

SUBJECT: CORE JAVA
JAVA PROJECT: LIBRARY MANAGEMENT SYSTEM
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//Library Management System Welcome Page

```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
class aa extends JFrame
{
aa()
{
JPanel p=new JPanel();
p.setLayout(null);

JLabel l=new JLabel("Welcome to Library Management System");
JLabel l1=new JLabel("What you want to do");
JButton b1=new JButton("ADMIN LOGIN");
JButton b2=new JButton("LIBRARIAN LOGIN");

b1.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e1)
{
aa1 am=new aa1();
am.setSize(1366,728);
am.setVisible(true);
am.setTitle("ADMIN LOGIN PAGE");
am.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
}});

b2.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e2)
{
l1 l1=new l1();
l1.setSize(1366,728);
l1.setVisible(true);
l1.setTitle("LIBRARIAN LOGIN PAGE");
l1.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
}});

l.setFont(new Font("Ariel",Font.BOLD,50));
l1.setFont(new Font("Ariel",10,40));
b1.setFont(new Font("Times New Roman",Font.BOLD,20));
b2.setFont(new Font("Times New Roman",Font.BOLD,20));

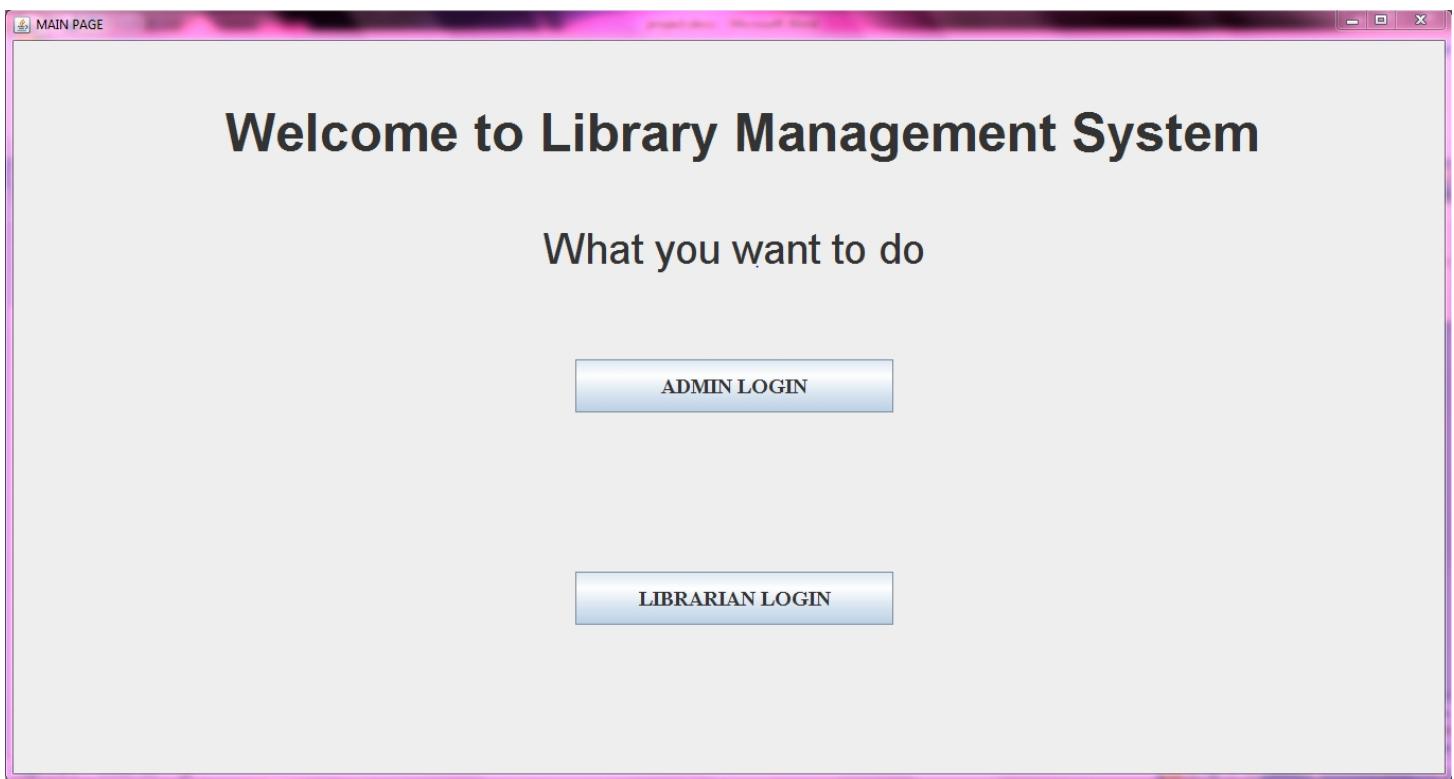
b2.setBounds(530,500,300,50);
l.setBounds(200,50,1300,70);
l1.setBounds(500,170,1300,50);
b1.setBounds(530,300,300,50);
```

```

p.add(l);
p.add(l1);
p.add(b1);
p.add(b2);

setContentPane(p);
}
}
}
class lm1
{
public static void main(String[] ar)
{
aa f=new aa();
f.setSize(1366,728);
f.setVisible(true);
f.setTitle("MAIN PAGE");
f.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
}
}

```



FOR ADMIN

//Library Management System Admin Login

```

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

class aa1 extends JFrame

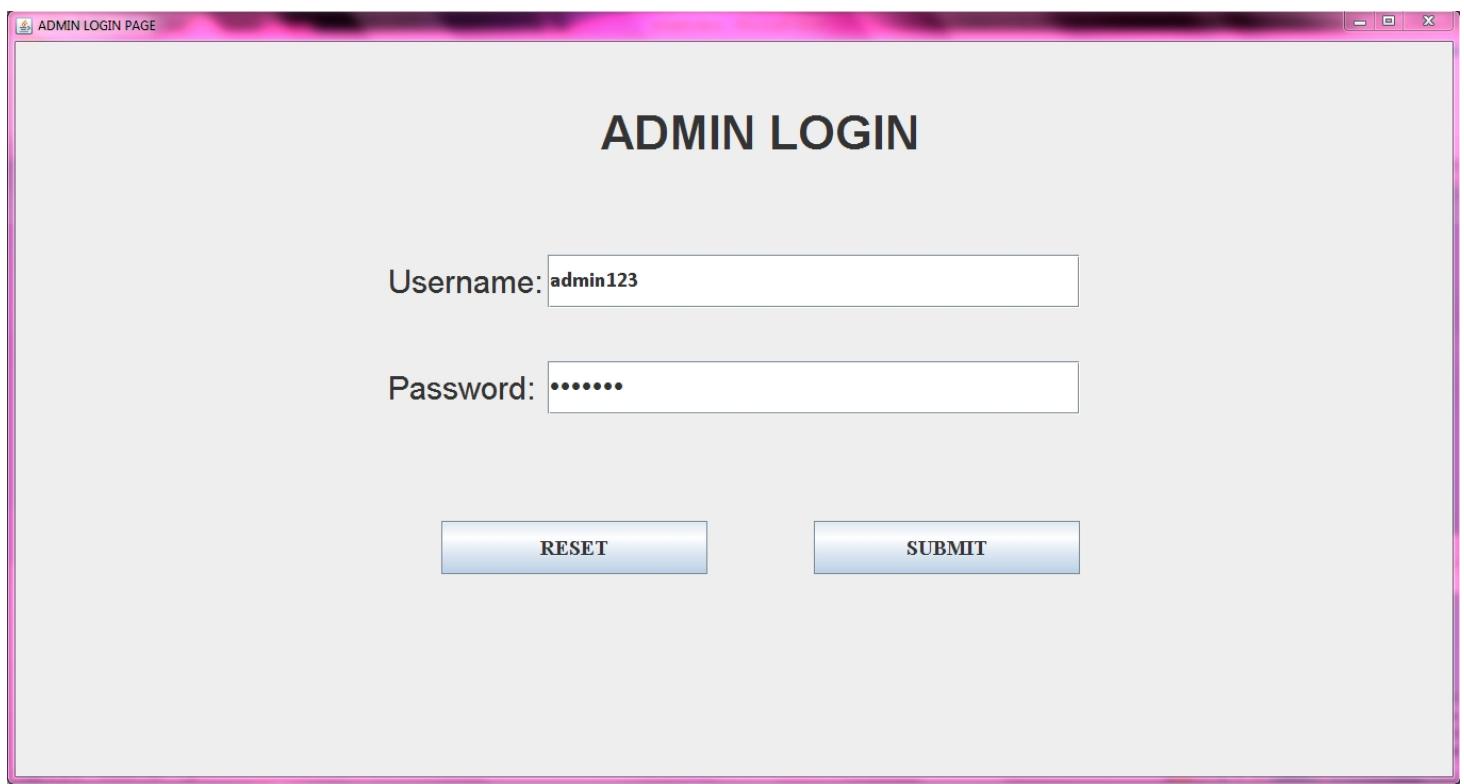
```

```
{  
aa1()  
{  
JPanel p=new JPanel();  
p.setLayout(null);  
JLabel l=new JLabel("ADMIN LOGIN");  
JLabel l1=new JLabel("Username:");  
l.setFont(new Font("Arial",Font.BOLD,45));  
l1.setFont(new Font("Arial",10,30));  
l.setBounds(550,50,1300,70);  
l1.setBounds(350,200,300,50);  
p.add(l);  
p.add(l1);  
final JTextField t1=new JTextField(25);  
t1.setFont(new Font("Calibri",Font.BOLD,20));  
t1.setBounds(500,200,500,50);  
p.add(t1);  
JLabel l2=new JLabel("Password:");  
l2.setFont(new Font("Arial",10,30));  
l2.setBounds(350,300,300,50);  
p.add(l2);  
final JPasswordField t2=new JPasswordField(25);  
t2.setFont(new Font("Calibri",Font.BOLD,20));  
t2.setBounds(500,300,500,50);  
p.add(t2);  
final JLabel l3=new JLabel();  
l3.setFont(new Font("Arial",10,30));  
l3.setBounds(550,550,1300,50);  
 JButton b1=new JButton("RESET");  
b1.addActionListener(new ActionListener()  
{  
public void actionPerformed(ActionEvent e1)  
{  
t1.setText("");  
t2.setText("");  
l3.setText("");  
}});  
b1.setFont(new Font("Times New Roman",Font.BOLD,20));  
b1.setBounds(400,450,250,50);  
p.add(b1);  
 JButton b2=new JButton("SUBMIT");  
b2.addActionListener(new ActionListener()  
{  
public void actionPerformed(ActionEvent e1)  
{  
String i=t1.getText();  
String j=t2.getText();  
if((i.compareTo("admin123")==0)&&(j.compareTo("1234567")==0))  
{  
l3.setText("");  
aa2 f1=new aa2();  
f1.setSize(1366,728);  
f1.setVisible(true);  
f1.setTitle("ADMIN ACTIONS PAGE");  
}});
```

```

f1.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
dispose();
}
else
{
l3.setText("Invalid Username/Password");
}
});
b2.setFont(new Font("Times New Roman",Font.BOLD,20));
b2.setBounds(750,450,250,50);
p.add(b2);
p.add(l3);
setContentPane(p);
}
}

```



Errors:

- **Invalid Username/Password** – Wrong Username and/or Password

//Library Management System Admin Action Buttons

```

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

class aa2 extends JFrame
{
aa2()
{
JPanel p=new JPanel();
p.setLayout(null);

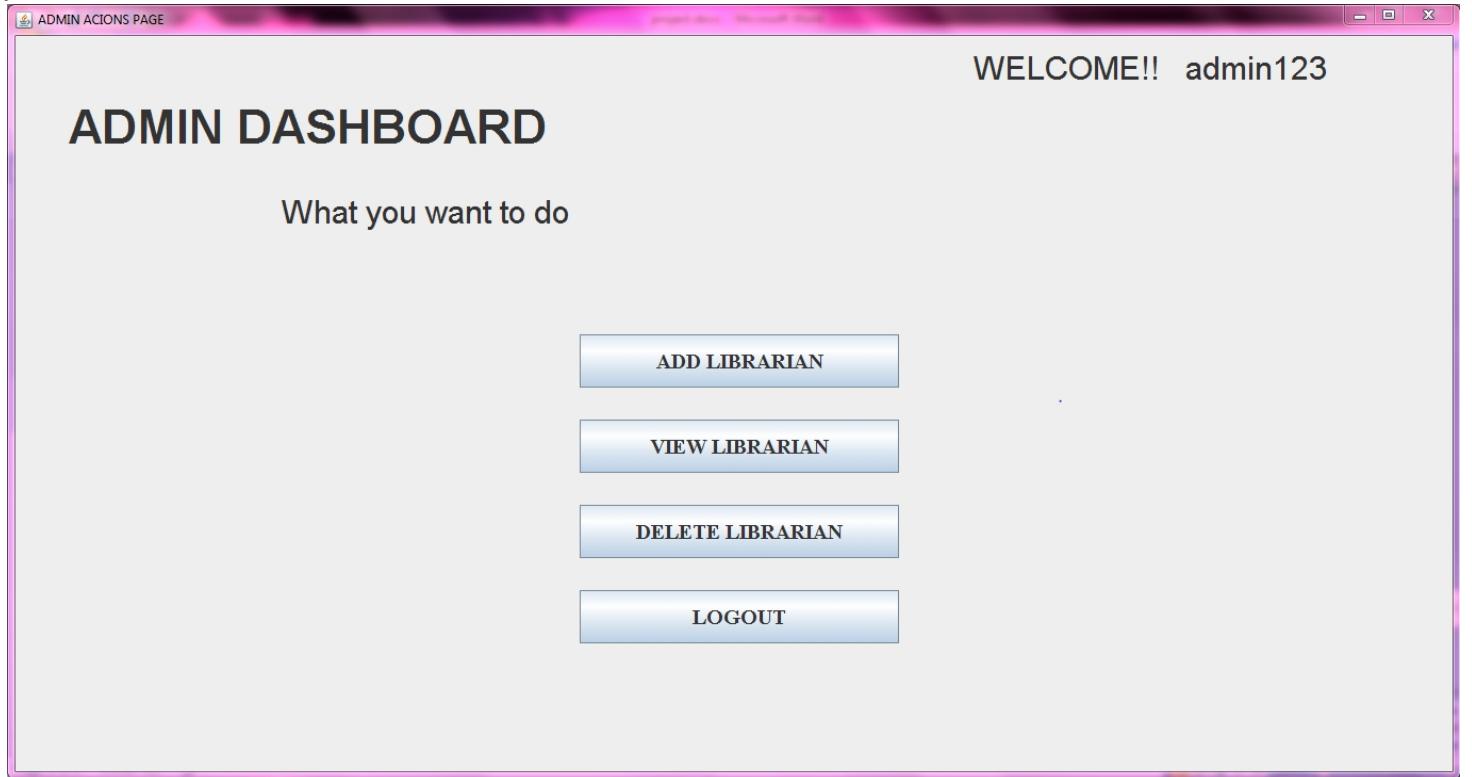
```

```
JLabel rt=new JLabel("WELCOME!! admin123");
rt.setFont(new Font("Arial",10,30));
rt.setBounds(900,10,400,40);
p.add(rt);
JLabel l=new JLabel("ADMIN DASHBOARD");
JLabel l1=new JLabel("What you want to do");
l.setFont(new Font("Arial",Font.BOLD,45));
l1.setFont(new Font("Arial",10,30));
l.setBounds(50,50,1300,70);
l1.setBounds(250,140,300,50);
p.add(l);
p.add(l1);
JButton b1=new JButton("ADD LIBRARIAN");
b1.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e1)
{
aa3 f2=new aa3();
f2.setSize(1366,728);
f2.setVisible(true);
f2.setTitle("ADD LIBRARIAN PAGE");
f2.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
}});
b1.setFont(new Font("Times New Roman",Font.BOLD,20));
b1.setBounds(530,280,300,50);
p.add(b1);
JButton b2=new JButton("VIEW LIBRARIAN");
b2.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e2)
{
aa4 f3=new aa4();
f3.setSize(1366,728);
f3.setVisible(true);
f3.setTitle("VIEW LIBRARIAN PAGE");
f3.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
}});
b2.setFont(new Font("Times New Roman",Font.BOLD,20));
b2.setBounds(530,360,300,50);
p.add(b2);
JButton b3=new JButton("DELETE LIBRARIAN");
b3.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e3)
{
aa5 f1=new aa5();
f1.setSize(1366,728);
f1.setVisible(true);
f1.setTitle("DELETE LIBRARIAN PAGE");
f1.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
}});
b3.setFont(new Font("Times New Roman",Font.BOLD,20));
b3.setBounds(530,440,300,50);
p.add(b3);
```

```

JButton b4=new JButton("LOGOUT");
b4.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e3)
{
dispose();
}});
b4.setFont(new Font("Times New Roman",Font.BOLD,20));
b4.setBounds(530,520,300,50);
p.add(b4);
setContentPane(p);
}
}

