COMPUTER SCIENCE

INVESTIGATORY PROJECT

LIBRARY MANAGEMENT

BY:

RAHUL : XII - C

DIWANSH SHARMA : XII - C

MRIGANK SATAPATHY : XII - C

OF

KENDRIYA VIDYALAYA

AFS YELAHANKA

BENGALURU-63

2015-2016

Certificate

This is to certify that **RAHUL, DIWANSH SHARMA & MRIGANK SATPATHY** *students of* **class XII-C** *of the* **Kendriya Vidyalaya AFS Yelahanka Bengaluru-63**, *session 2015-2016, has satisfactorily completed* **Computer Science Investigatory Project** *titled* **LIBRARY MANAGEMENT** *work as per the syllabus of Standard XII in the Computer Science laboratory of the school.*

Date: *Internal Examiner's Sign*

                 (Goverdhan Satish K.V)

Principal's Sign   *External Examiner's Sign*

(Y.G Patil)

Acknowledgement

*I would like to thank **Principal Y.G PATIL Kendriya Vidyalaya AFS Yelahanka Bengaluru-63,** for providing all the necessary facilities for completing the project in time. I would like show my gratitude towards **Mr Goverdhan Satish K.V, PGT CS** who guided me in progressing this project.*

*I would also like to extend my gratitude towards my **friends** for their constant source of encouragement and motivation to carry out this project and their timely help at the crucial situation.*

*I would like to express my gratitude to my **parents** their support, encouragement for completion of this project and patience to bear my long hours in front of computer.*

SYNOPSIS

"A library is delivery room for the birth of ideas, a place where history comes to life."

"Everything you need for better future & success has already been written. And guess what? All you have to do is go to the library."

The project is implemented using
- ❖ C++ as front end.
- ❖ Text file as Back end

The Library Management program which will be used by a librarian to manage the library records. The program easy to use.

The user (librarian) can able insert / delete the record.
Except librarian no one can use this program as it is password protected.
Password makes the data secure.
One major benefit is it can go the print out of

- ❖ All books of library details

- ❖ Issued books details

- ❖ Deposit books details

- ❖ Damage books details

During the time of issuing books if librarian accidently typed the wrong data than he can modify the record and can make it correct.

Interview

To know the problems that are faced by librarian to manage the library an interview was held between student and librarian. In which student was supposed to ask question on topic "LIBRARY MANAGEMENT" from librarian so that student can understand the problems that are faced to managing library and hence can develop an app which can reduce the works of librarian.

Question asked in the interview are:

Q1. For how long you have been in this profession?

Ans. It's been around 9 years approximately.

Q2. What are some common problems you usually faced during this long phase of 9 years? Isn't it tough to handle?

Ans. Yes, I do face many problems like lack of punctuality in return of the books by pupil, or like someone damaged the book, or in managing the vast collection of the books. It's tough actually.

Q3. What are the steps taken by you when a book is missing from library or a book is damaged?

Ans. Well actually first we announce in classes for return of books, if still not found we look in the records of library and confirm, after that we make the student realise his mistake by paying fine for the missing book.

Q4. If someone returns the book in bad condition, then?

Ans. In this case we make the student pay 25% of book cost as fine for the mistake.

Q5. It will be a difficult task for you to manage the books, like searching books by name and maintaing the records of every details of the book. How do you manage such type of tough job?

Ans. Actually, we have a software called "LIBRARY MANAGAMENT" we keep the records in it only, it is way too easy to put inputs in the program and doing the management. It takes very less time, more efficient and cost effective.

Contribution by Group Members:

Group Member Name	Contribution	Time Taken (in hrs)
Rahul	1. Giving ideas for program.	2
	2. Typed 1/3rd of the program.	11
	3. Made report of program.	5.5
	4. Made video for presentation	14
	5. Interview	3
	6. Demo in class	0.5
	Total : 36	

Group Member Name	Contribution	Time Taken (in hrs)
Diwansh	1. Gave ideas for program.	2
	2. Typed 1/3rd of the program.	12
	3. Made report of program.	6
	4. Taken screenshot of the error less program.	1
	5. Interview	3
	6. Demo in class	0.5
	Total : 24.5	

Group Member Name	Contribution	Time Taken (in hrs)
Mrigank	1. Gave ideas for program.	2
	2. Typed 1/3rd of the program.	12
	3. Made report of program.	5
	4. Entered data for program.	2
	5. Interview	3
	6. Demo in class	0.5
	Total : 24.5	

IN THIS FILE:

केन्द्रीय विद्यालय संगठन

Rahul, Diwansh Sharma, Mrigank Satapathy

INTRODUCTION

For an individual person (librarian) it's very hard to manage all the records such as issuing & depositing record of books of library.

The Library Management program will make reduce the work librarian.

Program is capable of managing all record of book including issued, deposited & damaged books.

