

THE DEVELOPMENT OF AN ONLINE PUBLIC ACCESS CATALOG (OPAC) SYSTEM: ENHANCING LIBRARY ACCESSIBILITY AND EFFICIENCY FOR THE MARIKINA PUBLIC LIBRARY

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BACKGROUND

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The Marikina City Public Library currently uses a traditional, manual cataloging and inquiry process: book records are maintained physically and users must visit the library in person or ask staff to check availability. These manual methods cause inefficiencies, delays, and an increased risk of human error when handling searches, borrowings, and returns.

BACKGROUND

The library's patrons include students, researchers, city employees, and the general public who require timely access to books and materials but are limited by on-site-only access. The OPAC (Online Public Access Catalog) project aims to replace these manual procedures with an online-based catalog that allows remote searching, borrowing requests, and real-time status updates.



THE PROJECT

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The project focuses on the development of an Online Public Access Catalog (OPAC) System for the Marikina Public Library. The program was developed to simulate the core functionality of a digital library management system.

The purpose of the study is to provide an efficient, user friendly and accessible platform as a ground up and basis for future systems that can be implemented as an OPAC system for the Marikina Public Library System where library users or patrons can search, reserve and return the books while allowing the library staffs to manage and update the collection efficiently and effectively.

THE PROJECT

While the current version of the program is text-based and operates through the console, it provides a strong foundation for future development of similar systems for the Marikina Public Library.

Future enhancements such as database integration for permanent data storage, user authentication for improved security, and the addition of a graphical user interface (GUI) could transform this prototype into a fully functional and user-friendly system suitable for real-world application.



STATEMENT OF THE PROBLEM

STATEMENT OF THE PROBLEM

- Relies on manual cataloging
- Patrons are still require to visit or ask the librarian to locate materials
- Causes delays and tracking issues and human errors
- No digital system leads to inefficient data management.
- Operations are time-consuming, especially during peak hours

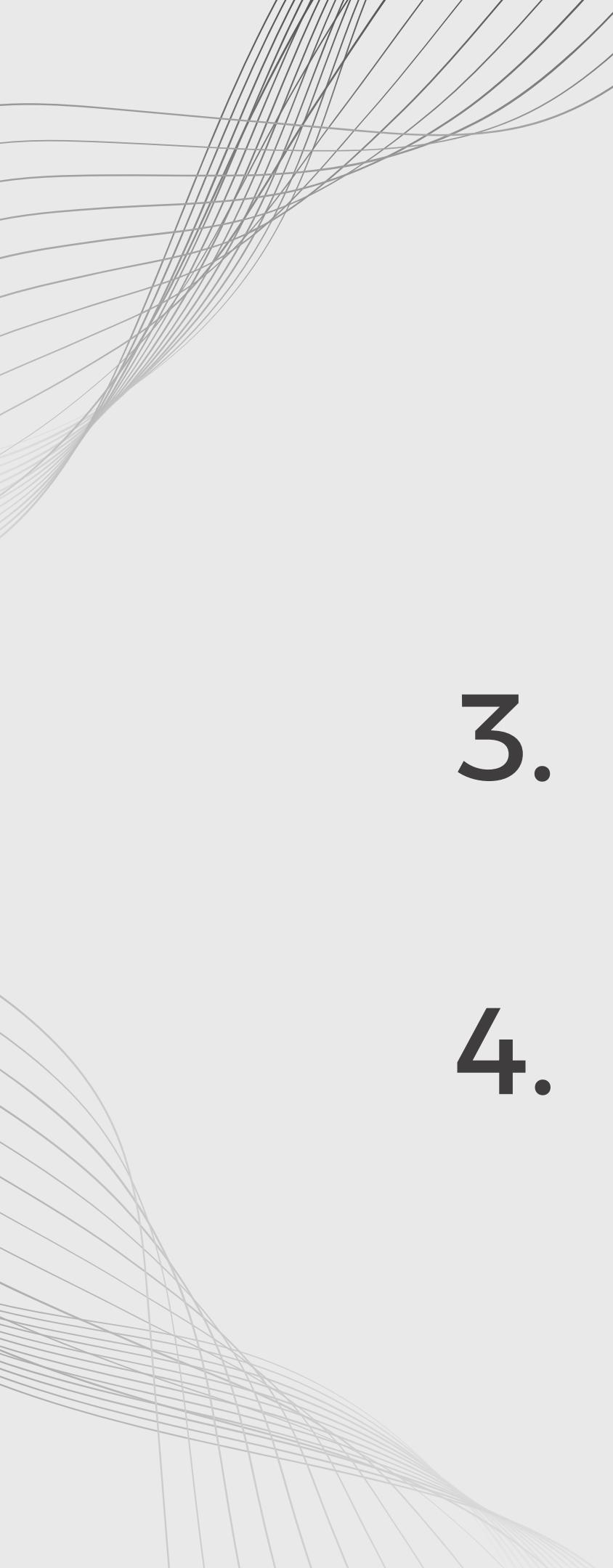
OBJECTIVE

OBJECTIVES

The main objective of the project is to develop an Online Public Access Catalog (OPAC) System for the Marikina City Public Library that will automate cataloging, inquiry, and borrowing processes, making them accessible online to improve efficiency, accuracy, and user satisfaction:

OBJECTIVES

1. To design and implement an easy-to-use OPAC platform that allows library patrons to search, view, and reserve books conveniently using any device with internet access.
2. To enable users and librarians to track borrowing and return transactions efficiently through digital records and real-time updates.



OBJECTIVES

3. To improve accessibility and service quality by reducing the time spent on manual inquiries and allowing users to independently manage their borrowing activities.

4. To support the modernization of the Marikina City Public Library by providing a reliable and sustainable system that aligns with digital transformation initiatives in public information services.

FLOWCHART

FIGURE 1: SYSTEM MENU PANEL

The menu panel flowchart presents the overall process flow of the Online Public Access Catalog (OPAC). It starts with a welcome screen and user's input, then directs individuals to either the admin or user interface depending on login credentials. Administrators manage book records through a control panel, while users browse and borrow materials, showing a clear division of roles within the Marikina City Public Library's OPAC system.