```



//Library Management System Adding Librarian

```

import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import java.io.*;
import java.sql.*;
import java.lang.*;

class aa3 extends JFrame
{
int count,flag,cd,us;
aa3()
{
JPanel p=new JPanel();
p.setLayout(null);
JLabel l=new JLabel("ADD LIBRARIAN");
JLabel l1=new JLabel("Name: ");

```

```
final JTextField t1=new JTextField(25);
t1.setFont(new Font("Calibri",Font.BOLD,20));
t1.setBounds(500,230,500,50);
p.add(t1);
l.setFont(new Font("Arial",Font.BOLD,45));
l1.setFont(new Font("Arial",10,30));
l1.setBounds(350,230,300,50);

l.setBounds(550,50,1300,70);

p.add(l);
p.add(l1);
JLabel l5=new JLabel("ID:");
l5.setFont(new Font("Arial",10,30));
l5.setBounds(350,160,300,50);
p.add(l5);
final JTextField t5=new JTextField(25);
t5.setFont(new Font("Calibri",Font.BOLD,20));
t5.setBounds(500,160,500,50);
t5.setToolTipText("Must contain digits only.");
p.add(t5);
JLabel l2=new JLabel("Username:");
l2.setFont(new Font("Arial",10,30));
l2.setBounds(350,300,300,50);
p.add(l2);
final JTextField t2=new JTextField(25);
t2.setFont(new Font("Calibri",Font.BOLD,20));
t2.setBounds(500,300,500,50);
t2.setToolTipText("Must Be 5 to 10 characters long. Should include Alphabets and Numbers");
p.add(t2);
JLabel l3=new JLabel("Password:");
final JTextField t3=new JTextField(25);
final JLabel l4=new JLabel();
l3.setFont(new Font("Arial",10,30));
l3.setBounds(350,370,300,50);
t3.setFont(new Font("Calibri",Font.BOLD,20));
t3.setBounds(500,370,500,50);
t3.setToolTipText("Must Be 7 to 25 characters long. Can be Number, Alphabets, Special Characters, or Combinations of all.");
p.add(l3);
p.add(t3);
JLabel l6=new JLabel("Mobile No.:");
l6.setFont(new Font("Arial",10,30));
l6.setBounds(350,440,300,50);
p.add(l6);
final JTextField t6=new JTextField(25);
t6.setFont(new Font("Calibri",Font.BOLD,20));
t6.setToolTipText("Must Be 10 digits long.");
t6.setBounds(500,440,500,50);
p.add(t6);
l4.setFont(new Font("Arial",10,30));
l4.setBounds(450,640,1300,50);
JButton b1=new JButton("RESET");
b1.addActionListener(new ActionListener())
```

```
{  
public void actionPerformed(ActionEvent e1)  
{  
t1.setText("");  
t2.setText("");  
t3.setText("");  
l4.setText("");  
t5.setText("");  
t6.setText("");  
});  
b1.setFont(new Font("Times New Roman",Font.BOLD,20));  
b1.setBounds(400,540,250,50);  
p.add(b1);  
JButton b2=new JButton("SUBMIT");  
b2.addActionListener(new ActionListener()  
{  
public void actionPerformed(ActionEvent e1)  
{  
String name=t1.getText();  
String user=t2.getText();  
String pass=t3.getText();  
String id=t5.getText();  
String mob=t6.getText();  
flag=0;  
try  
{  
Connection conn1=DriverManager.getConnection("jdbc:ucanaccess://Database3.accdb");  
Statement sc1=conn1.createStatement();  
ResultSet rs=sc1.executeQuery("select * from library");  
while(rs.next())  
{  
if((rs.getString(1).equals(id)))  
    flag=1;  
if(rs.getString(3).equals(user))  
    flag=2;  
}  
}  
catch(Exception e)  
{  
e.printStackTrace();  
}  
if((id.compareTo("")!=0)&&(name.compareTo("")!=0)&&(user.compareTo("")!=0)&&(pass.compareTo("")!=0)&&(mob.co  
mpareTo("")!=0))  
{  
if(flag!=2)  
{  
if((flag==0))  
{  
    if(pass.length()>=7&&pass.length()<=25)  
    {  
if((mob.length())==10))  
{  
    count=0;  
    cd=0;
```

```

us=0;
for(int i=0;i<mob.length();i++)
{
    char c=mob.charAt(i);
    if(Character.isDigit(c))
    {
        count++;
    }
}
for(int i=0;i<id.length();i++)
{
    char c=id.charAt(i);
    if(Character.isDigit(c))
    {
        cd++;
    }
}
for(int i=0;i<user.length();i++)
{
    char c=user.charAt(i);
    if(Character.isDigit(c))
    {
        us++;
    }
    if(Character.isLetter(c))
    {
        us++;
    }
}
if(cd==id.length())
{
    if(us==user.length())
    {
        if(us>=5&&us<=10)
        {
}
if(count==10)
{
try
{
Connection conn=DriverManager.getConnection("jdbc:ucanaccess://Database3.accdb");
Statement sc=conn.createStatement();
String s="insert into library values('"+id+"','"+name+"','"+user+"','"+pass+"','"+mob+"')";
sc.executeUpdate(s);
aa6 f2=new aa6();
f2.setSize(1366,728);
f2.setVisible(true);
f2.setTitle("LIBRARIAN ADDED PAGE");
f2.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
dispose();
}
catch(Exception e)
{
}
}

```

```

e.printStackTrace();
}
}
else
{
    l4.setText("INVALID MOBILE NUMBER");
}
}
else
{
    l4.setText("USERNAME NOT WITHIN RANGE");
    }
    else
    {
        l4.setText("INVALID USERNAME");
    }
}
else
{
l4.setText("INVALID ID...CANNOT INCLUDE CHARACTER");
}
else
{
    l4.setText("INVALID MOBILE NUMBER");
    }
    else
{
    l4.setText("PASSWORD NOT WITHIN LIMITS MENTIONED");
    }
    else
    {
        l4.setText("ID ALREADY EXISTS");
    }
}
else
{
    l4.setText("USERNAME ALREADY EXISTS");
}
}
else
{
    l4.setText("INVALID LIBRARIAN DETAILS");
}
});
b2.setFont(new Font("Times New Roman",Font.BOLD,20));
b2.setBounds(750,540,250,50);
p.add(b2);
p.add(l4);
setContentPane(p);
}
}

```

ADD LIBRARIAN PAGE

ADD LIBRARIAN

ID:

Name:

Username:

Password: Must Be 7 to 25 characters long. Can be Number, Alphabets, Special Characters, or Combinations of all.

Mobile No.:

Errors:

- **INVALID MOBILE NUMBER** – Mobile Number is not 10 DIGITS long.
- **USERNAME NOT WITHIN RANGE** – Username not 5 to 10 characters long.
- **INVALID USERNAME** – Username is not a combination of DIGITS and ALPHABETS only.
- **INVALID ID...CANNOT INCLUDE CHARACTER** – ID doesnot include only DIGITS.
- **PASSWORD NOT WITHIN LIMINTS MENTIONED** – Not 7 to 25 charactes long.
- **INVALID LIBRARIAN DETAILS** – Any Field left blank.
- **ID ALREADY EXISTS**
- **USERNAME ALREADY EXISTS**

//Library Management System ADDED LIBRARIAN

```

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

class aa6 extends JFrame
{
aa6()
{
JPanel p=new JPanel();
p.setLayout(null);
JLabel l=new JLabel("LIBRARIAN ADDED SUCCESSFULLY");
l.setFont(new Font("Ariel",Font.BOLD,50));
l.setBounds(300,200,1300,70);
p.add(l);

JButton b1=new JButton("ADD ANOTHER");
b1.addActionListener(new ActionListener()
{

```

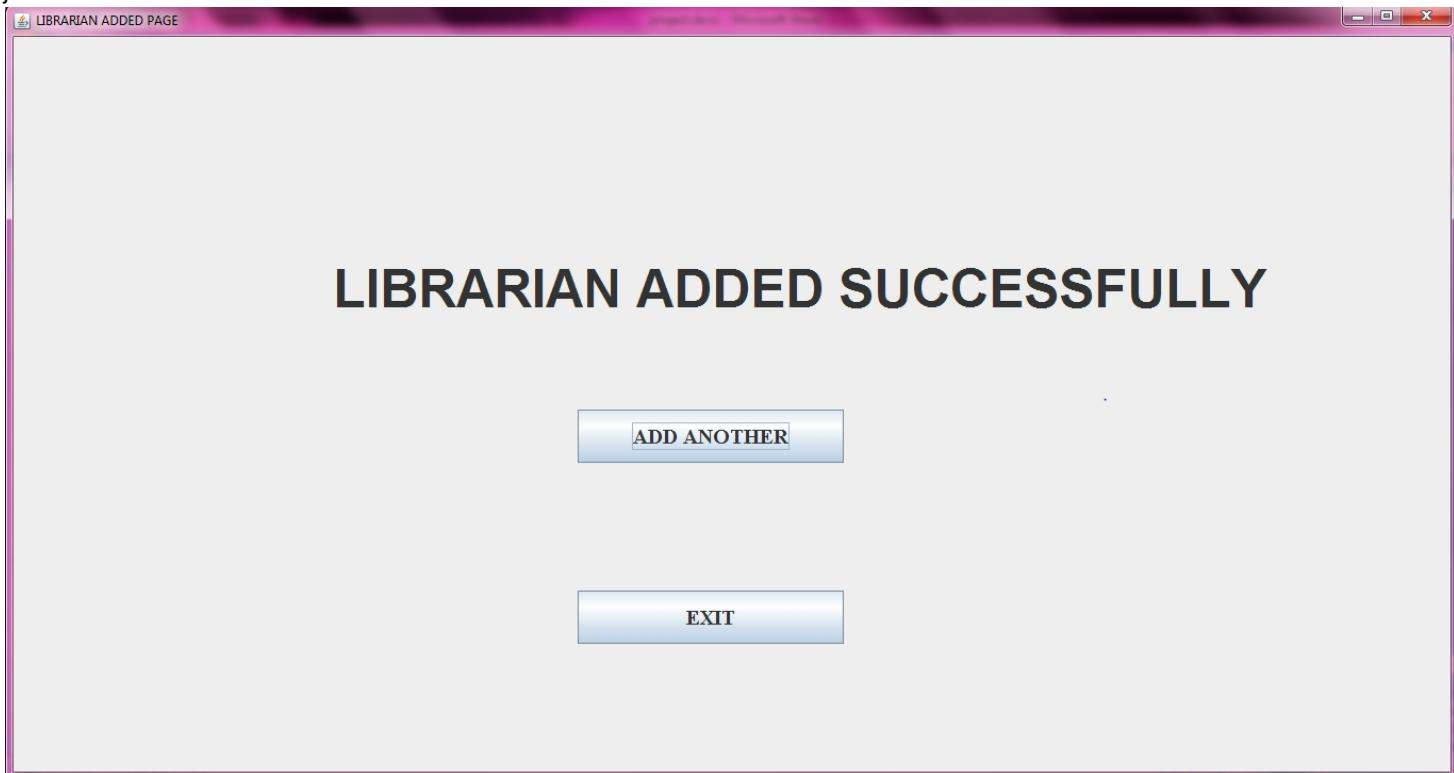
```

public void actionPerformed(ActionEvent e)
{
    aa3 f2=new aa3();
f2.setSize(1366,728);
f2.setVisible(true);
    f2.setTitle("ADD LIBRARIAN PAGE");
f2.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
dispose();
}
});

b1.setFont(new Font("Times New Roman",Font.BOLD,20));
b1.setBounds(530,350,250,50);
p.add(b1);
JButton b2=new JButton("EXIT");
b2.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent e)
    {

        dispose();
    }
});
b2.setFont(new Font("Times New Roman",Font.BOLD,20));
b2.setBounds(530,520,250,50);
p.add(b2);
setContentPane(p);
}
}

```



When we click "ADD ANOTHER"

ADD LIBRARIAN PAGE

ADD LIBRARIAN

ID:

Name:

Username:

Password: Must Be 7 to 25 characters long. Can be Number, Alphabets, Special Characters, or Combinations of all.

