

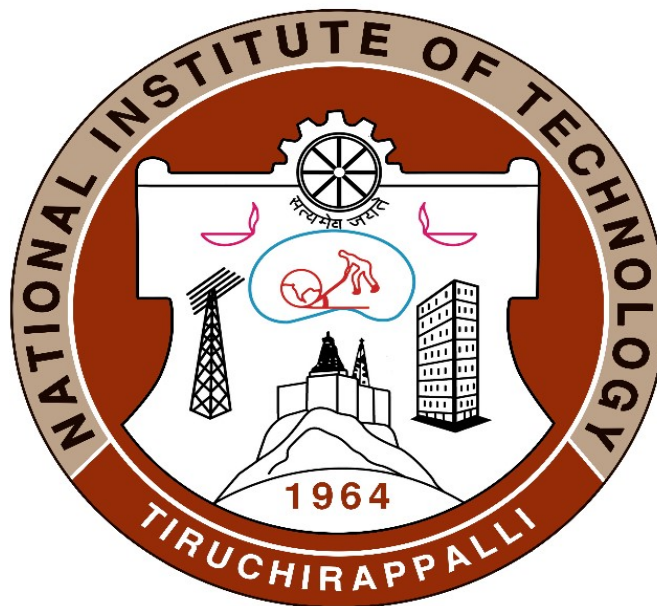
Library Management System

Master of Computer Applications

From

National Institute of Technology,

Tiruchchirapalli, Tamil Nadu



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MCA 2nd Semester

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INTRODUCTION

Problem Statement:

A Library management system is a software that uses to maintain the record of the library. It contains work like the number of available books in the library, the number of books are issued or returning or renewing a book or late fine charge record, etc. Library Management Systems is software that helps to maintain a database that is useful to enter new books & record books borrowed by the members, with the respective submission dates. Moreover, it also reduces the manual record burden of the librarian.

Objective:

Library management system allows the librarian to maintain library resources in a more operative manner that will help to save their time. It is also convenient for the librarian to manage the process of books allotting and return. Library management system is also useful for students as well as a librarian to keep the constant track of the availability of all books in a store.

Scope:

The Library management system is nowadays essential for schools, colleges, private libraries, and other organizations. They can use this software as the purpose of books issuing

and returning for renewal. Moreover, this software helps the librarian to maintain information about book issuing and returning the book.

Advantage:

- It reduces the manual paperwork through it and gives proper information of books has been recorded automatically.
- Librarian can update the information of books and manage availability and arriver record of the books.
- It saves human efforts and time.
- With the help of library management software, the customer can easily search and find the books.

Importance:

- A library management system is the most proficient and easy to use system for managing all the processes involved in a Library in the most effective ways.
- This system will reduce all the manual work and the whole process can be managed just through single clicks and edits.

- There will be no headache and doubtfulness of storing the data securely and searching the records of any individual afterward.
- Any book seeker can rent a book just by signing in with their details, and return it with the date of returning.
- The staff can also facilitate themselves with some extra authorizations and privileges.
- Only, one person is required to take care of the whole system, without any chances of mistakes.

SOFTWARE AND HARDWARE REQUIREMENTS

Client Software Configuration:

- Operating System: Windows/Linux/Unix
- Database :MySQL/Oracle/MariaDB

Client Hardware Configuration:

- RAM : 1 GB
- Processor : Dual Core
- Hard Disk – 40 GB

Server Software Configuration:

- Server : XAMPP/WAMP

Server Hardware Configuration:

- RAM : 8 GB
- Processor : XEON(2GHz or above)
- Hard Disk : 250 GB

TOOLS USED IN DEVELOPMENT

Editor:

- Netbeans IDE 9.0

Language :

- JAVA

DATABASE:

- MySQL

FEATURES

The features of library management system are as follows:

- Admin login
- Admin can add books.
- Admin can make student member.
- Admin can issue books to student.
- Admin can receive books from students.
- All the statistics of the book is provided in the form of report.
- Admin can remove student membership.
- Admin can see the monthly logs.
- Admin can see total books present in the library.
- If admin forgets login password, security question is asked, which when answered generates the old password.
- No need of filling the whole form, as many details are generated only by providing book_id, student_id etc.
- Admin can check all registered students.
- Admin can see the issued books, books returned in the form of tables .

DATABASE TABLES

account:

Field Name	Data Type	Constraint
username	varchar(20)	Primary key
name	varchar(25)	
password	varchar(25)	
sec_q	varchar(25)	
sec_ans	varchar(25)	

book:

Field Name	Data Type	Constraint
book_id	varchar(10)	Primary key
name	varchar(40)	
isbn	varchar(20)	
publisher	varchar(30)	
edition	varchar(10)	
price	varchar(10)	
pages	varchar(10)	

student:

Field Name	Data Type	Constraint
student_id	varchar(10)	Primary key
name	varchar(25)	
father	varchar(25)	
course	varchar(10)	
branch	varchar(10)	
year	varchar(10)	
semester	varchar(10)	

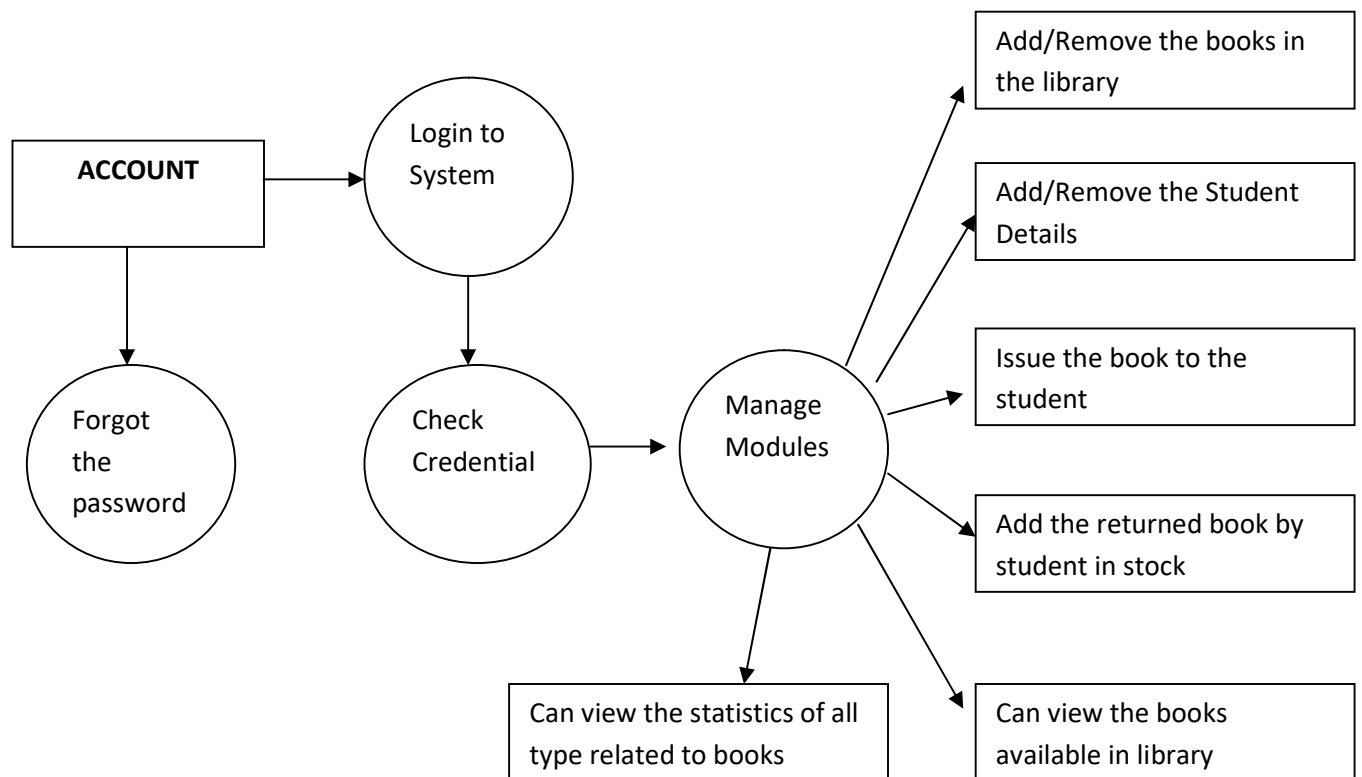
issueBook:

Field Name	Data Type	Constraint
book_id	varchar(10)	foreign key
student_id	varchar(10)	foreign key
bname	varchar(40)	
sname	varchar(40)	
course	varchar(20)	
branch	varchar(10)	
dateOfIssue	DATE	

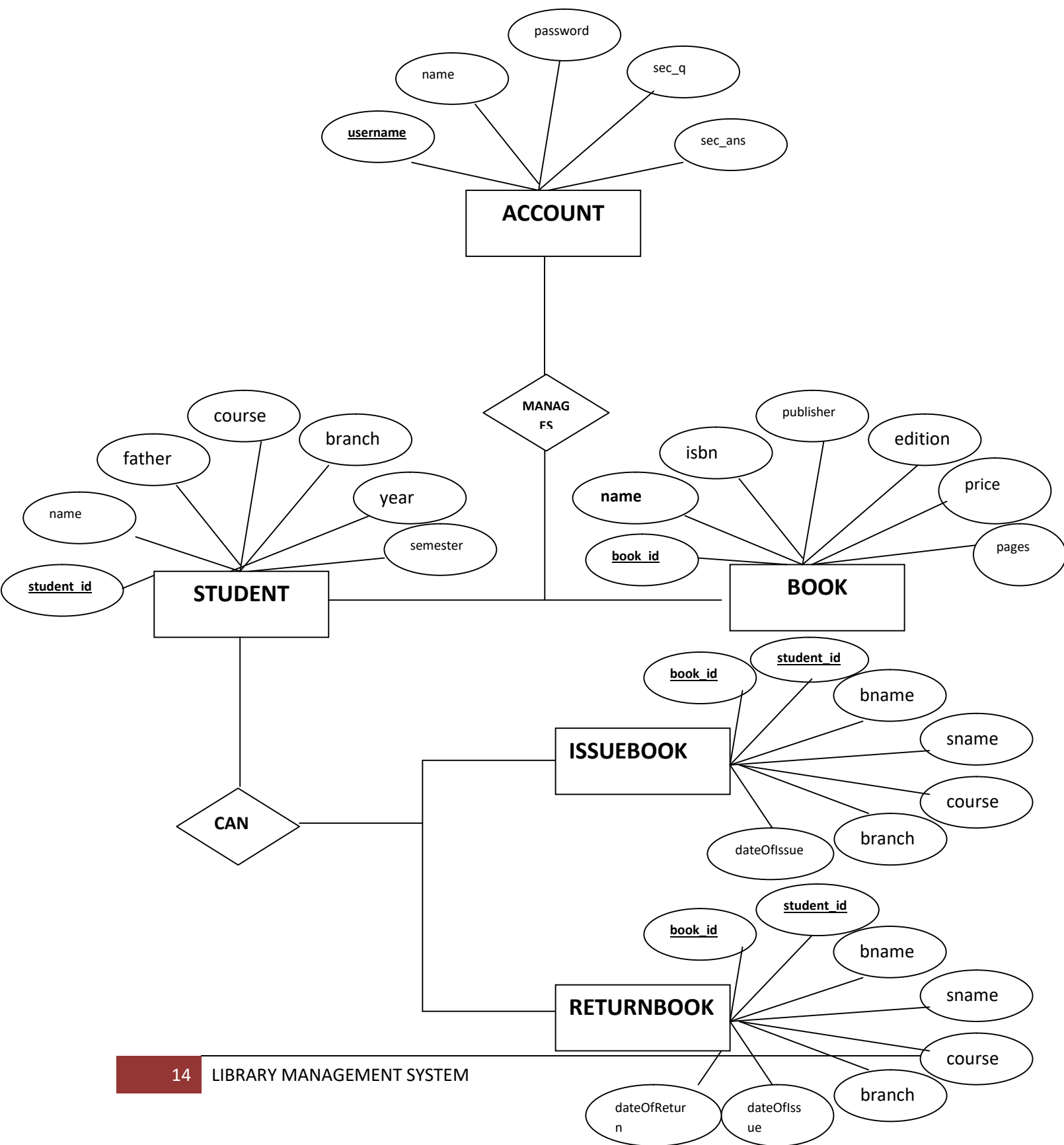
returnBook:

Field Name	Data Type	Constraint
book_id	varchar(10)	foreign key
student_id	varchar(10)	foreign key
bname	varchar(40)	
sname	varchar(40)	
course	varchar(20)	
branch	varchar(10)	
dateOfIssue	DATE	
dateOfReturn	DATE	

