IBM CAREER EDUCATION

MAIN PROJECT

DOMAIN NAME: JAVA

LIBRARY MANAGEMENT SYSTEM

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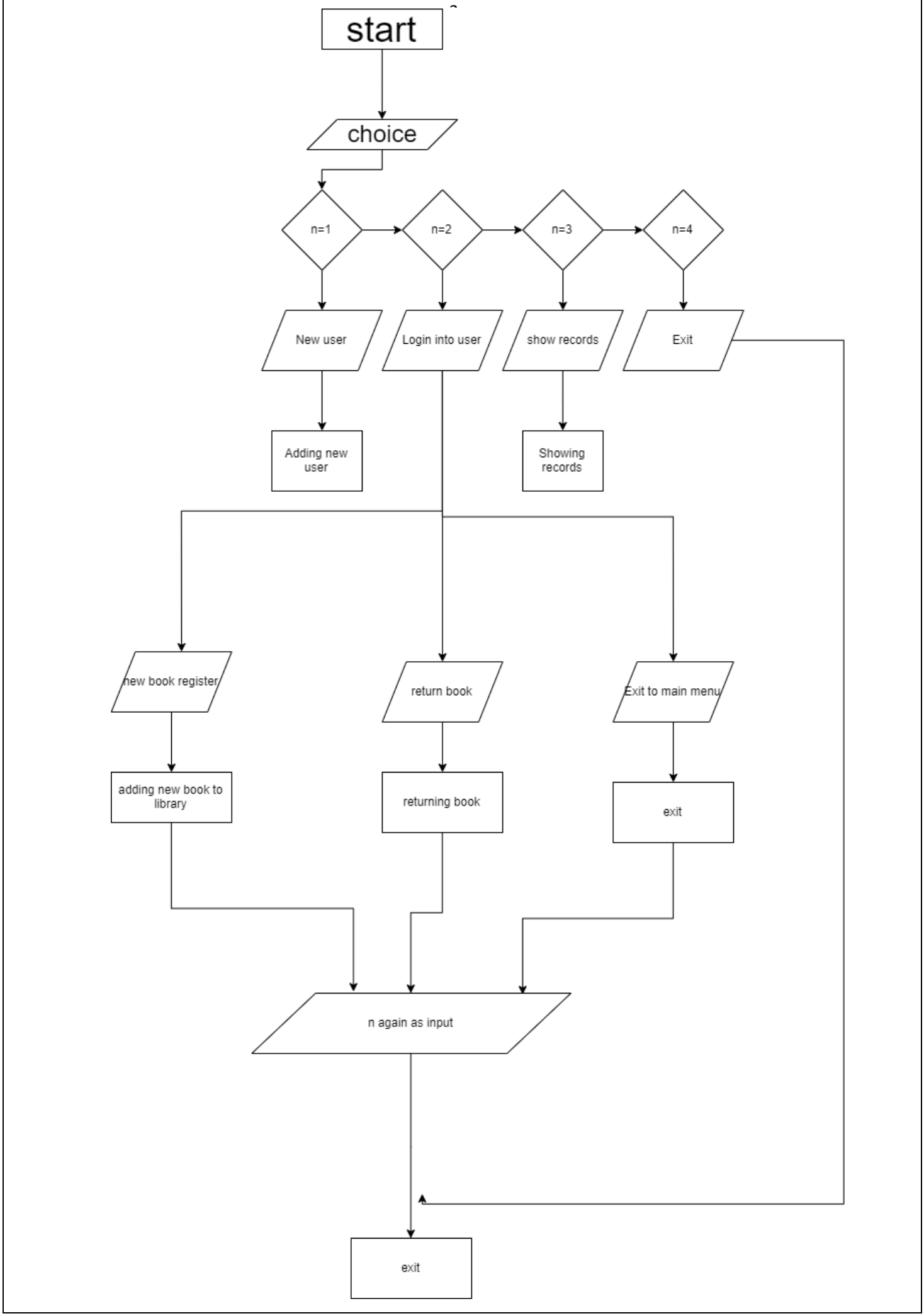

start
choice
n=1
n=2
n=3
n=4
New user
Login into user
show records
Exit
Adding new user
Showing records
new book register
return book
Exit to main menu
adding new book to library
returning book
exit
n again as input
exit

