MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Soft Skills Mini Project Report

on

LIBRARY MANAGEMENT SYSTEM

Submitted By:

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0901CA211066

Mentor:

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(Professor)

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MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE

GWALIOR - 474005 (MP) est. 1957

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MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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CERTIFICATE

This is certified that Vanshita Gupta (0901CA211066) has submitted the project report titled Library Management System under the mentorship of Dr. Anshu Chaturvedi (Professor), as the requirement for the skills based mini project in 1st year of Master of Computer Application in Computer Science and Engineering from Madhav Institute of Technology and Science, Gwalior.

Dr. Anshu Chaturvedi
(Professor)
Computer Science and Engineering

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ACKNOWLEDGEMENT

The full semester project has proved to be pivotal to my career. I am thankful to my institute, **Madhav Institute of Technology and Science** to allow me to continue my disciplinary project. I extend my gratitude to the Director of the institute, **Dr. R. K. Pandit** and Dean Academics, **Dr. Manjaree Pandit** for this.

I would sincerely like to thank my department, **Department of Computer Science and Engineering,** for allowing me to explore this project. I humbly thank **Dr. Manish Dixit**, Professor and Head, Department of Computer Science and Engineering, for his continued support during the course of this engagement, which eased the process and formalities involved.

I am sincerely thankful to my faculty coordinator. I am grateful to the guidance of **Dr. Anshu Chaturvedi**, (Professor), Computer Science and Engineering, for her continued support and guidance throughout the project. I am also very thankful to the faculty and staff of the department.

VANSHITA GUPTA
0901CA211066
2021-2023 Year,
Master of Computer Application,
Computer Science and Engineering

Abstract

In this Mini Skill Project, I have developed a library management system. Library management system is a project which aims in developing a computerized system to maintain all the daily work of library .This project has many features which are generally not available in normal library management systems like facility of user login and a facility of teachers login . It also has a facility of admin login through which the admin can monitor the whole system .

It also has facility of an online notice board where teachers can student can put up information about workshops or seminars being held in our colleges or nearby colleges and librarian after proper verification from the concerned institution organizing the seminar can add it to the notice board .

It has also a facility where student after logging in their accounts can see list of books issued and its issue date and return date and also the students can request the librarian to add new books by filling the book request form.

The librarian after logging into his account i.e. admin account can generate various reports suc h as student report , issue report, teacher report and book report 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.

CONTENTS

Introduction

Library Management System is an application which refers to library systems which are generally small or medium in size. It is used by librarian to manage the library record various transactions like issue of books, return of books, addition of new books, addition of new students etc. Books and student maintenance modules are also included in this system which would keep track of the students using the library and also a detailed description about the books a library contains.. In addition ,report module is also included in Library Management System. If user's position is admin, the user is able to generate different kinds of reports like lists of students registered, list of books, issue and return reports.

