

# LIBRARY MANAGEMENT SYSTEM



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SUBJECT : C-PROGRAMMING

# WHAT IS LIBRARY MANAGEMENT SYSTEM ?



The way to keep the records like files, documents and data of books in library with the help of present days technology is known as Library Management System.

Now a days it is pretty much hard to keep the data secure in systematic and chronological manner, and it is also much hard to keep it for a long period of time so, by this problems faced by us I have introduced an idea for keeping the data of library safe for long term(sustainable) with the help of present days technology, and I have made a short c program to ensure the work perfectly .





SOURCE CODE

```
#include<stdio.h>
#include<string.h>
#include<conio.h>
#include<stdlib.h>
#include<time.h>
```

```
struct books{
    int id;
    char bookName[50];
    char authorName[50];
    char date[12];
}b;
```

```
struct student{
    int id;
    char sName[50];
    char sClass[50];
    int sRoll;
    char bookName[50];
    char date[12];
}s;
```

```
void addBook();
void booksList();
void del();
void issueBook();
void issueList();
FILE *fp;

int main(){

    int ch;

    while(1){
        system("cls");
        printf("<== Library Management System ==>\n");
        printf("1.Add Book\n");
        printf("2.Books List\n");
        printf("3.Remove Book\n");
        printf("4.Issue Book\n");
        printf("5.Issued Book List\n");
        printf("0.Exit\n\n");
        printf("Enter your choice: ");
```

```
scanf("%d",&ch);
```

```
switch(ch){
```

```
case 0:
```

```
    exit(0);
```

```
case 1:
```

```
    addBook();
```

```
    break;
```

```
case 2:
```

```
    booksList();
```

```
    break;
```

```
case 3:
```

```
    del();
```

```
    break;
```

```
case 4:
```

```
    issueBook();
```

```
    break;
```

default:

```
printf("Invalid Choice...\n\n");
```

```
}
```

```
printf("Press Any Key To Continue...");
```

```
getch();
```

```
}
```

```
return 0;
```

```
}
```

```
void addBook(){
```

```
char myDate[12];
```

```
time_t t = time(NULL);
```

```
struct tm tm = *localtime(&t);
```

```
sprintf(myDate, "%02d/%02d/%d", tm.tm_mday, tm.tm_mon+1, tm.tm_year + 1900);
```

```
strcpy(b.date, myDate);
```

```
fp = fopen("books.txt", "ab");
```

```
printf("Enter book id: ");  
scanf("%d", &b.id);
```

```
printf("Enter book name: ");  
fflush(stdin);  
gets(b.bookName);
```

```
printf("Enter author name: ");  
fflush(stdin);  
gets(b.authorName);
```

```
printf("\nBook Added Successfully\n");