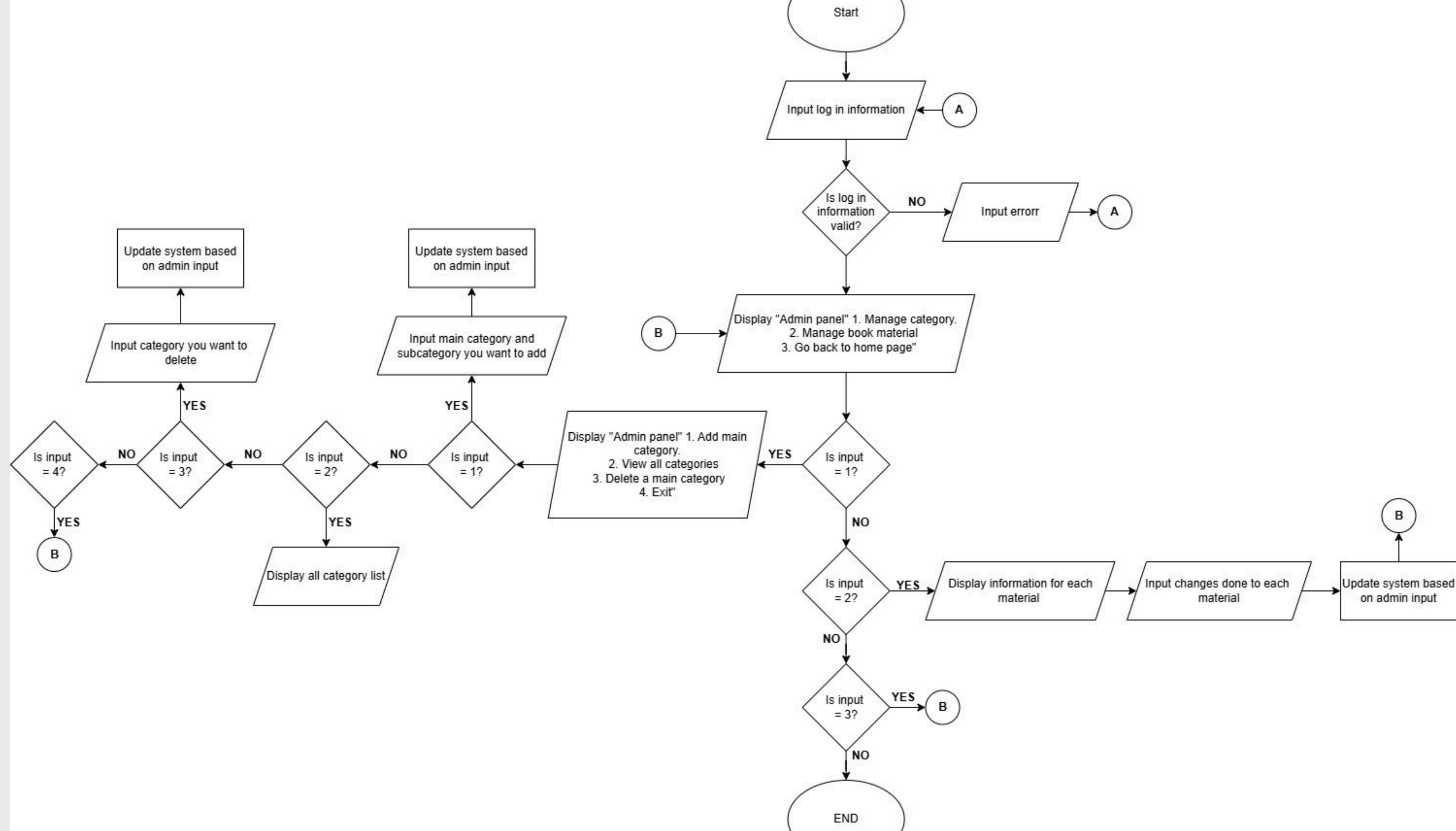


FIGURE 2: SYSTEM FOR ADMIN PANEL

Within the admin panel, the flowchart outlines procedures for managing system records, including category modification, material updates, and verification tasks. These processes are guided by conditional logic to ensure accuracy and proper system maintenance.

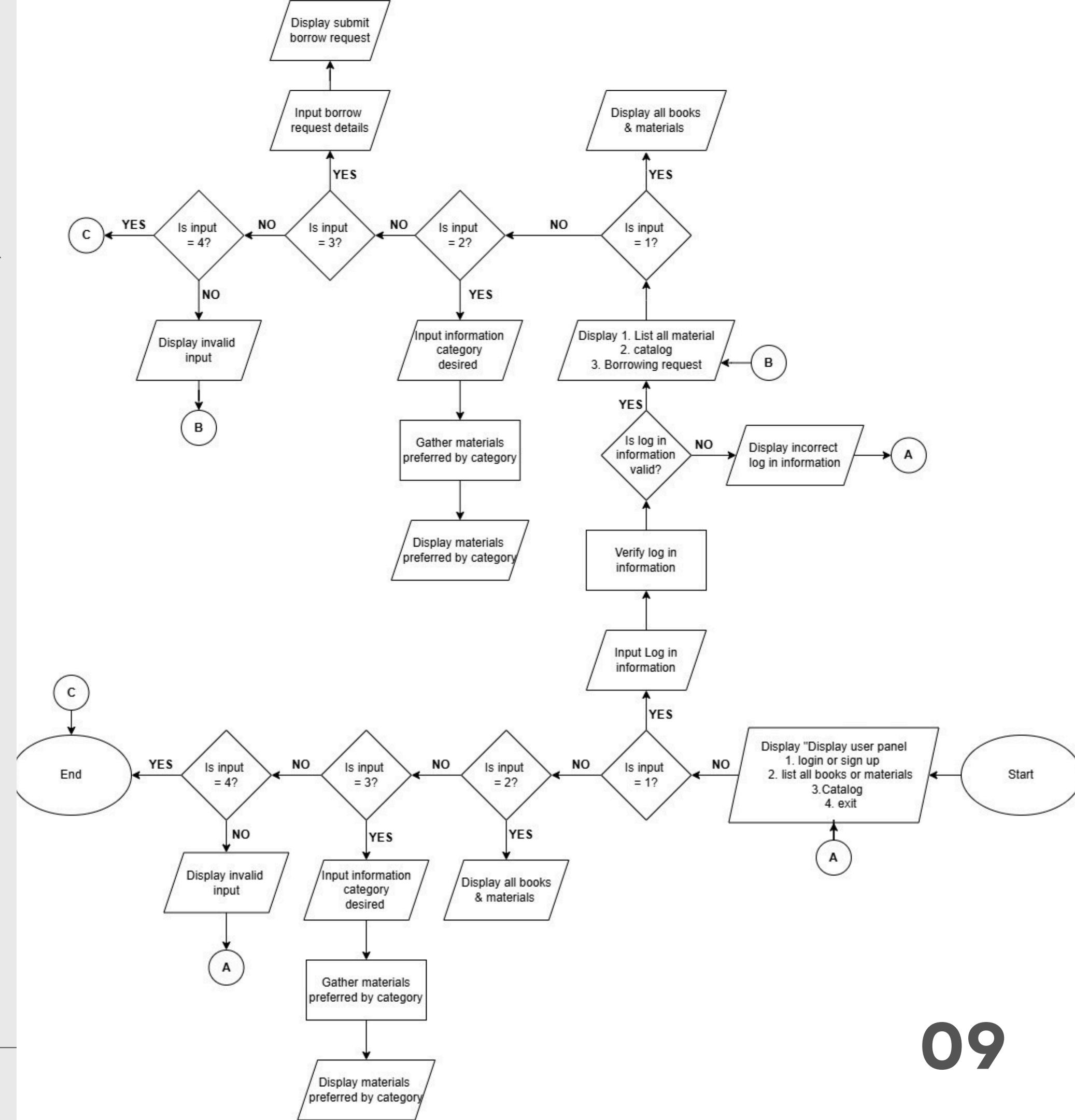
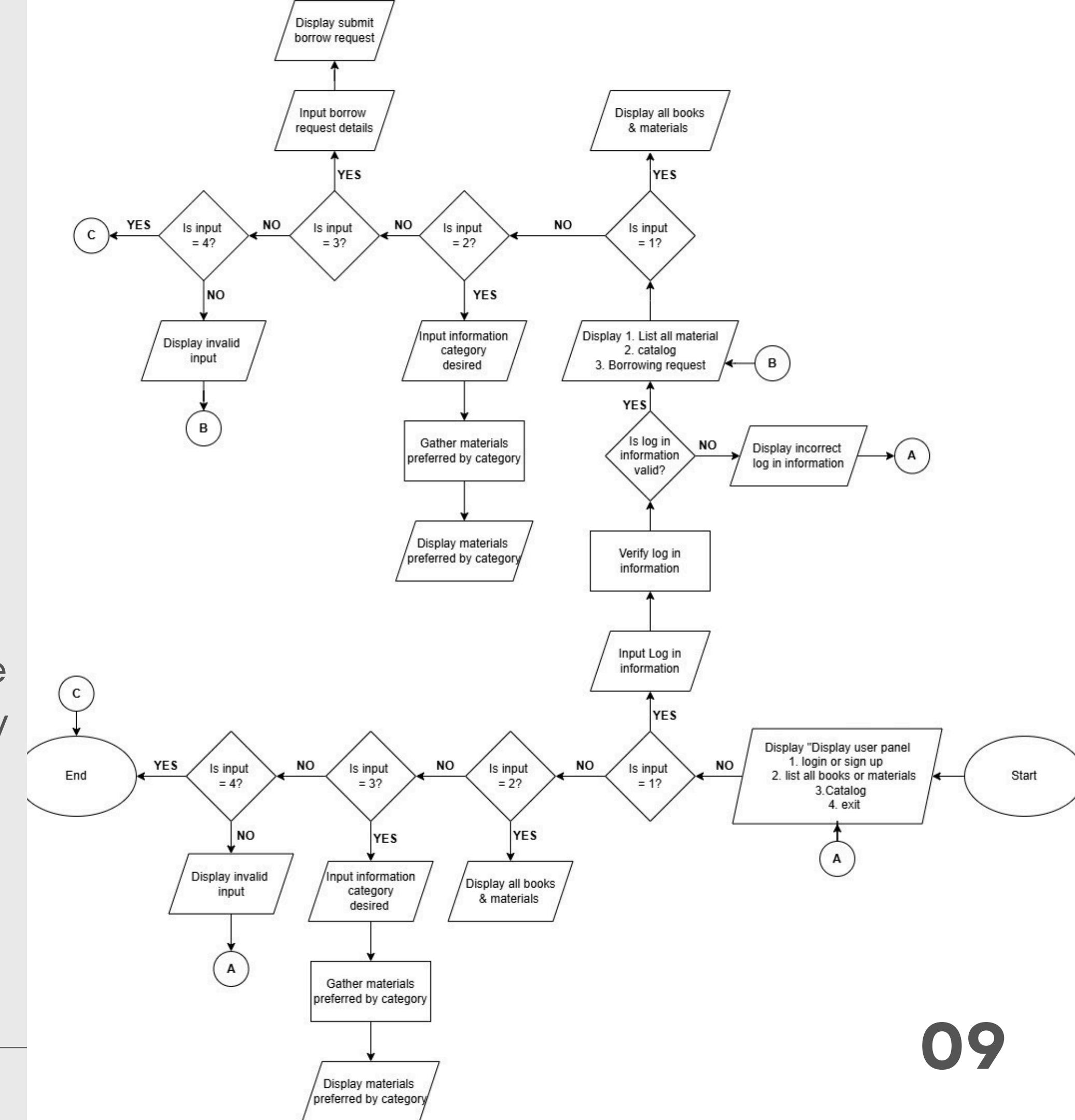