DATA FLOW DIAGRAM

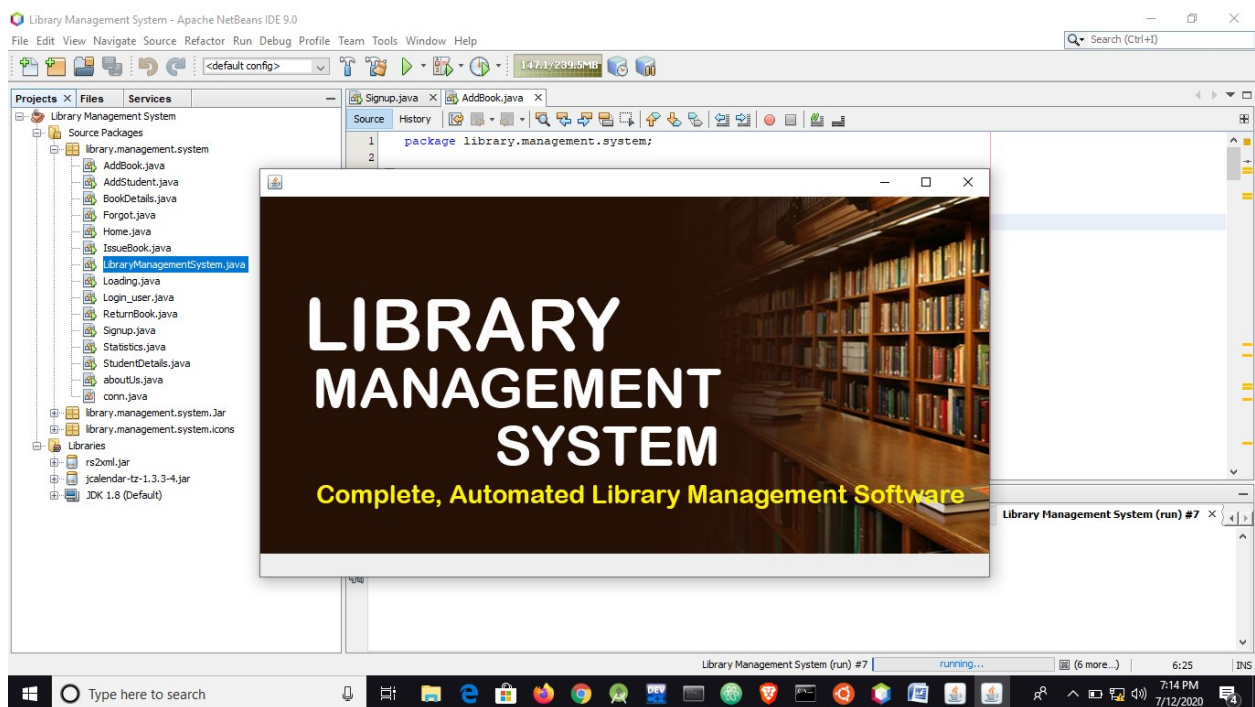


ER DIAGRAM

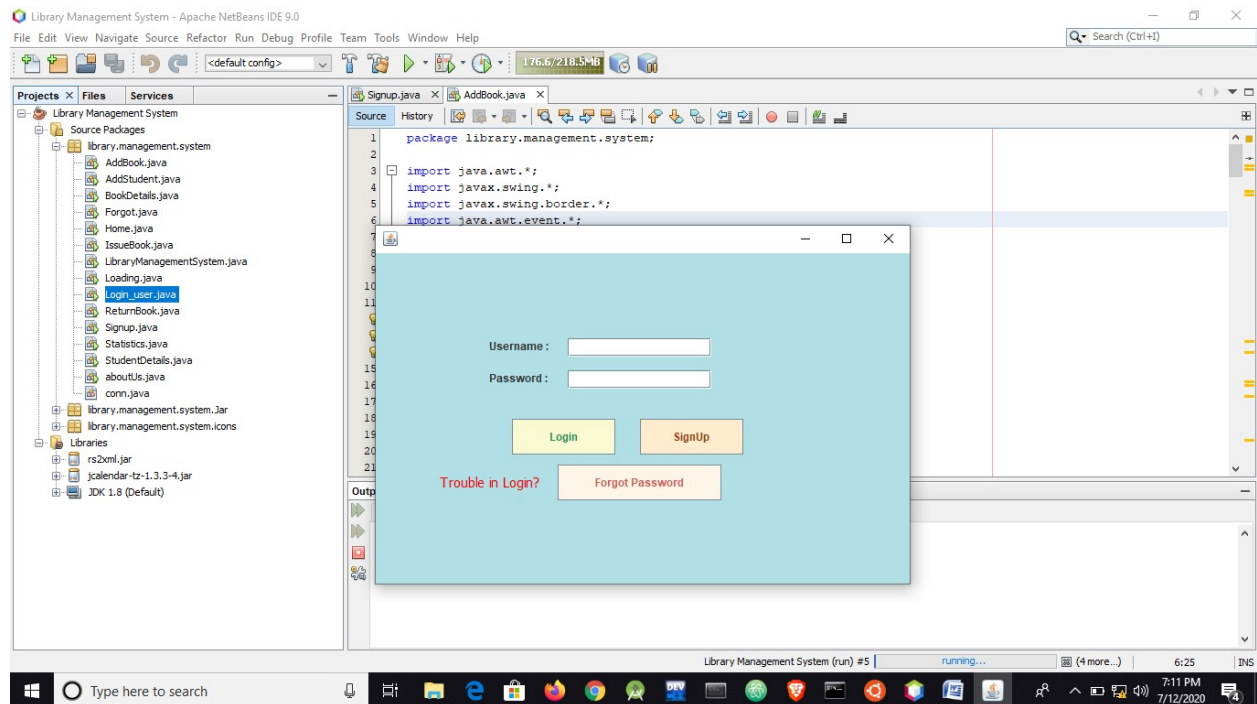


SCREENSHOTS

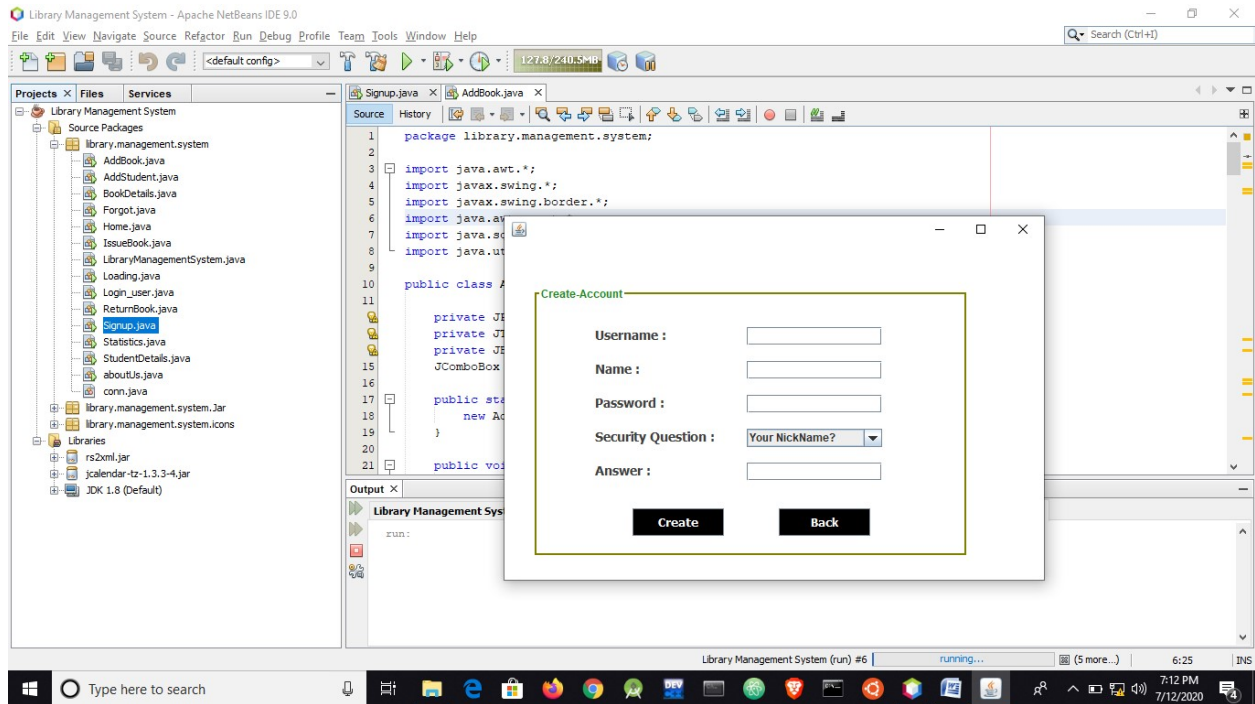
HOME SCREEN:



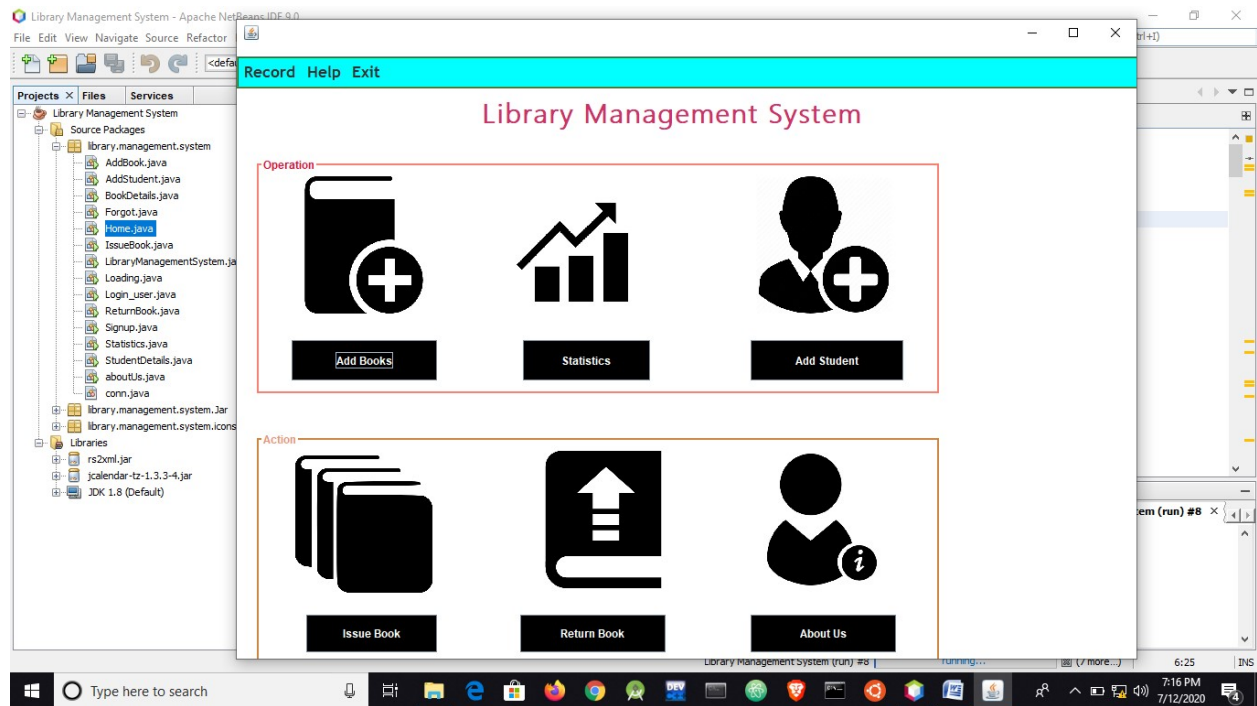
LOGIN SCREEN:



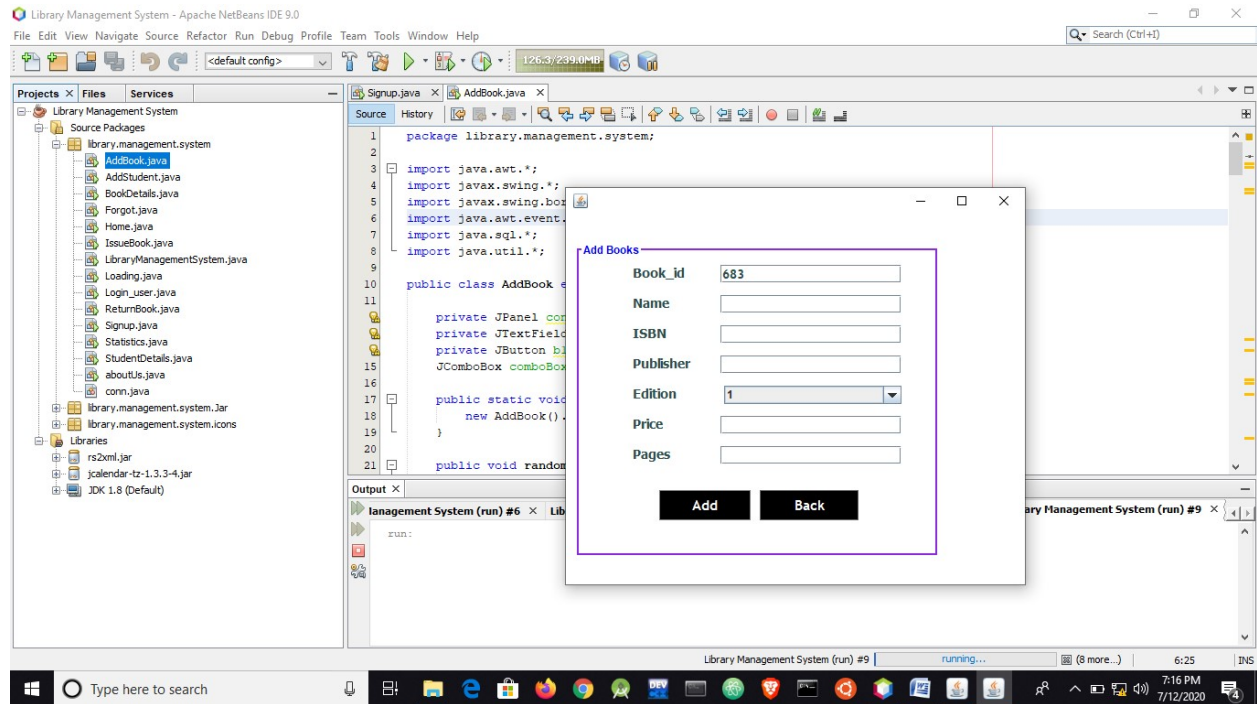
SIGN UP SCREEN:



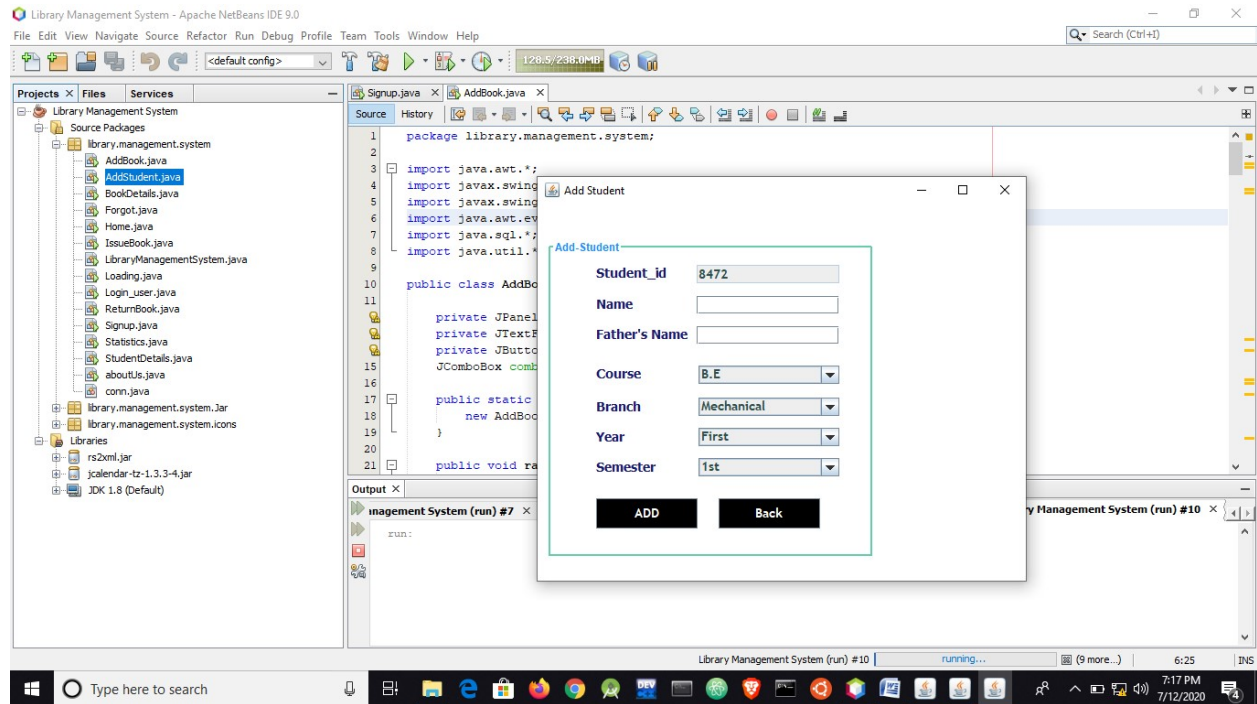
FEATURES SCREEN:



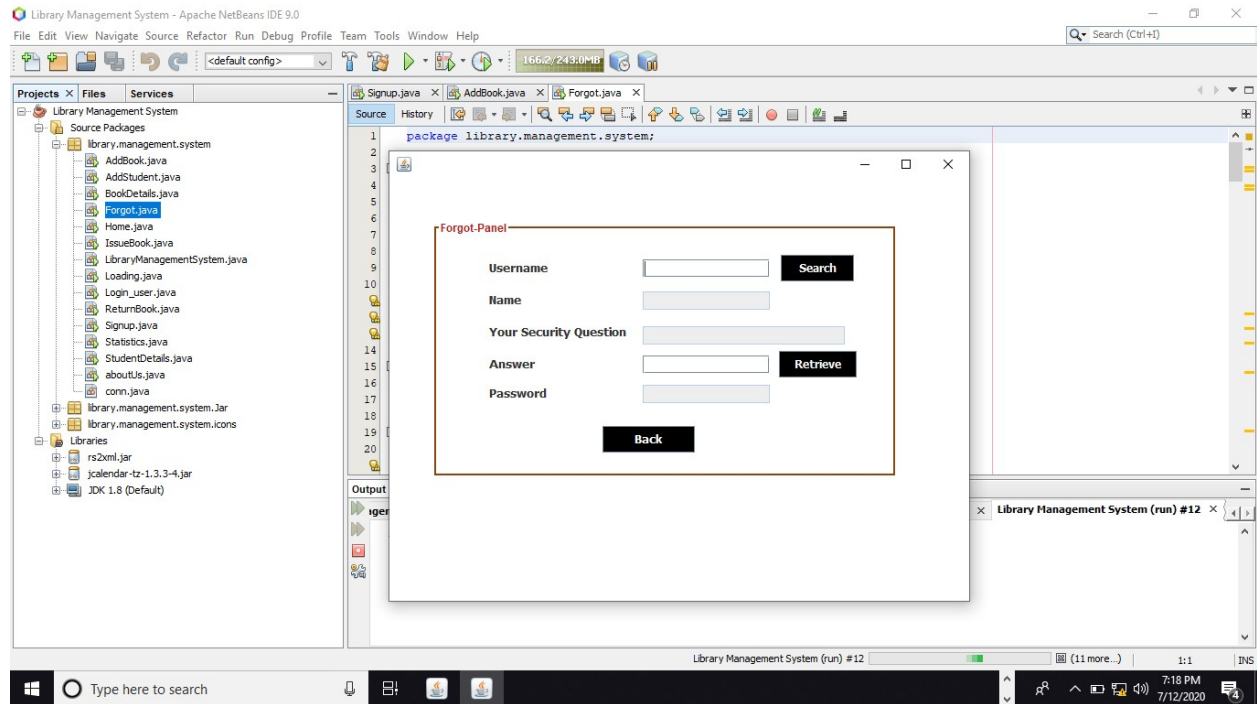
ADD BOOKS SCREEN:



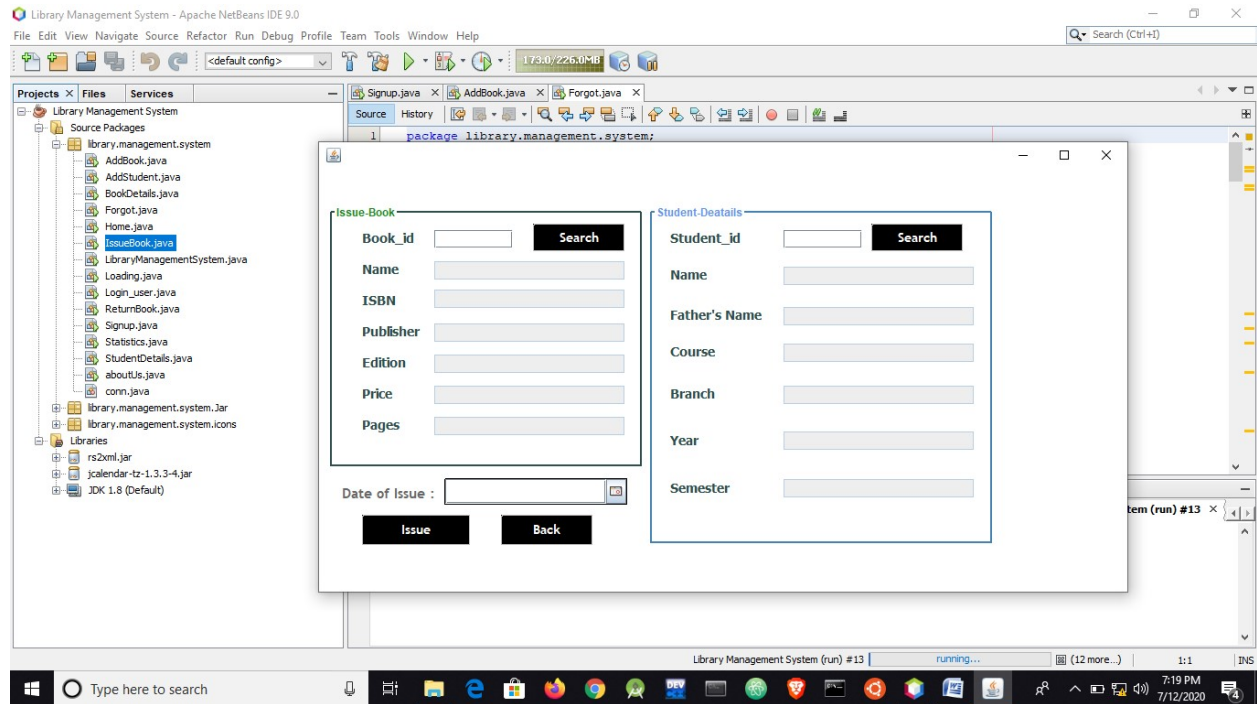
ADD STUDENT SCREEN:



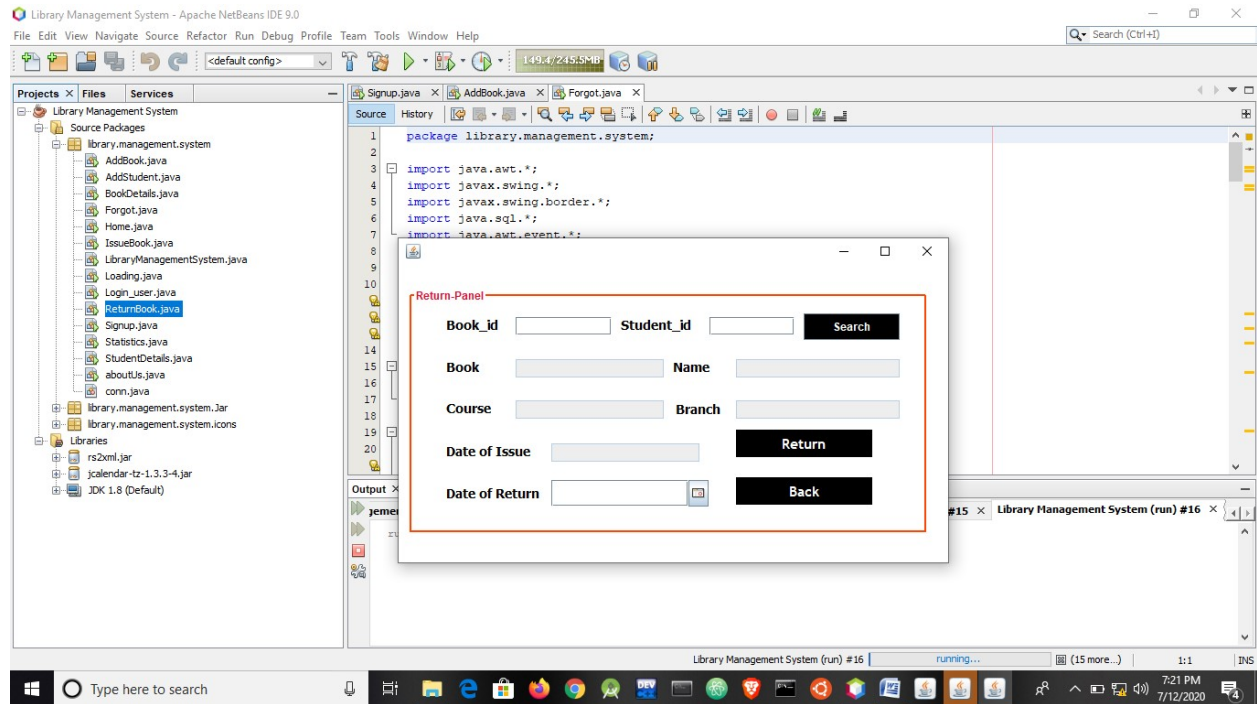
FORGOT PASSWORD SCREEN:



ISSUE BOOK SCREEN:



RETURN BOOK SCREEN:



CODING

HOME.JAVA

```
package library.management.system;

import javax.swing.*;
import javax.swing.border.*;
import java.awt.*;
import java.awt.event.*;

public class Home extends JFrame implements ActionListener{

    private JPanel contentPane;
    private JButton b1,b2,b3,b4,b5,b6;

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

    public Home() {

        setBounds(400, 150, 1000, 800);

        contentPane = new JPanel();

        setContentPane(contentPane);

        contentPane.setLayout(null);
```



```
JMenuBar menuBar = new JMenuBar();

menuBar.setBorder(new EtchedBorder(EtchedBorder.LOWERED, new Color(0, 128, 0), new Color(128, 128,
128)));

menuBar.setBackground(Color.CYAN);

menuBar.setBounds(0, 10, 1000, 35);

contentPane.add(menuBar);


JMenu mnExit = new JMenu("Exit");

mnExit.setFont(new Font("Trebuchet MS", Font.BOLD, 17));


JMenuItem mntmLogout = new JMenuItem("Logout");

mntmLogout.setBackground(new Color(211, 211, 211));

mntmLogout.setForeground(new Color(105, 105, 105));

mntmLogout.addActionListener(this);

mnExit.add(mntmLogout);


JMenuItem mntmExit = new JMenuItem("Exit");

mntmExit.setForeground(new Color(105, 105, 105));

mntmExit.setBackground(new Color(211, 211, 211));

mntmExit.addActionListener(this);

mnExit.add(mntmExit);


JMenu mnHelp = new JMenu("Help");
```

```
mnHelp.setFont(new Font("Trebuchet MS", Font.BOLD, 17));
```

```
JMenuItem mntmReadme = new JMenuItem("Read Me");  
mntmReadme.setBackground(new Color(211, 211, 211));  
mntmReadme.setForeground(new Color(105, 105, 105));  
mnHelp.add(mntmReadme);
```

```
JMenuItem mntmAboutUs = new JMenuItem("About Us");  
mntmAboutUs.setForeground(new Color(105, 105, 105));  
mntmAboutUs.setBackground(new Color(211, 211, 211));  
mntmAboutUs.addActionListener(this);  
mnHelp.add(mntmAboutUs);
```

```
JMenu mnRecord = new JMenu("Record");  
mnRecord.setFont(new Font("Trebuchet MS", Font.BOLD, 17));
```

```
JMenuItem bookdetails = new JMenuItem("Book Details");  
bookdetails.addActionListener(this);  
bookdetails.setBackground(new Color(211, 211, 211));  
bookdetails.setForeground(Color.DARK_GRAY);  
mnRecord.add(bookdetails);
```

```
JMenuItem studentdetails = new JMenuItem("Student Details");  
studentdetails.setBackground(new Color(211, 211, 211));  
studentdetails.setForeground(Color.DARK_GRAY);
```

```
studentdetails.addActionListener(this);
```

```
mnRecord.add(studentdetails);
```

```
menuBar.add(mnRecord);
```

```
menuBar.add(mnHelp);
```

```
menuBar.add(mnExit);
```

```
JLabel l1 = new JLabel("Library Management System");
```

```
l1.setForeground(new Color(204, 51, 102));
```

```
l1.setFont(new Font("Segoe UI Semilight", Font.BOLD, 30));
```

```
l1.setBounds(268, 30, 701, 80);
```

```
contentPane.add(l1);
```

```
JLabel l2 = new JLabel("");
```

```
l2.setVerticalAlignment(SwingConstants.TOP);
```

```
ImageIcon i1 = new  
ImageIcon(ClassLoader.getResource("library/management/system/icons/second.png"));
```

```
Image i2 = i1.getImage().getScaledInstance(150, 150, Image.SCALE_DEFAULT);
```

```
ImageIcon i3 = new ImageIcon(i2);
```

```
l2 = new JLabel(i3);
```

```
l2.setBounds(60, 140, 159, 152);
```

```
contentPane.add(l2);
```

```
JLabel l3 = new JLabel("");
```

```
ImageIcon i4 = new  
ImageIcon(ClassLoader.getResource("library/management/system/icons/third.png"));
```

```
Image i5 = i4.getImage().getScaledInstance(200, 200, Image.SCALE_DEFAULT);
```

```
ImageIcon i6 = new ImageIcon(i5);

l3 = new JLabel(i6);

l3.setBounds(300, 160, 134, 128);

contentPane.add(l3);


JLabel l4 = new JLabel("");

ImageIcon i7 = new
ImageIcon(ClassLoader.getResource("library/management/system/icons/fourth.png"));

Image i8 = i7.getImage().getScaledInstance(150, 150, Image.SCALE_DEFAULT);

ImageIcon i9 = new ImageIcon(i8);

l4 = new JLabel(i9);

l4.setBounds(530, 140, 225, 152);

contentPane.add(l4);


b1 = new JButton("Add Books");

b1.addActionListener(this);

b1.setBackground(Color.BLACK);

b1.setForeground(Color.WHITE);

b1.setBounds(60, 320, 159, 44);

contentPane.add(b1);


b2 = new JButton("Statistics");

b2.addActionListener(this);

b2.setBackground(Color.BLACK);

b2.setForeground(Color.WHITE);

b2.setBounds(313, 320, 139, 44);

contentPane.add(b2);
```

```

b3 = new JButton("Add Student");

b3.addActionListener(this);

b3.setBackground(Color.BLACK);

b3.setForeground(Color.WHITE);

b3.setBounds(562, 320, 167, 44);

contentPane.add(b3);


JPanel panel = new JPanel();

panel.setBorder(new TitledBorder(new LineBorder(new Color(250, 128, 114), 2), "Operation",
TitledBorder.LEADING,
TitledBorder.TOP, null, new Color(220, 20, 60)));

panel.setBounds(20, 120, 750, 260);

panel.setBackground(Color.WHITE);

contentPane.add(panel);


b4 = new JButton("Issue Book");

b4.addActionListener(this);

b4.setBackground(Color.BLACK);

b4.setForeground(Color.WHITE);

b4.setBounds(76, 620, 143, 41);

contentPane.add(b4);


b5 = new JButton("Return Book");

b5.addActionListener(this);

b5.setBackground(Color.BLACK);

b5.setForeground(Color.WHITE);

