Library Management System

A Mini Project in c

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AIM: To create a Library Management with the computer in a neat and convenient manner.

ABSTRACT: A Library Management System is a software built to handle the primary housekeeping functions of a library. Libraries rely on library management systems to manage asset collections as well as relationships with their members. Library management systems help libraries keep track of the books and their checkouts, as well as members' subscriptions and profiles.

Algorithms for Library Management System

Step 1: Declare a structure which holds data members
Step 2: declare variables which are used for loop
Step 3: use switch case to work on each module
Step 4: case 1- for Adding book information
Case 2- for Display book information
Case 3- for Finding number for books in library
Case 4- for EXIT

Source Code

```
// C program for the E-library
// Management System
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
```

```
// Create Structure of Library
struct library {
	char book_name[20];
	char author[20];
	int pages;
	float price;
};

// Driver Code
int main()
{
	// Create a instance
	struct library lib[100];

	char ar_nm[30], bk_nm[30];

	// Keep the track of the number of
	// of books available in the library
	int i, input, count;

	i = input = count = 0;

	// Iterate the loop
	while (input != 5) {
```

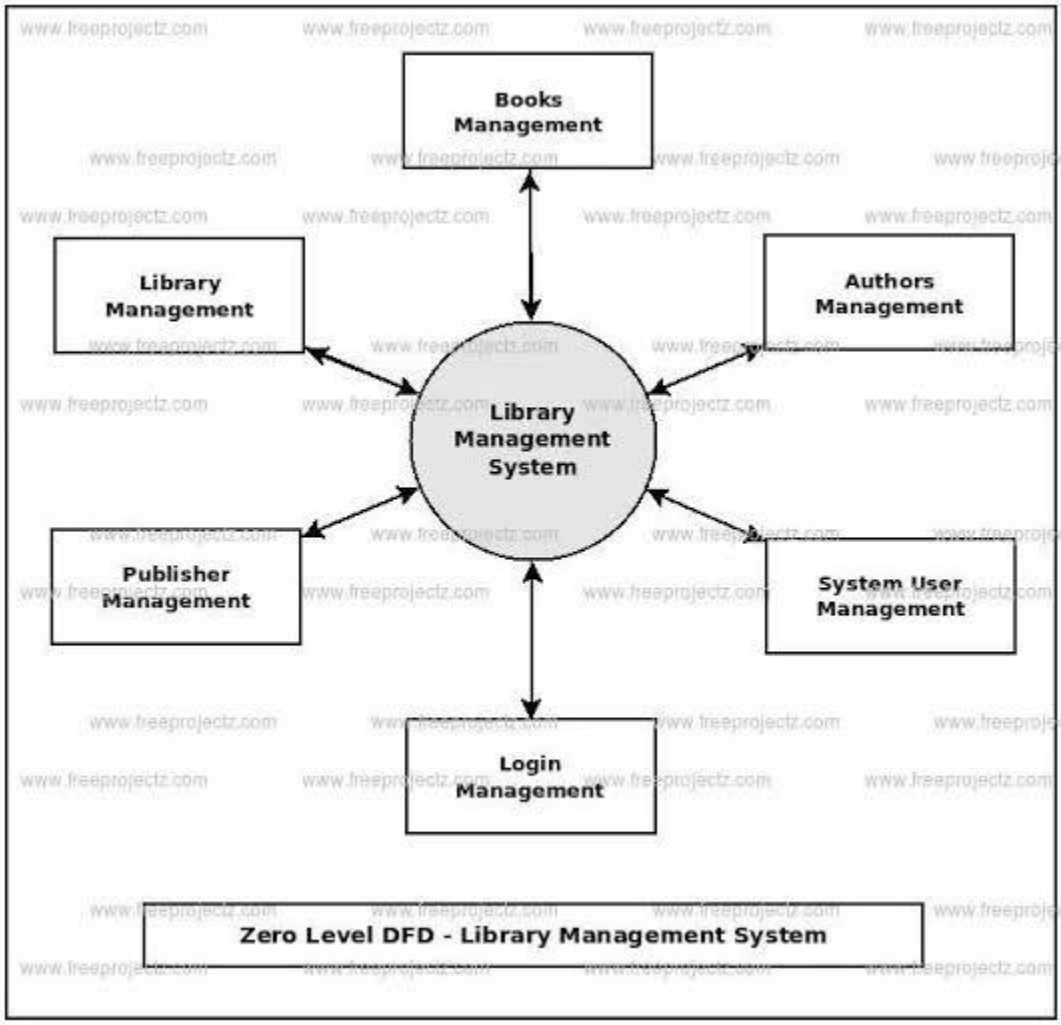
```
printf("\n\n****#######"
      "WELCOME TO E-LIBRARY "
      "######****\n");
printf("\n\n1. Add book infor"
      "mation\n2. Display "
      "book information\n");
printf("3. List all books of "
      "given author\n");
printf(
      "4. List the count of book"
      "s in the library\n");
printf("5. Exit");

// Enter the book details
printf("\n\nEnter one of "
      "the above: ");
scanf("%d", &input);

// Process the input
switch (input) {

// Add book
case 1:
```

```
        printf("Enter book name = ");
        scanf("%s", lib[i].book_name);

        printf("Enter author name = ");
        scanf("%s", lib[i].author);

        printf("Enter pages = ");
        scanf("%d", &lib[i].pages);

        printf("Enter price = ");
        scanf("%f", &lib[i].price);
        count++;

        break;

// Print book information
case 2:
        printf("you have entered"
               " the following "
               "information\n");
        for (i = 0; i < count; i++) {

               printf("book name = %s",
```