Mobile No.:

When we click "EXIT"

ADMIN ACTIONS PAGE

WELCOME!! admin123

ADMIN DASHBOARD

What you want to do

//Library Management System View Librarian

```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import java.lang.*;
import java.io.*;
```

```

import java.sql.*;

class aa4 extends JFrame
{
aa4()
{
JPanel p=new JPanel();
p.setLayout(null);
JTextArea t=new JTextArea(400,300);
t.setFont(new Font("Arial",Font.BOLD,20));
JScrollPane r=new
JScrollPane(t,JScrollPane.VERTICAL_SCROLLBAR_ALWAYS,JScrollPane.HORIZONTAL_SCROLLBAR_NEVER);
r.setBounds(30,50,1270,600);
p.add(r);
try
{
t.append("ID \t|\t Name \t|\t Username \t|\t Password \t|\t Mobile No\n");
t.append("-----\n");
t.append("-----\n");
Connection c=DriverManager.getConnection("jdbc:ucanaccess://Database3.accdb");
Statement st=c.createStatement();
ResultSet rs=st.executeQuery("select * from library");
while(rs.next())
{
    t.append(rs.getString(1) + "\t|\t" + rs.getString(2) + "\t|\t" +rs.getString(3) + "\t|\t" +rs.getString(4) + "\t|\t"
+rs.getString(5) + "\n");
    t.append("-----");
    t.append("-----\n");
}
}
catch(Exception e)
{
e.printStackTrace();
}
setContentPane(p);
}
}

```

VIEW LIBRARIAN PAGE

ID	Name	Username	Password	Mobile No
1	shrey	shrey123	1234567	9779925915
2	ray	ray123	1234567	9872992914
34	shrey	shrey125	shrey12345	9872874748
39	ray	dghry33	shrey256	9872998291

//Library Management System Delete Librarian

```

import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import java.lang.*;
import java.io.*;
import java.sql.*;

class aa5 extends JFrame
{
int flag;
aa5()
{
flag=0;
final JButton b1=new JButton("Submit");
JPanel p=new JPanel();
p.setLayout(null);
ImageIcon pic=new ImageIcon("fired.jpg");
final JLabel l3=new JLabel(pic);
l3.setBounds(10,70,420,500);
p.add(l3);
JLabel l=new JLabel("Delete Librarian");
l.setFont(new Font("Arial",Font.BOLD,45));
l.setBounds(550,50,1300,70);
p.add(l);
final JLabel l1=new JLabel("ID: ");
final JTextField t1=new JTextField(25);
t1.setFont(new Font("Calibri",Font.BOLD,20));
t1.setBounds(550,300,500,50);
p.add(t1);
l1.setFont(new Font("Arial",10,30));

```

```

l1.setBounds(500,300,300,50);
p.add(l1);
final JTextArea t=new JTextArea(400,300);
t.setFont(new Font("Arial",Font.BOLD,20));
t.setBounds(20,200,1300,300);
t.setVisible(false);
p.add(t);
final JLabel l2=new JLabel("");
l2.setFont(new Font("Arial",10,30));
l2.setBounds(530,550,1300,50);
l2.setVisible(false);
p.add(l2);

final JButton b2=new JButton("YES");

final JButton b3=new JButton("NO");
b3.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent g)
    {
        t.setText("");
        t1.setText("");
        l1.setVisible(true);
        t1.setVisible(true);
        b1.setVisible(true);
        l2.setVisible(false);
        b2.setVisible(false);
        t.setVisible(false);
        b3.setVisible(false);
        l3.setVisible(true);
    }
});

b3.setFont(new Font("Times New Roman",Font.BOLD,20));
b3.setBounds(1000,600,100,40);
b3.setVisible(false);
p.add(b3);

b1.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent y)
    {

try
{
    t.setText("");

t.append("ID \t|\t Name \t|\t Username \t|\t Password \t|\t Mobile No\n");
t.append("-----");
t.append("-----\n");
Connection c=DriverManager.getConnection("jdbc:ucanaccess://Database3.accdb");

```

```

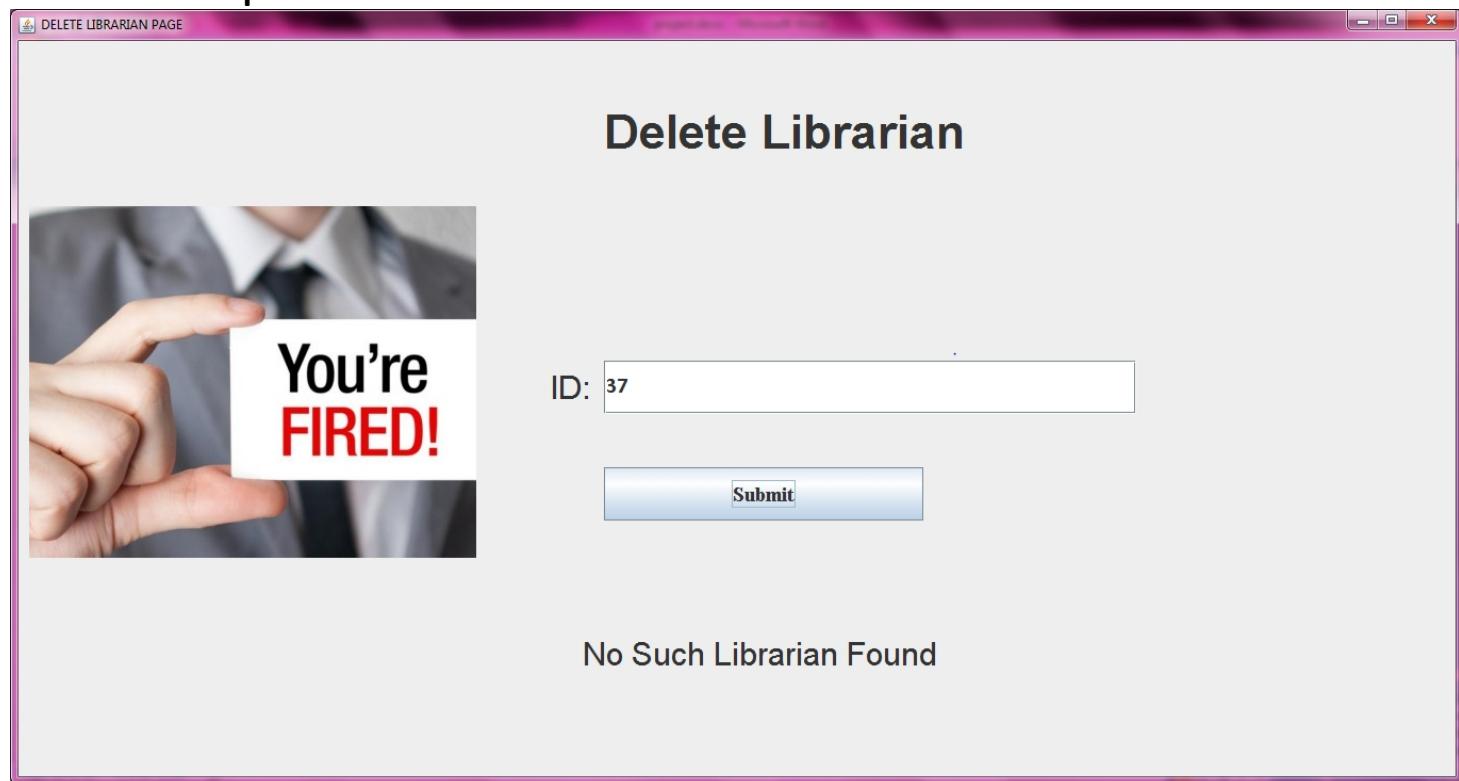
Statement st=c.createStatement();
ResultSet rs=st.executeQuery("select * from library where ID='"+t1.getText()+"'");
while(rs.next())
{
    t.append(rs.getString(1) + "\t|\t" + rs.getString(2) + "\t|\t" +rs.getString(3) + "\t|\t" +rs.getString(4) + "\t|\t"
+rs.getString(5) + "\n");
    t.append("-----");
t.append("-----\n");
    if((rs.getString(1)).equals(t1.getText()))
        flag=1;
}
if((flag==1)&&((t1.getText()).compareTo("")!=0))
{
l2.setText("Are you sure to delete Librarian");
l1.setVisible(false);
    t1.setVisible(false);
    b1.setVisible(false);
    l3.setVisible(false);
b2.setVisible(true);
    b3.setVisible(true);
    t.setVisible(true);
l2.setVisible(true);
}
else
{
    l2.setText("No Such Librarian Found");
    l2.setVisible(true);
    l1.setVisible(true);
        t1.setVisible(true);
        b1.setVisible(true);
}}
catch(Exception e)
{
e.printStackTrace();
}}));
b1.setFont(new Font("Times New Roman",Font.BOLD,20));
b1.setBounds(550,400,300,50);
p.add(b1);
b2.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent g)
    {
try
{
Connection c1=DriverManager.getConnection("jdbc:ucanaccess://Database3.accdb");
Statement st1=c1.createStatement();
String o="delete * from library where ID='"+t1.getText()+"'";
st1.executeUpdate(o);
aa7 f2=new aa7();
    f2.setSize(1366,728);
    f2.setVisible(true);
}

```

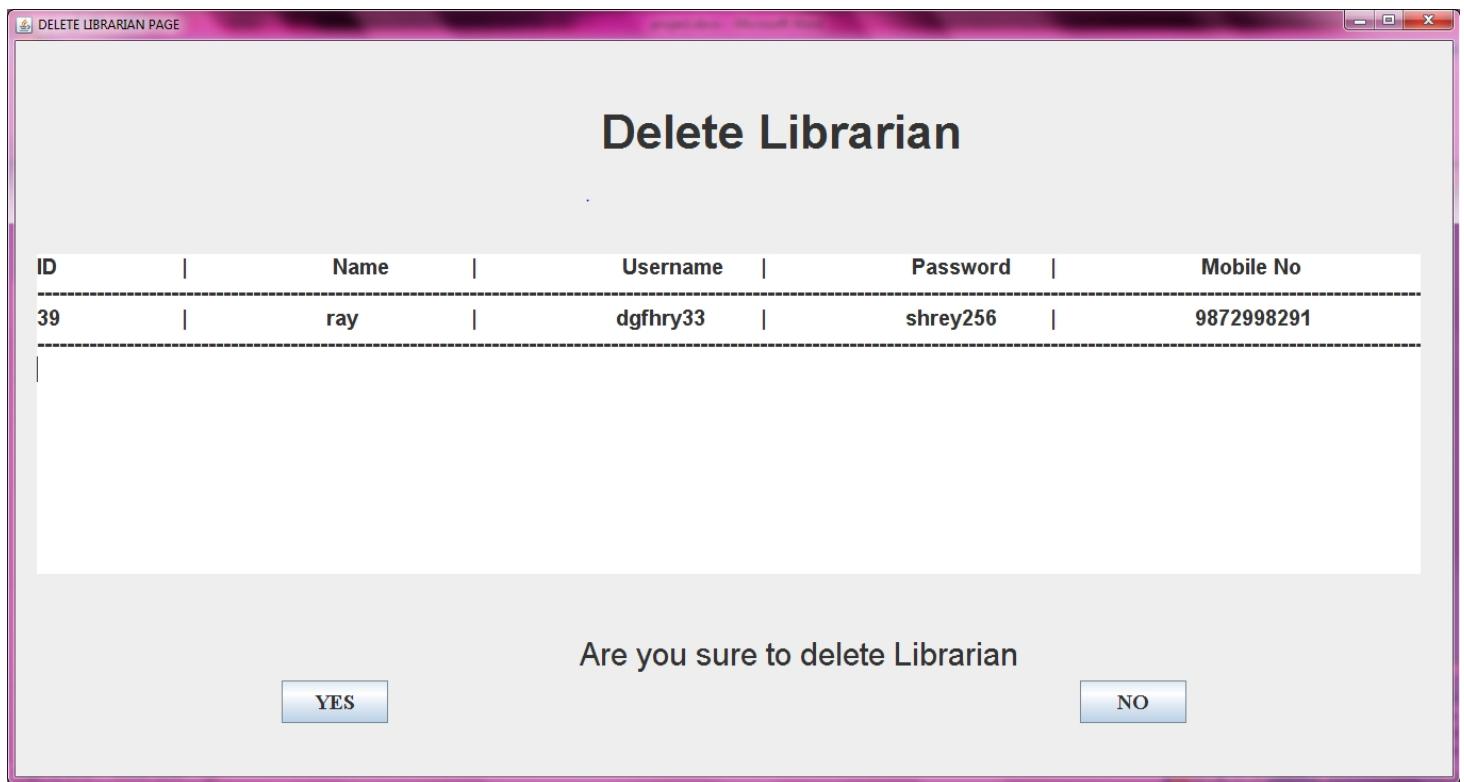
```
f2.setTitle("LIBRARIAN DELETED PAGE");
f2.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
dispose();
}
catch(Exception u)
{
u.printStackTrace();
}}});
b2.setFont(new Font("Times New Roman",Font.BOLD,20));
b2.setBounds(250,600,100,40);
b2.setVisible(false);
p.add(b2);

setContentPane(p);
}
}
```