```

```
b5.setBounds(310, 620, 159, 41);
```

```
contentPane.add(b5);
```

```
b6 = new JButton("About Us");
```

```
b6.addActionListener(this);
```

```
b6.setBackground(Color.BLACK);
```

```
b6.setForeground(Color.WHITE);
```

```
b6.setBounds(562, 620, 159, 41);
```

```
contentPane.add(b6);
```

```
JLabel l5 = new JLabel("");
```

```
ImageIcon i10 = new  
ImageIcon(ClassLoader.getResource("library/management/system/icons/fifth.png"));
```

```
Image i11 = i10.getImage().getScaledInstance(150, 150, Image.SCALE_DEFAULT);
```

```
ImageIcon i12 = new ImageIcon(i11);
```

```
l5 = new JLabel(i12);
```

```
l5.setBounds(60, 440, 159, 163);
```

```
contentPane.add(l5);
```

```
JLabel l6 = new JLabel("");
```

```
ImageIcon i13 = new  
ImageIcon(ClassLoader.getResource("library/management/system/icons/sixth.png"));
```

```
Image i14 = i13.getImage().getScaledInstance(150, 150, Image.SCALE_DEFAULT);
```

```
ImageIcon i15 = new ImageIcon(i14);
```

```
l6 = new JLabel(i15);
```

```
l6.setBounds(332, 440, 139, 152);
```

```
contentPane.add(l6);
```

```

JLabel l7 = new JLabel("");

ImageIcon i16 = new
ImageIcon(ClassLoader.getResource("library/management/system/icons/seventh.png"));

Image i17 = i16.getImage().getScaledInstance(150, 150, Image.SCALE_DEFAULT);

ImageIcon i18 = new ImageIcon(i17);

l7 = new JLabel(i18);

l7.setBounds(562, 440, 157, 152);

contentPane.add(l7);


JPanel panel2 = new JPanel();

panel2.setBorder(new TitledBorder(new LineBorder(new Color(205, 133, 63), 2), "Action",
TitledBorder.LEADING,

                                TitledBorder.TOP, null, new Color(233, 150, 122)));

panel2.setBounds(20, 420, 750, 270);

panel2.setBackground(Color.WHITE);

contentPane.add(panel2);


getContentPane().setBackground(Color.WHITE);

contentPane.setBackground(Color.WHITE);

}


public void actionPerformed(ActionEvent ae){

    String msg = ae.getActionCommand();

    if(msg.equals("Logout")){

        setVisible(false);

        new Login_user().setVisible(true);

    }else if(msg.equals("Exit")){

```

```
        System.exit(ABORT);

    }else if(msg.equals("Read Me")){

    }else if(msg.equals("About Us")){

        setVisible(false);

        new aboutUs().setVisible(true);

    }else if(msg.equals("Book Details")){

        setVisible(false);

        new BookDetails().setVisible(true);

    }else if(msg.equals("Student Details")){

        setVisible(false);

        new StudentDetails().setVisible(true);

    }

    if(ae.getSource() == b1){

        this.setVisible(false);

        new AddBook().setVisible(true);

    }

    if(ae.getSource() == b2){

        this.setVisible(false);

        new Statistics().setVisible(true);

    }

    if(ae.getSource() == b3){

        this.setVisible(false);
```



```

        new AddStudent().setVisible(true);
    }

    if(ae.getSource() == b4){
        this.setVisible(false);
        new IssueBook().setVisible(true);
    }

    if(ae.getSource() == b5){
        this.setVisible(false);
        new ReturnBook().setVisible(true);
    }

    if(ae.getSource() == b6){
        this.setVisible(false);
        new aboutUs().setVisible(true);
    }

}

}
}

```

LOGIN_USER.JAVA

```

package library.management.system;

import java.awt.*;

import javax.swing.*;

import java.awt.event.*;

```

```

import java.sql.*;

public class Login_user extends JFrame implements ActionListener{

    private JPanel panel;

    private JTextField textField;

    private JPasswordField passwordField;

    private JButton b1,b2,b3;


    public Login_user() {

        setBackground(new Color(169, 169, 169));
        setBounds(600, 300, 600, 400);

        panel = new JPanel();

        panel.setBackground(new Color(176, 224, 230));
        setContentPane(panel);
        panel.setLayout(null);

        JLabel l1 = new JLabel("Username : ");
        l1.setBounds(124, 89, 95, 24);
        panel.add(l1);

        JLabel l2 = new JLabel("Password : ");
        l2.setBounds(124, 124, 95, 24);
        panel.add(l2);

```

```
textField = new JTextField();  
textField.setBounds(210, 93, 157, 20);  
panel.add(textField);
```

```
passwordField = new JPasswordField();  
passwordField.setBounds(210, 128, 157, 20);  
panel.add(passwordField);
```

```
JLabel l3 = new JLabel("");  
l3.setBounds(377, 79, 46, 34);  
panel.add(l3);
```

```
JLabel l4 = new JLabel("");  
l4.setBounds(377, 124, 46, 34);  
panel.add(l3);
```

```
b1 = new JButton("Login");  
b1.addActionListener(this);
```

```
b1.setForeground(new Color(46, 139, 87));  
b1.setBackground(new Color(250, 250, 210));  
b1.setBounds(149, 181, 113, 39);  
panel.add(b1);
```

```
b2 = new JButton("SignUp");  
b2.addActionListener(this);
```

```

        b2.setForeground(new Color(139, 69, 19));

        b2.setBackground(new Color(255, 235, 205));

        b2.setBounds(289, 181, 113, 39);

        panel.add(b2);


        b3 = new JButton("Forgot Password");

        b3.addActionListener(this);


        b3.setForeground(new Color(205, 92, 92));

        b3.setBackground(new Color(253, 245, 230));

        b3.setBounds(199, 231, 179, 39);

        panel.add(b3);


        JLabel l5 = new JLabel("Trouble in Login?");

        l5.setFont(new Font("Tahoma", Font.PLAIN, 15));

        l5.setForeground(new Color(255, 0, 0));

        l5.setBounds(70, 240, 130, 20);

        panel.add(l5);


        JPanel panel2 = new JPanel();

        panel2.setBackground(new Color(176, 224, 230));

        panel2.setBounds(24, 40, 434, 263);

        panel.add(panel2);

    }


    public void actionPerformed(ActionEvent ae){

```

```

if(ae.getSource() == b1){

    Boolean status = false;

        try {

            conn con = new conn();

            String sql = "select * from account where username=? and password=?";

            PreparedStatement st = con.c.prepareStatement(sql);

            st.setString(1, textField.getText());

            st.setString(2, passwordField.getText());


            ResultSet rs = st.executeQuery();

            if (rs.next()) {

                this.setVisible(false);

                new Loading().setVisible(true);

            } else

                JOptionPane.showMessageDialog(null, "Invalid Login...!");


        } catch (Exception e2) {

            e2.printStackTrace();

        }

    }

if(ae.getSource() == b2){

    setVisible(false);

    Signup su = new Signup();

    su.setVisible(true);

}

if(ae.getSource() == b3){

```

```

        setVisible(false);

        Forgot forgot = new Forgot();

        forgot.setVisible(true);

    }

}

```

```

public static void main(String[] args) {

    new Login_user().setVisible(true);

}

```

```

}

```

SIGNUP.JAVA

```

/*
 * 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 library.management.system;

import java.awt.*;

import javax.swing.*;

import java.sql.*;

import java.awt.event.*;

import javax.swing.border.*;

public class Signup extends JFrame implements ActionListener{

```

```
private JPanel contentPane;  
  
private JTextField textField;  
  
private JTextField textField_1;  
  
private JTextField textField_2;  
  
private JTextField textField_3;  
  
private JButton b1, b2;  
  
private JComboBox comboBox;
```

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

```
public Signup() {  
    setBounds(600, 250, 606, 406);  
  
    contentPane = new JPanel();  
    contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));  
    setContentPane(contentPane);  
    contentPane.setBackground(Color.WHITE);  
    contentPane.setLayout(null);  
  
    JLabel lblUsername = new JLabel("Username :");  
    lblUsername.setForeground(Color.DARK_GRAY);  
    lblUsername.setFont(new Font("Tahoma", Font.BOLD, 14));  
    lblUsername.setBounds(99, 86, 92, 26);  
    contentPane.add(lblUsername);
```

```

JLabel lblName = new JLabel("Name :");

lblName.setForeground(Color.DARK_GRAY);

lblName.setFont(new Font("Tahoma", Font.BOLD, 14));

lblName.setBounds(99, 123, 92, 26);

contentPane.add(lblName);


JLabel lblPassword = new JLabel("Password :");

lblPassword.setForeground(Color.DARK_GRAY);

lblPassword.setFont(new Font("Tahoma", Font.BOLD, 14));

lblPassword.setBounds(99, 160, 92, 26);

contentPane.add(lblPassword);


JLabel lblAnswer = new JLabel("Answer :");

lblAnswer.setForeground(Color.DARK_GRAY);

lblAnswer.setFont(new Font("Tahoma", Font.BOLD, 14));

lblAnswer.setBounds(99, 234, 92, 26);

contentPane.add(lblAnswer);


comboBox = new JComboBox();

comboBox.setModel(new DefaultComboBoxModel(new String[] { "Your NickName?", "Your Lucky
Number?",

                "Your child SuperHero?", "Your childhood Name ?" }));

comboBox.setBounds(265, 202, 148, 20);

contentPane.add(comboBox);


JLabel lblSecurityQuestion = new JLabel("Security Question :");

```



```
lblSecurityQuestion.setForeground(Color.DARK_GRAY);

lblSecurityQuestion.setFont(new Font("Tahoma", Font.BOLD, 14));

lblSecurityQuestion.setBounds(99, 197, 140, 26);

contentPane.add(lblSecurityQuestion);


textField = new JTextField();

textField.setBounds(265, 91, 148, 20);

contentPane.add(textField);

textField.setColumns(10);


textField_1 = new JTextField();

textField_1.setColumns(10);

textField_1.setBounds(265, 128, 148, 20);

contentPane.add(textField_1);


textField_2 = new JTextField();

textField_2.setColumns(10);

textField_2.setBounds(265, 165, 148, 20);

contentPane.add(textField_2);


textField_3 = new JTextField();

textField_3.setColumns(10);

textField_3.setBounds(265, 239, 148, 20);

contentPane.add(textField_3);


b1 = new JButton("Create");

b1.addActionListener(this);
```

```

        b1.setFont(new Font("Tahoma", Font.BOLD, 13));

        b1.setBounds(140, 289, 100, 30);

b1.setBackground(Color.BLACK);

b1.setForeground(Color.WHITE);

        contentPane.add(b1);


        b2 = new JButton("Back");

        b2.addActionListener(this);

        b2.setFont(new Font("Tahoma", Font.BOLD, 13));

        b2.setBounds(300, 289, 100, 30);

        b2.setBackground(Color.BLACK);

b2.setForeground(Color.WHITE);

        contentPane.add(b2);


        JPanel panel = new JPanel();

        panel.setForeground(new Color(34, 139, 34));

        panel.setBorder(new TitledBorder(new LineBorder(new Color(128, 128, 0), 2), "Create-Account",

                TitledBorder.LEADING, TitledBorder.TOP, null, new Color(34, 139, 34)));

        panel.setBounds(31, 46, 476, 296);

        panel.setBackground(Color.WHITE);

        contentPane.add(panel);

    }


    public void actionPerformed(ActionEvent ae){

        try{

            conn con = new conn();

```

```

if(ae.getSource() == b1){

    String sql = "insert into account(username, name, password, sec_q, sec_ans) values(?, ?, ?, ?, ?)";

    PreparedStatement st = con.c.prepareStatement(sql);

    st.setString(1, textField.getText());

    st.setString(2, textField_1.getText());

    st.setString(3, textField_2.getText());

    st.setString(4, (String) comboBox.getSelectedItemAt());

    st.setString(5, textField_3.getText());


    int i = st.executeUpdate();

    if (i > 0){

        JOptionPane.showMessageDialog(null, "successfully Created");

    }


    textField.setText("");

    textField_1.setText("");

    textField_2.setText("");

    textField_3.setText("");

}

if(ae.getSource() == b2){

    this.setVisible(false);

    new Login_user().setVisible(true);

}

}catch(Exception e){

```

```
    }  
    }  
}
```

FORGOT.JAVA

```
package library.management.system;
```

```
import java.awt.*;
```

```
import javax.swing.*;
```

```
import javax.swing.border.*;
```

```
import java.sql.*;
```

```
import java.awt.event.*;
```

```
public class Forgot extends JFrame implements ActionListener{
```

```
    private JPanel contentPane;
```

```
    private JTextField t1,t2,t3,t4,t5;
```

```
    private JButton b1,b2,b3;
```

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

```
        new Forgot().setVisible(true);
```

```
    }
```

```
    public Forgot() {
```

```
        setBounds(500, 200, 650, 500);
```

```
        contentPane = new JPanel();
```

```
contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));

setContentPane(contentPane);

contentPane.setBackground(Color.WHITE);

contentPane.setLayout(null);


JLabel l1 = new JLabel("Username");

l1.setFont(new Font("Tahoma", Font.BOLD, 13));

l1.setBounds(109, 83, 87, 29);

contentPane.add(l1);


JLabel l2 = new JLabel("Name");

l2.setFont(new Font("Tahoma", Font.BOLD, 13));

l2.setBounds(109, 122, 75, 21);

contentPane.add(l2);


JLabel l3 = new JLabel("Your Security Question");

l3.setFont(new Font("Tahoma", Font.BOLD, 13));

l3.setBounds(109, 154, 156, 27);

contentPane.add(l3);


JLabel l4 = new JLabel("Answer");

l4.setFont(new Font("Tahoma", Font.BOLD, 13));

l4.setBounds(109, 192, 104, 21);

contentPane.add(l4);


JLabel l5 = new JLabel("Password");

l5.setFont(new Font("Tahoma", Font.BOLD, 13));
```

```
l5.setBounds(109, 224, 104, 21);

contentPane.add(l5);


t1 = new JTextField();

t1.setFont(new Font("Tahoma", Font.BOLD, 13));

t1.setForeground(new Color(105, 105, 105));

t1.setBounds(277, 88, 139, 20);

contentPane.add(t1);

t1.setColumns(10);


t2 = new JTextField();

t2.setEditable(false);

t2.setFont(new Font("Tahoma", Font.BOLD, 13));

t2.setForeground(new Color(165, 42, 42));

t2.setColumns(10);

t2.setBounds(277, 123, 139, 20);

contentPane.add(t2);


t3 = new JTextField();

t3.setEditable(false);

t3.setFont(new Font("Tahoma", Font.BOLD, 12));

t3.setForeground(new Color(72, 61, 139));

t3.setColumns(10);

t3.setBounds(277, 161, 221, 20);

contentPane.add(t3);


t4 = new JTextField();
```

```
t4.setFont(new Font("Tahoma", Font.BOLD, 13));

t4.setForeground(new Color(205, 92, 92));

t4.setColumns(10);

t4.setBounds(277, 193, 139, 20);

contentPane.add(t4);


t5 = new JTextField();

t5.setEditable(false);

t5.setFont(new Font("Tahoma", Font.BOLD, 13));

t5.setForeground(new Color(50, 205, 50));

t5.setColumns(10);

t5.setBounds(277, 225, 139, 20);

contentPane.add(t5);


b1 = new JButton("Search");

b1.addActionListener(this);

b1.setFont(new Font("Tahoma", Font.BOLD, 12));

b1.setBounds(428, 83, 80, 29);

b1.setBackground(Color.BLACK);

b1.setForeground(Color.WHITE);

contentPane.add(b1);


b2 = new JButton("Retrieve");

b2.addActionListener(this);

b2.setFont(new Font("Tahoma", Font.BOLD, 12));

b2.setBounds(426, 188, 85, 29);

b2.setBackground(Color.BLACK);
```

```

b2.setForeground(Color.WHITE);

    contentPane.add(b2);


    b3 = new JButton("Back");

    b3.addActionListener(this);

    b3.setFont(new Font("Tahoma", Font.BOLD, 13));

    b3.setBounds(233, 270, 101, 29);

b3.setBackground(Color.BLACK);

b3.setForeground(Color.WHITE);

    contentPane.add(b3);


    JPanel panel = new JPanel();

    panel.setBorder(new TitledBorder(new LineBorder(new Color(139, 69, 19), 2), "Forgot-Panel",
                                     TitledBorder.LEADING, TitledBorder.TOP, null, new Color(178, 34, 34)));

    panel.setBounds(47, 45, 508, 281);

    panel.setBackground(Color.WHITE);

    contentPane.add(panel);
}


public void actionPerformed(ActionEvent ae){

    try{

        conn con = new conn();

        if(ae.getSource() == b1){

            String sql = "select * from account where username=?";

            PreparedStatement st = con.c.prepareStatement(sql);

            st.setString(1, t1.getText());