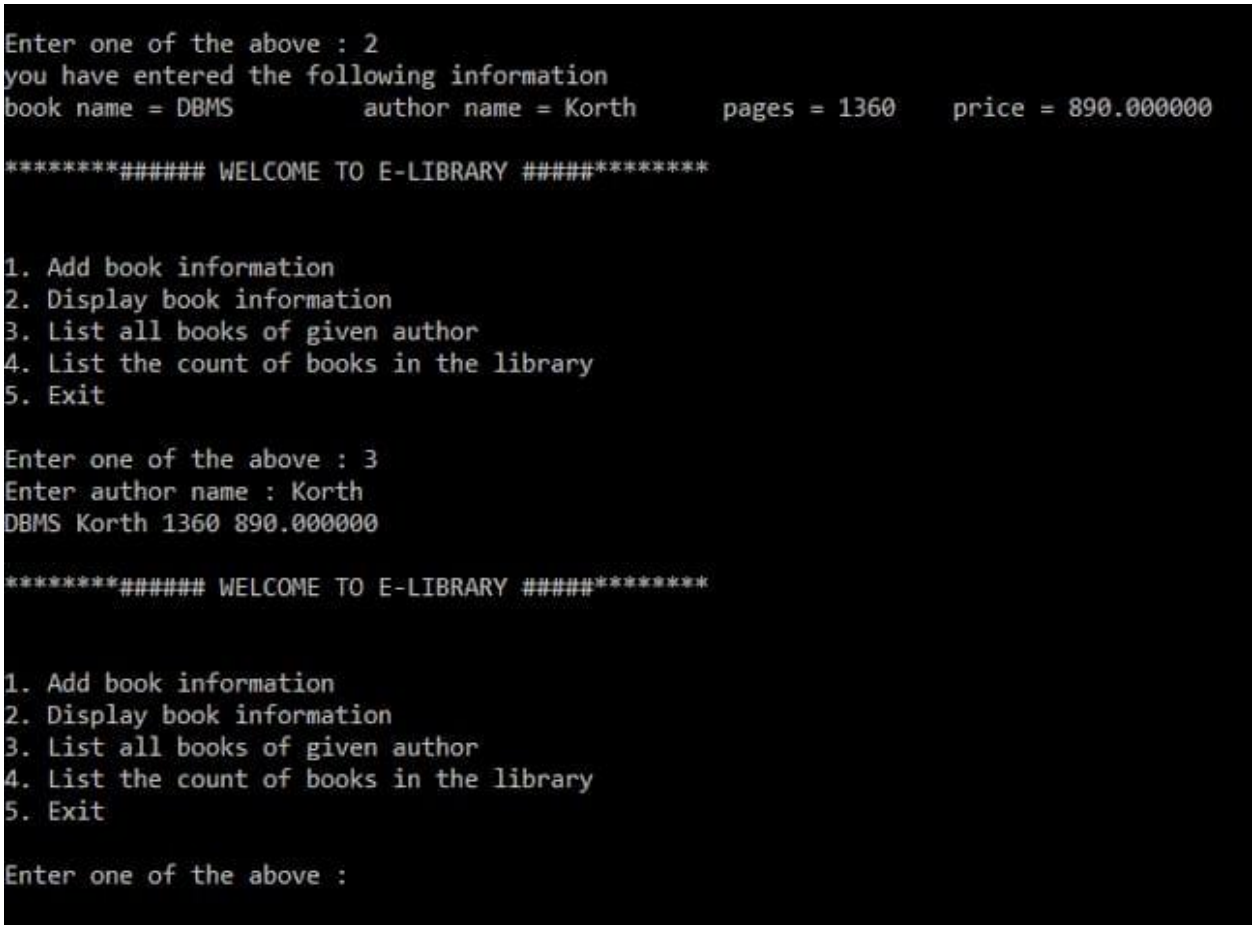
```
                lib[i].book_name);

            printf("\t author name = %s",
                lib[i].author);

            printf("\t pages = %d",
                lib[i].pages);

            printf("\t price = %f",
                lib[i].price);
        }
        break;

// Take the author name as input
case 3:
        printf("Enter author name : ");
        scanf("%s", ar_nm);
        for (i = 0; i < count; i++) {

            if (strcmp(ar_nm,
                    lib[i].author)
                == 0)
                printf("%s %s %d %f",
                    lib[i].book_name,
```

```
                        lib[i].author,
                        lib[i].pages,
                        lib[i].price);
                }
                break;

            // Print total count
            case 4:
                printf("\n No of books in "
                    "brary : %d",
                    count);
                break;
            case 5:
                exit(0);
            }
        }
        return 0;
}
```

FLOWCHART


Books Management
Library Management
Authors Management
Library Management System
Publisher Management
System User Management
Login Management
Zero Level DFD - Library Management System

OUTPUT



Conclusion: From the proper analysis of positive points and constraints on the component, it can safely be concluded that the product is a highly efficient GUI based component. The application is working properly and meeting all user requirements. This component can easily plug into many other systems.