Security is also one of the important part of managing library, and the program Library Management is secured by password.
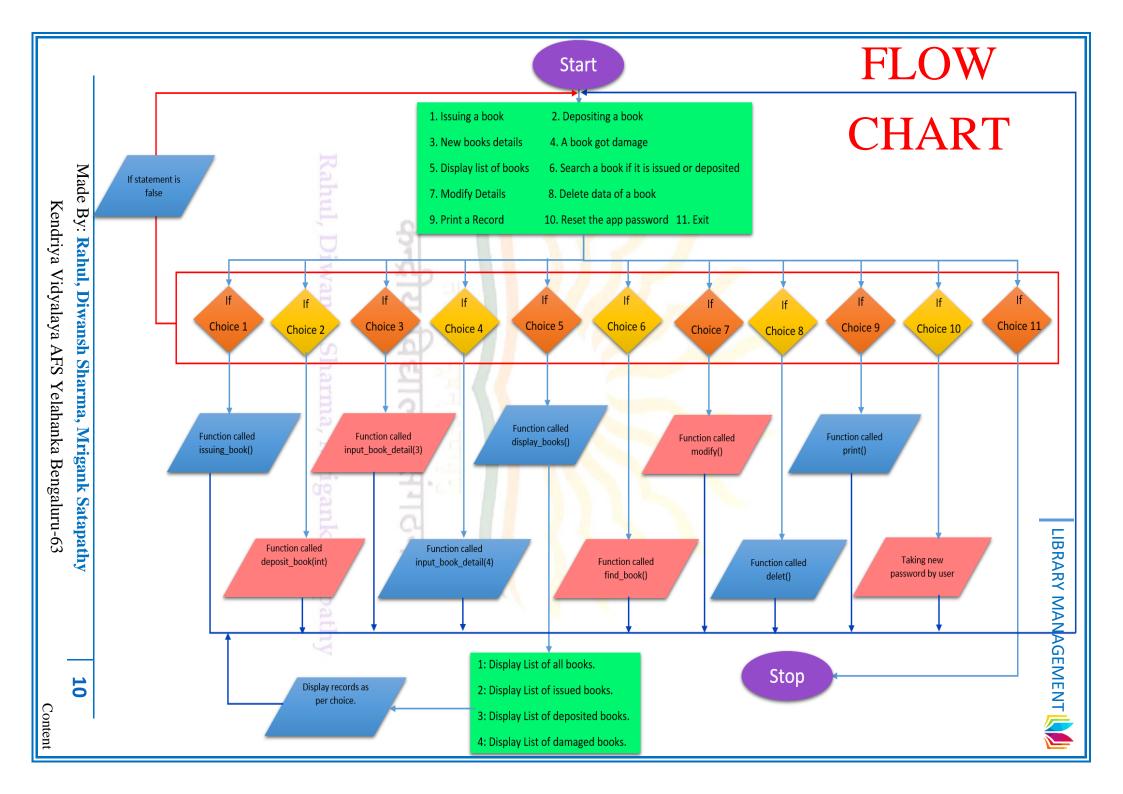
Analysed:

Merits:

> It is reliable & portable.

> Generate different kinds of reports.

> Capability to provide print-outs.

> Easy to use.

> Secured by password & password can be changed.

Demerits:

> Incomplete for a full school software.

> During time of depositing book it cannot count no. of day.

FLOW CHART

Start

1. Issuing a book   2. Depositing a book
3. New books details   4. A book got damage
5. Display list of books   6. Search a book if it is issued or deposited
7. Modify Details   8. Delete data of a book
9. Print a Record   10. Reset the app password   11. Exit

If statement is false

If Choice 1 | If Choice 2 | If Choice 3 | If Choice 4 | If Choice 5 | If Choice 6 | If Choice 7 | If Choice 8 | If Choice 9 | If Choice 10 | If Choice 11

Function called issuing_book()

Function called input_book_detail(3)

Function called display_books()

Function called modify()

Function called print()

Function called deposit_book(int)

Function called input_book_detail(4)

Function called find_book()

Function called delet()

Taking new password by user

1: Display List of all books.
2: Display List of issued books.
3: Display List of deposited books.
4: Display List of damaged books.

Display records as per choice.

Stop

LIBRARY MANAGEMENT

System Analysis

Specification required for new systems

Operating System	**MS Windows 7 /8/8.1/10**
Computer	**Intel Pentium III or IV/ AMD Athlon or Higher ; 1.7GHz , 512 MB RAM**
Hardware	**0-250 Gb hard-drive, Keyboard, Monitor**
System Specifications	**ANSI C++**

SYSTEM TESTING:

The system was tested several times. Some minor errors were reported and corrected on time. The system failure was not reported. The system worked well.