Objectives

1. The objective of the Library Management System is to handle the entire activity of a library.

2. The software keeps track of all the information about the books and their complete details.

3. The system contains database where all the information will be stored safely.

CODING

```
/*
* To change this license header, choose License Headers in Project Properties.
* To change this template file, choose Tools | Templates
* and open the template in the editor.
*/
package libraryproject;
import java.awt.*;
import javax.swing.*;
import java.awt.event.*;
import javax.swing.border.*;
/**
*
* @author Vanshita Gupta
*/
public class aboutus extends JFrame implements ActionListener{
private JPanel contentPane;
private JButton b5;
public aboutus(){
super("About Us ");

setBackground(new Color(173, 216, 230));
setBounds(300, 150, 700, 500);
setResizable(false);

contentPane = new JPanel();
setContentPane(contentPane);
contentPane.setLayout(null);

JLabel l3 = new JLabel("Smart");
l3.setForeground(new Color(0, 250, 154));
l3.setFont(new Font("Trebuchet MS", Font.BOLD | Font.ITALIC, 34));
l3.setBounds(160, 40, 150, 55);
contentPane.add(l3);

JLabel l4 = new JLabel("Library System");
l4.setForeground(new Color(127, 255, 0));
l4.setFont(new Font("Trebuchet MS", Font.BOLD | Font.ITALIC, 34));
l4.setBounds(70, 90, 405, 40);
contentPane.add(l4);
```

```
JLabel l5 = new JLabel("v5.1");
l5.setForeground(new Color(30, 144, 255));
l5.setFont(new Font("Trebuchet MS", Font.BOLD, 25));
l5.setBounds(185, 140, 100, 21);
contentPane.add(l5);

JLabel l6 = new JLabel("Developed By : Vanshita Gupta");
l6.setFont(new Font("Trebuchet MS", Font.BOLD, 30));
l6.setBounds(70, 198, 600, 35);
contentPane.add(l6);

JLabel l7 = new JLabel("I Have Study MITS , Gwalior");
l7.setFont(new Font("Trebuchet MS", Font.BOLD, 20));
l7.setBounds(70, 260, 600, 34);
contentPane.add(l7);

JLabel l8 = new JLabel("MY Gmail : vanshitag198@gmail.com");
l8.setFont(new Font("Trebuchet MS", Font.BOLD, 20));
l8.setBounds(70, 290, 600, 34);
contentPane.add(l8);

JLabel l9 = new JLabel("MY CONTACT NUMBER : 9761415834");
l9.setFont(new Font("Trebuchet MS", Font.BOLD , 20));
l9.setBounds(70, 320, 600, 34);
contentPane.add(l9);

JLabel l10 = new JLabel("**If you want us to make Java Project for you, drop a mail**");
l10.setForeground(new Color(47, 79, 79));
l10.setFont(new Font("Trebuchet MS", Font.BOLD | Font.ITALIC, 18));
l10.setBounds(70, 400, 600, 34);
contentPane.add(l10);

contentPane.setBackground(Color.WHITE);
b5 = new JButton("BACK");
b5.setFont(new Font("Italic",Font.BOLD,16));
b5.setForeground(Color.BLACK);
b5.setBackground(Color.PINK);
b5.setBounds(540,20,100,30);
add(b5);
b5.addActionListener(this);

}
public void actionPerformed(ActionEvent ae){

if(ae.getSource()==b5){
setVisible(false);
```

```
new home().setVisible(true);
}

}
public static void main(String[] args) {
new aboutus().setVisible(true);
}
}

package libraryproject;
import javax.swing.*;

import java.awt.*;
import java.awt.event.*;
import java.util.*;
import java.sql.*;
/**
*
* @author Vanshita Gupta
*/
public class addbooks extends JFrame implements ActionListener{
JPanel panel;
private JLabel l1,l2,l3,l4,l5,l6,l7;
private JButton b1,b2;
private JTextField t1,t2,t3,t4,t5;
JComboBox c1;
public void random(){
Random r1 = new Random();
t1.setText(""+r1.nextInt(10000+1));
}
package libraryproject;
import javax.swing.*;

import java.awt.*;
import java.awt.event.*;
import java.util.*;
import java.sql.*;
/**
*
* @author Vanshita Gupta
*/
public class addbooks extends JFrame implements ActionListener{
JPanel panel;
private JLabel l1,l2,l3,l4,l5,l6,l7;
private JButton b1,b2;
private JTextField t1,t2,t3,t4,t5;
```