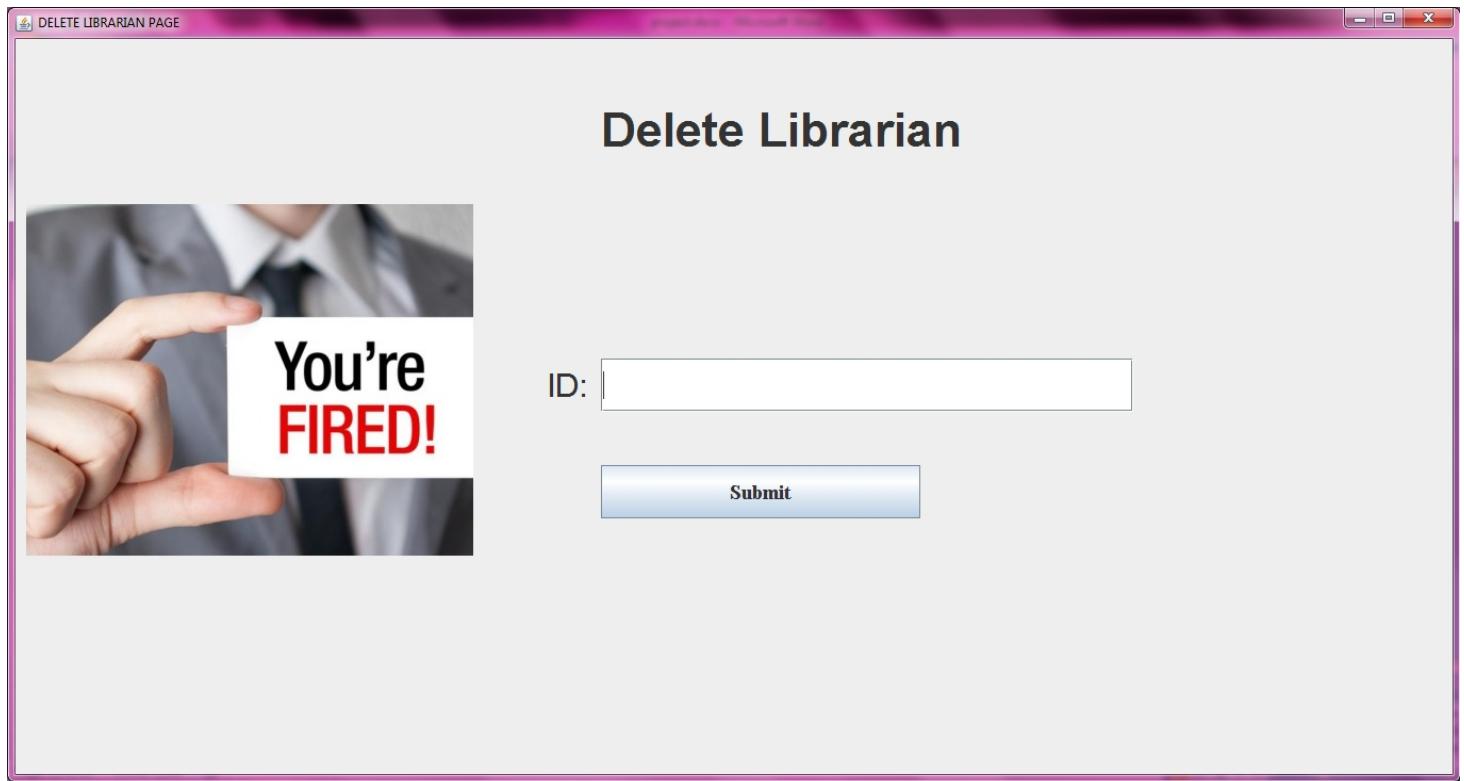
When ID is not present



If ID EXISTS



When clicked NO



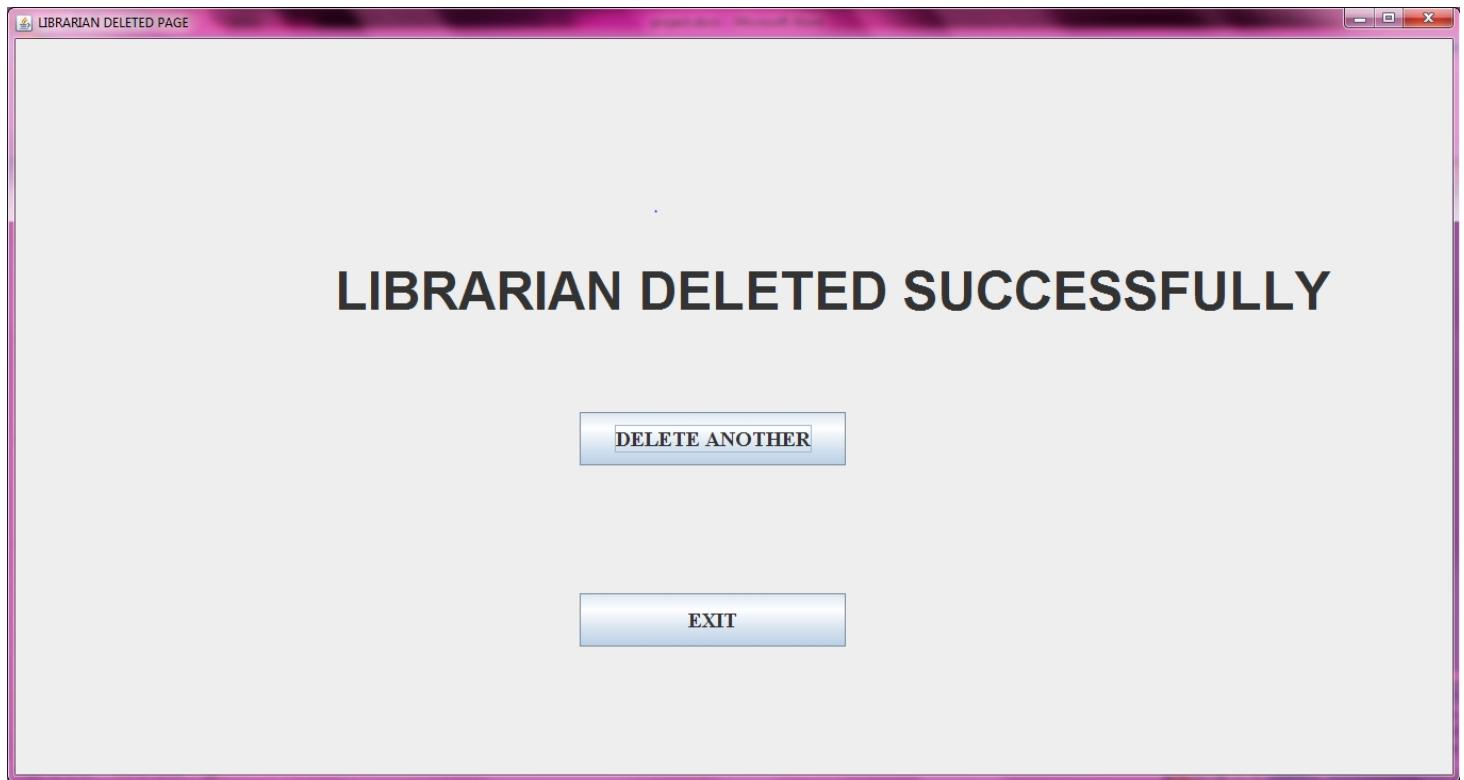
When clicked YES

//Library Management System DELETE LIBRARIAN

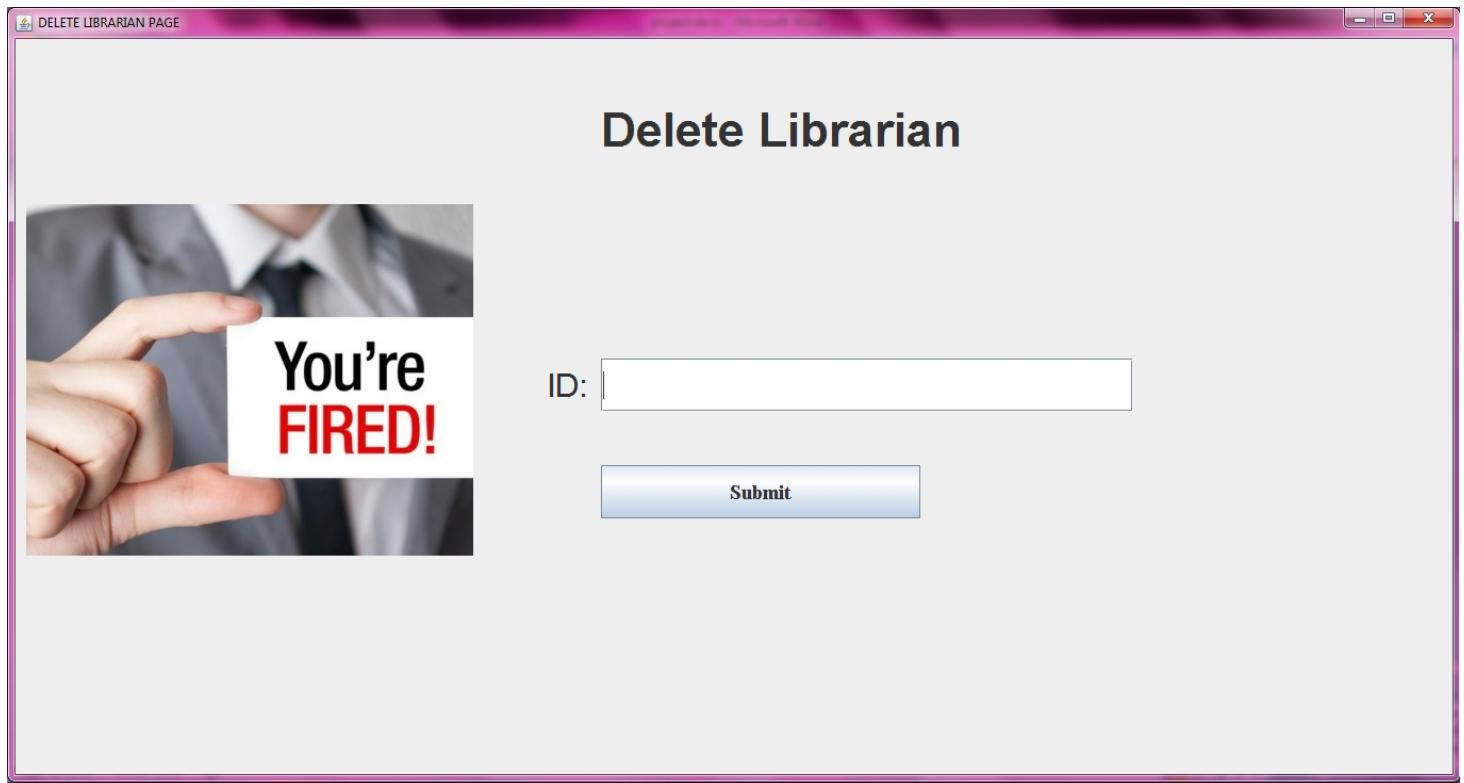
```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
```

```
class aa7 extends JFrame
{
aa7()
{
JPanel p=new JPanel();
p.setLayout(null);
JLabel l=new JLabel("LIBRARIAN DELETED SUCCESSFULLY");
l.setFont(new Font("Ariel",Font.BOLD,50));
l.setBounds(300,200,1300,70);
p.add(l);

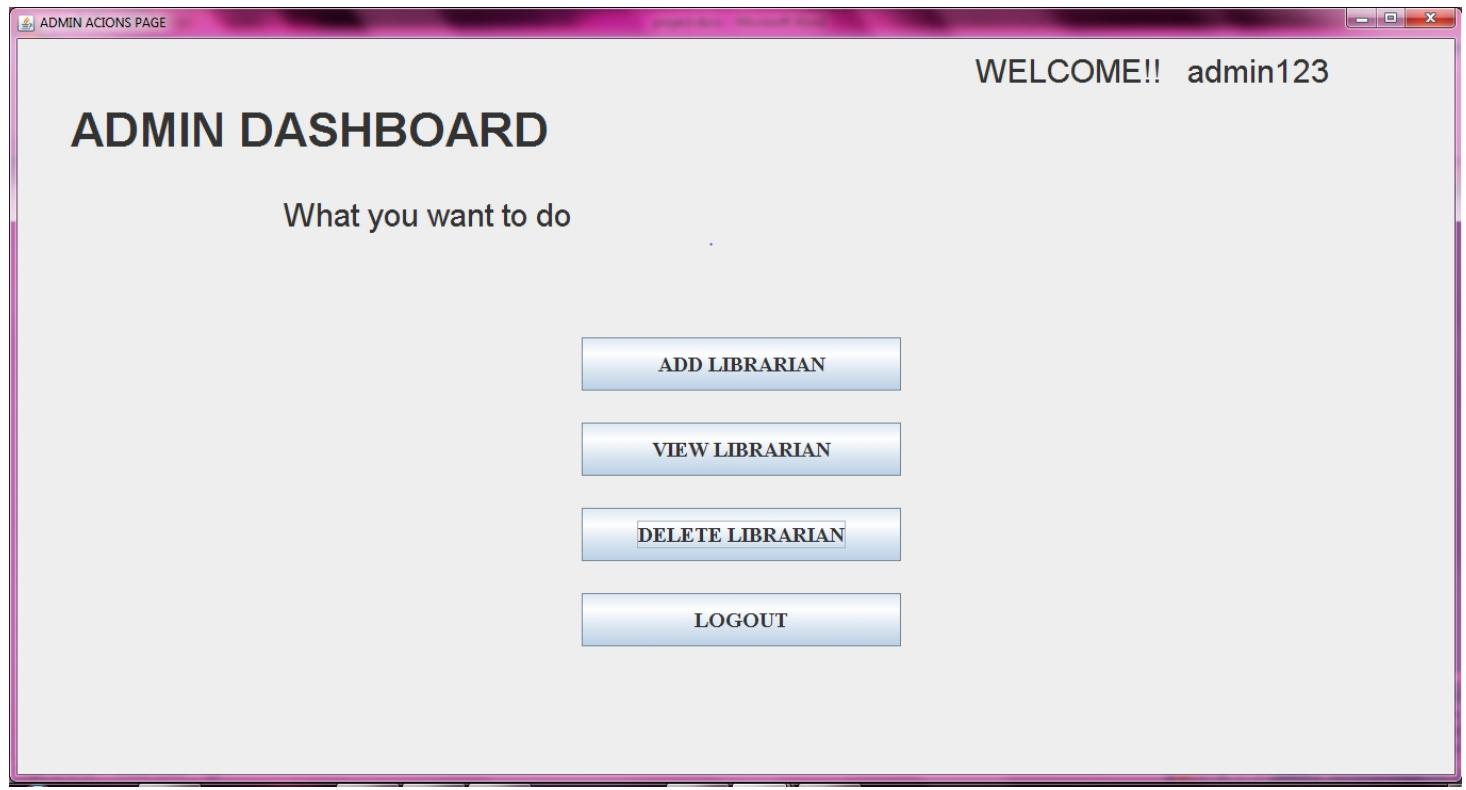
JButton b1=new JButton("DELETE ANOTHER");
b1.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent e)
    {
        aa5 f2=new aa5();
        f2.setSize(1366,728);
        f2.setVisible(true);
        f2.setTitle("DELETE LIBRARIAN PAGE");
        f2.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
        dispose();
    }
});
b1.setFont(new Font("Times New Roman",Font.BOLD,20));
b1.setBounds(530,350,250,50);
p.add(b1);
JButton b2=new JButton("EXIT");
b2.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent e)
    {
        dispose();
    }
});
b2.setFont(new Font("Times New Roman",Font.BOLD,20));
b2.setBounds(530,520,250,50);
p.add(b2);
setContentPane(p);
}
}
```



When clicked "DELETE ANOTHER"



When clicked "EXIT"