```



```

        ResultSet rs = st.executeQuery();

        while (rs.next()) {

            t2.setText(rs.getString("name"));

            t3.setText(rs.getString("sec_q"));

        }

    }

    if(ae.getSource() == b2){

        String sql = "select * from account where sec_ans=?";

        PreparedStatement st = con.c.prepareStatement(sql);

        st.setString(1, t4.getText());

        ResultSet rs = st.executeQuery();

        while (rs.next()) {

            t5.setText(rs.getString("password"));

        }

    }

    if(ae.getSource() == b3){

        this.setVisible(false);

        new Login_user().setVisible(true);

    }

}

}catch(Exception e){

```

```
    }  
    }  
}
```

LIBRARYMANAGEMENTSYSTEM.JAVA

```
package library.management.system;
```

```
import java.awt.*;
```

```
import javax.swing.*;
```

```
import java.awt.event.*;
```

```
public class LibraryManagementSystem extends JFrame implements ActionListener{
```

```
    JLabel l1;
```

```
    JButton b1;
```

```
    public LibraryManagementSystem() {
```

```
        setSize(1366,390);
```

```
        setLayout(null);
```

```
        setLocation(300,300);
```

```
        l1 = new JLabel("");
```

```
        b1 = new JButton("Next");
```

```
        b1.setBackground(Color.WHITE);
```

```
        b1.setForeground(Color.BLACK);
```

```

        ImageIcon i1 = new
        ImageIcon(ClassLoader.getResource("library/management/system/icons/first.jpg"));

        Image i3 = i1.getImage().getScaledInstance(1366, 390, Image.SCALE_DEFAULT);

        ImageIcon i2 = new ImageIcon(i3);

        l1 = new JLabel(i2);


        b1.setBounds(1050,250,200,60);

        l1.setBounds(0, 0, 1366, 390);


        l1.add(b1);

        add(l1);


        b1.addActionListener(this);

    }


    public void actionPerformed(ActionEvent ae){

        new Login_user().setVisible(true);

        this.setVisible(false);

    }


    public static void main(String[] args) {

        LibraryManagementSystem window = new LibraryManagementSystem();

        window.setVisible(true);
    }

```

```
}  
  
}
```

LOADING.JAVA

```
package library.management.system;
```

```
import java.awt.*;
```

```
import javax.swing.*;
```

```
import java.awt.event.*;
```

```
import java.sql.*;
```

```
public class Loading extends JFrame implements Runnable {
```

```
    private JPanel contentPane;
```

```
    private JProgressBar progressBar;
```

```
    Connection conn;
```

```
    int s;
```

```
    Thread th;
```

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

```
        new Loading().setVisible(true);
```

```
    }
```

```
    public void setUploading() {
```

```
        setVisible(false);
```

```
        th.start();
```

```
    }
```

```

public void run() {
try {
    for (int i = 0; i < 200; i++) {
        s = s + 1;

        int m = progressBar.getMaximum();

        int v = progressBar.getValue();

        if (v < m) {

            progressBar.setValue(progressBar.getValue() + 1);

        } else {

            i = 201;

            setVisible(false);

            new Home().setVisible(true);

        }

        Thread.sleep(50);

    }

} catch (Exception e) {

    e.printStackTrace();

}

}

```

```

public Loading() {

super("Loading");

th = new Thread((Runnable) this);

setBounds(600, 300, 600, 400);

```

```

contentPane = new JPanel();

setContentPane(contentPane);

contentPane.setLayout(null);


JLabel lblLibraryManagement = new JLabel("Smart Library v5.1");

lblLibraryManagement.setForeground(new Color(72, 209, 204));

lblLibraryManagement.setFont(new Font("Trebuchet MS", Font.BOLD, 35));

lblLibraryManagement.setBounds(130, 46, 500, 35);

contentPane.add(lblLibraryManagement);


progressBar = new JProgressBar();

progressBar.setFont(new Font("Tahoma", Font.BOLD, 12));

progressBar.setStringPainted(true);

progressBar.setBounds(130, 135, 300, 25);

contentPane.add(progressBar);


JLabel lblNewLabel_2 = new JLabel("Please Wait....");

lblNewLabel_2.setFont(new Font("Yu Gothic UI Semibold", Font.BOLD, 20));

lblNewLabel_2.setForeground(new Color(160, 82, 45));

lblNewLabel_2.setBounds(200, 165, 150, 20);

contentPane.add(lblNewLabel_2);


JPanel panel = new JPanel();

panel.setBackground(Color.WHITE);

panel.setBounds(0, 0, 590, 390);

contentPane.add(panel);

```

```
        setUploading();  
    }  
}
```

ADDBOOK.JAVA

```
package library.management.system;
```

```
import java.awt.*;
```

```
import javax.swing.*;
```

```
import javax.swing.border.*;
```

```
import java.awt.event.*;
```

```
import java.sql.*;
```

```
import java.util.*;
```

```
public class AddBook extends JFrame implements ActionListener{
```

```
    private JPanel contentPane;
```

```
    private JTextField t1,t2,t3,t4,t5,t6;
```

```
    private JButton b1,b2;
```

```
    JComboBox comboBox;
```

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

```
        new AddBook().setVisible(true);
```

```
    }
```

```
    public void random() {
```

```
        Random rd = new Random();
```

```

        t1.setText("" + rd.nextInt(1000 + 1));
    }

    public AddBook() {
        setBounds(600, 200, 518, 442);

        contentPane = new JPanel();
        contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));
        setContentPane(contentPane);
        contentPane.setLayout(null);

        JLabel l1 = new JLabel("Name");
        l1.setForeground(new Color(47, 79, 79));
        l1.setFont(new Font("Tahoma", Font.BOLD, 14));
        l1.setBounds(73, 84, 90, 22);
        contentPane.add(l1);

        JLabel l2 = new JLabel("ISBN");
        l2.setForeground(new Color(47, 79, 79));
        l2.setFont(new Font("Tahoma", Font.BOLD, 14));
        l2.setBounds(73, 117, 90, 22);
        contentPane.add(l2);

        JLabel l3 = new JLabel("Publisher");
        l3.setForeground(new Color(47, 79, 79));
        l3.setFont(new Font("Tahoma", Font.BOLD, 14));
        l3.setBounds(73, 150, 90, 22);
        contentPane.add(l3);
    }

```



```
JLabel l4 = new JLabel("Price");  
  
l4.setForeground(new Color(47, 79, 79));  
  
l4.setFont(new Font("Tahoma", Font.BOLD, 14));  
  
l4.setBounds(73, 216, 90, 22);  
  
contentPane.add(l4);
```

```
JLabel l5 = new JLabel("Pages");  
  
l5.setForeground(new Color(47, 79, 79));  
  
l5.setFont(new Font("Tahoma", Font.BOLD, 14));  
  
l5.setBounds(73, 249, 90, 22);  
  
contentPane.add(l5);
```

```
JLabel l6 = new JLabel("Book_id");  
  
l6.setForeground(new Color(47, 79, 79));  
  
l6.setFont(new Font("Tahoma", Font.BOLD, 14));  
  
l6.setBounds(73, 51, 90, 22);  
  
contentPane.add(l6);
```

```
JLabel l7 = new JLabel("Edition");  
  
l7.setForeground(new Color(47, 79, 79));  
  
l7.setFont(new Font("Tahoma", Font.BOLD, 14));  
  
l7.setBounds(73, 183, 90, 22);  
  
contentPane.add(l7);
```

```
t1 = new JTextField();  
  
t1.setForeground(new Color(47, 79, 79));
```

```
t1.setFont(new Font("Trebuchet MS", Font.BOLD, 14));
```

```
t1.setBounds(169, 54, 198, 20);
```

```
contentPane.add(t1);
```

```
t1.setColumns(10);
```

```
t2 = new JTextField();
```

```
t2.setForeground(new Color(47, 79, 79));
```

```
t2.setFont(new Font("Trebuchet MS", Font.BOLD, 14));
```

```
t2.setColumns(10);
```

```
t2.setBounds(169, 87, 198, 20);
```

```
contentPane.add(t2);
```

```
t3 = new JTextField();
```

```
t3.setForeground(new Color(47, 79, 79));
```

```
t3.setFont(new Font("Trebuchet MS", Font.BOLD, 14));
```

```
t3.setColumns(10);
```

```
t3.setBounds(169, 120, 198, 20);
```

```
contentPane.add(t3);
```

```
t4 = new JTextField();
```

```
t4.setForeground(new Color(47, 79, 79));
```

```
t4.setFont(new Font("Trebuchet MS", Font.BOLD, 14));
```

```
t4.setColumns(10);
```

```
t4.setBounds(169, 153, 198, 20);
```

```
contentPane.add(t4);
```

```
t5 = new JTextField();
```

```

t5.setForeground(new Color(47, 79, 79));

t5.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

t5.setColumns(10);

t5.setBounds(169, 219, 198, 20);

contentPane.add(t5);


t6 = new JTextField();

t6.setForeground(new Color(47, 79, 79));

t6.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

t6.setColumns(10);

t6.setBounds(169, 252, 198, 20);

contentPane.add(t6);


comboBox = new JComboBox();

comboBox.setModel(new DefaultComboBoxModel(new String[] { "1", "2", "3", "4", "5", "6", "7", "8", "9"
}));

comboBox.setBounds(173, 186, 194, 20);

contentPane.add(comboBox);


b1 = new JButton("Add");

b1.addActionListener(this);

b1.setBorder(new CompoundBorder(new LineBorder(new Color(128, 128, 128)), null));

b1.setFont(new Font("Trebuchet MS", Font.BOLD, 15));

b1.setBounds(102, 300, 100, 33);

b1.setBackground(Color.BLACK);

b1.setForeground(Color.WHITE);

contentPane.add(b1);

```

```

        b2 = new JButton("Back");

        b2.addActionListener(this);

        b2.setBorder(new CompoundBorder(new LineBorder(new Color(105, 105, 105)), null));

        b2.setFont(new Font("Trebuchet MS", Font.BOLD, 15));

        b2.setBounds(212, 300, 108, 33);

        b2.setBackground(Color.BLACK);

        b2.setForeground(Color.WHITE);


        contentPane.add(b2);


        JPanel panel = new JPanel();

        panel.setBorder(new TitledBorder(new LineBorder(new Color(138, 43, 226), 2), "Add Books",
TitledBorder.LEADING,
                                TitledBorder.TOP, null, new Color(0, 0, 255)));

        panel.setBounds(10, 29, 398, 344);

        contentPane.add(panel);


        panel.setBackground(Color.WHITE);

        contentPane.setBackground(Color.WHITE);

        random();

    }


    public void actionPerformed(ActionEvent ae){

        try{

            conn con = new conn();

```

```

if(ae.getSource() == b1){

    String sql = "insert into book(book_id, name, isbn, publisher, edition, price, pages) values(?, ?, ?, ?, ?, ?,
?)"

    PreparedStatement st = con.c.prepareStatement(sql);

    // st.setInt(1, Integer.parseInt(textField.getText()));

    st.setString(1, t1.getText());

    st.setString(2, t2.getText());

    st.setString(3, t3.getText());

    st.setString(4, t4.getText());

    st.setString(5, (String) comboBox.getSelectedItemAt());

    st.setString(6, t5.getText());

    st.setString(7, t6.getText());


    int rs = st.executeUpdate();

    if (rs > 0)

        JOptionPane.showMessageDialog(null, "Successfully Added");

    else

        JOptionPane.showMessageDialog(null, "Error");

    t1.setText("");

    t2.setText("");

    t3.setText("");

    t4.setText("");

    t5.setText("");

    t6.setText("");

    st.close();

}

if(ae.getSource() == b2){

```

```

        this.setVisible(false);

        new Home().setVisible(true);

    }

    con.c.close();

} catch (Exception e) {

}

}

}

```

ADD STUDENT.JAVA

```

package library.management.system;

import java.awt.*;

import javax.swing.*;

import javax.swing.border.*;

import java.awt.event.*;

import java.sql.*;

import java.util.*;

public class AddStudent extends JFrame implements ActionListener{

    private JPanel contentPane;

    private JTextField t1,t2,t3;

    private JComboBox comboBox, comboBox_1, comboBox_2, comboBox_3;

    JButton b1,b2;

```

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

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

```
public AddStudent() {  
    super("Add Student");  
    setBounds(700, 200, 550, 450);  
    contentPane = new JPanel();  
    contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));  
    setContentPane(contentPane);  
    contentPane.setLayout(null);  
  
    JLabel l1 = new JLabel("Student_id");  
    l1.setForeground(new Color(25, 25, 112));  
    l1.setFont(new Font("Tahoma", Font.BOLD, 14));  
    l1.setBounds(64, 63, 102, 22);  
    contentPane.add(l1);  
  
    JLabel l2 = new JLabel("Name");  
    l2.setForeground(new Color(25, 25, 112));  
    l2.setFont(new Font("Tahoma", Font.BOLD, 14));
```

```
l2.setBounds(64, 97, 102, 22);
```

```
contentPane.add(l2);
```

```
JLabel l3 = new JLabel("Father's Name");
```

```
l3.setForeground(new Color(25, 25, 112));
```

```
l3.setFont(new Font("Tahoma", Font.BOLD, 14));
```

```
l3.setBounds(64, 130, 102, 22);
```

```
contentPane.add(l3);
```

```
JLabel l4 = new JLabel("Branch");
```

```
l4.setForeground(new Color(25, 25, 112));
```

```
l4.setFont(new Font("Tahoma", Font.BOLD, 14));
```

```
l4.setBounds(64, 209, 102, 22);
```

```
contentPane.add(l4);
```

```
JLabel l5 = new JLabel("Year");
```

```
l5.setForeground(new Color(25, 25, 112));
```

```
l5.setFont(new Font("Tahoma", Font.BOLD, 14));
```

```
l5.setBounds(64, 242, 102, 22);
```

```
contentPane.add(l5);
```

```
JLabel l6 = new JLabel("Semester");
```

```
l6.setForeground(new Color(25, 25, 112));
```

```
l6.setFont(new Font("Tahoma", Font.BOLD, 14));
```

```
l6.setBounds(64, 275, 102, 22);
```

```
contentPane.add(l6);
```



```
t1 = new JTextField();

t1.setEditable(false);

t1.setForeground(new Color(47, 79, 79));

t1.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

t1.setBounds(174, 66, 156, 20);

contentPane.add(t1);

t1.setColumns(10);


t2 = new JTextField();

t2.setForeground(new Color(47, 79, 79));

t2.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

t2.setColumns(10);

t2.setBounds(174, 100, 156, 20);

contentPane.add(t2);


t3 = new JTextField();

t3.setForeground(new Color(47, 79, 79));

t3.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

t3.setColumns(10);

t3.setBounds(174, 133, 156, 20);

contentPane.add(t3);


comboBox = new JComboBox();

comboBox.setModel(new DefaultComboBoxModel(new String[] { "Mechanical", "CSE", "IT", "Civil",
"Automobile", "EEE", "Other" }));

comboBox.setForeground(new Color(47, 79, 79));

comboBox.setFont(new Font("Trebuchet MS", Font.BOLD, 14));
```

```

comboBox.setBounds(176, 211, 154, 20);

contentPane.add(comboBox);


comboBox_1 = new JComboBox();

comboBox_1.setModel(new DefaultComboBoxModel(new String[] { "First", "Second", "Third", "Four" }));

comboBox_1.setForeground(new Color(47, 79, 79));

comboBox_1.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

comboBox_1.setBounds(176, 244, 154, 20);

contentPane.add(comboBox_1);


comboBox_2 = new JComboBox();

comboBox_2.setModel(
    new DefaultComboBoxModel(new String[] { "1st", "2nd", "3rd", "4th", "5th", "6th",
"7th", "8th" }));

comboBox_2.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

comboBox_2.setForeground(new Color(47, 79, 79));

comboBox_2.setBounds(176, 277, 154, 20);

contentPane.add(comboBox_2);


b1 = new JButton("ADD");

b1.addActionListener(this);

b1.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

b1.setBounds(64, 321, 111, 33);

b1.setBackground(Color.BLACK);

b1.setForeground(Color.WHITE);

contentPane.add(b1);