FIGURE 3: SYSTEM FOR USER PANEL

In the user panel, the flowchart demonstrates the steps involved in accessing library resources, such as searching materials by category, viewing available collections, and submitting borrowing requests. Decision nodes validate user inputs and maintain system integrity by directing incorrect or incomplete actions toward error prompts.



PSEUDOCODE

START

INITIALIZE empty list of Books

INITIALIZE empty list of Users

SET CurrentUser to None

CALL LoadBooks

CALL LoadUsers

DISPLAY "Welcome to Marikina City Public Library"

LOOP forever:

IF CurrentUser is None THEN

 IF Users list is empty THEN

 DISPLAY "No users in system. Add a user first."

 CALL AddUser

 ELSE

 CALL Login → CurrentUser

 IF Login failed THEN

 DISPLAY "Returning to main menu..."

 CONTINUE LOOP

 ENDIF

 DISPLAY "Logged in as [UserName]"

 ENDIF

ENDIF

PSEUDOCODE

The pseudocode provides a step-by-step outline of the logical flow and processes within the Online Public Access Catalog (OPAC) System. It serves as a simplified representation of the system's operations, written in plain English to clearly describe how users and administrators interact with the program.

DISPLAY Menu:

1. View Available Books
2. Search Book
3. Reserve Book
4. Return Book
5. Add New Book
6. Add New User
7. Logout
8. Exit

GET UserChoice

SWITCH UserChoice:

CASE 1:
 CALL ViewAvailableBooks

CASE 2:
 CALL SearchBook

CASE 3:
 CALL ReserveBook(CurrentUser)

CASE 4:
 CALL ReturnBook(CurrentUser)

CASE 5:
 CALL AddBook

CASE 6:
 CALL AddUser

CASE 7:
 SET CurrentUser to None
 DISPLAY "Logged out successfully."

CASE 8:
 DISPLAY "Exiting system. Thank you for using the Marikina Public Library System."
 EXIT PROGRAM
DEFAULT:

DISPLAY "Invalid choice. Please try again."

ENDSWITCH

END LOOP

DISPLAY "Thank you for using the Marikina Public Library System."

END

Figure 2. presents the complete process of the Online Public Access Catalog (OPAC) System showing the complete process of how the program flows through each function and process based on the user inputs.



DATA DICTIONARY

DATA DICTIONARY

Table 1: Data Dictionary

Data Name	Size	Data Type	Description
book	1 dynamic	struct vector	A data that represents the books in the library, array that stores all of the registered users in the system.
book.title	variable	string	Stores the title of the book
book.author	variable	string	Stores the name of the author of the book.
book.available	1	bool	Indicates whether the book is available; T or F
User	1	struct	Represents a library user.
User.name	variable	string	Stores the name of the user.
Users	dynamic	vector	Array that stores all

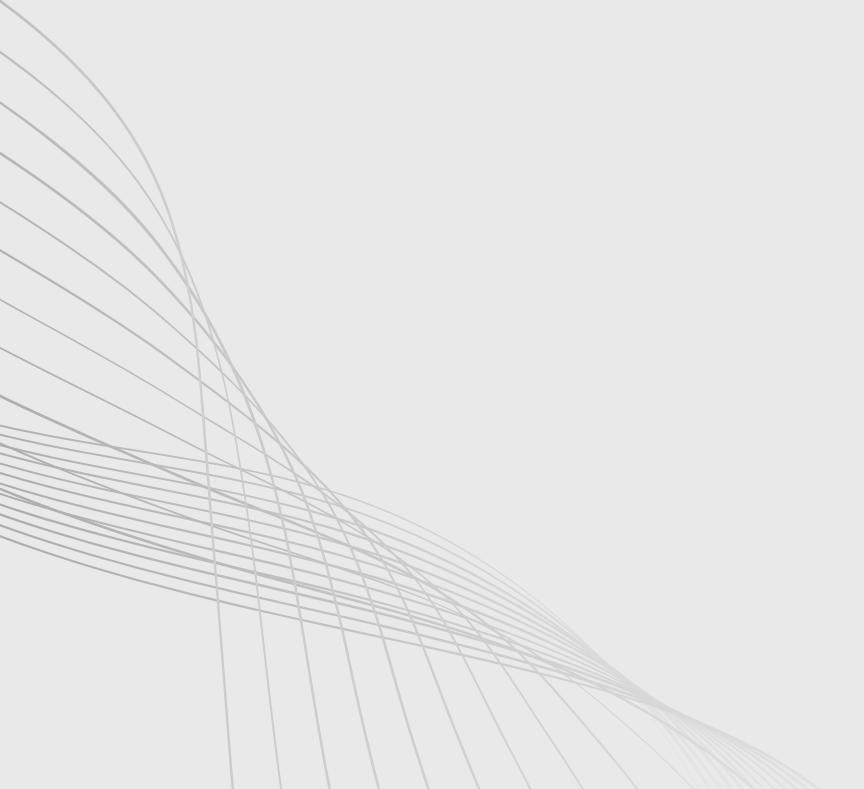
DATA DICTIONARY

			books in the system				
currentUser	1	int	Stores the index of the current logged in user.	newUser	1	class	Temporary variable to create new user before being added to the list of available log-in users
choice	1	int	Stores the userInput in the menu	d	variable	string	Acts as buffer
availableBB	dynamic	vector	Stores indexes of books currently available for reservation	viewAvailableBooks(books)	dynamic	function	Display all books currently available
borrowedCB	dynamic	vector	Stores index of the current books borrowed	searchBooks(books)	dynamic	function	Searches for available books
count	1		Used for numbering the books	reserveBooks(books, user)	dynamic	function	Allows users to reserve for books
search	variable	string	Stores the userInput when searching for a book.	returnBooks(books, user)	dynamic	function	Allows users to return and document the availability of the book
newBook	1	class	Temporary variable to create new book before being added to the list of available books				

DATA DICTIONARY

addBook(books)	dynamic	function	Allows admins to Add new books to the system
addUser(users)	dynamic	function	Allows for users to be added to the system
login(users)	dynamic	function	Allows users to log in from the list of users available.