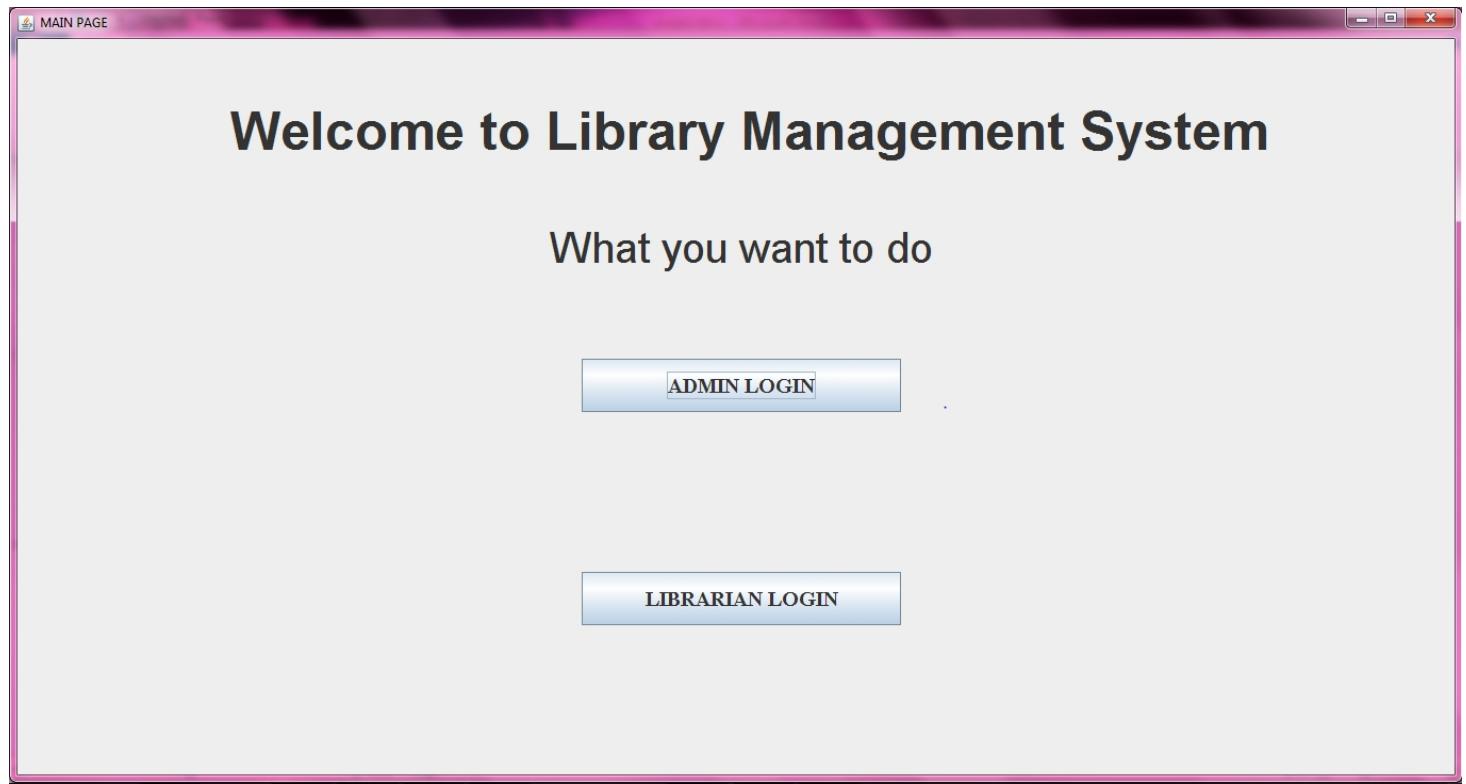


NOW WE CHECK “VIEW LIBRARIAN”

ID	Name	Username	Password	Mobile No
1	shrey	shrey123	1234567	9779925915
2	ray	ray123	1234567	9872992914
34	shrey	shrey125	shrey12345	9872874748

Librarian with ID 39 is deleted

When We click “LOGOUT”



FOR LIBRARIAN

//Library Management System Librarian Login

```
import java.lang.*;
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import java.sql.*;

class LI1 extends JFrame
{
    int flag;
    LI1()
    {
        flag=0;
        JPanel p=new JPanel();
        p.setLayout(null);
        JLabel l=new JLabel("LIBRARIAN LOGIN");
        l.setFont(new Font("Arial",Font.BOLD,45));
        JLabel l1=new JLabel("Username:");
        l1.setFont(new Font("Arial",10,30));
        l1.setBounds(500,50,1300,70);
        l1.setBounds(350,200,300,50);
        p.add(l);
        p.add(l1);
        final JTextField t1=new JTextField(25);
        t1.setFont(new Font("Calibri",Font.BOLD,20));
        t1.setBounds(500,200,500,50);
        p.add(t1);
        JLabel l2=new JLabel("Password:");
        l2.setFont(new Font("Arial",10,30));
        l2.setBounds(500,250,1300,70);
        l2.setBounds(350,300,300,50);
        p.add(l2);
        JButton b1=new JButton("Login");
        JButton b2=new JButton("Cancel");
        b1.setFont(new Font("Arial",10,30));
        b1.setBounds(500,350,1300,70);
        b1.setBounds(350,400,300,50);
        b2.setFont(new Font("Arial",10,30));
        b2.setBounds(500,400,1300,70);
        b2.setBounds(350,450,300,50);
        p.add(b1);
        p.add(b2);
        add(p);
    }
}
```

```
I2.setFont(new Font("Arial",10,30));
I2.setBounds(350,300,300,50);
p.add(I2);
final JPasswordField t2=new JPasswordField(25);
t2.setFont(new Font("Calibri",Font.BOLD,20));
t2.setBounds(500,300,500,50);
p.add(t2);
final JLabel I3=new JLabel();
I3.setFont(new Font("Arial",Font.BOLD,30));
I3.setBounds(550,550,1300,50);
JButton b1=new JButton("RESET");
b1.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e1)
{
t1.setText("");
t2.setText("");
I3.setText("");
}}));
b1.setFont(new Font("Times New Roman",Font.BOLD,20));
b1.setBounds(400,450,250,50);
p.add(b1);
JButton b2=new JButton("SUBMIT");
b2.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e1)
{flag=0;
String i=t1.getText();
String j=t2.getText();
try
{
Connection c=DriverManager.getConnection("jdbc:ucanaccess://Database3.accdb");
Statement st=c.createStatement();
ResultSet rs=st.executeQuery("select * from library");
while(rs.next())
{
if((i.equals(rs.getString(3)))&&(j.equals(rs.getString(4))))
{flag=1;
I3.setText("");
II2 f1=new II2(rs.getString(2));
f1.setSize(1366,728);
f1.setVisible(true);
f1.setTitle("LIBRARIAN ACTIONS PAGE");
f1.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
dispose();
}
}
}
if(flag==0)
I3.setText("Invalid Username/Password");
}
catch(SQLException e)
{
e.printStackTrace();
}
```

```

});  

b2.setFont(new Font("Times New Roman",Font.BOLD,20));  

b2.setBounds(750,450,250,50);  
  

p.add(b2);  

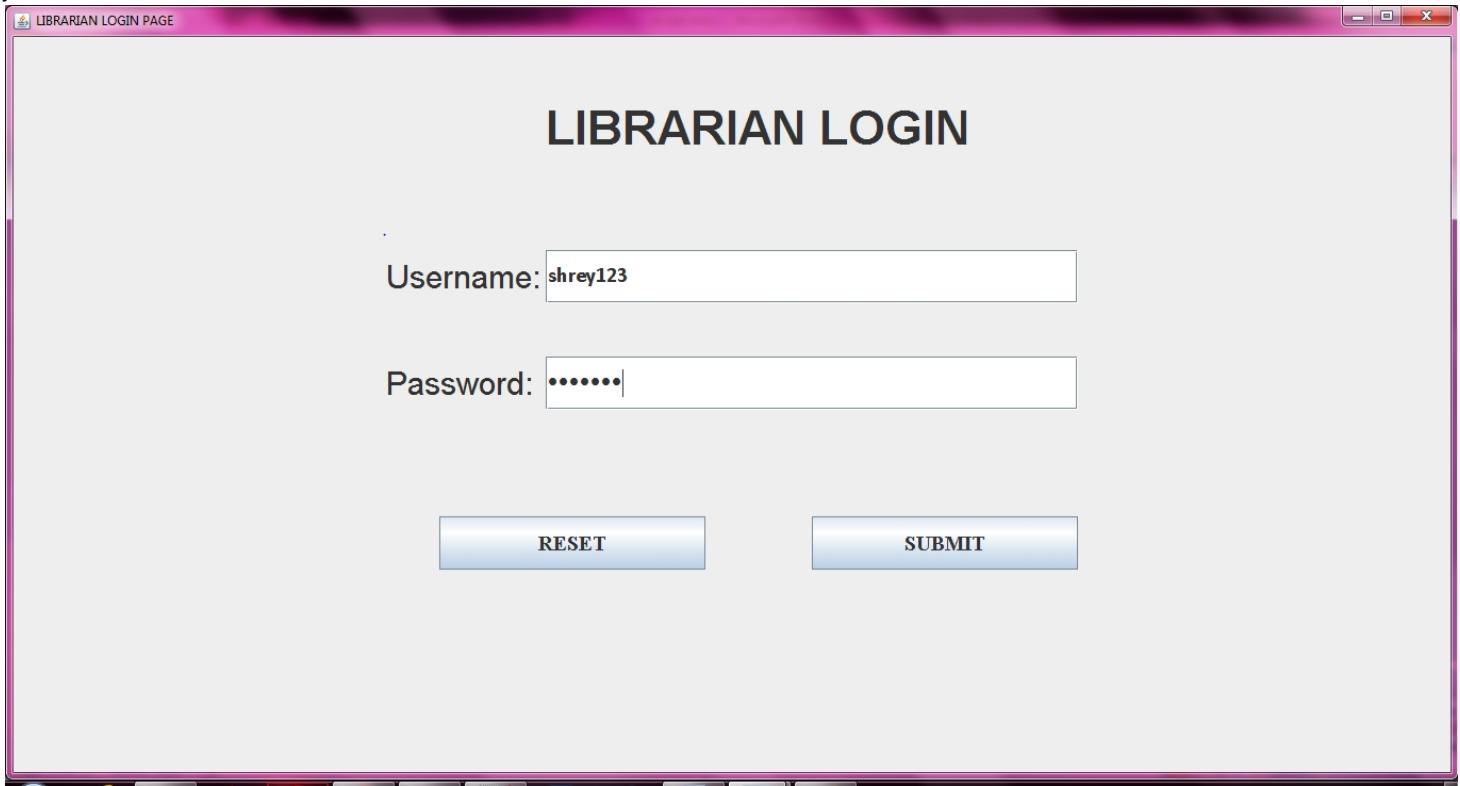
p.add(l3);  

setContentPane(p);  

}  

}

```



Errors:

- **Invalid Username/Password** – Wrong Username and/or Password

//Library Management System Librarian Action Buttons

```

import java.awt.*;  

import java.awt.event.*;  

import javax.swing.*;  
  

class lI2 extends JFrame  

{  

lI2(String q)  

{  

JPanel p=new JPanel();  

p.setLayout(null);  

JLabel rt=new JLabel("WELCOME!! " + q.toUpperCase());  

rt.setFont(new Font("Arial",10,30));  

rt.setBounds(900,10,400,40);  

p.add(rt);  

JLabel l=new JLabel("LIBRARIAN DASHBOARD");  

JLabel l1=new JLabel("What you want to do");  

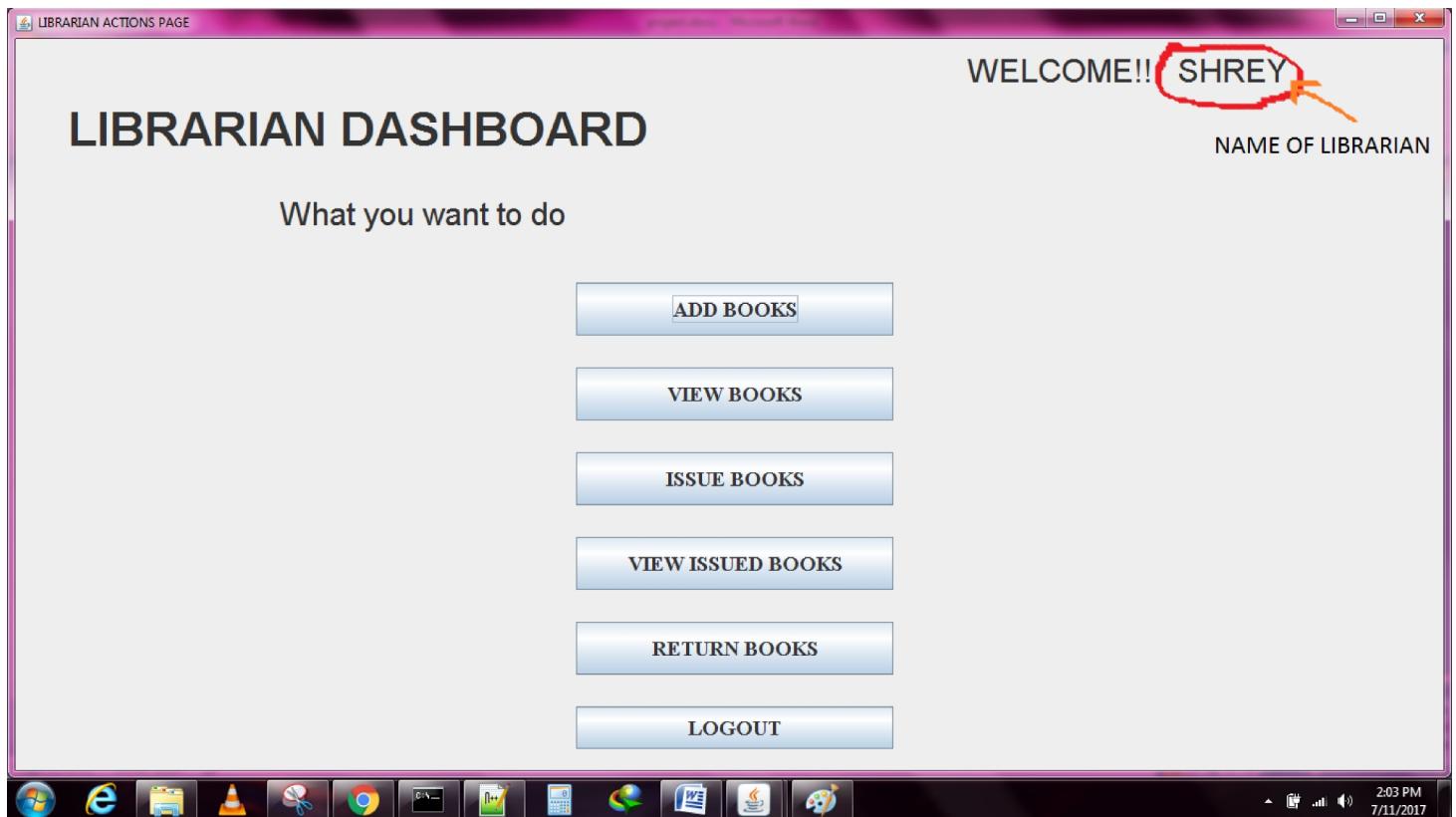
l.setFont(new Font("Arial",Font.BOLD,45));