CODING FOR THE PROGRAM

```cpp
#include<iostream>

#include<fstream>

#include<conio.h>

#include<process.h>

#include<stdlib.h>

#include<string.h>

#include<stdio.h>


using namespace std;


void dispchar(char a,int n)

{

        for(int i=0;i<n;i++)

        {

                cout<<a;

        }

}

//Function welcome will display "WELCOME TO LIBRARY"

void welcome()

{

    dispchar('*',96);

    cout<<"\n\t\t22    22      ";

    cout<<"\n\t\t22    22 2222222 22     222222  222222 222   222 2222222 ";

    cout<<"\n\t\t22    22 22    22     22    22  22 22 222 22 22      ";

    cout<<"\n\t\t22 2 22 22222  22    22    22  22 22 2 22 22222  ";

    cout<<"\n\t\t22 222 22 22    22     22     22  22 22    22 22     ";
```

```cpp
cout<<"\n\t\t222  222 2222222 2222222 222222  222222 22    22 2222222 ";

 cout<<"\n\n\t\t\t     22222222 22222   ";

cout<<"\n\t\t\t        22   2  2    ";

cout<<"\n\t\t\t        22    22222   ";

cout<<"\n\t\t 22                         ";

cout<<"\n\t\t 22     22 2222222 222222   22   222222 22   22";

cout<<"\n\t\t 22     22 22  22 22 22 22 22 22 22 22 22 22 ";

cout<<"\n\t\t 22     22 22222  2222   22ÜÜ22 2222    22  ";

cout<<"\n\t\t 22     22 22  22 22 22 22   22 22 22    22  ";

cout<<"\n\t\t 2222222 22 2222222 22 22 22   22 22 22    22 \n";


dispchar('*',96);

cout<<"\n\t\t\t     LIBRARY MANAGEMENT CS PROJECT BY  :-\n";

cout<<"\n\t\t\t* RAHUL"<<"\t\t  XII - C\t\t ";

cout<<"\n\t\t\t* DIWANSH SHARMA"<<"\t  XII - C\t\t ";

cout<<"\n\t\t\t* MRIGANK SATAPATHY"<<"\t  XII - C\t\t ";

getch();

    system("cls");
}

void introduction()
{
    system("cls");

    dispchar('*',96);

    cout<<"\n\t\t\t\tSOME THINGS YOU SHOULD KNOW\n";

    dispchar('*',96);


    cout<<"\n\n\n1: While writing a record use '_' insted of using spacebar between the words. \n\n";

    cout<<"\tEg : Write 'WELCOME_TO_LIBRARY' insted of WELCOME TO LIBRARY\n\n\n";


    cout<<"2: While entering the date , write the date one after the other.\n\n";
```

```cpp
        cout<<"\tEg : Date_Format(DD MM YYYY)\n\n\tDate(DD) : 05\n\tMonth(MM) : 11\n\tYear(YYYY) :
2015\n\n\n";


        cout<<"3: While changing the password a MASTER PASSWORD is required. \n\n";


        dispchar('-',96);


        cout<<"\n\n";

        system("pause");

}
//Creating structure of date which will take input of issue date & deposit date

struct date

{

        int day;

        int month;

        int year;

};
/*

Class library will take data from librarian if

1:A new book is came to library

2:A book got damage

*/

class library

{

        public:

        int book_no;

        char book_name[40];

        char author[30];

        int year_of_publication;

        int price;                                      //for damaged book it will use as fine
```

```cpp
public:

        void display_books();

        void input_book_detail(int x);
};
```

//Class issue will take input data if a student want to issue a book

```cpp
class issue
{
        public:
        char sd_name[20];
        int clas;
        char sec[1];
        int roll;
        int book_no;
        char book_name[25];
        date d_issued;

                void issuing_book();
};
```