Overall, the table serves as a reference to understand how data is organized, accessed, and manipulated within the program, facilitating easier maintenance and future development.



CODE

CODE

The program simulates a simple Library Management System for the Marikina City Public Library. It allows users to view available books, search for books by title, reserve and return books, and manage library users and book records.

The system is designed to provide an interactive menu-based interface, enabling efficient management of library resources and user accounts in a digital format.

```
#include <iostream>
#include <vector>
#include <string>
#include <fstream>

using namespace std;

// Book structure
struct Book {
    string title;
    string author;
    bool available;
};

// User structure with password
struct User {
    string name;
    string password;
};

// Save users to file
void saveUsers(vector<User>& users) {
    ofstream file("users.txt");
    for (int i = 0; i < users.size(); i++) {
        file << users[i].name << endl;
    }
}
```

CODE

```

cout << "Enter number to return: ";
cin >> choice;

if (choice < 1 || choice > borrowedCB.size()) {
    cout << "Invalid choice.\n";
    return;
}

books[borrowedCB[choice - 1]].available = true;
cout << "Book returned by " << username << "\n";
saveBooks(books); // Save changes
}

// Adds a new book
void addBook(vector<Book>& books) {
    string title, author;
    cout << "\nEnter Book Title: ";
    getline(cin, title);
    cout << "\nEnter Author: ";
    getline(cin, author);

    Book newBook;
    newBook.title = title;
    newBook.author = author;
    newBook.available = true;
    books.push_back(newBook);

    cout << "Book added!\n";
    saveBooks(books); // Save changes
}

// Adds new users with password
void addUser(vector<User>& users) {
    string name, password;
    cout << "\nEnter User Name: ";
    getline(cin, name);
    cout << "\nEnter Password: ";
    getline(cin, password);

    User newUser;
    newUser.name = name;
    newUser.password = password;
    users.push_back(newUser);
}

```

```

vector<User> users;
int currentUser = -1;
int choice;

// Load existing data
loadUsers(users);
loadBooks(books);

cout << "\nWelcome to Marikina City Public Library\n";
cout << "===== \n";

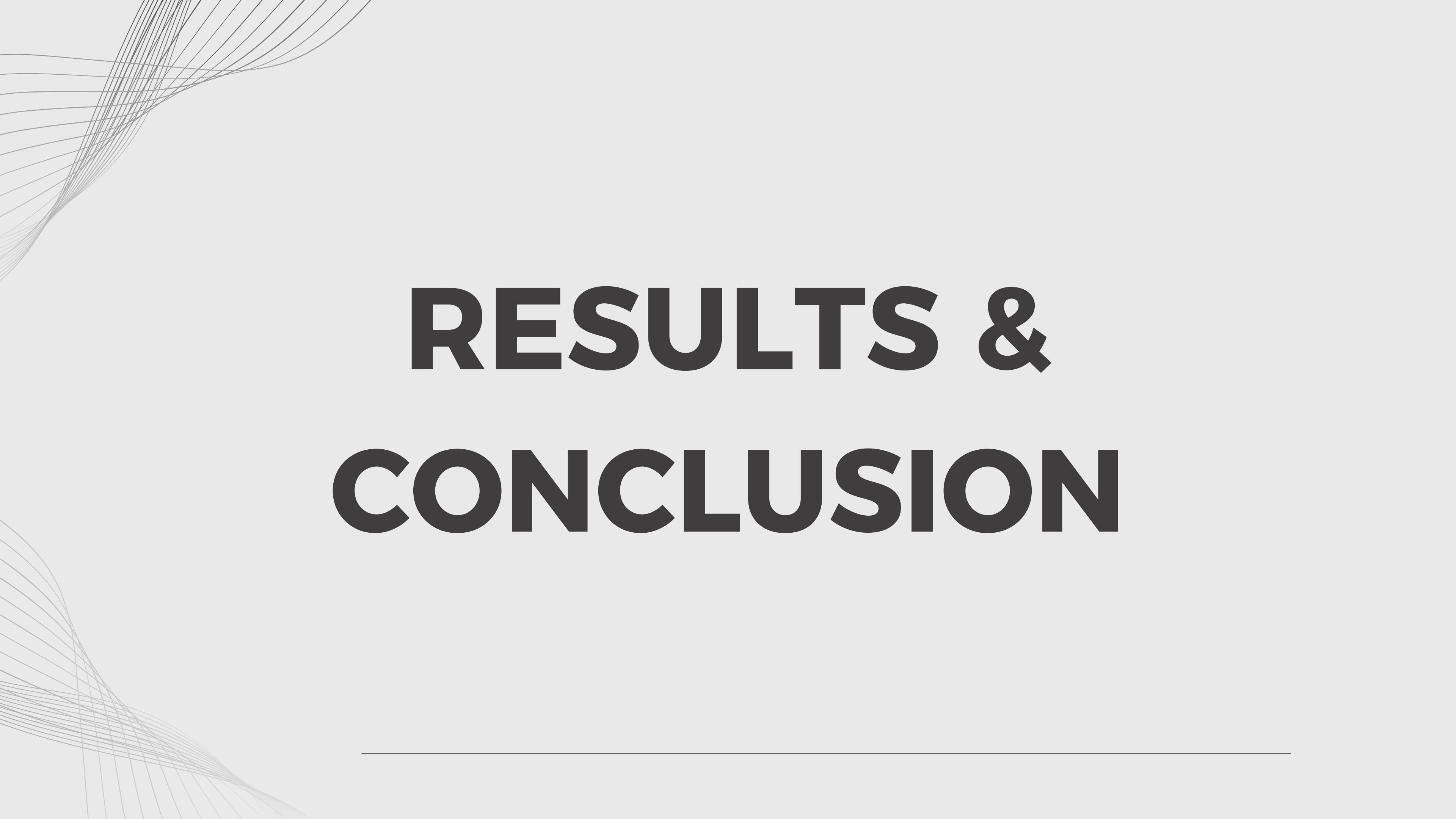
if (users.size() > 0) {
    cout << "Loaded " << users.size() << " existing users.\n";
}
if (books.size() > 0) {
    cout << "Loaded " << books.size() << " existing books.\n";
}

while (true) {
    // Pag walang user na available
    if (currentUser == -1) {
        if (users.size() == 0) {
            cout << "\nNo users in system. Add a user first.\n";
            string d;
            getline(cin, d);
            addUser(users);
            continue;
        }
    }

    // Login part
    currentUser = login(users);
    if (currentUser == -1) {
        cout << "\nReturning to main menu...\n";
        continue;
    }
    cout << "\nLogged in as " << users[currentUser].name << "\n";
}

// Menu
else {
    cout << "\n===== Marikina City Public Library =====\n";
    cout << "1. View Available Books\n";
    cout << "2. Search Book\n";
    cout << "3. Reserve Book\n";
}

```



RESULTS & CONCLUSION

RESULT

The execution of the Marikina City Public Library OPAC system, developed by the researchers, demonstrates the functionality and interaction of its various modules.