```

```
I1.setFont(new Font("Arial",10,30));
I1.setBounds(50,50,1300,70);
I1.setBounds(250,140,300,50);
p.add(I1);
p.add(I1);
JButton b1=new JButton("ADD BOOKS");
b1.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e1)
{
    I13 f=new I13();
    f.setSize(1366,728);
    f.setVisible(true);
    f.setTitle("ADD BOOKS PAGE");
    f.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);

}});
b1.setFont(new Font("Times New Roman",Font.BOLD,20));
b1.setBounds(530,230,300,50);
p.add(b1);
JButton b2=new JButton("VIEW BOOKS");
b2.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e2)
{
    I14 f3=new I14();
    f3.setSize(1366,728);
    f3.setVisible(true);
    f3.setTitle("VIEW BOOKS PAGE");
    f3.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
}});
b2.setFont(new Font("Times New Roman",Font.BOLD,20));
b2.setBounds(530,310,300,50);
p.add(b2);
JButton b3=new JButton("ISSUE BOOKS");
b3.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e3)
{
    I16 f3=new I16();
    f3.setSize(1366,728);
    f3.setVisible(true);
    f3.setTitle("ISSUE BOOKS PAGE");
    f3.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
}});
b3.setFont(new Font("Times New Roman",Font.BOLD,20));
b3.setBounds(530,390,300,50);
p.add(b3);
JButton b4=new JButton("VIEW ISSUED BOOKS");
b4.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e3)
{
    I18 f3=new I18();
    f3.setSize(1366,728);
    f3.setVisible(true);
    f3.setTitle("VIEW ISSUED BOOKS PAGE");
    f3.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
}});
b4.setFont(new Font("Times New Roman",Font.BOLD,20));
b4.setBounds(530,470,300,50);
p.add(b4);
JButton b5=new JButton("SEARCH BOOKS");
b5.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e3)
{
    I19 f3=new I19();
    f3.setSize(1366,728);
    f3.setVisible(true);
    f3.setTitle("SEARCH BOOKS PAGE");
    f3.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
}});
b5.setFont(new Font("Times New Roman",Font.BOLD,20));
b5.setBounds(530,550,300,50);
p.add(b5);
JButton b6=new JButton("LOGOUT");
b6.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e3)
{
    I20 f3=new I20();
    f3.setSize(1366,728);
    f3.setVisible(true);
    f3.setTitle("LOGOUT PAGE");
    f3.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
}});
b6.setFont(new Font("Times New Roman",Font.BOLD,20));
b6.setBounds(530,630,300,50);
p.add(b6);
JButton b7=new JButton("EXIT");
b7.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e3)
{
    System.exit(0);
}});
b7.setFont(new Font("Times New Roman",Font.BOLD,20));
b7.setBounds(530,710,300,50);
p.add(b7);
```

```
f3.setSize(1366,728);
f3.setVisible(true);
f3.setTitle("VIEW ISSUED BOOKS PAGE");
f3.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
}});
b4.setFont(new Font("Times New Roman",Font.BOLD,20));
b4.setBounds(530,470,300,50);
p.add(b4);
JButton b5=new JButton("RETURN BOOKS");
b5.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e3)
{
    II9 f3=new II9();
f3.setSize(1366,728);
f3.setVisible(true);
f3.setTitle("RETURN BOOKS PAGE");
f3.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
}});
b5.setFont(new Font("Times New Roman",Font.BOLD,20));
b5.setBounds(530,550,300,50);
p.add(b5);
JButton b6=new JButton("LOGOUT");
b6.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e3)
{
    dispose();
}});
b6.setFont(new Font("Times New Roman",Font.BOLD,20));
b6.setBounds(530,630,300,40);
p.add(b6);
setContentPane(p);
}
}
```



//Library Management System Adding Books

```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import java.io.*;
import java.sql.*;

class II3 extends JFrame
{
int b;
II3()
{
b=1;
JPanel p=new JPanel();
p.setLayout(null);
JLabel l=new JLabel("ADD BOOKS");
JLabel l1=new JLabel("Code: ");
l.setFont(new Font("Arial",Font.BOLD,45));
l1.setFont(new Font("Arial",10,30));
l.setBounds(550,50,1300,70);
l1.setBounds(350,160,300,50);
final JTextField t1=new JTextField(25);
t1.setFont(new Font("Calibri",Font.BOLD,20));
t1.setBounds(500,160,500,50);
p.add(t1);
p.add(l);
p.add(l1);
JLabel l2=new JLabel("Name:");
l2.setFont(new Font("Arial",10,30));
l2.setBounds(350,230,300,50);
```

```
p.add(l2);
final JTextField t2=new JTextField(25);
t2.setFont(new Font("Calibri",Font.BOLD,20));
t2.setBounds(500,230,500,50);
p.add(t2);
JLabel l3=new JLabel("Publisher:");
final JTextField t3=new JTextField(25);
final JLabel l4=new JLabel();
l3.setFont(new Font("Arial",10,30));
l3.setBounds(350,300,300,50);
t3.setFont(new Font("Calibri",Font.BOLD,20));
t3.setBounds(500,300,500,50);
p.add(l3);
p.add(t3);
JLabel l6=new JLabel("Year:");
l6.setFont(new Font("Arial",10,30));
l6.setBounds(350,370,300,50);
p.add(l6);
final JTextField t6=new JTextField(50);
t6.setToolTipText("Must Be Between 2000 and 2050");
t6.setFont(new Font("Calibri",Font.BOLD,20));
t6.setBounds(500,370,500,50);
p.add(t6);
l4.setFont(new Font("Arial",10,30));
l4.setBounds(550,620,500,50);
 JButton b1=new JButton("RESET");
b1.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e1)
{
t1.setText("");
t2.setText("");
t3.setText("");
l4.setText("");

t6.setText("");
}});

b1.setFont(new Font("Times New Roman",Font.BOLD,20));
b1.setBounds(400,520,250,50);
p.add(b1);
 JButton b2=new JButton("SUBMIT");
b2.addActionListener(new ActionListener()
{
public void actionPerformed(ActionEvent e1)
{
String name=t2.getText();
String co=t1.getText();
String pub=t3.getText();

String yr=t6.getText();

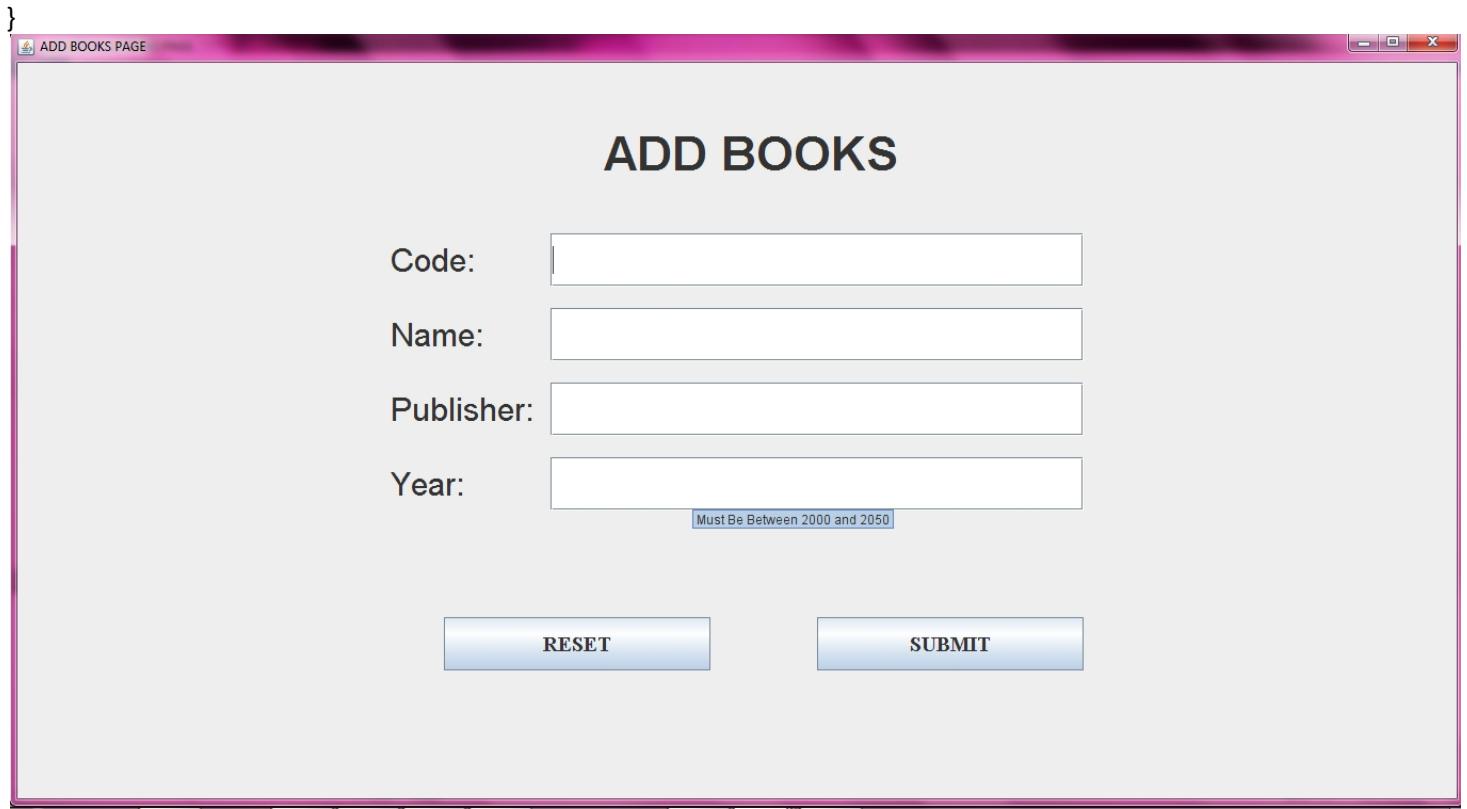
try
{
Connection conn=DriverManager.getConnection("jdbc:ucanaccess://Database3.accdb");

```

```

Statement sc=conn.createStatement();
ResultSet rs=sc.executeQuery("select * from book");
ResultSet r5=sc.executeQuery("select * from Issued");
while(rs.next())
{
    if(co.equals(rs.getString(1)))
        b=0;
}
while(r5.next())
{
    if(co.equals(r5.getString(1)))
        b=0;
}
if(b==0)
{
    l4.setText("Code Already Exists");
}
else
{
    if((co.compareTo("")!=0)&&name.compareTo("")!=0&&pub.compareTo("")!=0&&yr.compareTo("")!=0)
    {
if((yr.compareTo("2050")<0)&&(yr.compareTo("2000")>0))
{
String s="insert into book values(\""+co+"\",""+name+"\",""+pub+"\",""+yr+"")";
sc.executeUpdate(s);
l4.setText("Book ADDED SUCCESSFULLY");
l15 f2=new l15();
f2.setSize(1366,728);
f2.setVisible(true);
f2.setTitle("BOOK ADDED PAGE");
f2.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
dispose();
}
else
{
    l4.setText("Invalid YEAR");
}
else
{
    l4.setText("Invalid Book Details");
}
}
}
}
catch(Exception e)
{
e.printStackTrace();
}}
});
b2.setFont(new Font("Times New Roman",Font.BOLD,20));
b2.setBounds(750,520,250,50);
p.add(b2);
p.add(l4);
setContentPane(p);
}

```



Errors:

- **Invalid YEAR**– Year is not between 2000 and 2050
- **Invalid Book Details** – Any Field left blank.
- **Code Already Exists**

//Library Management System ADDED Book

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

class II5 extends JFrame
{
II5()
{
JPanel p=new JPanel();
p.setLayout(null);
JLabel l=new JLabel("BOOK ADDED SUCCESSFULLY");
l.setFont(new Font("Ariel",Font.BOLD,50));
l.setBounds(300,200,1300,70);
p.add(l);

JButton b1=new JButton("ADD ANOTHER");
b1.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent e)
    {
        II3 f2=new II3();
        f2.setSize(1366,728);
        f2.setVisible(true);
    }
})
```

```

        f2.setTitle("ADD BOOKS PAGE");
        f2.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
        dispose();
    }

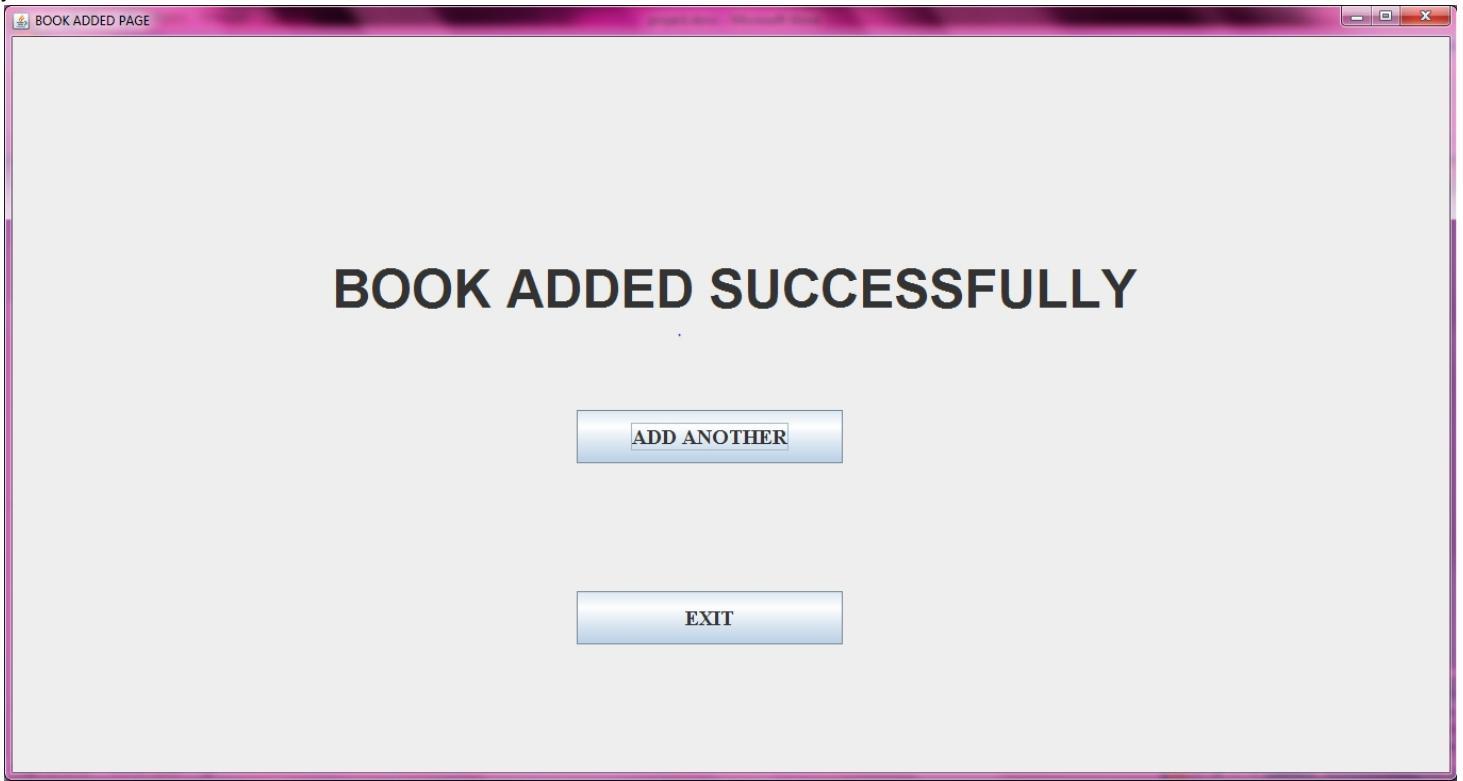
});

b1.setFont(new Font("Times New Roman",Font.BOLD,20));
b1.setBounds(530,350,250,50);
p.add(b1);
JButton b2=new JButton("EXIT");
b2.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent e)
    {

        dispose();
    }
});

b2.setFont(new Font("Times New Roman",Font.BOLD,20));
b2.setBounds(530,520,250,50);
p.add(b2);
setContentPane(p);
}
}

```



When we click "ADD ANOTHER"

ADD BOOKS

Code:

Name:

Publisher:

Year:

Must Be Between 2000 and 2050

When click "EXIT"

LIBRARIAN ACTIONS PAGE

WELCOME!! **SHREY** 
NAME OF LIBRARIAN

What you want to do

//Library Management System View Books