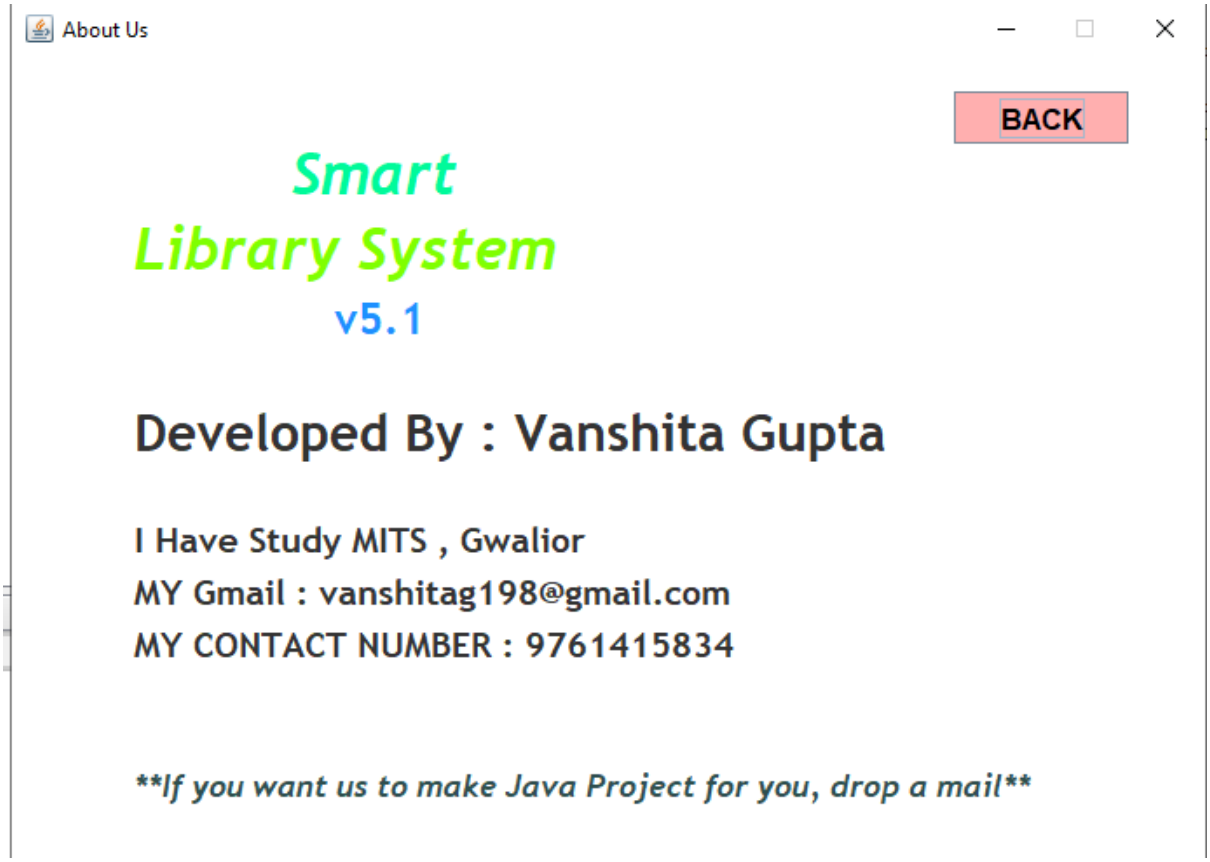
```
JComboBox c1;
public void random(){
Random r1 = new Random();
t1.setText(""+r1.nextInt(10000+1));
}

public addbooks(){
setSize(600,550);
setTitle("Book Detail");
setLocation(300,100);
setResizable(false);
panel = new JPanel();
setContentPane(panel);
panel.setLayout((null));
panel.setBackground(Color.WHITE);

l6 = new JLabel("BOOK DETAIL...");
l6.setForeground(Color.BLACK);

l6.setFont(new Font("Italic",Font.BOLD,22));
l6.setBounds(200,5,250,30);
add(l6);

l1 = new JLabel("Book_Id :");
l1.setFont(new Font("Italic",Font.BOLD,17));
l1.setForeground(Color.RED);
l1.setBounds(60,75,100,20);
add(l1);

t1 = new JTextField();
t1.setBounds(280,75,200,20);
add(t1);

l2 = new JLabel("Name :");
l2.setFont(new Font("Italic",Font.BOLD,17));
l2.setForeground(Color.RED);
l2.setBounds(60,125,100,22);
add(l2);

t2 = new JTextField();
t2.setBounds(280,125,200,22);
add(t2);

l3 = new JLabel("Publisher :");
l3.setFont(new Font("Italic",Font.BOLD,17));
l3.setForeground(Color.RED);
```