//Class issue will take input data if a student want to deposit a book

```cpp
class deposit
{
        public:
        char sd_name[20];
        int clas;
        char sec[1];
        int roll;
```

```cpp
        int book_no;

        char book_name[25];

        date d_issued;

        date d_deposite;


        void deposit_book(int b_no);

};



/*

Function input_book_detail(int x) will takes data of new as well as damaged book

                and will store in txt file

If value passed to function will be 3 than it will take input of new books

If value passed to function will be 4 than it will take input of damaged books

*/



void library::input_book_detail(int x)

{

        system("cls");


        library s1;


        ofstream fdamage,ftotal;

        fdamage.open("Books\\damaged.txt",ios::app|ios::binary);

        ftotal.open("Books\\total.txt",ios::app|ios::binary);


        dispchar('*',96);

        cout<<"\n\t\t\t\tENTER DETAILS OF BOOK\n";

        dispchar('*',96);


        cout<<"\n\n\n";
```

```
cout<<"1.Book_No : ";

cin>>s1.book_no;

cout<<"2.Book_Name : ";

cin>>s1.book_name;

cout<<"3.Author : ";

cin>>s1.author;

cout<<"4.Year_Of_Publication : ";

cin>>s1.year_of_publication;


if(x==3)

{

        cout<<"5.Price : ";

        cin>>s1.price;

}

else

{

        cout<<"5.Fine : ";

        cin>>s1.price;

}

if(x==3)

{

        ftotal.write((char*)&s1,sizeof(s1));

        ftotal.close();

        cout<<"\n\n";

        system("pause");

}

else if(x==4)

{

        fdamage.write((char*)&s1,sizeof(s1));

        fdamage.close();

        cout<<"\n\n";
```

```
            system("pause");
        }
        else
        cout<<"\n\nINVALID INPUT";
}




/*
Function issuing_book() will takes data of issuing book
                and will store in txt file
*/

void issue::issuing_book()
{
        library l;
        issue s1;

        int b_no,count=0;

        ofstream fout;
        ifstream ftotal;
        fout.open("Books\\issued.txt",ios::app|ios::binary);
        ftotal.open("Books\\total.txt",ios::app|ios::binary);

        dispchar('*',96);
        cout<<"\n\t\t\t\tENTER DETAILS OF ISSUING BOOK\n";
        dispchar('*',96);

        cout<<"\n\nBook no : ";
        cin>>b_no;
```

```
while(ftotal.read((char*)&l,sizeof(l)))
{
        if(l.book_no==b_no)
        {
                cout<<"\n\n";
                cout<<"1.Student Name : ";
                cin>>s1.sd_name;
                cout<<"2.Class : ";
                cin>>s1.clas;
                cout<<"3.Sec : ";
                cin>>s1.sec;
                cout<<"4.Roll : ";
                cin>>s1.roll;
                s1.book_no=b_no;
                strcpy(s1.book_name,l.book_name);
                cout<<"\n7.Date_Of_Issue(DD MM YYYY)\n\n";
                cout<<"\tDate(DD) : ";
                cin>>s1.d_issued.day;
                cout<<"\tMonth(MM) : ";
                cin>>s1.d_issued.month;
                cout<<"\tYear(YYYY) : ";
                cin>>s1.d_issued.year;

                fout.write((char*)&s1,sizeof(s1));
                fout.close();
                count=1;
        }
}


if(count==0)
```

```cpp
    {
            cout<<"\n\nBook having book no. "<<b_no<<" is not present in the library\n\n\n";
    }


    system("pause");
}



/*
Function deposit_book(int b_no) will takes


" book no & date to deposit only "


and rest data will copy fron issude data

and than it will store in txt file

*/


void deposit::deposit_book(int b_no)
{
    int count=0;
    issue s1;
    deposit s2;

    ifstream fin;

    ofstream fout,ftemp,extra;

    fout.open("Books\\deposit.txt",ios::app|ios::binary);

    fin.open("Books\\issued.txt",ios::in|ios::binary);

    ftemp.open("Books\\temp.txt",ios::app|ios::binary);


    while(fin.read((char*)&s1,sizeof(s1)))
```

```
{
        if(s1.book_no==b_no)
        {
                strcpy(s2.sd_name , s1.sd_name);

                s2.clas = s1.clas;

                strcpy(s2.sec , s1.sec);

                s2.roll = s1.roll;

                s2.book_no = s1.book_no;

                strcpy(s2.book_name , s1.book_name);

                s2.d_issued.day = s1.d_issued.day;

                s2.d_issued.month = s1.d_issued.month;

                s2.d_issued.year = s1.d_issued.year;


                cout<<"\n  7.Date_Of_Deposit (DD MM YYYY)\n\n";

                cout<<"\t   Date(DD) : ";

                cin>>s2.d_deposite.day;

                cout<<"\t   Month(MM) : ";

                cin>>s2.d_deposite.month;

                cout<<"\t   Year(YYYY) : ";

                cin>>s2.d_deposite.year;

                fout.write((char*)&s2,sizeof(s2));

                fout.close();

                count++;

        }
        else
        {
                ftemp.write((char*)&s1,sizeof(s1));

        }
}


fin.close();
```

```cpp
        ftemp.close();

        extra.open("Books\\issued.txt",ios::out|ios::binary);

        extra.close();


        rename("Books\\issued.txt","Books\\abc.txt");

        rename("Books\\temp.txt","Books\\issued.txt");

        rename("Books\\abc.txt","Books\\temp.txt");


        if(count<1)

        {

                cout<<"\n\n\n\t\tBook Has not been issued\n";

        }


        system("pause");

}




//Function modify() will modify the issued books data only

void modify()

{

        int b_no,count=0;


        issue s1;


        ifstream fissued;

        ofstream ftemp,extra;

        fissued.open("Books\\issued.txt",ios::in|ios::binary);

        ftemp.open("Books\\temp.txt",ios::app|ios::binary);
```

```
dispchar('*',96);

cout<<"\n\t\t\tENTER DETAILS OF ISSUED BOOK TO MODIFY\n";

dispchar('*',96);


cout<<"\nModify data of issued book\n";

cout<<"\nEnter Book no. which has to be modified : ";

cin>>b_no;


        while(fissued.read((char*)&s1,sizeof(s1)))

        {

                if(b_no==s1.book_no)

                {

                        cout<<"\nEnter Details\n\n";

                        cout<<"1.Student Name : ";

                        cin>>s1.sd_name;

                        cout<<"2.Class : ";

                        cin>>s1.clas;

                        cout<<"3.Sec : ";

                        cin>>s1.sec;

                        cout<<"4.Roll : ";

                        cin>>s1.roll;

                        s1.book_no=b_no;

                        cout<<"5.Book_name : ";

                        cin>>s1.book_name;

                        cout<<"\n6.Date_Of_Issue(DD MM YYYY)\n\n";

                        cout<<"\tDate(DD) : ";

                        cin>>s1.d_issued.day;

                        cout<<"\tMonth(MM) : ";

                        cin>>s1.d_issued.month;

                        cout<<"\tYear(YYYY) : ";

                        cin>>s1.d_issued.year;
```

```
                        ftemp.write((char*)&s1,sizeof(s1));

                        count++;

                }

                else