```

```

b2 = new JButton("Back");

b2.addActionListener(this);

b2.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

b2.setBounds(198, 321, 111, 33);

b2.setBackground(Color.BLACK);

b2.setForeground(Color.WHITE);

contentPane.add(b2);


JLabel l7 = new JLabel("Course");

l7.setForeground(new Color(25, 25, 112));

l7.setFont(new Font("Tahoma", Font.BOLD, 14));

l7.setBounds(64, 173, 102, 22);

contentPane.add(l7);


comboBox_3 = new JComboBox();

comboBox_3.setModel(new DefaultComboBoxModel(

    new String[] { "B.E", "B.Tech", "M.Tech", "MBA", "BBA", "BCA", "B.Sc", "M.Sc", "B.Com",

"M.Com" }));

comboBox_3.setForeground(new Color(47, 79, 79));

comboBox_3.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

comboBox_3.setBounds(176, 176, 154, 20);

contentPane.add(comboBox_3);


JPanel panel = new JPanel();

panel.setBorder(new TitledBorder(new LineBorder(new Color(102, 205, 170), 2, true), "Add-Student",

    TitledBorder.LEADING, TitledBorder.TOP, null, new Color(30, 144, 255)));

panel.setBackground(new Color(211, 211, 211));

```

```

        panel.setBounds(10, 38, 358, 348);

        contentPane.setBackground(Color.WHITE);
        panel.setBackground(Color.WHITE);

        contentPane.add(panel);

        random();
    }

    public void actionPerformed(ActionEvent ae){
        try{

            if(ae.getSource() == b1){
                try{
                    conn con = new conn();

                    String sql = "insert into student(student_id, name, father, course, branch, year, semester) values(?, ?, ?, ?, ?, ?, ?)";

                    PreparedStatement st = con.c.prepareStatement(sql);

                    st.setString(1, t1.getText());

                    st.setString(2, t2.getText());

                    st.setString(3, t3.getText());

                    st.setString(4, (String) comboBox_3.getSelectedItem());

                    st.setString(5, (String) comboBox.getSelectedItem());

                    st.setString(6, (String) comboBox_1.getSelectedItem());

                    st.setString(7, (String) comboBox_2.getSelectedItem());

                    int i = st.executeUpdate();

```

```

        if (i > 0){

            JOptionPane.showMessageDialog(null, "Successfully Added");

            this.setVisible(false);

            new Home().setVisible(true);

        }

        else

            JOptionPane.showMessageDialog(null, "error");

    }catch(Exception e){

        e.printStackTrace();

    }

}

if(ae.getSource() == b2){

    this.setVisible(false);

    new Home().setVisible(true);

}

}catch(Exception e){

}

}

}

}

```

BOOKDETAILS.JAVA

```
package library.management.system;
```

```
import java.awt.*;
```

```
import javax.swing.*;
```

```

import javax.swing.border.*;

import net.proteanit.sql.DbUtils;

import java.sql.*;

import java.awt.event.*;

public class BookDetails extends JFrame implements ActionListener{

    private JPanel contentPane;

    private JTable table;

    private JTextField search;

    private JButton b1,b2,b3;

    public static void main(String[] args) {

        new BookDetails().setVisible(true);

    }

    public void Book() {

        try {

            conn con = new conn();

            String sql = "select * from book";

            PreparedStatement st = con.c.prepareStatement(sql);

            ResultSet rs = st.executeQuery();

            table.setModel(DbUtils.resultSetToTableModel(rs));

            rs.close();

            st.close();

            con.c.close();

```

```

    } catch (Exception e) {

    }

}

public BookDetails() {

    setBounds(350, 200, 890, 475);

    contentPane = new JPanel();

    contentPane.setBackground(Color.WHITE);

    contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));

    setContentPane(contentPane);

    contentPane.setLayout(null);


    JScrollPane scrollPane = new JScrollPane();

    scrollPane.setBounds(79, 133, 771, 282);

    contentPane.add(scrollPane);


    table = new JTable();

    table.addMouseListener(new MouseAdapter() {

@Override

public void mouseClicked(MouseEvent arg0) {

    int row = table.getSelectedRow();

        search.setText(table.getModel().getValueAt(row, 1).toString());

    }

});

    table.setBackground(new Color(240, 248, 255));

    table.setForeground(Color.DARK_GRAY);

```

```

table.setFont(new Font("Trebuchet MS", Font.BOLD, 16));

scrollPane.setViewportView(table);


JButton b1 = new JButton("Search");

b1.addActionListener(this);

b1.setBorder(new LineBorder(new Color(255, 20, 147), 2, true));

ImageIcon i1 = new
ImageIcon(ClassLoader.getResource("library/management/system/icons/eight.png"));

Image i2 = i1.getImage().getScaledInstance(20, 20, Image.SCALE_DEFAULT);

ImageIcon i3 = new ImageIcon(i2);

b1.setIcon(i3);

b1.setForeground(new Color(199, 21, 133));

b1.setFont(new Font("Trebuchet MS", Font.BOLD, 18));

b1.setBounds(564, 89, 138, 33);

contentPane.add(b1);


JButton b2 = new JButton("Delete");

b2.addActionListener(this);

ImageIcon i4 = new
ImageIcon(ClassLoader.getResource("library/management/system/icons/nineth.png"));

Image i5 = i4.getImage().getScaledInstance(30, 30, Image.SCALE_DEFAULT);

ImageIcon i6 = new ImageIcon(i5);

b2.setIcon(i6);

b2.setForeground(new Color(199, 21, 133));

b2.setFont(new Font("Trebuchet MS", Font.BOLD, 18));

b2.setBorder(new LineBorder(new Color(255, 20, 147), 2, true));

b2.setBounds(712, 89, 138, 33);

contentPane.add(b2);

```



```

JLabel l1 = new JLabel("Book Details");

l1.setForeground(new Color(107, 142, 35));

l1.setFont(new Font("Trebuchet MS", Font.BOLD | Font.ITALIC, 30));

l1.setBounds(300, 15, 400, 47);

contentPane.add(l1);


search = new JTextField();

search.setBackground(new Color(255, 240, 245));

search.setBorder(new LineBorder(new Color(255, 105, 180), 2, true));

search.setForeground(new Color(47, 79, 79));

search.setFont(new Font("Trebuchet MS", Font.BOLD | Font.ITALIC, 17));

search.setBounds(189, 89, 357, 33);

contentPane.add(search);

search.setColumns(10);


JLabel l3 = new JLabel("Back");

l3.addMouseListener(new MouseAdapter() {

    @Override

    public void mouseClicked(MouseEvent e) {

        setVisible(false);

        Home home = new Home();

        home.setVisible(true);

    }

});

```

```

        l3.setForeground(Color.GRAY);

        l3.setFont(new Font("Trebuchet MS", Font.BOLD, 18));

        ImageIcon i7 = new
        ImageIcon(ClassLoader.getResource("library/management/system/icons/tenth.png"));

        Image i8 = i7.getImage().getScaledInstance(20, 20, Image.SCALE_DEFAULT);

        ImageIcon i9 = new ImageIcon(i8);

        l3.setIcon(i9);

        l3.setBounds(97, 89, 72, 33);

        contentPane.add(l3);


        JPanel panel = new JPanel();

        panel.setBorder(new TitledBorder(new LineBorder(new Color(0, 128, 128), 3, true), "Book-Details",
                                           TitledBorder.LEADING, TitledBorder.TOP, null, new Color(0, 128, 0)));

        panel.setBounds(67, 54, 793, 368);

        contentPane.add(panel);

        panel.setBackground(Color.WHITE);

        Book();
    }

    public void actionPerformed(ActionEvent ae){

        try{

            conn con = new conn();

            if(ae.getSource() == b1){

                String sql = "select * from book where concat(name, book_id) like ?";

                PreparedStatement st = con.c.prepareStatement(sql);

```

```

        st.setString(1, "%" + search.getText() + "%");

        ResultSet rs = st.executeQuery();

        table.setModel(DbUtils.resultSetToTableModel(rs));

        rs.close();

        st.close();

    }

    if(ae.getSource() == b2){

        String sql = "delete from book where name = '" + search.getText() + "'";

        PreparedStatement st = con.c.prepareStatement(sql);

        JDialog.setDefaultLookAndFeelDecorated(true);

        int response = JOptionPane.showConfirmDialog(null, "Do you want to continue?", "Confirm",
        JOptionPane.YES_NO_OPTION, JOptionPane.QUESTION_MESSAGE);

        if (response == JOptionPane.NO_OPTION) {

            } else if (response == JOptionPane.YES_OPTION) {

                int rs = st.executeUpdate();

                JOptionPane.showMessageDialog(null, "Deleted !!");

            } else if (response == JOptionPane.CLOSED_OPTION) {

            }

            st.close();

        }
    }

```

```

        con.c.close();

    }catch(Exception e){

    }

}

}

```

ISSUEBOOK.JAVA

```

package library.management.system;

import java.awt.*;

import javax.swing.*;

import javax.swing.border.*;

import com.toedter.calendar.JDateChooser;

import java.awt.event.*;

import java.sql.*;

public class IssueBook extends JFrame implements ActionListener{

    private JPanel contentPane;

    JDateChooser dateChooser;

    private JTextField t1,t2,t3,t4,t5,t6,t7,t8,t9,t10,t11,t12,t13,t14;

    private JButton b1,b2,b3,b4;

    public static void main(String[] args) {

        new IssueBook().setVisible(true);
    }
}

```

```
}
```

```
public IssueBook() {  
    setBounds(300, 200, 900, 500);  
    contentPane = new JPanel();  
    contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));  
    setContentPane(contentPane);  
    contentPane.setBackground(Color.WHITE);  
    contentPane.setLayout(null);  
  
    JLabel l1 = new JLabel("Book_id");  
    l1.setFont(new Font("Tahoma", Font.BOLD, 14));  
    l1.setForeground(new Color(47, 79, 79));  
    l1.setBounds(47, 63, 100, 23);  
    contentPane.add(l1);  
  
    JLabel l2 = new JLabel("Name");  
    l2.setForeground(new Color(47, 79, 79));  
    l2.setFont(new Font("Tahoma", Font.BOLD, 14));  
    l2.setBounds(47, 97, 100, 23);  
    contentPane.add(l2);  
  
    JLabel l3 = new JLabel("ISBN");  
    l3.setForeground(new Color(47, 79, 79));  
    l3.setFont(new Font("Tahoma", Font.BOLD, 14));  
    l3.setBounds(47, 131, 100, 23);
```

```
contentPane.add(l3);
```

```
JLabel l4 = new JLabel("Publisher");
```

```
l4.setForeground(new Color(47, 79, 79));
```

```
l4.setFont(new Font("Tahoma", Font.BOLD, 14));
```

```
l4.setBounds(47, 165, 100, 23);
```

```
contentPane.add(l4);
```

```
JLabel l5 = new JLabel("Edition");
```

```
l5.setForeground(new Color(47, 79, 79));
```

```
l5.setFont(new Font("Tahoma", Font.BOLD, 14));
```

```
l5.setBounds(47, 199, 100, 23);
```

```
contentPane.add(l5);
```

```
JLabel l6 = new JLabel("Price");
```

```
l6.setForeground(new Color(47, 79, 79));
```

```
l6.setFont(new Font("Tahoma", Font.BOLD, 14));
```

```
l6.setBounds(47, 233, 100, 23);
```

```
contentPane.add(l6);
```

```
JLabel l7 = new JLabel("Pages");
```

```
l7.setForeground(new Color(47, 79, 79));
```

```
l7.setFont(new Font("Tahoma", Font.BOLD, 14));
```

```
l7.setBounds(47, 267, 100, 23);
```

```
contentPane.add(l7);
```

```
t1 = new JTextField();
```

```
t1.setForeground(new Color(47, 79, 79));

t1.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

t1.setBounds(126, 66, 86, 20);

contentPane.add(t1);


b1 = new JButton("Search");

b1.addActionListener(this);

b1.setBorder(new LineBorder(new Color(192, 192, 192), 1, true));

b1.setBackground(Color.BLACK);

b1.setForeground(Color.WHITE);

b1.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

b1.setBounds(234, 59, 100, 30);


contentPane.add(b1);


t2 = new JTextField();

t2.setEditable(false);

t2.setForeground(new Color(47, 79, 79));

t2.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

t2.setBounds(126, 100, 208, 20);

contentPane.add(t2);

t2.setColumns(10);


t3 = new JTextField();

t3.setEditable(false);

t3.setForeground(new Color(47, 79, 79));

t3.setFont(new Font("Trebuchet MS", Font.BOLD, 14));
```

```
t3.setColumns(10);

t3.setBounds(126, 131, 208, 20);

contentPane.add(t3);


t4 = new JTextField();

t4.setEditable(false);

t4.setForeground(new Color(47, 79, 79));

t4.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

t4.setColumns(10);

t4.setBounds(126, 168, 208, 20);

contentPane.add(t4);


t5 = new JTextField();

t5.setEditable(false);

t5.setForeground(new Color(47, 79, 79));

t5.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

t5.setColumns(10);

t5.setBounds(126, 202, 208, 20);

contentPane.add(t5);


t6 = new JTextField();

t6.setEditable(false);

t6.setForeground(new Color(47, 79, 79));

t6.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

t6.setColumns(10);

t6.setBounds(126, 236, 208, 20);

contentPane.add(t6);
```



```

t7 = new JTextField();

t7.setEditable(false);

t7.setForeground(new Color(47, 79, 79));

t7.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

t7.setColumns(10);

t7.setBounds(126, 270, 208, 20);

contentPane.add(t7);


JPanel panel = new JPanel();

panel.setBorder(new TitledBorder(new LineBorder(new Color(47, 79, 79), 2, true), "Issue-Book",
                                     TitledBorder.LEADING, TitledBorder.TOP, null, new Color(34, 139, 34)));

panel.setFont(new Font("Tahoma", Font.BOLD, 14));

panel.setBounds(10, 38, 345, 288);

panel.setBackground(Color.WHITE);

contentPane.add(panel);


JLabel l8 = new JLabel("Student_id");

l8.setForeground(new Color(47, 79, 79));

l8.setFont(new Font("Tahoma", Font.BOLD, 14));

l8.setBounds(384, 63, 100, 23);

contentPane.add(l8);


JLabel l9 = new JLabel("Name");

l9.setForeground(new Color(47, 79, 79));

l9.setFont(new Font("Tahoma", Font.BOLD, 14));

l9.setBounds(384, 103, 100, 23);