Upon running the program, the user is greeted with a welcome message and prompted to log in or create a new user account if none exist. This ensures that the system maintains a controlled access to its functions, allowing only registered users to perform library operations.

RESULT

Welcome to The Marikina Public library library system!

About Marikina Public library:

The Marikina Public Library is located at the heart of Marikina Elementary School in Barangay Santa Elena. The library offers a wide range of services and resources to the residents of Marikina, including book lending, reference services, and computer access. The library also hosts various programs and events for the community, such as reading programs for children and educational workshops for adults. The Marikina Public Library is committed to promoting literacy and lifelong learning among its patrons.

Figure 4.1. Homepage

RESULT

Current list of latest added books/materials in our library collection:

```
Table created Successfully
Records created Successfully
ID: 1
TITLE: The Great Gatsby
AUTHOR: F. Scott Fitzgerald
CALL_NUMBER: PS3511 .I9 G7 1992
ISBN: 9780791093009
CATEGORY: Fiction
SUBCATEGORY: Tragedy
YEAR: 1925

ID: 2
TITLE: To Kill a Mockingbird
AUTHOR: Harper Lee
CALL_NUMBER: FIC LEE
ISBN: 9780446310789
CATEGORY: Fiction
SUBCATEGORY: Coming of Age
YEAR: 1960

ID: 3
TITLE: 1984
AUTHOR: George Orwell
CALL_NUMBER: PR6029 .R8 N4944 2007
ISBN: 9780791093009
CATEGORY: Fiction
SUBCATEGORY: Dystopian
YEAR: 1949

ID: 4
TITLE: The Catcher in the Rye
AUTHOR: J.D. Salinger
CALL_NUMBER: PS 3557 .A426 C3 1991
ISBN: 0316769487
CATEGORY: Fiction
SUBCATEGORY: Coming of Age
YEAR: 1951
```

Figure 4.2. Homepage

RESULT

```
=====
Press ok to continue...
If you are the admin please enter 'admin' to continue to the admin login page
.
```

Figure 4.3. Homepage

```
=====
Press ok to continue...
If you are the admin please enter 'admin' to continue to the admin login page
admin

Admin database found.
Proceeding to admin login...

Please log in to your admin account.
Enter username: bakerchip
Enter password: bakerchip'

Incorrect password. Try again.

Forgot password? (yes/no):

no

Please log in to your admin account.
Enter username: bakerchip
Enter password: bakerchip

Login successful! Welcome, bakerchip.

=====
```

Figure 5. Admin Login Panel

RESULT



Figure 6. Admin Panel

RESULT

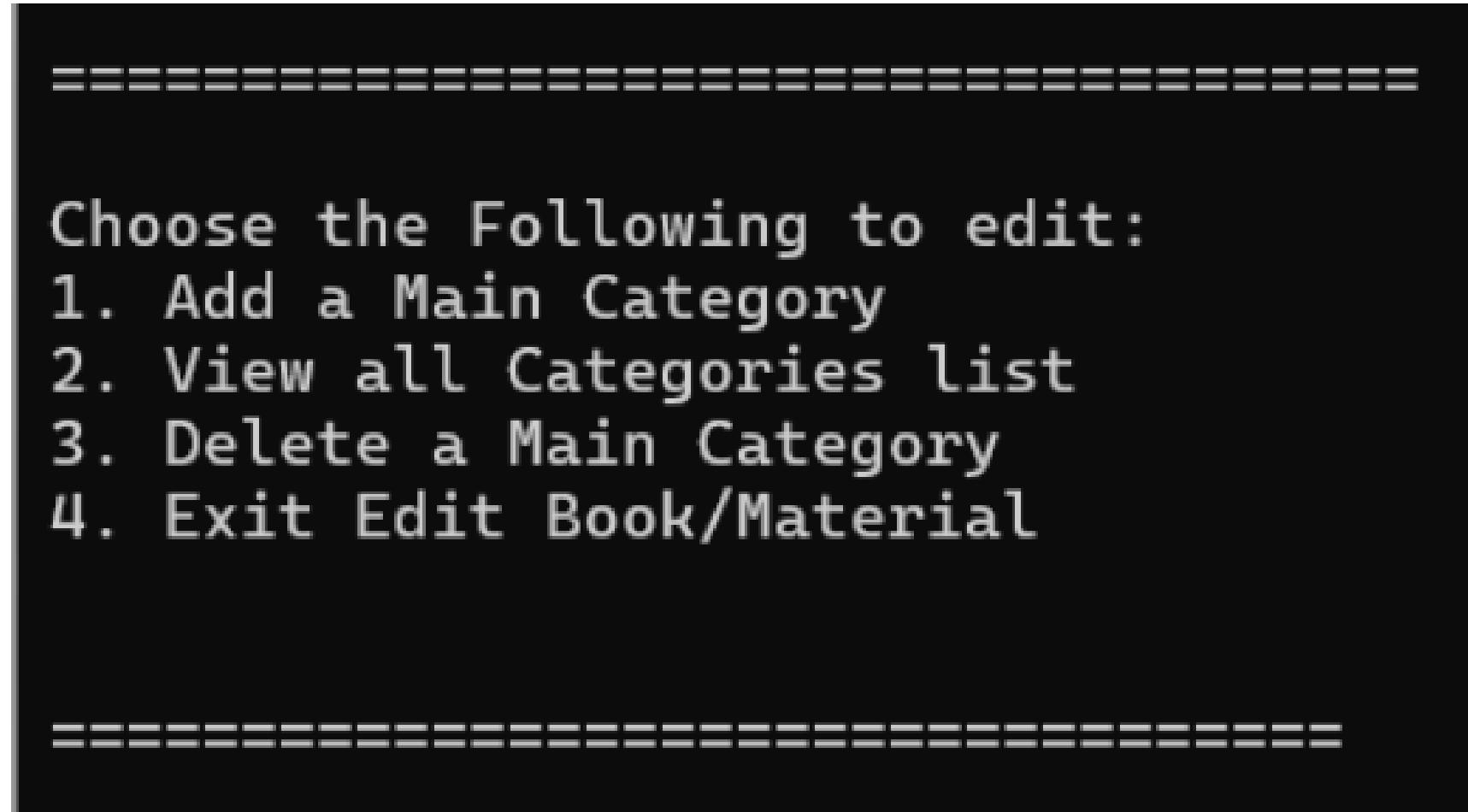


Figure 7. Manage category

RESULT

```
Adding a Main Category
```

```
Adding a category!
```

```
Input the main category and subcategory you're going to add:
```

```
Main Category:
```

```
Horror
```

```
Input the subcategory you're going to add:
```

```
SubCategory:
```

```
Tragic
```

```
Book added successfully!
```

```
Press any key to continue . . .
```

Figure 8. Main Category

RESULT

```
Viewing all Categories:  
ID: 1  
MAIN_CATEGORY: Fiction  
SUB_CATEGORY: Tragedy  
  
ID: 2  
MAIN_CATEGORY: Non-Fiction  
SUB_CATEGORY: Coming of Age  
  
ID: 3  
MAIN_CATEGORY: Science & Technology  
SUB_CATEGORY: Dystopian  
  
ID: 4  
MAIN_CATEGORY: Education & Reference  
SUB_CATEGORY: Coming of Age  
  
ID: 5  
MAIN_CATEGORY: Fiction  
SUB_CATEGORY: Tragedy  
  
ID: 6  
MAIN_CATEGORY: Non-Fiction  
SUB_CATEGORY: Coming of Age
```