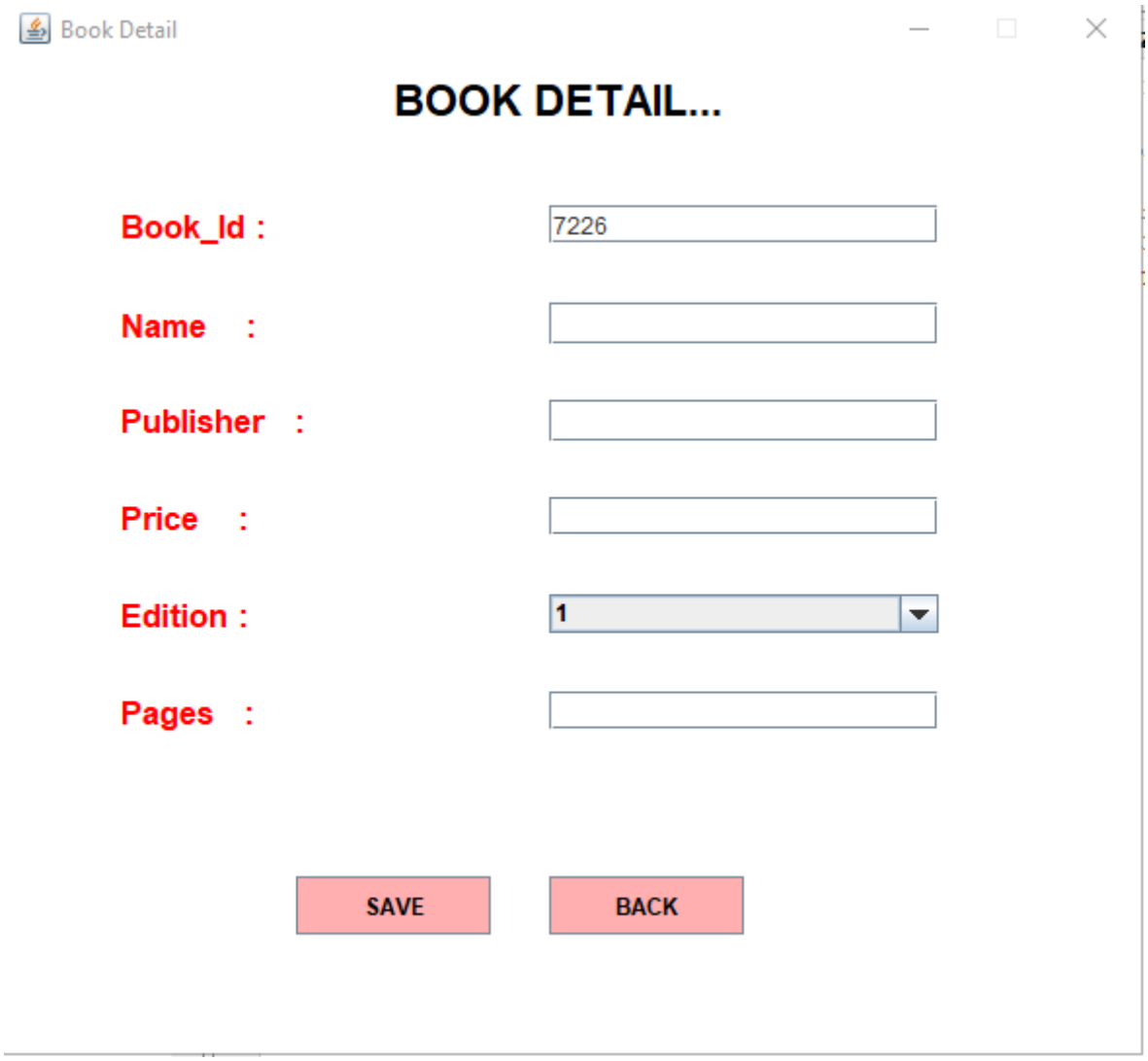
```
l3.setBounds(60,175,100,20);
add(l3);

t3 = new JTextField();
t3.setBounds(280,175,200,22);
add(t3);

l4= new JLabel("Price :");
l4.setFont(new Font("Italic",Font.BOLD,17));
l4.setForeground(Color.RED);
l4.setBounds(60,225,100,20);
add(l4);

t4 = new JTextField();
t4.setBounds(280,225,200,20);
add(t4);

l5 = new JLabel("Edition :");
l5.setFont(new Font("Italic",Font.BOLD,17));
l5.setForeground(Color.RED);
l5.setBounds(60,275,100,20);
add(l5);

String combo[] = {"1","2","3","4","5","6","7","8","9"};
c1 = new JComboBox(combo);
c1.setForeground(Color.BLACK);
c1.setBounds(280,275,200,20);
add(c1);

l7 = new JLabel("Pages :");
l7.setFont(new Font("Italic",Font.BOLD,17));
l7.setForeground(Color.RED);
l7.setBounds(60,325,100,20);
add(l7);

t5 = new JTextField();
t5.setBounds(280,325,200,20);
add(t5);

b1 = new JButton("SAVE");
b1.setBackground(Color.PINK);
b1.setForeground(Color.BLACK);
b1.setBounds(150,420,100,30);
add(b1);
b1.addActionListener(this);
```