```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import java.lang.*;
import java.io.*;
```

```
import java.sql.*;

class II4 extends JFrame
{
    II4()
    {
        JPanel p=new JPanel();
        p.setLayout(null);
        JTextArea t=new JTextArea(1300,400);
        t.setFont(new Font("Arial",10,30));
        JScrollPane r=new
        JScrollPane(t,JScrollPane.VERTICAL_SCROLLBAR_ALWAYS,JScrollPane.HORIZONTAL_SCROLLBAR_NEVER);
        r.setBounds(10,20,1320,650);
        p.add(r);
        try
        {
            t.append("Code\t|\tName\t|\tPublisher\t|\tYear \n");
            t.append("-----\n");
            Connection c=DriverManager.getConnection("jdbc:ucanaccess://Database3.accdb");
            Statement st=c.createStatement();
            ResultSet rs=st.executeQuery("select * from book");
            while(rs.next())
            {
                t.append(rs.getString(1) + "\t|\t" + rs.getString(2) + "\t|\t" +rs.getString(3) + "\t|\t" +rs.getString(4) + "\n");
                t.append("-----\n");
            }
        }
        catch(Exception e)
        {
            e.printStackTrace();
        }
        setContentPane(p);
    }
}
```

Code	Name	Publisher	Year
man101	Mathematics	R.D.Sharma	2017
man103	Mathematics	RS Agarwal	2015
mc	g	gy	2009
man290	maths	sd publications	2014

//Library Management System View Issued Books

```

import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import java.lang.*;
import java.io.*;
import java.sql.*;

class II8 extends JFrame
{
int i;
II8()
{
i=0;
JPanel p=new JPanel();
p.setLayout(null);
JLabel l=new JLabel("");
l.setFont(new Font("Ariel",Font.BOLD,50));
l.setBounds(500,250,1300,100);
p.add(l);
JTextArea t=new JTextArea(400,300);
t.setFont(new Font("Arial",10,30));
JScrollPane r=new
JScrollPane(t,JScrollPane.VERTICAL_SCROLLBAR_AS_NEEDED,JScrollPane.HORIZONTAL_SCROLLBAR_NEVER);
r.setBounds(10,20,1320,650);
r.setVisible(false);
p.add(r);

try
{

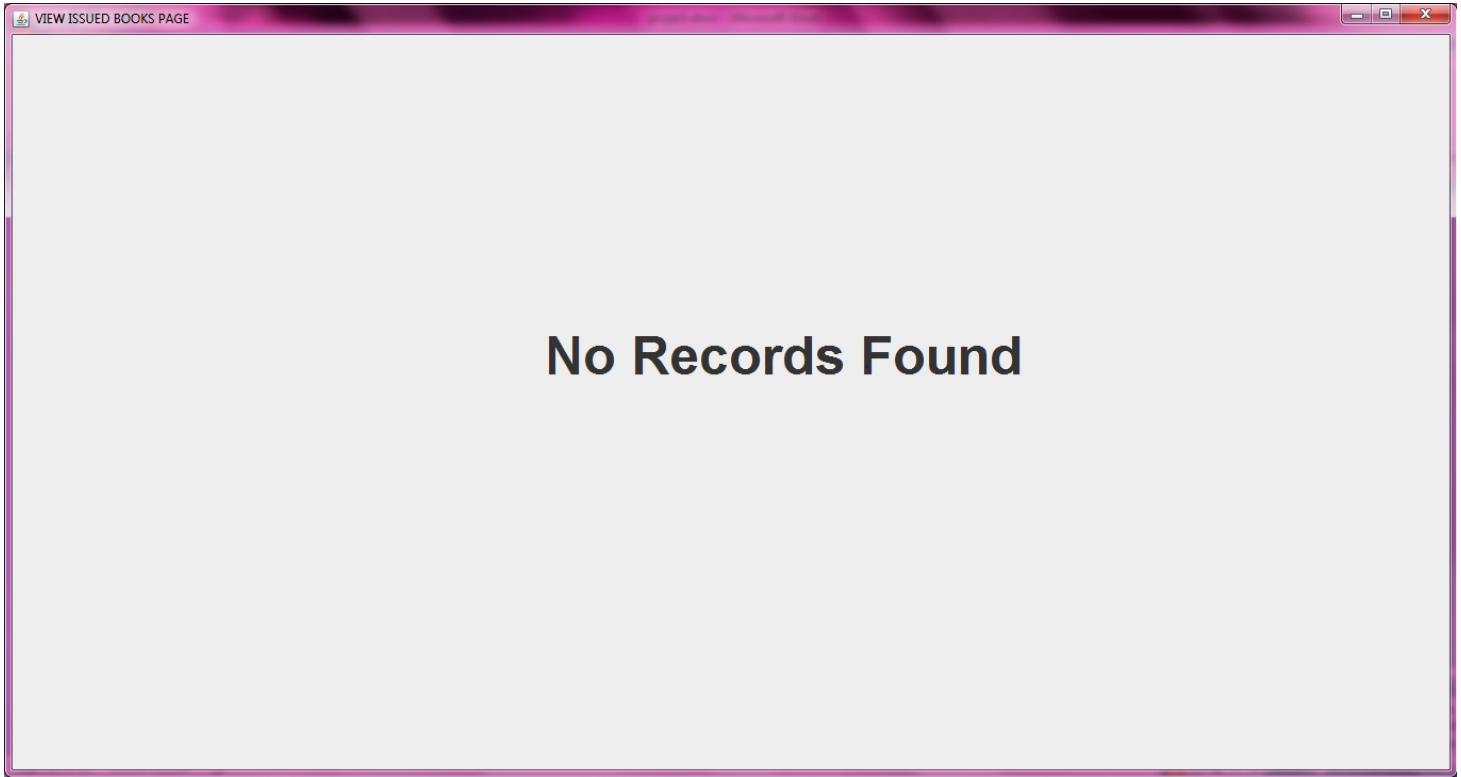
```

```

t.append("Name \t|\t Code \t|\t Publisher \t|\t Year\n");
t.append("-----\n");
Connection c=DriverManager.getConnection("jdbc:ucanaccess://Database3.accdb");
Statement st=c.createStatement();
ResultSet rs=st.executeQuery("select * from Issued");
while(rs.next())
{
    t.append(rs.getString(1) + "\t|\t" + rs.getString(2) + "\t|\t" +rs.getString(3) + "\t|\t" +rs.getString(4) + "\n");
    t.append("-----\n");
}
if(i==1)
r.setVisible(true);
else
    l.setText("No Records Found");

}
catch(Exception e)
{
l.setText("No Records Found");
}
setContentPane(p);
}
}

```



//Library Management System Issue Books

```

import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import java.lang.*;
import java.io.*;

```

```
import java.sql.*;

class II6 extends JFrame
{
int flag;
II6()
{
flag=0;
final JButton b1=new JButton("Submit");

JPanel p=new JPanel();
p.setLayout(null);
ImageIcon pic=new ImageIcon("issue.jpg");
final JLabel l3=new JLabel(pic);
l3.setBounds(10,70,400,500);
p.add(l3);

JLabel l=new JLabel("ISSUE BOOKS");
l.setFont(new Font("Arial",Font.BOLD,45));
l.setBounds(550,50,1300,70);
p.add(l);

final JLabel l1=new JLabel("CODE: ");
l1.setFont(new Font("Arial",10,30));

l1.setBounds(430,300,300,50);
p.add(l1);

final JTextField t1=new JTextField(25);
t1.setFont(new Font("Calibri",Font.BOLD,20));
t1.setBounds(550,300,500,50);
p.add(t1);

final JTextArea t=new JTextArea(400,300);
t.setFont(new Font("Arial",10,30));
t.setBounds(20,200,1300,300);
t.setVisible(false);
p.add(t);

final JLabel l2=new JLabel("");
l2.setFont(new Font("Arial",10,30));
l2.setBounds(600,550,300,50);
l2.setVisible(false);
p.add(l2);

final JButton b2=new JButton("YES");

final JButton b3=new JButton("NO");
b3.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent g)
    {
        t.setText("");
        t1.setText("");
    }
});
```

```

        l1.setVisible(true);
        t1.setVisible(true);
        b1.setVisible(true);
        l2.setVisible(false);
        b2.setVisible(false);
        t.setVisible(false);
        b3.setVisible(false);
        l3.setVisible(true);

    }});
b3.setFont(new Font("Times New Roman",Font.BOLD,20));
b3.setBounds(1000,600,100,40);
b3.setVisible(false);
p.add(b3);

b1.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent y)
    {

try
{

    t.setText("");

t.append("Code \t|\t Name \t|\t Publisher \t|\t Year \n");
t.append("-----\n");
Connection c=DriverManager.getConnection("jdbc:ucanaccess://Database3.accdb");
Statement st=c.createStatement();
ResultSet rs=st.executeQuery("select * from book where Code='"+t1.getText()+"'");
ResultSet r5=st.executeQuery("select * from Issued where Code='"+t1.getText()+"'");
while(rs.next())
{
    t.append(rs.getString(1) + "\t|\t" + rs.getString(2) + "\t|\t" +rs.getString(3) + "\t|\t" +rs.getString(4) + "\n");
    t.append("-----\n");
    if((rs.getString(1)).equals(t1.getText()))
        flag=1;
}
while(r5.next())
{
    if((r5.getString(1)).equals(t1.getText()))
        flag=2;
}
if((flag==1)&&((t1.getText().compareTo(""))!=0))
{

l2.setText("Issue the Book");
l1.setVisible(false);
t1.setVisible(false);
}

```

```

        b1.setVisible(false);
b2.setVisible(true);
    b3.setVisible(true);
    t.setVisible(true);
l2.setVisible(true);
l3.setVisible(false);
}
else
{
    if(flag==2)
        l2.setText("Book Already Issued");
    else
        l2.setText("No Book Found");
l2.setVisible(true);
l1.setVisible(true);
    t1.setVisible(true);
    b1.setVisible(true);
}}
catch(Exception e)
{
e.printStackTrace();
}}));
b1.setFont(new Font("Times New Roman",Font.BOLD,20));
b1.setBounds(550,400,300,50);
p.add(b1);
b2.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent g)
    {
try
{
Connection c1=DriverManager.getConnection("jdbc:ucanaccess://Database3.accdb");
Statement s=c1.createStatement();
ResultSet rst=s.executeQuery("select * from book where Code='"+t1.getText()+"'");
while(rst.next())
{
String re="insert into Issued
values('"+rst.getString(1)+"','"+rst.getString(2)+"','"+rst.getString(3)+"','"+rst.getString(4)+"')";
s.executeUpdate(re);
}
String o="delete * from book where Code='"+t1.getText()+"'";
s.executeUpdate(o);

l1 f2=new l1();
f2.setSize(1366,728);
f2.setVisible(true);
    f2.setTitle("BOOK ISSUED PAGE");
f2.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
dispose();
}
catch(Exception u)
{
u.printStackTrace();
}