Figure 9. Viewing all Categories

```
- Deleting a Main Category feature coming soon!  
Enter Main Category you want to delete: Horror  
Record deleted successfully!  
Table created Successfully  
Records created Successfully
```

Figure 10. Delete a Main Category

RESULT



Figure 11. Exiting Manage Categories

RESULT

```
Welcome to Manage Books/Materials
Viewing all books/materials in the library database...
ID: 1
TITLE: The Great Gatsby
AUTHOR: F. Scott Fitzgerald
CALL_NUMBER: PS3511 .I9 G7 1992
ISBN: 9780791093009
CATEGORY: Fiction
SUBCATEGORY: Tragedy
YEAR: 1925
```

Figure 12. Manage Books/Materials

```
ID: 36
TITLE: The Catcher in the Rye
AUTHOR: J.D. Salinger
CALL_NUMBER: PS 3557 .A426 C3 1991
ISBN: 0316769487
CATEGORY: Fiction
SUBCATEGORY: Coming of Age
YEAR: 1951
```

Do you want to change anything in the book/materials database? yes/no?

Figure 12.2. Manage Books/Materials.

RESULT

yes

Entering Manage Books/Materials...

Please choose the folllowing:

1. Add Book
2. Edit Book
3. Delete Book
4. View All Book
5. Exit Manage Books/Materials

Figure 12.3. Yes option

RESULT

Adding book/material

So you want to add a book!

Input the info about the book you're going to add:

Title:

Stutter

Author:

Mariana

ISBN: 0316765678

Call Number: PS 3557 .A426 C3 2025

Category: Fiction

Subcategory: Romance

Year: 2025

Book added successfully!

Press any key to continue . . .

Figure 14. Add Book

RESULT

```
Please paste the content of the book below.  
Type END on a new line when you're done:  
He stood in front of her, every word tripping over his tongue, wishing his heartbeat would quiet long enough to let him  
speak. She smiled, soft and patient, as if waiting for the truth he kept trying and failing to confess. In the silence b  
etween his stutters, she finally stepped close and whispered what he never could- "I like you too."  
END  
  
Book content successfully written to newbook.txt!  
The file will then be renamed to the book's title.  
File renamed successfully!
```

Figure 14.1. Add Content Save File

Choose the Following to edit:

1. Title
2. Author
3. Call Number
4. Category
5. Subcategory
6. Year
7. Exit Edit Book/Material

Figure 15. Edit Book

RESULT

1
Enter the ISBN of the book/material: 0316769487
Enter the new title: Stutter
Record updated successfully!

Figure 16. Edit Title

2
What's the ISBN of the book/material you want to edit the Author of?
0316769487
What would be the new Author?
J.P. Armada
Editing Author...
Record updated successfully!

Figure 17. Edit Author

3
What's the ISBN of the book/material you want to edit the Author of?
0316769487
What would be the new callnumber?
PS 3557 .A426 C3 2025
Editing Call Number...
Record updated successfully!

Figure 18. Edit Call Number

RESULT

4
What's the ISBN of the book/material you want to edit the category of?
0316769487
Horror
What would be the new Category?
Editing Category...
Record updated successfully!

Figure 19. Edit Category

5
What's the ISBN of the book/material you want to edit the subcategory of?
0316769487
What would be the new subcategory?
Dystopian

Editing Subcategory...
Record updated successfully!

Figure 20. Edit Sub Category

5
What's the ISBN of the book/material you want to edit the subcategory of?
0316769487
What would be the new subcategory?
Dystopian

Editing Subcategory...
Record updated successfully!

Figure 21. Edit Year

RESULT

7
Exiting Edit Book/Material...

Figure 23. Exit Edit Book/Material

What's the ISBN of the book/material you want to delete?
0316769487
Record deleted successfully!

Figure 24. Delete Book

RESULT

```
4
Viewing all books/materials in the library database...
ID: 1
TITLE: The Great Gatsby
AUTHOR: F. Scott Fitzgerald
CALL_NUMBER: PS3511 .I9 G7 1992
ISBN: 9780791093009
CATEGORY: Fiction
SUBCATEGORY: Tragedy
YEAR: 1925

ID: 2
TITLE: To Kill a Mockingbird
AUTHOR: Harper Lee
CALL_NUMBER: FIC LEE
ISBN: 9780446310789
CATEGORY: Fiction
SUBCATEGORY: Coming of Age
YEAR: 1960

ID: 3
TITLE: 1984
AUTHOR: George Orwell
CALL_NUMBER: PR6029 .R8 N4944 2007
ISBN: 9780791093009
CATEGORY: Fiction
SUBCATEGORY: Dystopian
YEAR: 1949
```