HARDWARE SPECIFICATIONS

- PROCESSOR : Intel(R) Core(TM) i3-7020U CPU @ 2.30 GHz 2.30GHz
- RAM : 8GB SD RAM
- HARD DISK : 1 TB
- FLOPPY DRIVE : 1.44 MB

SOFTWARE SPECIFICATIONS

- OPERATING SYSTEM : Linux / Windows / IOS
- ENVIRONMENT : Cent-os

DESCRIPTION

INTRODUCTION:

Library management system offers many flexible and convenient features, allowing librarians and library users to maximize time and efficiency. Library System gives all detailed information about students, staff and books. It will track how many books available in library and books issued to the students.

DESCRIPTION:

A library management is a project that manages and stores books information electronically according to students needs. The system helps both students and library manager to keep a constant track of all the books available in the library. It allows both the admin and the student to search for the desired book.

PROS:

- As the system is computerised so making it fast, this leads to time saving.
- Record Maintenance.
- Web-Based Solution.
- Saves Time and Cost.
- Secure and Reliable.
- Increases Efficiency.
- Simple and Easy to Use.

CONS:

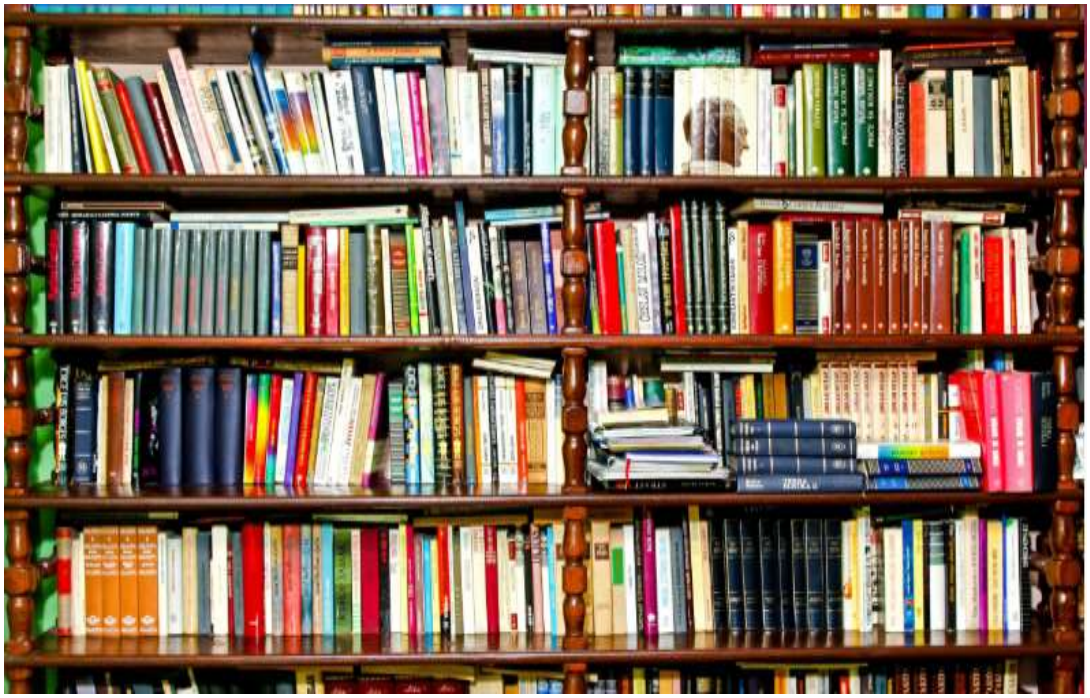
- Software needs to be updated regularly.
- The existing way of managing library is quite flexible.
- Complicated to operate.
- Online Systems require high-speed internet connectivity.
- Risk of computer virus.