```

```
contentPane.add(l9);
```

```
JLabel l10 = new JLabel("Father's Name");  
l10.setForeground(new Color(47, 79, 79));  
l10.setFont(new Font("Tahoma", Font.BOLD, 14));  
l10.setBounds(384, 147, 100, 23);  
contentPane.add(l10);
```

```
JLabel l11 = new JLabel("Course");  
l11.setForeground(new Color(47, 79, 79));  
l11.setFont(new Font("Tahoma", Font.BOLD, 14));  
l11.setBounds(384, 187, 100, 23);  
contentPane.add(l11);
```

```
JLabel l12 = new JLabel("Branch");  
l12.setForeground(new Color(47, 79, 79));  
l12.setFont(new Font("Tahoma", Font.BOLD, 14));  
l12.setBounds(384, 233, 100, 23);  
contentPane.add(l12);
```

```
JLabel l13 = new JLabel("Year");  
l13.setForeground(new Color(47, 79, 79));  
l13.setFont(new Font("Tahoma", Font.BOLD, 14));  
l13.setBounds(384, 284, 100, 23);  
contentPane.add(l13);
```

```
JLabel l14 = new JLabel("Semester");
```

```
l14.setForeground(new Color(47, 79, 79));

l14.setFont(new Font("Tahoma", Font.BOLD, 14));

l14.setBounds(384, 336, 100, 23);

contentPane.add(l14);


t8 = new JTextField();

t8.setForeground(new Color(47, 79, 79));

t8.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

t8.setColumns(10);

t8.setBounds(508, 66, 86, 20);

contentPane.add(t8);


b2 = new JButton("Search");

b2.addActionListener(this);

b2.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

b2.setBorder(new LineBorder(new Color(192, 192, 192), 1, true));

b2.setBounds(604, 59, 100, 30);

b2.setBackground(Color.BLACK);

b2.setForeground(Color.WHITE);

contentPane.add(b2);


t9 = new JTextField();

t9.setForeground(new Color(47, 79, 79));

t9.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

t9.setEditable(false);

t9.setColumns(10);

t9.setBounds(508, 106, 208, 20);
```

```
contentPane.add(t9);
```

```
t10 = new JTextField();
```

```
t10.setForeground(new Color(47, 79, 79));
```

```
t10.setFont(new Font("Trebuchet MS", Font.BOLD, 14));
```

```
t10.setEditable(false);
```

```
t10.setColumns(10);
```

```
t10.setBounds(508, 150, 208, 20);
```

```
contentPane.add(t10);
```

```
t11 = new JTextField();
```

```
t11.setForeground(new Color(47, 79, 79));
```

```
t11.setFont(new Font("Trebuchet MS", Font.BOLD, 14));
```

```
t11.setEditable(false);
```

```
t11.setColumns(10);
```

```
t11.setBounds(508, 190, 208, 20);
```

```
contentPane.add(t11);
```

```
t12 = new JTextField();
```

```
t12.setForeground(new Color(47, 79, 79));
```

```
t12.setFont(new Font("Trebuchet MS", Font.BOLD, 14));
```

```
t12.setEditable(false);
```

```
t12.setColumns(10);
```

```
t12.setBounds(508, 236, 208, 20);
```

```
contentPane.add(t12);
```

```
t13 = new JTextField();
```

```

t13.setForeground(new Color(47, 79, 79));

t13.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

t13.setEditable(false);

t13.setColumns(10);

t13.setBounds(508, 286, 208, 20);

contentPane.add(t13);


t14 = new JTextField();

t14.setForeground(new Color(47, 79, 79));

t14.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

t14.setEditable(false);

t14.setColumns(10);

t14.setBounds(508, 338, 208, 20);

contentPane.add(t14);


JPanel panel_1 = new JPanel();

panel_1.setBorder(new TitledBorder(new LineBorder(new Color(70, 130, 180), 2, true), "Student-
Deatails",

                                TitledBorder.LEADING, TitledBorder.TOP, null, new Color(100, 149, 237)));

panel_1.setForeground(new Color(0, 100, 0));

panel_1.setBounds(360, 38, 378, 372);

panel_1.setBackground(Color.WHITE);

contentPane.add(panel_1);


JLabel l15 = new JLabel(" Date of Issue :");

l15.setForeground(new Color(105, 105, 105));

l15.setFont(new Font("Trebuchet MS", Font.BOLD, 15));

```

```

l15.setBounds(20, 340, 118, 26);

contentPane.add(l15);


dateChooser = new JDateChooser();

dateChooser.setBorder(new LineBorder(new Color(0, 0, 0), 1, true));

dateChooser.setForeground(new Color(105, 105, 105));

dateChooser.setBounds(137, 337, 200, 29);

contentPane.add(dateChooser);


b3 = new JButton("Issue");

b3.addActionListener(this);

b3.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

b3.setBorder(new LineBorder(new Color(192, 192, 192), 1, true));

b3.setBounds(47, 377, 118, 33);

b3.setBackground(Color.BLACK);

b3.setForeground(Color.WHITE);

contentPane.add(b3);


b4 = new JButton("Back");

b4.addActionListener(this);

b4.setFont(new Font("Trebuchet MS", Font.BOLD, 14));

b4.setBorder(new LineBorder(new Color(192, 192, 192), 1, true));

b4.setBounds(199, 377, 100, 33);

b4.setBackground(Color.BLACK);

b4.setForeground(Color.WHITE);

contentPane.add(b4);

}

```

```

public void actionPerformed(ActionEvent ae){

    try{

        conn con = new conn();

        if(ae.getSource() == b1){

            String sql = "select * from book where book_id = ?";

            PreparedStatement st = con.c.prepareStatement(sql);

            st.setString(1, t1.getText());

            ResultSet rs = st.executeQuery();

            while (rs.next()) {

                t2.setText(rs.getString("name"));

                t3.setText(rs.getString("isbn"));

                t4.setText(rs.getString("publisher"));

                t5.setText(rs.getString("edition"));

                t6.setText(rs.getString("price"));

                t7.setText(rs.getString("pages"));

            }

            st.close();

            rs.close();

        }

        if(ae.getSource() == b2){

            String sql = "select * from student where student_id = ?";

            PreparedStatement st = con.c.prepareStatement(sql);

            st.setString(1, t8.getText());

            ResultSet rs = st.executeQuery();

```

```

while (rs.next()) {

    t9.setText(rs.getString("name"));

    t10.setText(rs.getString("father"));

    t11.setText(rs.getString("course"));

    t12.setText(rs.getString("branch"));

    t13.setText(rs.getString("year"));

    t14.setText(rs.getString("semester"));

    }

    st.close();

    rs.close();

}

if(ae.getSource() == b3){

    try{

        String sql = "insert into issueBook(book_id, student_id, bname, sname, course, branch, dateOfIssue)
values(?, ?, ?, ?, ?, ?, ?)";

        PreparedStatement st = con.c.prepareStatement(sql);

        st.setString(1, t1.getText());

        st.setString(2, t8.getText());

        st.setString(3, t2.getText());

        st.setString(4, t9.getText());

        st.setString(5, t11.getText());

        st.setString(6, t12.getText());

        st.setString(7, ((JTextField) dateChooser.getDateEditor().getUiComponent()).getText());

        int i = st.executeUpdate();

        if (i > 0)

```



```

        JOptionPane.showMessageDialog(null, "Successfully Book Issued..!");

        else

        JOptionPane.showMessageDialog(null, "error");

    }catch(Exception e){

        e.printStackTrace();

    }

}

if(ae.getSource() == b4){

    this.setVisible(false);

    new Home().setVisible(true);

}

con.c.close();

}catch(Exception e){

}

}

}

```

RETURNBOOK.JAVA

```

package library.management.system;

import javax.swing.*;

import javax.swing.border.*;

import java.awt.*;

import com.toedter.calendar.JDateChooser;

```

```

import java.awt.event.*;

import java.sql.*;

public class ReturnBook extends JFrame implements ActionListener{

    private JPanel contentPane;

    private JTextField textField;

    private JTextField textField_1;

    private JTextField textField_2;

    private JTextField textField_3;

    private JTextField textField_4;

    private JTextField textField_5;

    private JTextField textField_6;

    private JButton b1,b2,b3;

    private JDateChooser dateChooser;

    public static void main(String[] args) {

        new ReturnBook().setVisible(true);

    }

    public void delete() {

        try {

            conn con = new conn();

            String sql = "delete from issueBook where book_id=?";

            PreparedStatement st = con.c.prepareStatement(sql);

            st.setString(1, textField.getText());

            int i = st.executeUpdate();

```

```

        if (i > 0)

            JOptionPane.showConfirmDialog(null, "Book Returned");

        else

            JOptionPane.showMessageDialog(null, "error in Deleting");

    } catch (SQLException e) {

        JOptionPane.showMessageDialog(null, e);

        e.printStackTrace();

    }

}

```

```

public ReturnBook() {

    setBounds(450, 300, 617, 363);

    contentPane = new JPanel();

    contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));

    setContentPane(contentPane);

    contentPane.setBackground(Color.WHITE);

    contentPane.setLayout(null);


    JLabel lblNewLabel = new JLabel("Book_id");

    lblNewLabel.setForeground(new Color(0, 0, 0));

    lblNewLabel.setFont(new Font("Tahoma", Font.BOLD, 14));

    lblNewLabel.setBounds(52, 52, 87, 24);

    contentPane.add(lblNewLabel);


    JLabel lblStudentid = new JLabel("Student_id");

    lblStudentid.setForeground(Color.BLACK);

```

```
lblStudentid.setFont(new Font("Tahoma", Font.BOLD, 14));  
  
lblStudentid.setBounds(243, 52, 87, 24);  
  
contentPane.add(lblStudentid);
```

```
JLabel lblBook = new JLabel("Book");  
  
lblBook.setForeground(Color.BLACK);  
  
lblBook.setFont(new Font("Tahoma", Font.BOLD, 14));  
  
lblBook.setBounds(52, 98, 71, 24);  
  
contentPane.add(lblBook);
```

```
JLabel lblName = new JLabel("Name");  
  
lblName.setForeground(Color.BLACK);  
  
lblName.setFont(new Font("Tahoma", Font.BOLD, 14));  
  
lblName.setBounds(300, 98, 71, 24);  
  
contentPane.add(lblName);
```

```
JLabel lblCourse = new JLabel("Course");  
  
lblCourse.setForeground(Color.BLACK);  
  
lblCourse.setFont(new Font("Tahoma", Font.BOLD, 14));  
  
lblCourse.setBounds(52, 143, 87, 24);  
  
contentPane.add(lblCourse);
```

```
JLabel lblBranch = new JLabel("Branch");  
  
lblBranch.setForeground(Color.BLACK);  
  
lblBranch.setFont(new Font("Tahoma", Font.BOLD, 14));  
  
lblBranch.setBounds(303, 144, 68, 24);  
  
contentPane.add(lblBranch);
```

```
JLabel lblDateOfIssue = new JLabel("Date of Issue");  
  
lblDateOfIssue.setForeground(Color.BLACK);  
  
lblDateOfIssue.setFont(new Font("Tahoma", Font.BOLD, 14));  
  
lblDateOfIssue.setBounds(52, 188, 105, 29);  
  
contentPane.add(lblDateOfIssue);
```

```
JLabel lblDateOfReturn = new JLabel("Date of Return");  
  
lblDateOfReturn.setForeground(Color.BLACK);  
  
lblDateOfReturn.setFont(new Font("Tahoma", Font.BOLD, 14));  
  
lblDateOfReturn.setBounds(52, 234, 118, 29);  
  
contentPane.add(lblDateOfReturn);
```

```
textField = new JTextField();  
  
textField.setForeground(new Color(105, 105, 105));  
  
textField.setFont(new Font("Trebuchet MS", Font.BOLD, 14));  
  
textField.setBounds(128, 56, 105, 20);  
  
contentPane.add(textField);  
  
textField.setColumns(10);
```

```
textField_1 = new JTextField();  
  
textField_1.setForeground(new Color(105, 105, 105));  
  
textField_1.setFont(new Font("Trebuchet MS", Font.BOLD, 14));  
  
textField_1.setBounds(340, 56, 93, 20);  
  
contentPane.add(textField_1);  
  
textField_1.setColumns(10);
```

```
b1 = new JButton("Search");

b1.addActionListener(this);

b1.setBounds(443, 52, 105, 29);

b1.setBackground(Color.BLACK);

b1.setForeground(Color.WHITE);

contentPane.add(b1);


textField_2 = new JTextField();

textField_2.setEditable(false);

textField_2.setForeground(new Color(0, 100, 0));

textField_2.setFont(new Font("Trebuchet MS", Font.BOLD, 13));

textField_2.setBounds(128, 102, 162, 20);

contentPane.add(textField_2);

textField_2.setColumns(10);


textField_3 = new JTextField();

textField_3.setEditable(false);

textField_3.setForeground(new Color(0, 100, 0));

textField_3.setFont(new Font("Trebuchet MS", Font.BOLD, 13));

textField_3.setColumns(10);

textField_3.setBounds(369, 102, 179, 20);

contentPane.add(textField_3);


textField_4 = new JTextField();

textField_4.setEditable(false);

textField_4.setForeground(new Color(0, 100, 0));

textField_4.setFont(new Font("Trebuchet MS", Font.BOLD, 13));
```

```
textField_4.setColumns(10);

textField_4.setBounds(128, 147, 162, 20);

contentPane.add(textField_4);


textField_5 = new JTextField();

textField_5.setForeground(new Color(0, 100, 0));

textField_5.setFont(new Font("Trebuchet MS", Font.BOLD, 13));

textField_5.setEditable(false);

textField_5.setColumns(10);

textField_5.setBounds(369, 147, 179, 20);

contentPane.add(textField_5);


textField_6 = new JTextField();

textField_6.setForeground(new Color(0, 100, 0));

textField_6.setFont(new Font("Trebuchet MS", Font.BOLD, 13));

textField_6.setEditable(false);

textField_6.setColumns(10);

textField_6.setBounds(167, 194, 162, 20);

contentPane.add(textField_6);


dateChooser = new JDateChooser();

dateChooser.setBorder(new LineBorder(new Color(0, 0, 0), 0, true));

dateChooser.setBounds(167, 234, 172, 29);

contentPane.add(dateChooser);


b2 = new JButton("Return");

b2.addActionListener(this);
```

```

        b2.setFont(new Font("Trebuchet MS", Font.BOLD, 15));

        b2.setBorder(new LineBorder(new Color(0, 0, 0), 0, true));

        b2.setBounds(369, 179, 149, 30);

b2.setBackground(Color.BLACK);

b2.setForeground(Color.WHITE);


        contentPane.add(b2);


        b3 = new JButton("Back");

        b3.addActionListener(this);

        b3.setFont(new Font("Trebuchet MS", Font.BOLD, 15));

        b3.setBorder(new LineBorder(new Color(0, 0, 0), 0, true));

        b3.setBounds(369, 231, 149, 30);

b3.setBackground(Color.BLACK);

b3.setForeground(Color.WHITE);

        contentPane.add(b3);


        JPanel panel = new JPanel();

        panel.setBorder(new TitledBorder(new LineBorder(new Color(255, 69, 0), 2, true), "Return-Panel",

                TitledBorder.LEADING, TitledBorder.TOP, null, new Color(220, 20, 60)));

        panel.setBounds(10, 24, 569, 269);

        panel.setBackground(Color.WHITE);

        contentPane.add(panel);

    }


    public void actionPerformed(ActionEvent ae){

        try{

