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LIBRARY MANAGEMENT SYSTEM

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ABSRACT:

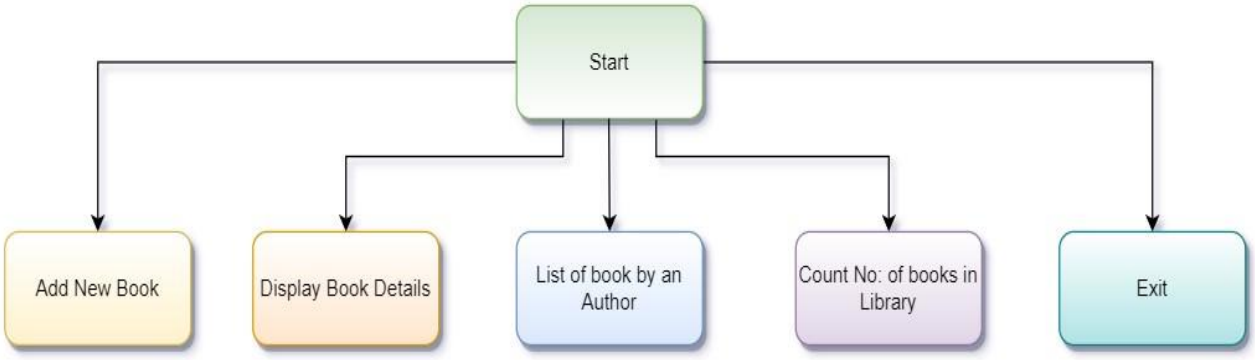
Library Management System is a computerized system which helps user(librarian) to manage the library daily activity in electronic format. It reduces the risk of paper work such as file lost, file damaged and time

consuming. It can help user to manage the transaction or record more effectively and time-saving. It is used by librarian to manage the library using a computerized system where he/she can record various transactions like issue of books, addition of new books etc. The system is designed for a user friendly environment so that student and staff of library can perform the various tasks easily and in an effective way.

This application can be used by all institutions such as schools, colleges to store their book details. The library management system has many options such as, add details display the entered details, display of total number of books and an option the exit from the program. The platform used here is c language. We use the Windows.h" header file which contains declarations for all the functions in the Windows API.

The add book info option consist of enter book name, enter author name, enter book genre, enter pages and enter price. The second option is to display the book information the third option is to for finding number of Books in library the fourth option is exit. Overall this project of ours is being developed to help the students as well as staff of library to maintain the library in the best way possible and also reduce the human efforts.

FLOW CHART:



ALGORITHM:

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 List all books of given author

Case 4- for Finding number for books in library

Case 5- to input date

Case 6- Exit

PROGRAM:

// 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];
	char genre[20];
	int pages;
	float price;
	char date[9];
};

// 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;
char d[2], m[2], year[2];

// 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. Enter date (dd/mm/yy):\n");
printf("6. 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);

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

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

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

            printf("\t date = %s",
                        lib[i].date);
        }
        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 %s %s",
                                lib[i].book_name,
                                lib[i].author,
                                lib[i].pages,
                                lib[i].price,
                                lib[i].genre,
                                lib[i].date);
        }
        break;


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

```
                exit(0);
            }
        }
        return 0;
}
```

Output:

********######WELCOME TO E-LIBRARY #####********

1. Add book information

2. Display book information

3. List all books of given author

4. List the count of books in the library

5. Exit

Enter one of the above: 1

Enter book name = SherlockHolmes

Enter author name = ArthurCOna onanDoyle

Enter pages = 300

Enter price = 699

Enter genre = Mystery

Enter Date in dd/mm/yyyy = 09/01/2022

********######WELCOME TO E-LIBRARY #####*********

1. Add book information

2. Display book information

3. List all books of given author

4. List the count of books in the library

5. Exit

Enter one of the above: 2

you have entered the following information

book name = SherlockHolmes

author name = ArthurConanDoyle

pages = 300

price = 699.000000

genre = Mystery

date = 09/01/2022

********######WELCOME TO E-LIBRARY #####********

1. Add book information

2. Display book information

3. List all books of given author

4. List the count of books in the library

5. Exit

Enter one of the above: 3

Enter author name : ArthurConanDoyle

SherlockHolmes

ArthurConanDoyle

300

699.000000

Mystery

09/01/2022

********######WELCOME TO E-LIBRARY #####********

1. Add book information

2. Display book information

3. List all books of given author

4. List the count of books in the library

5. Exit

Enter one of the above: 4

No of books in library : 1

********######WELCOME TO E-LIBRARY #####********

1. Add book information

2. Display book information

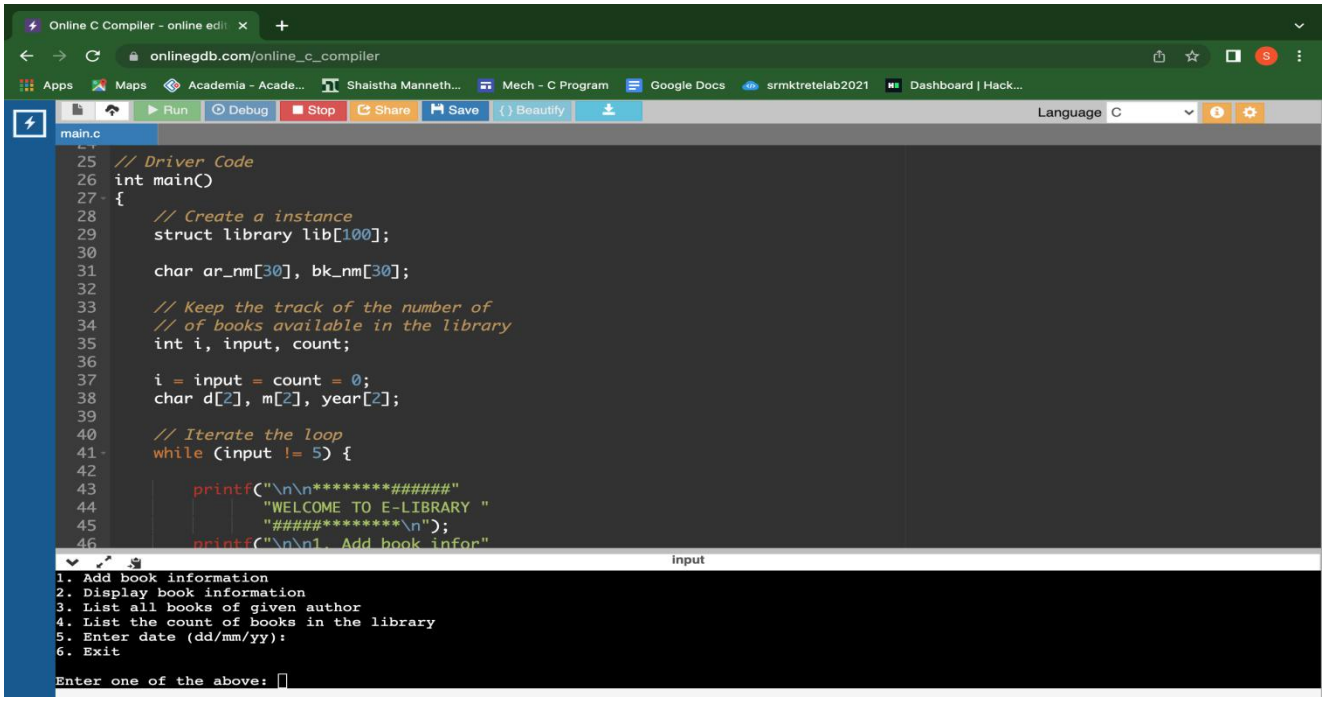
3. List all books of given author

4. List the count of books in the library

5. Exit

Enter one of the above: 5

SCREENSHOTS:



DECLARATION:

I hereby declare that the project entitled “LIBRARY MANAGEMENT SYSTEM“ which is being submitted as a mini Project for 1ST semester in Mechanical Engineering to SRM INSTITUTE OF SCIENCE AND TECHNOLOGY is an authentic work done under the complete guidance of Prof DR VIJAY A, SCHOOL OF COMPUTING, SRMIST, I would also like to thank the professors’ friends and family members who have supported me during this time. Last but not the least, I would like to thank GOD ALMIGHTY.

Date: 18/01/2022

REFERENCES:

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