LIBRARY MANAGEMENT SYSTEM

PICTURES

Library

Managing Library



Records of book

LIBRARY MANAGEMENT SYSTEM

AIM:

- **The main purpose of this system is to manage library daily operation efficiently.**
- **To build a system that can receive input and generate automatically output in easy way and short time.**
- **It is also created to ensure that the library items are stored properly in order to maintain their security.**

PROGRAM:

```
import java.io.*;

class lib_m

{

long number;

static int no=1001;
```

```
static int no1=7700;

int book_no[]=new int[10], d[]=new int[10], m[]=new int[10],
y[]=new int[10],reg_no;

String name, book_name[]=new String[10],temp;

int f=0;

BufferedReader br = new BufferedReader(new
InputStreamReader(System.in));

void n_reg()throws java.lang.Exception

{

System.out.print("\tEnter book name :");

book_name[f]=br.readLine();

System.out.print("\tEnter date (d m y) :");

d[f]=Integer.parseInt(br.readLine());

m[f]=Integer.parseInt(br.readLine());

y[f]=Integer.parseInt(br.readLine());

book_no[f]=no1;

no1++;

System.out.println("\tYour book number is :"+book_no[f]);

System.out.print("\tEnter 'C' to continue:");
```

```
temp=br.readLine();
f++;
}
void create()throws java.lang.Exception
{
System.out.print("\tEnter Name :");
name=br.readLine();
reg_no=no;
no++;
System.out.print("\tYour registration number is : "+reg_no+"\n\tEnter 'C' to continue :");
temp=br.readLine();
}
void show()throws java.lang.Exception
{
for(int i=0;i<f;i++)
{
if(book_no[i]==0)
{
```

```
}
else
{
System.out.println("-----------------------------------------------
------------------");
System.out.println("\tName : "+name);
System.out.println("\tRegistration_no : "+reg_no);
System.out.println("\tBook Name : "+book_name[i]);
System.out.println("\tBook_no : "+book_no[i]);
System.out.println("\tRegistered Date :
"+d[i]+"/"+m[i]+"/"+y[i]);
System.out.println("-----------------------------------------------
------------------");
}
}
System.out.print("\tEnter 'C' to continue:");
temp=br.readLine();
}
public void return1()throws java.lang.Exception
```

```
{
int i,k;
System.out.print("Enter Book number :");
k=Integer.parseInt(br.readLine());
for(i=0;i<f;i++)
{
if(book_no[i]==k)
{
book_no[i]=0;
System.out.println("\t\t------Returned successfully!------");
break;
}
}
}
public static void main(String args[])throws java.lang.Exception
{
BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
```

```
lib_m ob[] = new lib_m[5];
int n=-1;
int flag=0;
int l=0;
int i=0,k=0;
String name1;
long number1;
while(n!=4)
{
System.out.println("\t-------------------------------");
System.out.println("\t1. New User");
System.out.println("\t-------------------------------");
System.out.println("\t2. Login into User");
System.out.println("\t-------------------------------");
System.out.println("\t3. Show Records");
System.out.println("\t-------------------------------");
System.out.println("\t4. Exit");
System.out.println("\t-------------------------------");
```

```
System.out.print("\tEnter Choice :");
n=Integer.parseInt(br.readLine());
switch(n)
{
case 1:
ob[l] = new lib_m();
ob[l].create();
l++;
break;
case 2:
if(l==0)
{
System.out.println("No users");
}
else
{
System.out.print("\n\tEnter user details: \n\tEnter name : ");
name1=br.readLine();
```

```
System.out.print("\tEnter Registration Number :");
number1=Long.parseLong(br.readLine());
n=0;
for(i=0;i<l;i++)
{
if(name1.equals(ob[i].name) && number1==ob[i].reg_no)
{
flag=1;
System.out.println("\t\t------------login successful!------------");
while(n!=3)
{
System.out.println("\t-------------------------------");
System.out.println("\t1. New Book Registration");
System.out.println("\t-------------------------------");
System.out.println("\t2. Return Book");
System.out.println("\t-------------------------------");
System.out.println("\t3.Exit to main menu");
System.out.println("\t-------------------------------");
```

```
System.out.print("\tEnter Choice :");
n=Integer.parseInt(br.readLine());
if(n==1)
{
ob[i].n_reg();
}
else if(n==2)
{
ob[i].return1();
}
}
}
}
if(flag==0)
{
flag=1;
System.out.println("\t\t----------login falied!----------");
}
```

```
}
break;
case 3:
for(i=0;i<l;i++)
{
ob[i].show();
}
break;
case 4:
System.exit(0);
break;
default:
System.out.println("Wrong input.");

}
}
}
}
```