```

```
fwrite(&b, sizeof(b), 1, fp);  
fclose(fp);
```

```
}
```

```
void booksList(){
```

```
system("cls");  
printf("<== Available Books ==>\n\n");  
printf("%-10s %-30s %-20s %s\n\n", "Book id", "Book Name", "Author", "Date");
```



```
fp = fopen("books.txt", "rb");
while(fread(&b, sizeof(b), 1, fp) == 1){
    printf("%-10d %-30s %-20s %s\n", b.id, b.bookName, b.authorName, b.date);
}
```

```
fclose(fp);
}
```

```
void del(){
    int id, f=0;
    system("cls");
    printf("<== Remove Books ==>\n\n");
    printf("Enter Book id to remove:");
    scanf("%d", &id);
```

```
FILE *ft;
fp = fopen("books.txt", "rb");
ft = fopen("temp.txt", "wb");
```

```
while(fread(&b, sizeof(b), 1, fp) == 1){
    if(id == b.id){
        f=1;
    }else{
```

```
        fwrite(&b, sizeof(b), 1, ft);
    }
}

if(f==1){
    printf("\n\nDeleted Successfully.");
}else{
    printf("\n\nRecord Not Found!");
}

fclose(fp);
fclose(ft);

remove("books.txt");
rename("temp.txt", "books.txt");

}
```

```
void issueBook(){
```

```
    char myDate[12];
    time_t t = time(NULL);
```

```
struct tm tm = *localtime(&t);  
sprintf(myDate, "%02d/%02d/%d", tm.tm_mday, tm.tm_mon+1, tm.tm_year + 1900);  
strcpy(s.date, myDate);
```

```
int f=0;
```

```
system("cls");  
printf("<== Issue Books ==>\n\n");
```

```
printf("Enter Book id to issue: ");  
scanf("%d", &s.id);
```

```
//Check if we have book of given id  
fp = fopen("books.txt", "rb");
```

```
while(fread(&b, sizeof(b), 1, fp) == 1){  
    if(b.id == s.id){  
        strcpy(s.bookName, b.bookName);  
        f=1;  
        break;  
    }  
}
```

```
if(f==0){  
    printf("No book found with this id\n");  
    printf("Please try again...\n\n");  
    return;  
}
```

```
fp = fopen("issue.txt","ab");
```

```
printf("Enter Student Name: ");  
fflush(stdin);  
gets(s.sName);
```

```
printf("Enter Student Class: ");  
fflush(stdin);  
gets(s.sClass);
```

```
printf("Enter Student Roll: ");  
scanf("%d", &s.sRoll);
```

```
printf("Book Issued Successfully\n\n");
```

```
fwrite(&s, sizeof(s), 1, fp);  
fclose(fp);
```



```
}
```

```
void issueList(){  
    system("cls");  
    printf("<== Book Issue List ==>\n\n");  
  
    printf("%-10s %-30s %-20s %-10s %-30s %s\n\n", "S.id", "Name", "Class", "Roll", "Book Name", "Date");  
  
    fp = fopen("issue.txt", "rb");  
    while(fread(&s, sizeof(s), 1, fp) == 1){  
        printf("%-10d %-30s %-20s %-10d %-30s %s\n", s.id, s.sName, s.sClass, s.sRoll, s.bookName, s.date);  
    }  
  
    fclose(fp);  
}
```