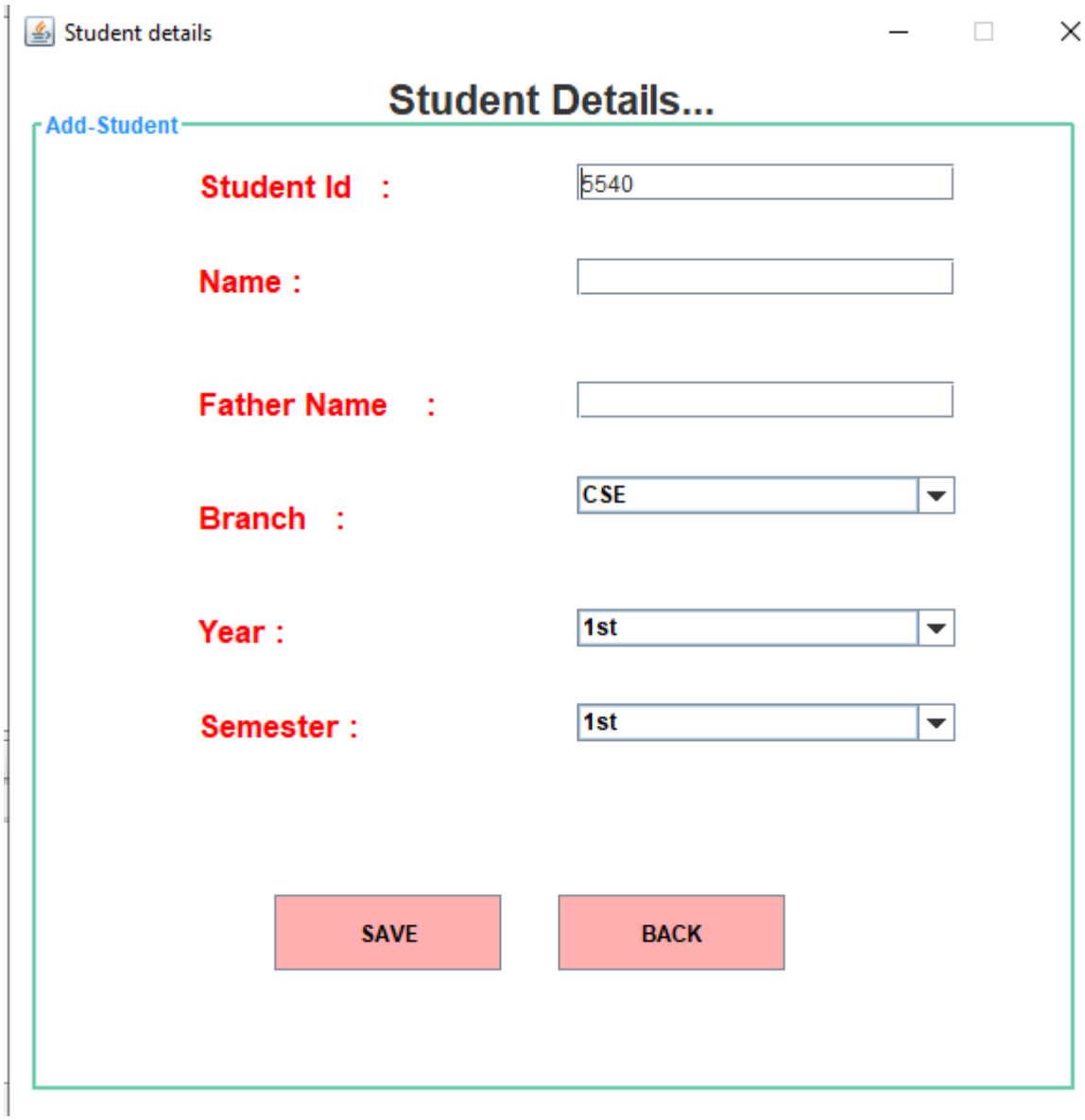
```
b2 = new JButton("BACK");
b2.setBackground(Color.PINK);
b2.setForeground(Color.BLACK);
b2.setBounds(280,420,100,30);
add(b2);
b2.addActionListener(this);

random();
}
public void actionPerformed(ActionEvent ae){
try{
connection con = new connection();
if(ae.getSource()==b1){
String str = "insert into book(book_id, name, publisher, price, edition, page)values(?, ?, ?, ?,
?, ?)";
PreparedStatement st = con.conn.prepareStatement(str);
st.setString(1, t1.getText());
st.setString(2, t2.getText());
st.setString(3, t3.getText());

st.setString(4, t4.getText());
st.setString(5, (String)c1.getSelectedItem());
st.setString(6, t5.getText());

int rs = st.executeUpdate();
if(rs>0){
JOptionPane.showMessageDialog(null,"Inserted Suceesfully");

}else
JOptionPane.showMessageDialog(null, "Error");
}
t1.setText("");
t2.setText("");
t3.setText("");
t4.setText("");
t5.setText("");

if(ae.getSource()==b2){
setVisible(false);
new home().setVisible(true);
}
con.conn.close();
}catch(Exception e){
e.printStackTrace();
}
```