```



```

conn con = new conn();

if(ae.getSource() == b1){

    String sql = "select * from issueBook where student_id = ? and book_id=?";

    PreparedStatement st = con.c.prepareStatement(sql);

    st.setString(1, textField_1.getText());

    st.setString(2, textField.getText());

    ResultSet rs = st.executeQuery();

    while (rs.next()) {

        textField_2.setText(rs.getString("bname"));

        textField_3.setText(rs.getString("sname"));

        textField_4.setText(rs.getString("course"));

        textField_5.setText(rs.getString("branch"));

        textField_6.setText(rs.getString("dateOfIssue"));

    }

    st.close();

    rs.close();

}

if(ae.getSource() == b2){

    String sql = "insert into returnBook(book_id, student_id, bname, sname,course, branch, dateOfIssue,
dateOfReturn) values(?, ?, ?, ?, ?, ?, ?, ?)";

    PreparedStatement st = con.c.prepareStatement(sql);

    st.setString(1, textField.getText());

    st.setString(2, textField_1.getText());

    st.setString(3, textField_2.getText());

    st.setString(4, textField_3.getText());

```

```

        st.setString(5, textField_4.getText());

        st.setString(6, textField_5.getText());

        st.setString(7, textField_6.getText());


        st.setString(8, ((JTextField) dateChooser.getDateEditor().getUiComponent()).getText());

        int i = st.executeUpdate();

        if (i > 0) {

            JOptionPane.showMessageDialog(null, "Processing..");

            delete();

        } else

            JOptionPane.showMessageDialog(null, "error");

    }

    if(ae.getSource() == b3){

        this.setVisible(false);

        new Home().setVisible(true);

    }

} catch(Exception e){

}

}

}

```

STATISTICS.JAVA

```
package library.management.system;
```

```

import java.awt.*;

import java.sql.*;

import javax.swing.*;

import javax.swing.border.*;

import net.proteanit.sql.DbUtils;

import java.awt.event.*;


public class Statistics extends JFrame{


    private JPanel contentPane;

    private JTable table;

    private JTable table_1;


    public static void main(String[] args) {

        new Statistics().setVisible(true);

    }


    public void issueBook() {

        try {

            Conn con = new Conn();

            String sql = "select * from issueBook";

            PreparedStatement st = con.c.prepareStatement(sql);

            ResultSet rs = st.executeQuery();

            table.setModel(DbUtils.resultSetToTableModel(rs));


        } catch (Exception e) {

```

```

        // TODO: handle exception
    }
}

public void returnBook() {
    try {
        conn con = new conn();

        String sql = "select * from returnBook";

        PreparedStatement st = con.c.prepareStatement(sql);

        ResultSet rs = st.executeQuery();

        table_1.setModel(DbUtils.resultSetToTableModel(rs));

    } catch (Exception e) {

        // TODO: handle exception

    }
}

```

```

public Statistics() {
    setBounds(400, 200, 810, 594);

    contentPane = new JPanel();

    contentPane.setBackground(Color.WHITE);

    contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));

    setContentPane(contentPane);

    contentPane.setLayout(null);


    JScrollPane scrollPane = new JScrollPane();

    scrollPane.setBounds(40, 51, 708, 217);

    contentPane.add(scrollPane);
}

```

```

table = new JTable();

table.setBackground(new Color(224, 255, 255));

table.setForeground(new Color(128, 128, 0));

table.setFont(new Font("Trebuchet MS", Font.BOLD, 15));

scrollPane.setViewportView(table);


JPanel panel = new JPanel();

panel.setBorder(new TitledBorder(new LineBorder(new Color(47, 79, 79), 2, true), "Issue-Book-Details",
                                TitledBorder.LEADING, TitledBorder.TOP, null, new Color(0, 128, 128)));

panel.setForeground(new Color(0, 128, 128));

panel.setBounds(26, 36, 737, 240);

panel.setBackground(Color.WHITE);

contentPane.add(panel);


JLabel l1 = new JLabel("Back");

l1.addMouseListener(new MouseAdapter() {

@Override

public void mouseClicked(MouseEvent arg0) {

    setVisible(false);

    Home home = new Home();

    home.setVisible(true);

}

});

l1.setForeground(new Color(204, 0, 102));

l1.setFont(new Font("Tahoma", Font.BOLD, 18));

```

```

        ImageIcon i1 = new
ImageIcon(ClassLoader.getResource("library/management/system/icons/tenth.png"));

        Image i2 = i1.getImage().getScaledInstance(20, 20, Image.SCALE_DEFAULT);

        ImageIcon i3 = new ImageIcon(i2);

        l1.setIcon(i3);

        l1.setBounds(690, 13, 96, 27);

        contentPane.add(l1);


        JScrollPane scrollPane_1 = new JScrollPane();

        scrollPane_1.setBounds(40, 316, 717, 217);

        contentPane.add(scrollPane_1);


        table_1 = new JTable();

        table_1.setBackground(new Color(204, 255, 255));

        table_1.setForeground(new Color(153, 51, 0));

        table_1.setFont(new Font("Sitka Small", Font.BOLD, 12));

        scrollPane_1.setViewportView(table_1);


        JPanel panel_1 = new JPanel();

        panel_1.setBorder(new TitledBorder(new LineBorder(new Color(0, 204, 153), 2, true), "Return-Book-
Details",

        TitledBorder.RIGHT, TitledBorder.TOP, null, new Color(0, 102, 51)));

        panel_1.setBounds(22, 299, 741, 240);

        panel_1.setBackground(Color.WHITE);

        contentPane.add(panel_1);


        issueBook();

```

```
        returnBook();  
    }  
}
```

STUDENTDETAILS.JAVA

```
/*  
 * 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 library.management.system;  
  
  
import java.awt.*;  
  
import java.awt.event.*;  
  
import java.sql.*;  
  
import javax.swing.*;  
  
import javax.swing.border.*;  
  
import net.proteanit.sql.DbUtils;  
  
  
public class StudentDetails extends JFrame implements ActionListener{  
  
    private JPanel contentPane;  
  
    private JTable table;  
  
    private JTextField search;  
  
    private JButton b1,b2;
```

```

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

public void student() {
    try {
        conn con = new conn();

        String sql = "select * from student";

        PreparedStatement st = con.c.prepareStatement(sql);

        ResultSet rs = st.executeQuery();

        table.setModel(DbUtils.resultSetToTableModel(rs));

        rs.close();

        st.close();

        con.c.close();
    } catch (Exception e) {

    }
}

```

```

public StudentDetails() {
    setBounds(350, 200, 890, 475);

    contentPane = new JPanel();

    contentPane.setBackground(new Color(220, 220, 220));

    contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));

    setContentPane(contentPane);
}

```



```

contentPane.setBackground(Color.WHITE);

        contentPane.setLayout(null);


        JScrollPane scrollPane = new JScrollPane();

        scrollPane.setBounds(79, 133, 771, 288);

        contentPane.add(scrollPane);


        table = new JTable();

        table.addMouseListener(new MouseAdapter() {

@Override

public void mouseClicked(MouseEvent arg0) {

        int row = table.getSelectedRow();

                search.setText(table.getModel().getValueAt(row, 1).toString());

        }

});

        table.setBackground(new Color(240, 248, 255));

        table.setForeground(Color.DARK_GRAY);

        table.setFont(new Font("Trebuchet MS", Font.BOLD, 16));

        scrollPane.setViewportView(table);


        JButton b1 = new JButton("Search");

        b1.addActionListener(this);

        b1.setBorder(new LineBorder(new Color(255, 20, 147), 2, true));

        ImageIcon i1 = new
ImageIcon(ClassLoader.getResource("library/management/system/icons/eight.png"));

        Image i2 = i1.getImage().getScaledInstance(20, 20, Image.SCALE_DEFAULT);

        ImageIcon i3 = new ImageIcon(i2);

```

```

b1.setIcon(i3);

b1.setForeground(new Color(199, 21, 133));

b1.setFont(new Font("Trebuchet MS", Font.BOLD, 18));

b1.setBounds(564, 89, 138, 33);

contentPane.add(b1);


JButton b2 = new JButton("Delete");

b2.addActionListener(this);

ImageIcon i4 = new
ImageIcon(ClassLoader.getResource("library/management/system/icons/nineth.png"));

Image i5 = i4.getImage().getScaledInstance(30, 30, Image.SCALE_DEFAULT);

ImageIcon i6 = new ImageIcon(i5);

b2.setIcon(i6);

b2.setForeground(new Color(199, 21, 133));

b2.setFont(new Font("Trebuchet MS", Font.BOLD, 18));

b2.setBorder(new LineBorder(new Color(255, 20, 147), 2, true));

b2.setBounds(712, 89, 138, 33);

contentPane.add(b2);


JLabel l1 = new JLabel("Student Details");

l1.setForeground(new Color(102, 205, 170));

l1.setFont(new Font("Trebuchet MS", Font.BOLD | Font.ITALIC, 26));

l1.setBounds(250, 20, 400, 47);

contentPane.add(l1);


search = new JTextField();

```

```

search.setBackground(new Color(255, 240, 245));

search.setBorder(new LineBorder(new Color(255, 105, 180), 2, true));

search.setForeground(new Color(47, 79, 79));

search.setFont(new Font("Trebuchet MS", Font.BOLD | Font.ITALIC, 17));

search.setBounds(189, 89, 357, 33);

contentPane.add(search);

search.setColumns(10);


JLabel l2 = new JLabel("Back");

l2.addMouseListener(new MouseAdapter() {

@Override

public void mouseClicked(MouseEvent e) {

setVisible(false);

Home home = new Home();

home.setVisible(true);

}

});

l2.setForeground(Color.GRAY);

l2.setFont(new Font("Trebuchet MS", Font.BOLD, 18));

ImageIcon i7 = new
ImageIcon(ClassLoader.getResource("library/management/system/icons/tenth.png"));

Image i8 = i7.getImage().getScaledInstance(20, 20, Image.SCALE_DEFAULT);

ImageIcon i9 = new ImageIcon(i8);

l2.setIcon(i9);

l2.setBounds(97, 89, 72, 33);

contentPane.add(l2);

```

```

JPanel panel = new JPanel();

panel.setBorder(new TitledBorder(new LineBorder(new Color(95, 158, 160), 3, true), "Student-Deatails",

        TitledBorder.LEADING, TitledBorder.TOP, null, new Color(72, 209, 204)));

panel.setBounds(68, 59, 790, 370);

panel.setBackground(Color.WHITE);

contentPane.add(panel);

student();

}

```

```

public void actionPerformed(ActionEvent ae){

    try{

        conn con = new conn();

        if( ae.getSource() == b1){

            String sql = "select * from student where concat(name, student_id) like ?";

            PreparedStatement st = con.c.prepareStatement(sql);

            st.setString(1, "%" + search.getText() + "%");

            ResultSet rs = st.executeQuery();

            table.setModel(DbUtils.resultSetToTableModel(rs));

            rs.close();

            st.close();

        }

```

```

        if(ae.getSource() == b2){

            String sql = "delete from student where name = '" + search.getText() + "'";

```

```

        PreparedStatement st = con.c.prepareStatement(sql);

        JDialog.setDefaultLookAndFeelDecorated(true);

        int response = JOptionPane.showConfirmDialog(null, "Do you want to continue?", "Confirm",
        JOptionPane.YES_NO_OPTION, JOptionPane.QUESTION_MESSAGE);

        if (response == JOptionPane.NO_OPTION) {

            } else if (response == JOptionPane.YES_OPTION) {

            int rs = st.executeUpdate();

            JOptionPane.showMessageDialog(null, "Deleted !!");

            } else if (response == JOptionPane.CLOSED_OPTION) {

            }

            st.close();

        }

        con.c.close();

    }catch(Exception e){

    }

}
}
}

```

ABOUTUS.JAVA

```
package library.management.system;
```

```
import java.awt.*;
```

```

import javax.swing.*;

import javax.swing.border.*;

public class aboutUs extends JFrame{

    private JPanel contentPane;

    public static void main(String[] args) {

        new aboutUs().setVisible(true);

    }

    public aboutUs() {

        super("About Us - Pranshu Mishra");

        setIconImage(Toolkit.getDefaultToolkit().getImage("C:\\Users\\ram\\Desktop\\rohit.jpg"));

        setBackground(new Color(173, 216, 230));

        setBounds(500, 250, 700, 500);

        contentPane = new JPanel();

        setContentPane(contentPane);

        contentPane.setLayout(null);

        JLabel l1 = new JLabel("New label");

        ImageIcon i1 = new
        ImageIcon(ClassLoader.getResource("library/management/system/icons/logo.png"));

        Image i2 = i1.getImage().getScaledInstance(100, 100,Image.SCALE_DEFAULT);

        ImageIcon i3 = new ImageIcon(i2);

```

```
l1 = new JLabel(i3);  
  
l1.setBounds(500, 40, 100, 100);  
  
contentPane.add(l1);
```

```
JLabel l3 = new JLabel("Library");  
  
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("Mangement 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 : Pranshu Mishra");  
  
l6.setFont(new Font("Trebuchet MS", Font.BOLD, 30));  
  
l6.setBounds(70, 198, 600, 35);
```

```

        contentPane.add(l6);

        JLabel l7 = new JLabel("Email : pranshu1mishra123@gmail.com");

        l7.setFont(new Font("Trebuchet MS", Font.BOLD, 20));

        l7.setBounds(70, 260, 600, 34);

        contentPane.add(l7);

        contentPane.setBackground(Color.WHITE);

    }

}

```

CONN.JAVA

```

package library.management.system;

import java.sql.*;

public class conn{

    Connection c;

    Statement s;

    public conn(){

        try{

            Class.forName("com.mysql.jdbc.Driver");

            c=DriverManager.getConnection("jdbc:mysql:///project7","root","");

            s=c.createStatement();

        }

        catch(Exception e){

            System.out.println(e);

        }

    }

}

```


DATABASE CODING:

book:

```
create table book(book_id varchar(10), name varchar(40), isbn  
varchar(20), publisher varchar(30), edition varchar(10), price  
varchar(10), pages varchar(10));
```

student:

```
create table student(student_id varchar(10), name varchar(25),  
father varchar(25), course varchar(10), branch varchar(10), year  
varchar(10), semester varchar(10));
```

issueBook:

```
create table issueBook(book_id varchar(10), student_id  
varchar(10), bname varchar(40), sname varchar(40), course  
varchar(20), branch varchar(10), dateOfIssue DATE);
```

returnBook:

```
create table returnBook(book_id varchar(10), student_id  
varchar(10), bname varchar(40), sname varchar(40), course  
varchar(20), branch varchar(10), dateOfIssue varchar(30),  
dateOfReturn varchar(30));
```

account:

```
create table account(username varchar(20), name varchar(25),  
password varchar(25), sec_q varchar(25), sec_ans varchar(25));
```