<== Library Management System ==>

- 1.Add Book
- 2.Books List
- 3.Remove Book
- 4.Issue Book
- 5.Issued Book List
- 0.Exit

Enter your choice:

## Running page of source code

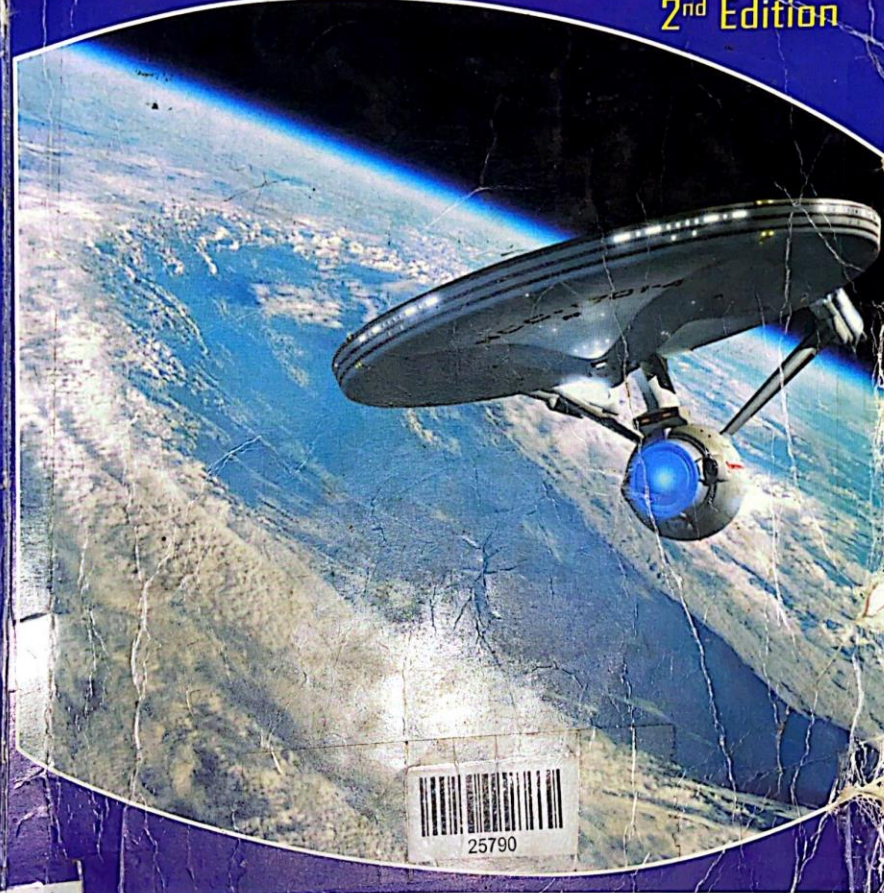


Here we can see the choices as per requirement of student or the person who is taking the book or as a new books enters the library we can make a clear data about it in the program(computer).

BENCHMARK  
PUBLICATION

# Fundamentals of ENGINEERING PHYSICS

2nd Edition



Balkrishna Sapkota  
Bhadra Pokharel  
Rajendra Kumar Bhattarai

<== Library Management System ==>

1.Add Book

2.Books List

3.Remove Book

4.Issue Book

5.Issued Book List

0.Exit

Enter your choice: 1

Enter book id: 25790

Enter book name: Engineering Physics

Enter author name: Balkrishna Sapkota

Book Added Successfully

Press Any Key To Continue...

## Adding a new Book



Here in this slide we can see that how the program works while adding a new book in library with the help of sytem.



<== Available Books ==>

Book id	Book Name	Author	Date
25790	Engineering Physics	Balkrishna Sapkota	12/08/2023

Press Any Key To Continue...\_

## SLIDE SHOWING THE DETAILS AFTER ADDITION OF A NEW BOOK



Here we see every single details entered while adding a new book in the library



C:\Users\lenovo\OneDrive\Documents\Kshitiz\_libraryManagementSystem.exe

<== Remove Books ==>

Enter Book id to remove: 25790

Deleted Successfully.Press Any Key To Continue...■

## BOOK REMOVAL



Here this slide shows that how we can remove  
the book we added if we want.

<== Available Books ==>

Book id	Book Name	Author	Date
---------	-----------	--------	------

Press Any Key To Continue...\_

## AFTER REMOVAL



Here this slide shows the confirmation that there is no such book in our data after the removal