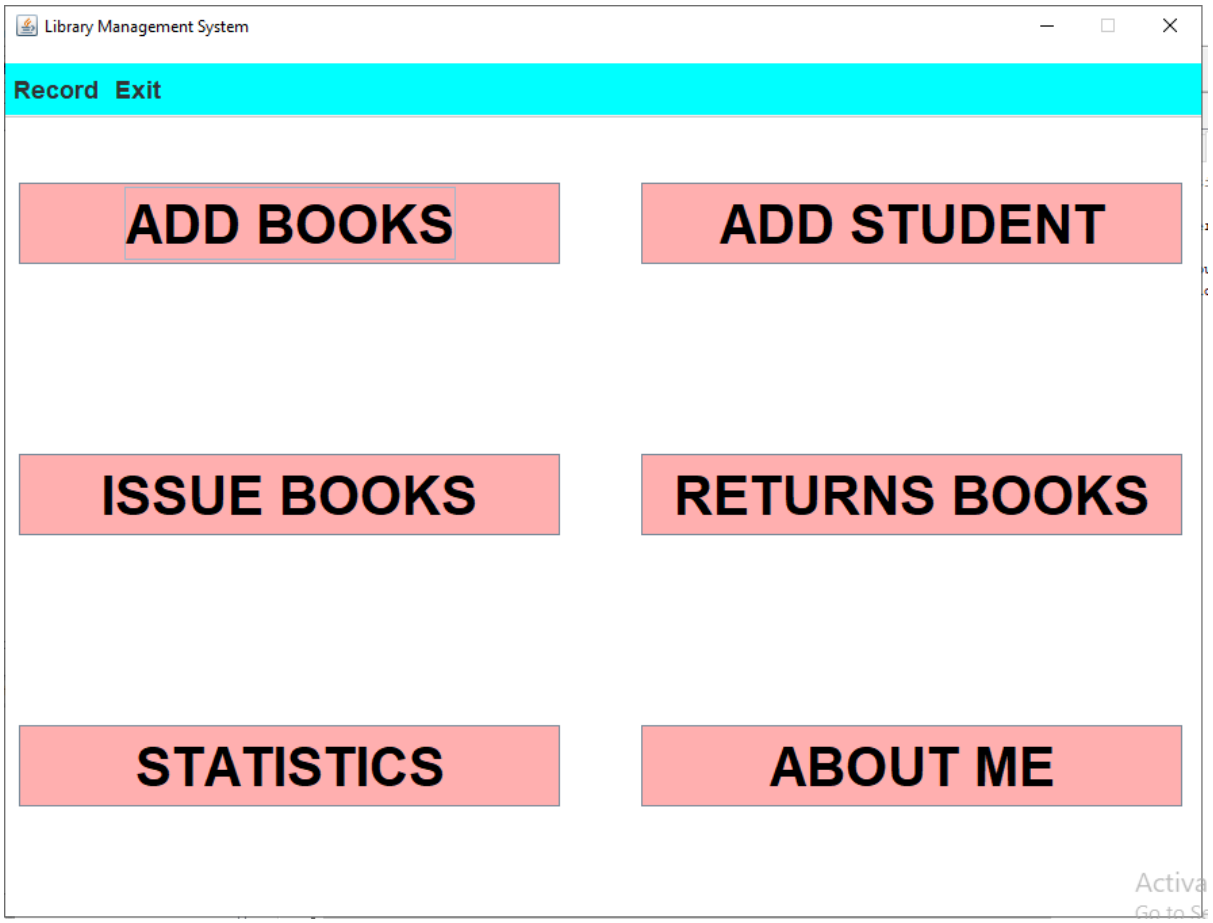
```
}
public static void main(String[] args) {

new addbooks().setVisible(true);
}
}
```