EXPLANATION ABOUT PROJECT:

This project basically has 4 modules:

1. Adding Book: - Addition of a new book to the library record. Adding details of the book which is to be added.
2. Book Issue: - Students issue book through their school/college unique id’s.
3. Book return: - Student will return the book on the designated date.
4. Show records: Showing records of person who issued the book.

OUTPUT SCREENSHOTS:

```
[gnu@localhost ~]$ javac pro.java
[gnu@localhost ~]$ java lib_m
        ---------------------------------
        1. New User
        ---------------------------------
        2. Login into User
        ---------------------------------
        3. Show Records
        ---------------------------------
        4. Exit
        ---------------------------------
        Enter Choice :1
        Enter Name :saloni
        Your registration number is : 1001
        Enter 'C' to continue :c
        ---------------------------------
        1. New User
        ---------------------------------
        2. Login into User
        ---------------------------------
        3. Show Records
        ---------------------------------
        4. Exit
        ---------------------------------
        Enter Choice :1
        Enter Name :manali
        Your registration number is : 1002
        Enter 'C' to continue :c
```

```
Enter 'C' to continue :c
---------------------------------
1. New User
---------------------------------
2. Login into User
---------------------------------
3. Show Records
---------------------------------
4. Exit
---------------------------------
Enter Choice :2

Enter user details:
Enter name : saloni
Enter Registration Number :1001
        ------------login successful!------------
---------------------------------
1. New Book Registration
---------------------------------
2. Return Book
---------------------------------
3.Exit to main menu
---------------------------------
Enter Choice :1
Enter book name :black_hole
Enter date (d m y) :2
10
2019
Your book number is :7700
```

```
        Enter 'C' to continue:c
        ---------------------------------
        1. New Book Registration
        ---------------------------------
        2. Return Book
        ---------------------------------
        3.Exit to main menu
        ---------------------------------
        Enter Choice :1
        Enter book name :hello_world
        Enter date (d m y) :12
10
2019
        Your book number is :7701
        Enter 'C' to continue:c
        ---------------------------------
        1. New Book Registration
        ---------------------------------
        2. Return Book
        ---------------------------------
        3.Exit to main menu
        ---------------------------------
        Enter Choice :2
Enter Book number :7701
                ------Returned successfully!------
        ---------------------------------
        1. New Book Registration
        ---------------------------------
        2. Return Book
        ---------------------------------
        3.Exit to main menu
```

```
Enter Book number :7701
                ------Returned successfully!------
        --------------------------------
        1. New Book Registration
        --------------------------------
        2. Return Book
        --------------------------------
        3.Exit to main menu
        --------------------------------
        Enter Choice :3
        --------------------------------
        1. New User
        --------------------------------
        2. Login into User
        --------------------------------
        3. Show Records
        --------------------------------
        4. Exit
        --------------------------------
        Enter Choice :3
------------------------------------------------------------------------
        Name : saloni
        Registration_no : 1001
        Book Name : black_hole
        Book_no : 7700
        Registered Date : 2/10/2019
------------------------------------------------------------------------
        Enter 'C' to continue:c

          Enter 'C' to continue:c
          ----------------------------------
          1. New User
          ----------------------------------
          2. Login into User
          ----------------------------------
          3. Show Records
          ----------------------------------
          4. Exit
          ----------------------------------
          Enter Choice :4
[gnu@localhost ~]$
```

REFERENCES:

1. Wikipedia(Library Management System page)
2. https://www.slideshare.net
3. Google Images

CONCLUSION:

1. **A better, smart, time efficient and easy to manage alternative of existing ways of managing library record.**
2. **This project provides a computerized version of library management system which will benefit the students as well as the staff of the library.**