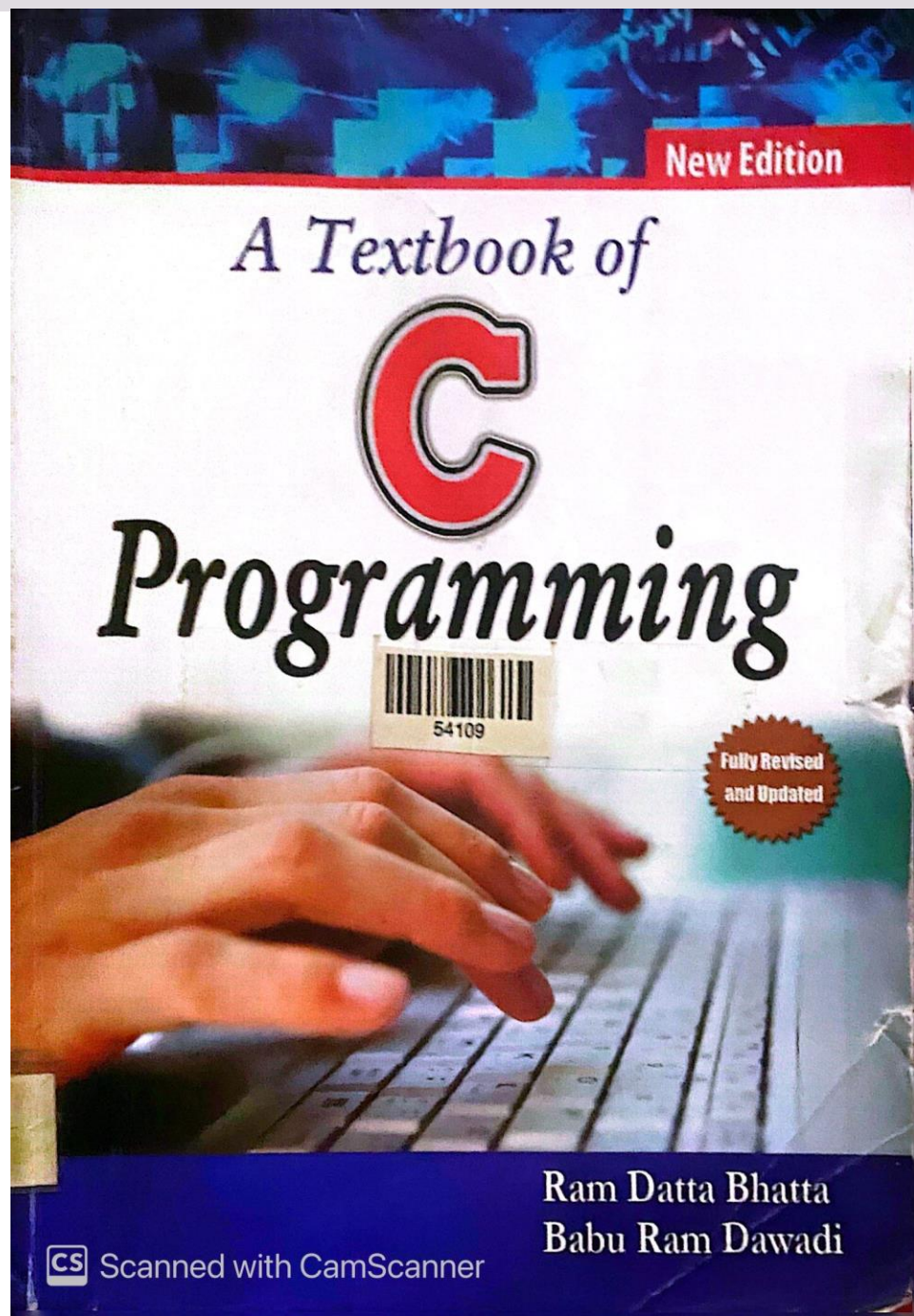
New Edition

*A Textbook of*  
**C**  
*Programming*



54109

Fully Revised  
and Updated



Ram Datta Bhatta  
Babu Ram Dawadi



Scanned with CamScanner





C:\Users\lenovo\OneDrive\Documents\Kshitiz\_libraryManagementSystem.exe

<== Issue Books ==>

Enter Book id to issue: 54109

Enter Student Name: Kshitiz kshtri

Enter Student Class: BCT A-1/1

Enter Student Roll: ACE079BCT032

Book Issued Successfully

Press Any Key To Continue...

## Book Issue



Here in this slide we get to know how to issue  
a book to a student in library by given  
information.

Book Issue List ==>

Name	Class	Roll	Book Name	Date
kshitiz	78	456	pangenu	12/08/2023
Kshitiz kshtri	BCT A-1/1	0	C-programming	12/08/2023
*	*	0	C-programming	12/08/2023
*	*	0	C-programming	12/08/2023
*	*	0	C-programming	12/08/2023

Any Key To Continue...

## DETAILS AFTER ISSUING BOOK



This slide shows the information about the  
issued books



C:\Users\lenovo\OneDrive\Documents\LibraryMangementSystem\_(kshitiz).exe

<== Library Management System ==>

1.Add Book

2.Books List

3.Remove Book

4.Issue Book

5.Issued Book List

0.Exit

Enter your choice: 0

----- EXIT

Process exited after 30.01 seconds with return value 0

Press any key to continue . . .

This page shows to exit the program

THANK YOU