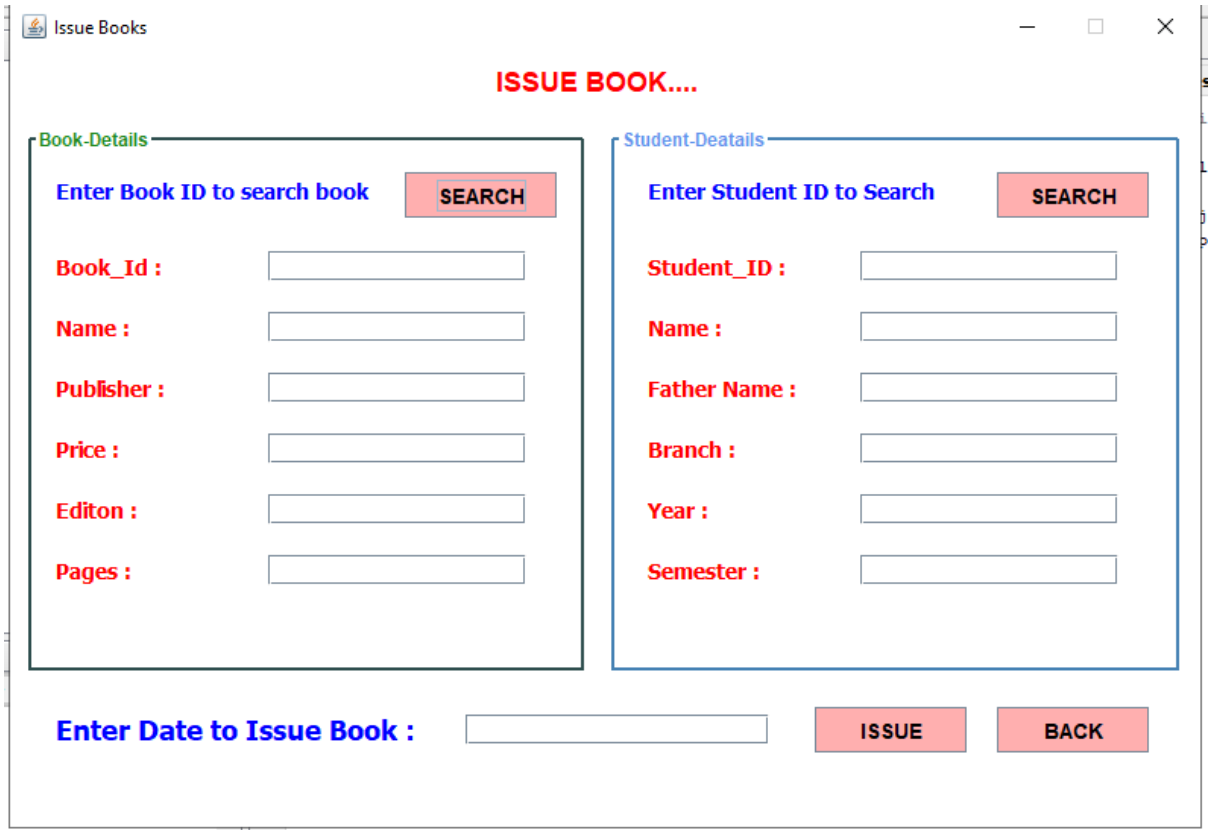
Screenshot


About Us
BACK
Smart
Library System
v5.1
Developed By : Vanshita Gupta
I Have Study MITS , Gwalior
MY Gmail : vanshitag198@gmail.com
MY CONTACT NUMBER : 9761415834
If you want us to make Java Project for you, drop a mail


Book Detail
BOOK DETAIL...
Book_Id :
7226
Name :
Publisher :
Price :
Edition :
1
Pages :
SAVE
BACK


Student details
Student Details...
Add-Student
Student Id :
5540
Name :
Father Name :
Branch :
CSE
Year :
1st
Semester :
1st
SAVE
BACK


Library Management System
Record Exit
ADD BOOKS
ADD STUDENT
ISSUE BOOKS
RETURNS BOOKS
STATISTICS
ABOUT ME


Issue Books
ISSUE BOOK....
Book-Details
Enter Book ID to search book
SEARCH
Book_Id :
Name :
Publisher :
Price :
Editon :
Pages :
Student-Deatails
Enter Student ID to Search
SEARCH
Student_ID :
Name :
Father Name :
Branch :
Year :
Semester :
Enter Date to Issue Book :
ISSUE
BACK

CONCLUSION

This paper mainly focuses on how we can improve the traditional method of working of a library because the traditional method includes doing all the things in manual mode which is slow, less efficient, less secure, and difficult to manage. The solution to this is an online library management system which take care of all the work by automating and digitizing the whole process.

Our application is based on Java and is linked to a relational database (sql).

The frontend part has been coded using Java and its packages like awt and swing. The backend is supported and connected with database using java, its libraries and APIs. With the increase in the workload of the library, new features can be added to the existing application to make it relevant in the future as well.

References

http://www.w3schools.com/html/html_intro.asp

http://www.Udemy.com/css/css_background.asp

http://www.w3schools.com/js/js_datatypes.asp