Figure 25. View All Books

RESULT

5
Exiting Manage Books/Materials...

Figure 26. Exit Manage Books/Materials

RESULT

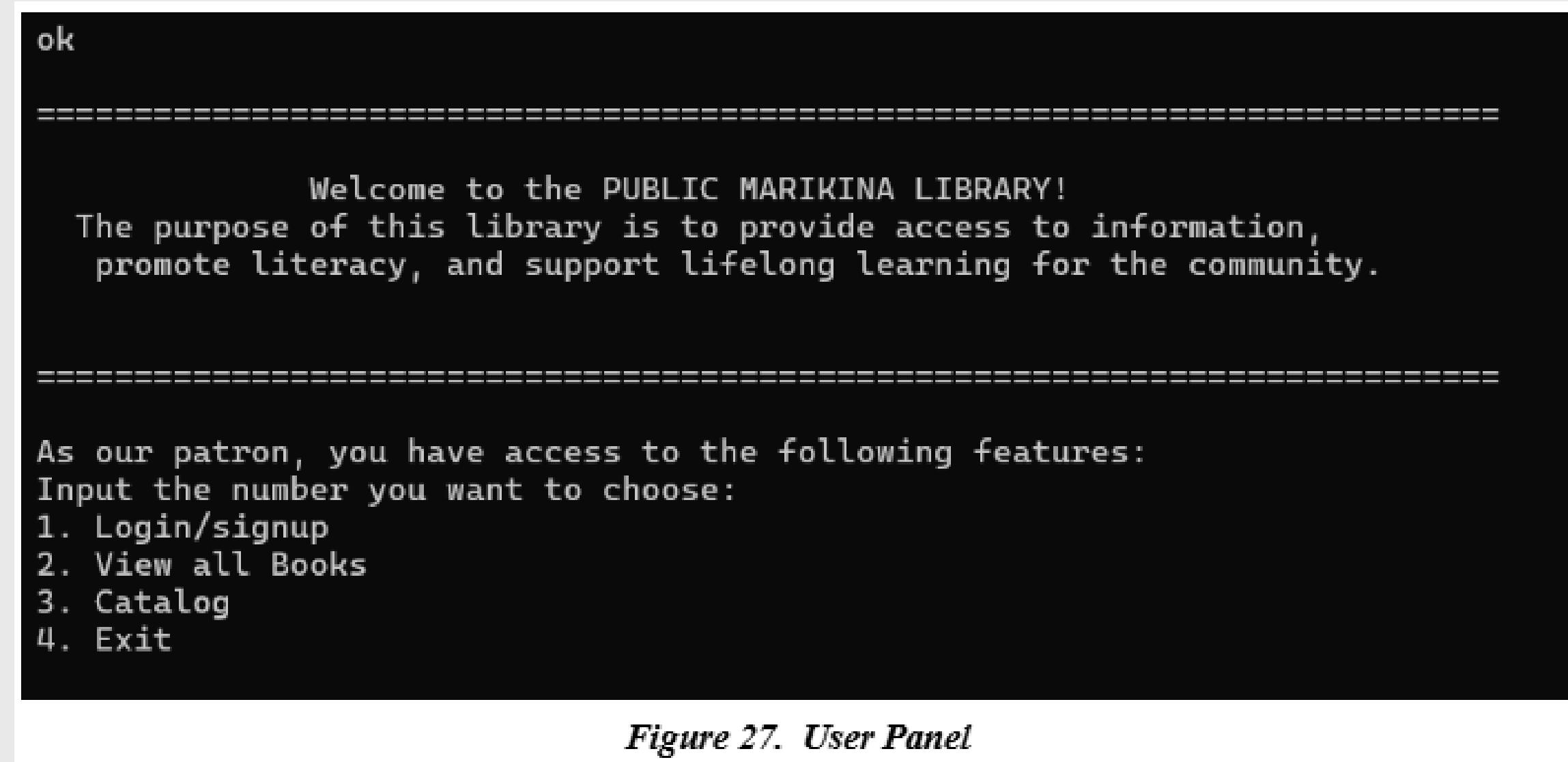


Figure 27. User Panel

RESULT

```
2
List all books/materials
ID: 1
TITLE: The Great Gatsby
AUTHOR: F. Scott Fitzgerald
CALL_NUMBER: PS3511 .I9 G7 1992
ISBN: 9780791093009
CATEGORY: Fiction
SUBCATEGORY: Tragedy
YEAR: 1925

ID: 2
TITLE: To Kill a Mockingbird
AUTHOR: Harper Lee
CALL_NUMBER: FIC LEE
ISBN: 9780446310789
CATEGORY: Fiction
SUBCATEGORY: Coming of Age
YEAR: 1960

ID: 3
TITLE: 1984
AUTHOR: George Orwell
CALL_NUMBER: PR6029 .R8 N4944 2007
ISBN: 9780791093009
CATEGORY: Fiction
SUBCATEGORY: Dystopian
YEAR: 1949
```

Figure 28. View All Books

RESULT

```
3
To search a book, first input what bibliographic data your gonna enter:
Choose the following bibliographic data your gonna enter:
1. Title
2. ISBN
3. Exit Catalogue
```

Figure 29. Catalog

RESULT

1

Enter the title of the book you're searching for:

The Great Gatsby

Searching process...

Successfully we found the book you're looking for! The Great Gatsby!

Title: The Great Gatsby

Author: F. Scott Fitzgerald

Call number: PS3511 .I9 G7 1992

ISBN: 9780791093009

Category: Fiction

Subcategory: Tragedy

Year: 1925

Want to check out the book?

Figure 30. TITLE

RESULT

```
For example: 'Title.txt' file  
The Great Gatsby.txt  
Opening....  
  
ng|The Great Gatsby  
By F. Scott Fitzgerald  
.....  
  
Then wear the gold hat, if that will move her;  
If you can bounce high, bounce far her too,  
Till she cry Lover, gold-hatted, high-bouncing  
lover, I must have you!  
by THOMAS PARKE DINWILLIERS  
.....  
  
Chapter 1  
In my younger and more vulnerable years my father gave me some advice that I have been turning over in my mind ever since. Whenever you feel like criticizing any one, he told me, just remember that all the people in this world have not had the advantages that you have had. He did not say any more but we have always been unusually communicative in a reserved way, and I understood that he meant a great deal more than that. In consequence I've inclined to reserve all judgments, a habit that has opened up many curious natures to me and also made me the victim of not a few veteran bores. The abnormal mind is quick to detect and attach i
```

Figure 30.1. TITLE

RESULT

2

Enter the ISBN of the book you're searching for:

9780791093009

Searching process...

Successfully we found the book you're looking for! 9780791093009!

Title: The Great Gatsby

Author: F. Scott Fitzgerald

Call number: PS3511 .I9 G7 1992

ISBN: 9780791093009

Category: Fiction

Subcategory: Tragedy

Year: 1925

Want to check out the book?

Figure 31. ISBN

RESULT

```
3. Exit Catalogue
3
Exit.....
=====
Welcome to the PUBLIC MARIKINA LIBRARY!
The purpose of this library is to provide access to information,
promote literacy, and support lifelong learning for the community.

=====
As our patron, you have access to the following features:
Input the number you want to choose:
1. Login/signup
2. View all Books
3. Catalog
4. Exit
```

Figure 32. Exit Catalog

RESULT

```
1

User account found.
Proceeding to login...

Please log in to your account.
Enter username: James earl
Enter password: take me out

Login successful! Welcome, James earl.

ID: 1
TITLE: The Great Gatsby
AUTHOR: F. Scott Fitzgerald
CALL_NUMBER: PS3511 .I9 G7 1992
ISBN: 9780791093009
CATEGORY: Fiction
SUBCATEGORY: Tragedy
YEAR: 1925
```

Figure 33. Login/Sign-up

RESULT

```
You have successfully logged in/signup!
You can now access the following features:
```

- ```
=====
1. List All Books/Materials in the Library
2. Catalog
3. Borrowing Request To The Management
4. Exit
```

*Figure 33.1. Login/Signup*

# RESULT

```
2
List all books/materials
ID: 1
TITLE: The Great Gatsby
AUTHOR: F. Scott Fitzgerald
CALL_NUMBER: PS3511 .I9 G7 1992
ISBN: 9780791093009
CATEGORY: Fiction
SUBCATEGORY: Tragedy
YEAR: 1925

ID: 2
TITLE: To Kill a Mockingbird
AUTHOR: Harper Lee
CALL_NUMBER: FIC LEE
ISBN: 9780446310789
CATEGORY: Fiction
SUBCATEGORY: Coming of Age
YEAR: 1960

ID: 3
TITLE: 1984
AUTHOR: George Orwell
CALL_NUMBER: PR6029 .R8 N4944 2007
ISBN: 9780791093009
CATEGORY: Fiction
SUBCATEGORY: Dystopian
YEAR: 1949
```

*Figure 33. View All Books*

# RESULT

```
Input the number you want to choose:
```

```
2
```

```
To search a book, first input what bibliographic data your gonna enter:
```

```
Choose the following bibliographic data your gonna enter:
```

```
1. Title
```

```
2. ISBN
```

```
3. Exit Catalogue
```

*Figure 34. Catalog*

# RESULT

```
1
Enter the title of the book you're searching for:
The Great Gatsby
Searching process...
Successfully we found the book you're looking for! The Great Gatsby!

Title: The Great Gatsby
Author: F. Scott Fitzgerald
Call number: PS3511 .I9 G7 1992
ISBN: 9780791093009
Category: Fiction
Subcategory: Tragedy
Year: 1925

Want to check out the book?
```

*Figure 35. TITLE*

# RESULT

```
For example: 'Title.txt' file
The Great Gatsby.txt
Opening....

ng;The Great Gatsby
By F. Scott Fitzgerald

Then wear the gold hat, if that will move her;
If you can bounce high, bounce far her too,
Till she cry Lover, gold-hatted, high-bouncing
lover, I must have you!
by THOMAS PARKE DINWILLIERS

Chapter 1
In my younger and more vulnerable years my father gave me some advice that I have been turning over in my mind ever since. Whenever you feel like criticizing any one, he told me, just remember that all the people in this world have not had the advantages that you have had. He did not say any more but we have always been unusually communicative in a reserved way, and I understood that he meant a great deal more than that. In consequence I've inclined to reserve all judgments, a habit that has opened up many curious natures to me and also made me the victim of not a few veteran bores. The abnormal mind is quick to detect and attach i
```

*Figure 35.1. TITLE*

# RESULT

2

Enter the ISBN of the book you're searching for:

9780791093009

Searching process...