                {

                        ftemp.write((char*)&s1,sizeof(s1));

                }

        }


        fissued.close();

        ftemp.close();

                extra.open("Books\\issued.txt",ios::out|ios::binary);

                extra.close();

                rename("Books\\issued.txt","Books\\abc.txt");

                rename("Books\\temp.txt","Books\\issued.txt");

                rename("Books\\abc.txt","Books\\temp.txt");


        if(count<1)

        {

                cout<<"\nBook not found\n";

        }

}



//Function delet() will delete the library books data


void delet()

{

        int b_no,count=0;
```

```cpp
library s1;

ifstream ftotal;

ofstream ftemp,extra;

ftotal.open("Books\\total.txt",ios::app|ios::binary);

ftemp.open("Books\\temp.txt",ios::app|ios::binary);


cout<<"\nDelete data of a book\n";

cout<<"\nEnter Book no. which has to be delete : ";

cin>>b_no;


while(ftotal.read((char*)&s1,sizeof(s1)))

{

        if(b_no==s1.book_no)

        {

                cout<<"\n\n\t\tData of '"<<s1.book_name<<"' having Book no. : "<<s1.book_no<<"

has been deleted from record";

                count++;

                cout<<"\n\n";

                system("pause");

        }

        else

        {

                ftemp.write((char*)&s1,sizeof(s1));

        }

}

ftotal.close();

        ftemp.close();

                extra.open("Books\\total.txt",ios::out|ios::binary);

                extra.close();
```

```cpp
        rename("Books\\total.txt","Books\\abc.txt");

        rename("Books\\temp.txt","Books\\total.txt");

        rename("Books\\abc.txt","Books\\temp.txt");


        if(count<1)
        {
                cout<<"\nBook not found\n";
        }
}



/*
Function will display
1:All books of library details
2:Issued books details
3:Deposit books details
4:Damage books details
*/

void library::display_books()
{
        int choice;

        library s1;
        issue s2;
        deposit s3;


        ifstream ftotal,fissued,fdamaged,fdeposit;
        ftotal.open("Books\\total.txt",ios::app|ios::binary);
        fissued.open("Books\\issued.txt",ios::app|ios::binary);
```

```cpp
fdamaged.open("Books\\damaged.txt",ios::app|ios::binary);

fdeposit.open("Books\\deposit.txt",ios::app|ios::binary);


dispchar('*',96);

cout<<"\n\t\t\t\t\tWHAT DO YOU WANT TO SEE\n";

dispchar('*',96);


cout<<"\n\n1:List of all books\n2:List of issued books\n3:List of deposited books\n4:List of damaged books\t";

cin>>choice;


if(choice==1)

{

        system("cls");


        dispchar('*',96);

        cout<<"\n\t\t\t\t   LIST OF ALL BOOKS OF LIBRARY\n";

        dispchar('*',96);


        cout<<"\n\n\nBook_no \tBook_name\tAuthor\tYear_of_publication\tPrice\n\n";

        while(ftotal.read((char*)&s1,sizeof(s1)))

        {

cout<<s1.book_no<<"\t\t"<<s1.book_name<<"\t\t"<<s1.author<<"\t\t"<<s1.year_of_publication<<"\t\t"<<s1.price<<"\n";

        }

        ftotal.close();

}

else if(choice==2)

{

        system("cls");
```

```
                dispchar('*',96);

                cout<<"\n\t\t\t\t\tLIST OF ISSUED BOOKS\n";

                dispchar('*',96);


                cout<<"\n\n\nName\t\tClass Sec\tRoll\tBook_no\tBook_name\tdate_of_issue\n\n";

                while(fissued.read((char*)&s2,sizeof(s2)))
                {
                        cout<<s2.sd_name<<"\t\t"<<s2.clas<<"
"<<s2.sec<<"\t\t"<<s2.roll<<"\t"<<s2.book_no<<"\t"<<s2.book_name<<"\t"<<s2.d_issued.day<<"-
"<<s2.d_issued.month<<"-"<<s2.d_issued.year<<"\n";

                }

                fissued.close();

        }

        else if(choice==3)

        {

                system("cls");


                dispchar('*',96);

                cout<<"\n\t\t\t\t\tLIST OF DEPOSIT BOOKS\n";

                dispchar('*',96);


                cout<<"\n\n\nName\t\tClass
Sec\tRoll\tBook_no\tBook_name\tdate_of_issue\tdate_of_deposit\n\n";

                while(fdeposit.read((char*)&s3,sizeof(s3)))
                {
                        cout<<s3.sd_name<<"\t\t"<<s3.clas<<"
"<<s3.sec<<"\t\t"<<s3.roll<<"\t"<<s3.book_no<<"\t"<<s3.book_name<<"\t"<<s3.d_issued.day<<"-
"<<s3.d_issued.month<<"-"<<s3.d_issued.year<<"\t"<<s3.d_deposite.day<<"-"<<s3.d_deposite.month<<"-
"<<s3.d_deposite.year<<"\n";

                }

                fdeposit.close();

        }

        else if(choice==4)
```

```cpp
{
    system("cls");

    dispchar('*',96);

    cout<<"\n\t\t\t\tLIST OF DAMAGED BOOKS\n";

    dispchar('*',96);

    cout<<"\n\n\nBook_no \tBook_name\tAuthor\tYear_of_publication\tFine\n\n";

    while(fdamaged.read((char*)&s1,sizeof(s1)))
    {

cout<<s1.book_no<<"\t\t"<<s1.book_name<<"\t\t"<<s1.author<<"\t\t"<<s1.year_of_publication<<"\t\t"<<
s1.price<<"\n";

    }

    fdamaged.close();
}
else
cout<<"\n\nINVALID INPUT";
getch();
}

//Function for searching books if it is issued/diposited

void find_book()
{

    dispchar('*',96);

    cout<<"\n\t\t\tSEARCHING BOOKS IF IT IS ISSUED or DIPOSITED\n";

    dispchar('*',96);

    int b_no,found=0;
```

```cpp
issue s2;

deposit s3;


ifstream fissued,fdeposit;

fissued.open("Books\\issued.txt",ios::in|ios::binary);

fdeposit.open("Books\\deposit.txt",ios::in|ios::binary);


cout<<"\n\n\tEnter Book no to seach : ";

cin>>b_no;


while(fissued.read((char*)&s2,sizeof(s2)))

{

        if(b_no==s2.book_no)

        {

    cout<<"\n\n\tThe Book having book no. "<<s2.book_no<<" is issue to student : \n\n";

        cout<<"\tName        : "<<s2.sd_name<<"\n";

        cout<<"\tClass Sec    : "<<s2.clas<<" "<<s2.sec<<"\n";

        cout<<"\tRoll no.     : "<<s2.roll<<"\n";

        cout<<"\tBook name    : "<<s2.book_name<<"\n";

        cout<<"\tDate of Issued : "<<s2.d_issued.day<<"-"<<s2.d_issued.month<<"-"<<s2.d_issued.year;


        found=1;

        }

}

fissued.close();



if(found==0)

{
```

```
                cout<<"\n\n\tThe book is not issued";

        }


        while(fdeposit.read((char*)&s3,sizeof(s3)))

        {

                if(b_no==s3.book_no)

                {

                cout<<"\n\n\tThe Book having book no. "<<s3.book_no<<" was last time deposited by
student : \n\n";

                        cout<<"\tName         : "<<s3.sd_name<<"\n";

                        cout<<"\tClass Sec    : "<<s3.clas<<" "<<s2.sec<<"\n";

                        cout<<"\tRoll no.      : "<<s3.roll<<"\n";

                        cout<<"\tBook name     : "<<s3.book_name<<"\n";

                        cout<<"\tDate of Issued : "<<s3.d_issued.day<<"-"<<s3.d_issued.month<<"-
"<<s3.d_issued.year<<"\n";

                cout<<"\tDate of Deposit: "<<s3.d_deposite.day<<"-"<<s3.d_deposite.month<<"-
"<<s3.d_deposite.year;

                break;

                }

        }

        fdeposit.close();


        cout<<"\n\n\n\t";

        system("pause");
}




/*

Function will give print out of

1:All books of library details

2:Issued books details

3:Deposit books details
```

