N/A
Author	N/A
Assumptions	N/A

### 1.1.2. Relationships

Relationship	From	To
---><<include>>	<a href="#">Manage Books</a>	<a href="#">Add Book</a>

## 1.2. Borrow Book

ID: UC04

This function allows a borrower to borrow a book from the library.

### 1.2.1. Primary Actors

[Borrower](#)

### 1.2.2. Details

Level	N/A
Complexity	N/A
Use Case Status	N/A
Implementation Status	N/A
Preconditions	N/A
Post-conditions	N/A
Author	N/A
Assumptions	N/A

### 1.2.3. Relationships

Relationship	From	To
—unnamed	 <a href="#">Borrower</a>	 <a href="#">Borrow Book</a>

## 1.3. Borrower

ID: AC02

The borrower is the person who borrows books from the library. They are distinct from the user, as the user may perform administrative tasks in the system, while the borrower is the end-user who borrows and returns books.

### 1.3.1. Properties

Abstract	false
Leaf	false
Root	false

### 1.3.2. Relationships



Relationship	From	To
—unnamed	 <a href="#">Borrower</a>	 <a href="#">Return Book</a>
—unnamed	 <a href="#">Borrower</a>	 <a href="#">Borrow Book</a>
—unnamed	 <a href="#">Borrower</a>	 <a href="#">Search Books</a>
—unnamed	 <a href="#">Borrower</a>	 <a href="#">View Book Details</a>








## 1.4. Library Management System

### 1.4.1. Properties

Abstract	false
Leaf	false
Root	false

### 1.4.2. Children Summary

Name	Description
 <a href="#">Add Book</a>	This function allows the user to add a new book to the library's collection.
 <a href="#">Borrow Book</a>	This function allows a borrower to borrow a book from the library.

Name	Description
 <a href="#">Log In</a>	This function allows the user to log into the system, using authentication such as a username and password.
 <a href="#">Manage Books</a>	This function gives the user the ability to perform various operations related to managing the books in the library, such as adding new books, updating existing book information, and removing books from the system.
 <a href="#">Remove Books</a>	This function allows the user to remove books.
 <a href="#">Return Book</a>	This function allows a borrower to return a book that they had previously borrowed from the library.
 <a href="#">Search Books</a>	This function allows users (both the administrative user and borrowers) to search for books within the library's collection.
 <a href="#">Update Books</a>	This function allows the user to update the information associated with existing books in the library's collection.
 <a href="#">View Book Details</a>	This function allows users to view detailed information about a specific book, such as the title, author, publication date, and availability status.

## 1.5. Log In

ID: UC02

This function allows the user to log into the system, using authentication such as a username and password.



### 1.5.1. Primary Actors

 [User](#)

### 1.5.2. Details

Level	N/A
Complexity	N/A
Use Case Status	N/A
Implementation Status	N/A
Preconditions	N/A
Post-conditions	N/A
Author	N/A
Assumptions	N/A

### 1.5.3. Relationships

Relationship	From	To
 <<include>>	 <a href="#">Log In</a>	 <a href="#">Manage Books</a>
 unnamed	 <a href="#">User</a>	 <a href="#">Log In</a>

## 1.6. Manage Books


ID: UC05

This function gives the user the ability to perform various operations related to managing the books in the library, such as adding new books, updating existing book information, and removing books from the system.

### 1.6.1. Details

Level	N/A
Complexity	N/A
Use Case Status	N/A
Implementation Status	N/A
Preconditions	N/A
Post-conditions	N/A
Author	N/A
Assumptions	N/A

## 1.6.2. Relationships

Relationship	From	To
---><<include>>	 <a href="#">Manage Books</a>	 <a href="#">Add Book</a>
---><<include>>	 <a href="#">Manage Books</a>	 <a href="#">Remove Books</a>
---><<include>>	 <a href="#">Manage Books</a>	 <a href="#">Search Books</a>
---><<include>>	 <a href="#">Manage Books</a>	 <a href="#">View Book Details</a>
---><<include>>	 <a href="#">Manage Books</a>	 <a href="#">Update Books</a>
---><<include>>	 <a href="#">Log In</a>	 <a href="#">Manage Books</a>
---><<include>>	 <a href="#">Manage Books</a>	 Add
---><<include>>	 <a href="#">Manage Books</a>	 Hold
---><<include>>	 <a href="#">Manage Books</a>	 Reading History
---><<include>>	 <a href="#">Manage Books</a>	 Borrow
---><<include>>	 <a href="#">Manage Books</a>	 New Arrivals

## 1.7. Remove Books



ID: UC08

This function allows the user to remove books.

### 1.7.1. Details

Level	N/A
Complexity	N/A
Use Case Status	N/A
Implementation Status	N/A
Preconditions	N/A
Post-conditions	N/A
Author	N/A
Assumptions	N/A

### 1.7.2. Relationships

Relationship	From	To
---><<include>>	 <a href="#">Manage Books</a>	 <a href="#">Remove Books</a>

## ● 1.8. Return Book

ID: UC03

This function allows a borrower to return a book that they had previously borrowed from the library.

### 1.8.1. Primary Actors

 [Borrower](#)

### 1.8.2. Details

Level	N/A
Complexity	N/A
Use Case Status	N/A
Implementation Status	N/A
Preconditions	N/A
Post-conditions	N/A
Author	N/A
Assumptions	N/A

### 1.8.3. Relationships

Relationship	From	To
—unnamed	 <a href="#">Borrower</a>	 <a href="#">Return Book</a>

## ● 1.9. Search Books

ID: UC09

This function allows users (both the administrative user and borrowers) to search for books within the library's collection.





### 1.9.1. Primary Actors

 [Borrower](#)

### 1.9.2. Details

Level	N/A
Complexity	N/A
Use Case Status	N/A
Implementation Status	N/A
Preconditions	N/A
Post-conditions	N/A
Author	N/A
Assumptions	N/A

### 1.9.3. Relationships

Relationship	From	To
---><<include>>	 <a href="#">Manage Books</a>	 <a href="#">Search Books</a>
—unnamed	 <a href="#">Borrower</a>	 <a href="#">Search Books</a>

## 1.10. Update Books



ID: UC07

This function allows the user to update the information associated with existing books in the library's collection.

### 1.10.1. Details

Level	N/A
Complexity	N/A
Use Case Status	N/A
Implementation Status	N/A
Preconditions	N/A
Post-conditions	N/A
Author	N/A
Assumptions	N/A

### 1.10.2. Relationships

Relationship	From	To
---><<include>>	 <a href="#">Manage Books</a>	 <a href="#">Update Books</a>

## 1.11. User

ID: AC01

The user interacts with the Library Management System to perform various actions such as logging in, borrowing books, returning books, and managing books.

### 1.11.1. Properties

Abstract	false
Leaf	false
Root	false

### 1.11.2. Relationships

Relationship	From	To
—unnamed	 <a href="#">User</a>	 <a href="#">Log In</a>

## 1.12. View Book Details

ID: UC10

This function allows users to view detailed information about a specific book, such as the title, author, publication date, and availability status.





### 1.12.1. Primary Actors

 [Borrower](#)

### 1.12.2. Details

Level	N/A
Complexity	N/A
Use Case Status	N/A
Implementation Status	N/A
Preconditions	N/A
Post-conditions	N/A
Author	N/A
Assumptions	N/A

### 1.12.3. Relationships

Relationship	From	To
---><<include>>	 <a href="#">Manage Books</a>	 <a href="#">View Book Details</a>
—unnamed	 <a href="#">Borrower</a>	 <a href="#">View Book Details</a>