Successfully we found the book you're looking for! 9780791093009!

Title: The Great Gatsby

Author: F. Scott Fitzgerald

Call number: PS3511 .I9 G7 1992

ISBN: 9780791093009

Category: Fiction

Subcategory: Tragedy

Year: 1925

Want to check out the book?

*Figure 36. ISBN*

# RESULT

```
3. Exit Catalogue
3
Exit.....
=====
Welcome to the PUBLIC MARIKINA LIBRARY!
The purpose of this library is to provide access to information,
promote literacy, and support lifelong learning for the community.

=====
As our patron, you have access to the following features:
Input the number you want to choose:
1. Login/signup
2. View all Books
3. Catalog
4. Exit
```

*Figure 37. Exit Catalog*

# RESULT

Type the ISBN of the book/material you want to borrow:  
0316769487

You have requested to borrow: 0316769487  
process....

Not the book you're referring.

Not the book you're referring.

Not the book you're referring.

Successfully we found the book you're looking for: 0316769487!

Before you proceed to the borrowing section, please review and agree to the following conditions for borrowing this book:  
By agreeing, you confirm that you are requesting to borrow this book from the library.

I hereby declare that I am borrowing this book from the library.

I understand that this book remains the property of the library,  
and I am responsible for its proper use and timely return within 7 days.

I also acknowledge that any loss or damage to the book while it is in my possession  
may result in penalties or replacement fees.

This serves as my authentication and agreement to abide by the library's  
borrowing policies.

Do you agree on the following conditions?:

*Figure 38. Borrowing Request To the Management*

# RESULT

```
=====
Do you agree on the following conditions?:
yes
Congratulations! on your new borrowed book!
You may now proceed to get your book on the book counter!
Thank you for using our service!
```

```
=====
Welcome to the PUBLIC MARIKINA LIBRARY!
The purpose of this library is to provide access to information,
promote literacy, and support lifelong learning for the community.
```

```
=====
As our patron, you have access to the following features:
Input the number you want to choose:
1. Login/signup
2. View all Books
3. Catalog
4. Exit
```

*Figure 38.1. Borrowing Request To the Management*

# RESULT

```
Input the number you want to choose:
4
Exiting....
```

```
=====
Welcome to the PUBLIC MARIKINA LIBRARY!
The purpose of this library is to provide access to information,
promote literacy, and support lifelong learning for the community.
```

```
=====
As our patron, you have access to the following features:
Input the number you want to choose:
1. Login/signup
2. View all Books
3. Catalog
4. Exit
```

*Figure 39. Exit*

# RESULT

Overall, the output of the system confirms that it is able to simulate a small-scale library environment, demonstrating effectiveness of the data structures and functions in managing books and users efficiently.

# CONCLUSION

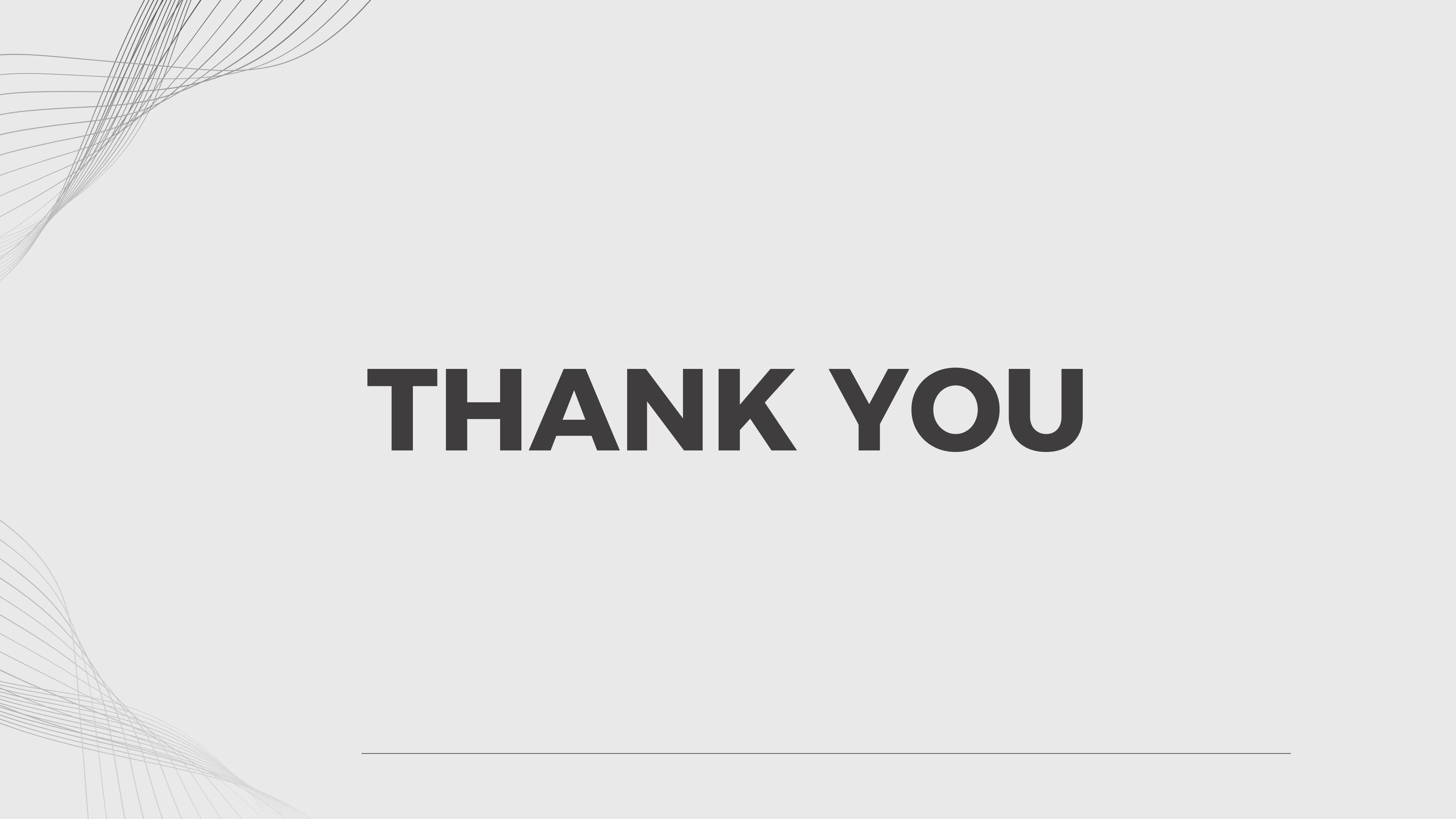
The results and output of the program highlight that the Online Public Access Catalog (OPAC) System developed is capable of efficiently managing library transactions such as viewing, searching, reserving, and returning books, as well as adding new users and book records.

The system provides a user-friendly, menu-driven interface that allows users to interact smoothly with the database while ensuring that all operations are processed accurately.

# CONCLUSION

The program is able to display real-time updates on book availability and user activities, demonstrating proper data handling and logical flow. The inclusion of features such as validation for invalid inputs and feedback messages ensures that the system can operate reliably under different conditions within the Marikina Public Library.

In conclusion, the program was able to fulfill its objective of simulating a functional library management environment, showing its potential as a basic yet effective model for digital library systems.



# **THANK YOU**

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# GDRIVE OLC

# PRESENTATION

<https://drive.google.com/drive/folders/1shffLAmOioBeHmicPvlQYyZ3k4gz-NtN?usp=sharing>