4:Damage books details

*/


```cpp
void print()
{
        int choice;


        library s1;
        issue s2;
        deposit s3;


        ifstream ftotal,fissued,fdamaged,fdeposit;
        ofstream fout;
        ftotal.open("Books\\total.txt",ios::in|ios::binary);
        fissued.open("Books\\issued.txt",ios::in|ios::binary);
        fdamaged.open("Books\\damaged.txt",ios::in|ios::binary);
        fdeposit.open("Books\\deposit.txt",ios::in|ios::binary);


        fout.open("PRN");


        dispchar('*',96);
        cout<<"\n\t\t\t\tWHAT DO YOU WANT TO PRINT\n";
        dispchar('*',96);

        cout<<"\n1:List of all books\n2:List of issued books\n3:List of deposited books\n4:List of damaged books\t";
        cin>>choice;


        if(choice==1)
        {
                while(ftotal.read((char*)&s1,sizeof(s1)))
```

```
                {
                        fout.write((char*)&s1,sizeof(s1));
                }
        ftotal.close();
        fout.close();
}
else if(choice==2)
{
        while(fissued.read((char*)&s2,sizeof(s2)))
        {
                fout.write((char*)&s1,sizeof(s1));
        }
        fissued.close();
        fout.close();
}
else if(choice==3)
{
        while(fdeposit.read((char*)&s3,sizeof(s3)))
        {
                fout.write((char*)&s1,sizeof(s1));
        }
        fdeposit.close();
        fout.close();
}
else if(choice==4)
{
        while(fdamaged.read((char*)&s1,sizeof(s1)))
        {
                fout.write((char*)&s1,sizeof(s1));
        }
        fdamaged.close();
```

```
            fout.close();
    }
    else
    cout<<"\n\nINVALID INPUT";
}


//Main program

int main()
{
    system("cls");

    int choice=1,n;
    char pwd[20],f_pwd[20],mas_pwd[]={"$milewithmE"};

    ifstream fin("Books\\pwd.txt",ios::in);

    library s1;
    issue s2;
    deposit d1;

    welcome();

    fin>>f_pwd;


    cout<<"\n\n\n\n\n\n\n\t\t\t\tEnter Password : ";
    cin>>pwd;
    if(strcmp(pwd,f_pwd)==0||strcmp(pwd,mas_pwd)==0)
    {
            fin.close();
```

```cpp
cout<<"\t\t\t\t Correct Password\n\n\t\t\t   ";

system("pause");

introduction();

while(choice!=11)

{

        system("cls");

        dispchar('*',96);

        cout<<"\n\t\t\t\t\tWELCOME TO LIBRARY\n";

        dispchar('*',96);

        cout<<"\n\n\n   1.Issuing a book";

        cout<<"\n   2.Depositing a book";

        cout<<"\n   3.New books details";

        cout<<"\n   4.A book got damage";

        cout<<"\n   5.Display list of books";

        cout<<"\n   6.Search a book if it is issued or deposited";

        cout<<"\n   7.Modify Details";

        cout<<"\n   8.Delete data of a book ";

        cout<<"\n   9.Print a Record";

        cout<<"\n   10.Reset the app password";

        cout<<"\n   11.Exit";

        cout<<"\n\n   Enter Your Choice : ";

        cin>>choice;


        if(choice==1)

        {

                system("cls");

                s2.issuing_book();

        }

        else if(choice==2)

        {

                cout<<"\n   Enter book no to deposit : ";
```

```cpp
            cin>>n;

            d1.deposit_book(n);

    }

    else if(choice==3)

    {

            s1.input_book_detail(3);

    }

    else if(choice==4)

    {

            s1.input_book_detail(4);

    }

    else if(choice==5)

    {

            system("cls");

            s1.display_books();

    }

    else if(choice==6)

    {

            system("cls");

            find_book();

    }

    else if(choice==7)

    {

            system("cls");

            modify();

    }

    else if(choice==8)

    {

            delet();

    }

    else if(choice==9)
```

```cpp
    {
            system("cls");
            print();
    }
    else if(choice==10)
    {
            cout<<"\n  Enter Master Password : ";
            cin>>pwd;
            if(strcmp(pwd,mas_pwd)==0)
            {
                    char new_pwd1[20],new_pwd2[20];
                    cout<<"  New Password : ";
                    cin>>new_pwd1;
                    cout<<"  Re-enter Password : ";
                    cin>>new_pwd2;

                    if(strcmp(new_pwd1,new_pwd2)==0)
                    {
                            ofstream fout("Books\\pwd.txt",ios::out);
                            fout<<new_pwd1;
                            cout<<"\n\t  Password Successfully Changed ";
                            system("pause");
                    }
                    else
                    {
                            cout<<"\n\t   Password Does Not Match";
                            system("pause");
                    }
            }
            else
            {
```
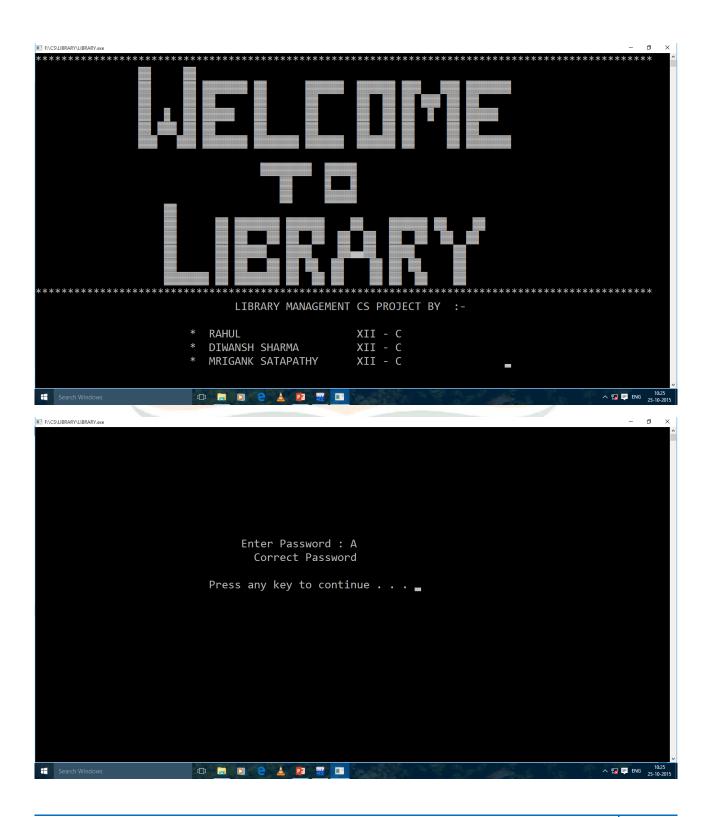
```
                        cout<<"\n  Incorrect Password";

                }

        }

        else if(choice==11)

        {

                cout<<"\n\n\t\t\tBYE HAVE A NICE DAY\n";

                cout<<"\t\t\t  Leave your suggestion on : \n";

                cout<<"\t\t\t  Email : rahul0512.pi@gmail.com\n";                }

        else

        {

                cout<<"\n\n  INVALID INPUT";

        }


    }

}

else

{

    cout<<"\t\t\t\t Incorrect Password\n\t\t\t   ";

}

getch();

return 0;

}
```

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SCREEN SHOTS

```
F:\Rahul\XII_Programs\PROJECT\LIBRARY\LIBRARY.exe                                          —  □  ×
**********************************************************************************
                        SOME THINGS YOU SHOULD KNOW
**********************************************************************************


1: While writing a record use '_' insted of using spacebar between the words.

        Eg : Write 'WELCOME_TO_LIBRARY' insted of WELCOME TO LIBRARY


2: While entering the date , write the date one after the other.

        Eg : Date_Format(DD MM YYYY)

        Date(DD) : 05
        Month(MM) : 11
        Year(YYYY) : 2015


3: While changing the password a MASTER PASSWORD is required.

--------------------------------------------------------------------------------

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

```
F:\Rahul\XII_Programs\PROJECT\LIBRARY\Full_Final\Library Management.exe                    —  □  ×
**********************************************************************************
                            WELCOME TO LIBRARY
**********************************************************************************


    1.Issuing a book
    2.Depositing a book
    3.New books details
    4.A book got damage
    5.Display list of all books
    6.Display books by class
    7.Search a book if it is issued or deposited
    8.Modify Details
    9.Delete data of a book
    10.Print a Record
    11.Reset the app password
    12.Exit

    Enter Your Choice : _
```

```
F:\Rahul\XII_Programs\PROJECT\LIBRARY\LIBRARY.exe                                              —  □  ×
******************************************************************************
                          ENTER DETAILS OF BOOK
******************************************************************************


1.Book_No : 4682
2.Book_Name : INFERNO
3.Author : D_BROWN
4.Year_Of_Publication : 2014
5.Price : 499


Press any key to continue . . .
```

```
F:\Rahul\XII_Programs\PROJECT\LIBRARY\LIBRARY.exe                                              —  □  ×
******************************************************************************
                          ENTER DETAILS OF BOOK
******************************************************************************


1.Book_No : 1245
2.Book_Name : RD
3.Author : RDSHARMA
4.Year_Of_Publication : 2013
5.Fine : 440


Press any key to continue . . .
```

```
F:\Rahul\XII_Programs\PROJECT\LIBRARY\LIBRARY.exe                                    —   □   ×
***********************************************************************************
                        ENTER DETAILS OF ISSUED BOOK TO MODIFY
***********************************************************************************
Modify data of issued book

Enter Book no. which has to be modified : 4682

Enter Details

1.Student Name : ADARSH
2.Class : 10
3.Sec : D
4.Roll : 44
5.Book_name : INFERNO

6.Date_Of_Issue(DD MM YYYY)

        Date(DD) : 11
        Month(MM) : 10
        Year(YYYY) : 2015
Press any key to continue . . . ▄
```

```
F:\Rahul\XII_Programs\PROJECT\LIBRARY\LIBRARY.exe                                    —   □   ×
***********************************************************************************
                        WHAT DO YOU WANT TO SEE
***********************************************************************************

1:List of all books
2:List of issued books
3:List of deposited books
4:List of damaged books ▄
```

```
F:\Rahul\XII_Programs\PROJECT\LIBRARY\LIBRARY.exe                                    —  □  ×
**************************************************************************************
                            LIST OF ALL BOOKS OF LIBRARY
**************************************************************************************


Book_no          Book_name         Author    Year_of_publication       Price

5667             CAPTAIN           KAPTAN              2013              199
4678             ARORA             SL                  2015              2590
6216             HARRY             POTTER              2002              499
1239             HEROS             ANUPAM              2013              199
4682             INFERNO           D_BROWN             2014              499
```

```
F:\Rahul\XII_Programs\PROJECT\LIBRARY\LIBRARY.exe                                    —  □  ×
**************************************************************************************
                            LIST OF ISSUED BOOKS
**************************************************************************************


Name            Class Sec       Roll    Book_no Book_name       date_of_issue

RISABH          12 C            34      4532    GODZILLA        24-8-2015
SHIVAM          12 C            23      8990    HC_VERMA        29-8-2015
SAURAB          11 D            24      2323    DECCATLAWN      1-8-2015
ADARSH          10 D            44      4682    INFERNO 11-10-2015
```
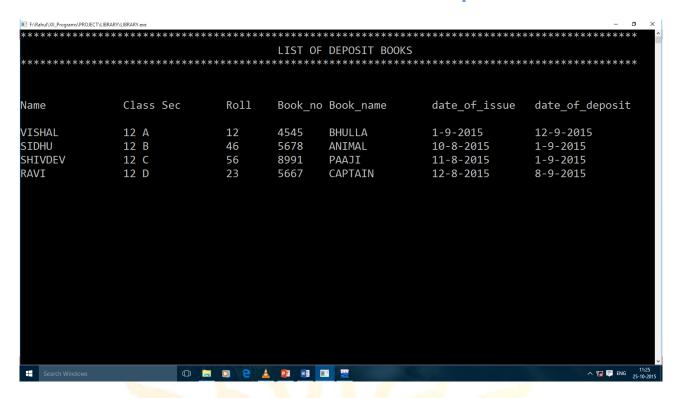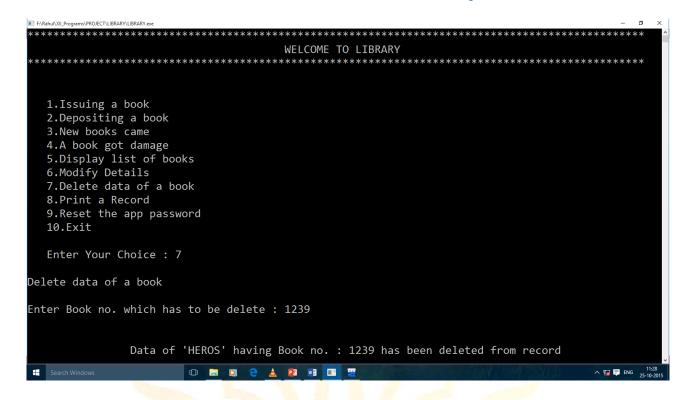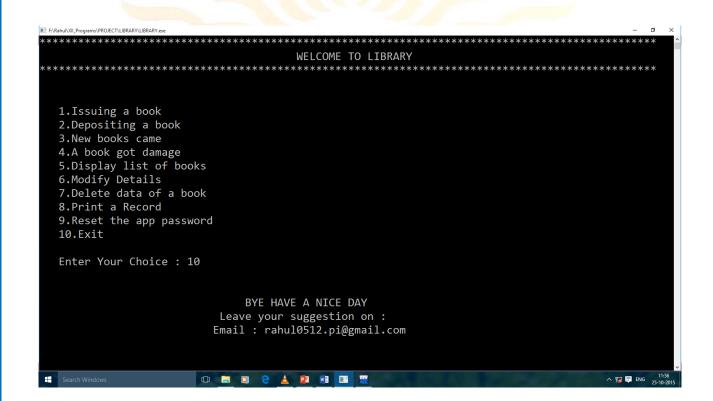
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Conclusion

This project titled "LIBRARY MANAGEMENT" is able to perform all the operations in a fast and effective way. It can do operations like reading the details of issued, deposit, damaged book. Displaying, writing, modifying, deleting & printing the record of books. The program is also protected by password which makes it secure. This project is running successfully and free of errors.

Future Updating

1. To search details of a book by taking three letters of its name.

Example **Input:**

Enter three letter of book you want to search: **POT**

Output:

Book no	: 1234
Book name	: HARRY_**POT**TER
Author	: JK_ROWLING
Year of publication	: 2004
Price	: 499

2. Count no of day after depositing the book.

केन्द्रीय विद्यालय संगठन

Rahul, Diwansh Sharma, Mrigank Satapathy