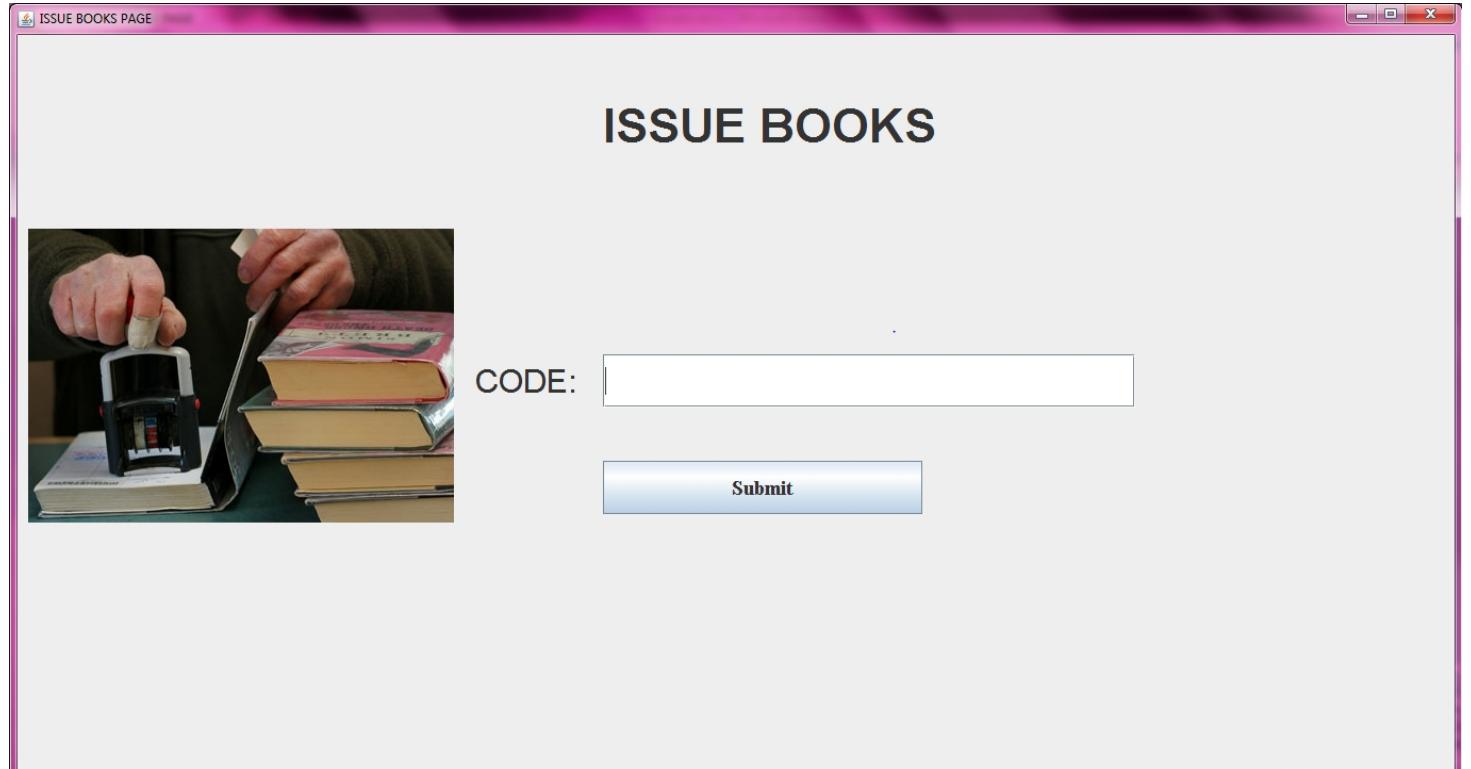
```

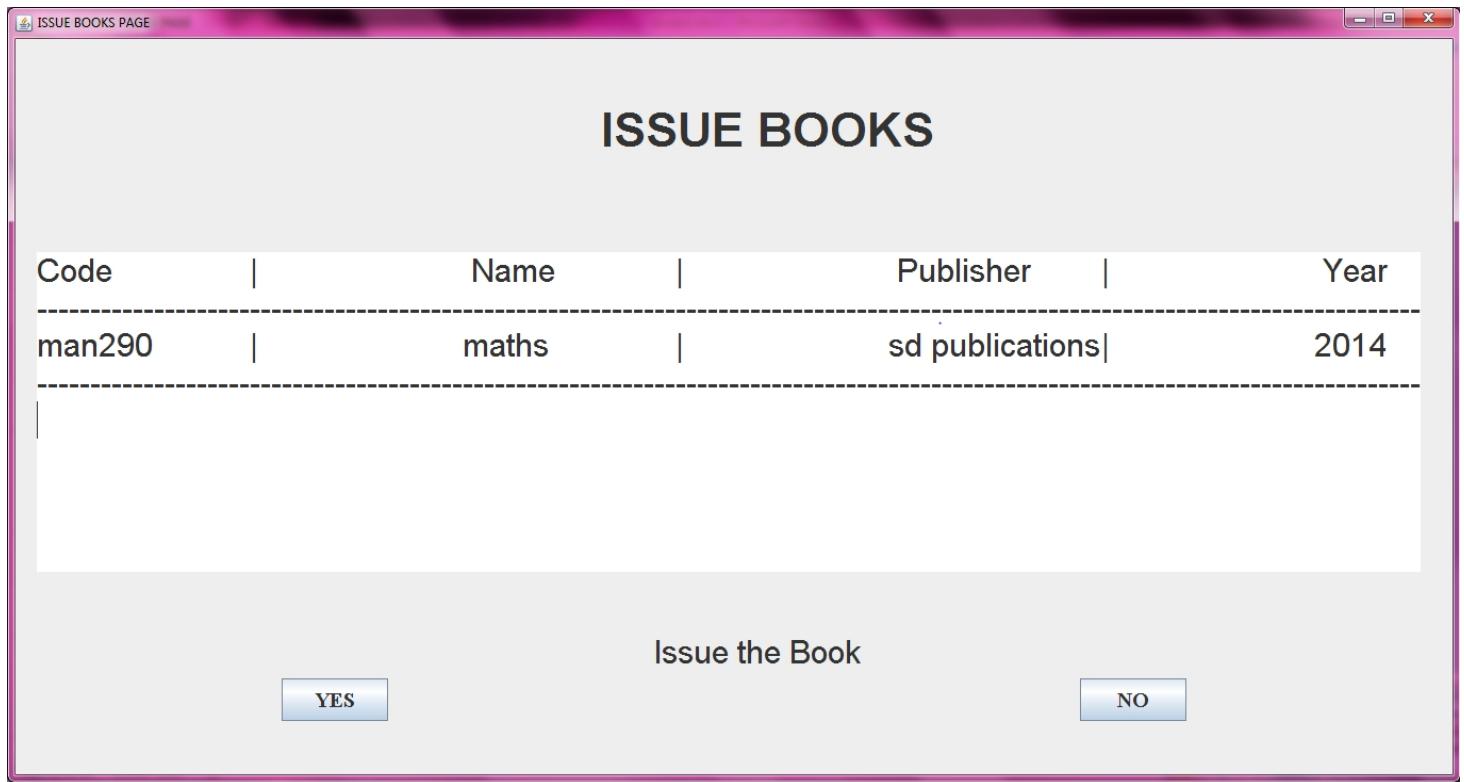
```
});  
b2.setFont(new Font("Times New Roman",Font.BOLD,20));  
b2.setBounds(250,600,100,40);  
b2.setVisible(false);  
p.add(b2);
```

```
setContentPane(p);
```

```
}
```

```
}
```





When clicked YES

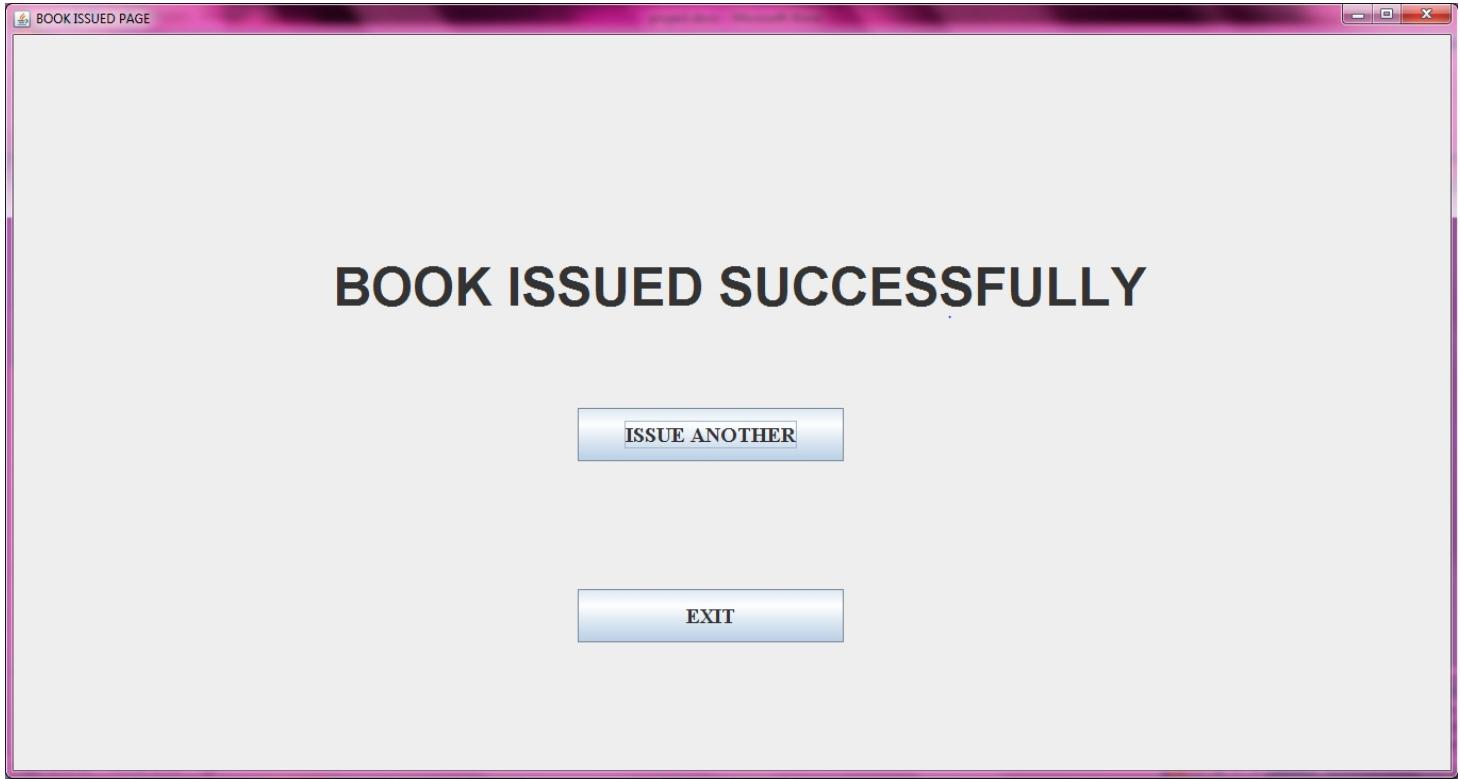
//Library Management System issue book

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

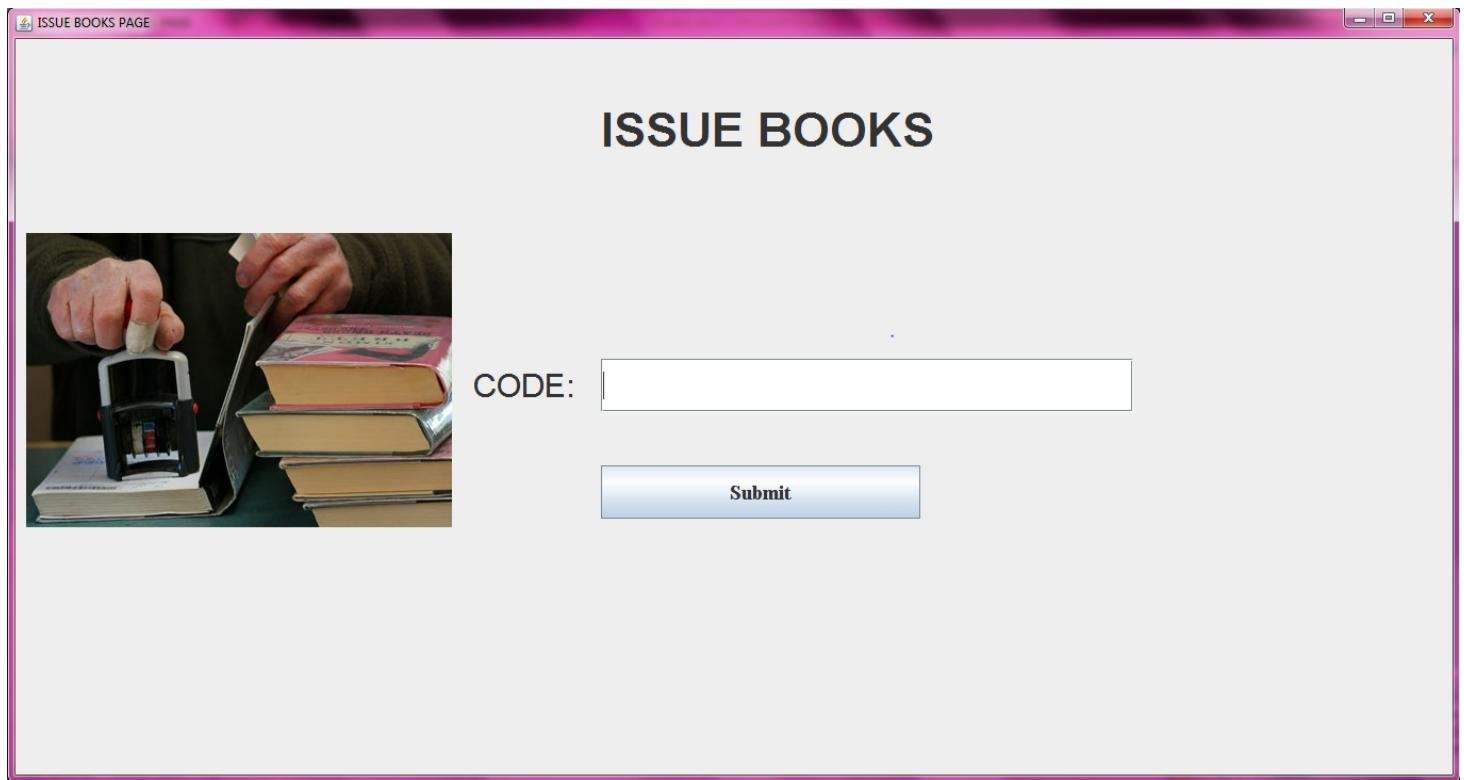
class II7 extends JFrame
{
II7()
{
JPanel p=new JPanel();
p.setLayout(null);
JLabel l=new JLabel("BOOK ISSUED SUCCESSFULLY");
l.setFont(new Font("Ariel",Font.BOLD,50));
l.setBounds(300,200,1300,70);
p.add(l);

JButton b1=new JButton("ISSUE ANOTHER");
b1.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent e)
    {
        II6 f2=new II6();
        f2.setSize(1366,728);
        f2.setVisible(true);
        f2.setTitle("ISSUE BOOKS PAGE");
        f2.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
        dispose();
    }
});
```

```
b1.setFont(new Font("Times New Roman",Font.BOLD,20));
b1.setBounds(530,350,250,50);
p.add(b1);
JButton b2=new JButton("EXIT");
b2.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent e)
    {
        dispose();
    }
});
b2.setFont(new Font("Times New Roman",Font.BOLD,20));
b2.setBounds(530,520,250,50);
p.add(b2);
setContentPane(p);
}
}
```



ISSUE ANOTHER



EXIT

A screenshot of a Windows application window titled "LIBRARIAN ACTIONS PAGE". At the top right, it says "WELCOME!!" followed by the name "SHREY" which is circled in red. Below the name is the text "NAME OF LIBRARIAN". The main title "LIBRARIAN DASHBOARD" is centered at the top. Below the title, the text "What you want to do" is displayed. There are six blue rectangular buttons arranged vertically, each containing white text: "ADD BOOKS", "VIEW BOOKS", "ISSUE BOOKS", "VIEW ISSUED BOOKS", "RETURN BOOKS", and "LOGOUT". The taskbar at the bottom shows various icons for system applications like File Explorer, Control Panel, and Internet Explorer, along with the date and time "2:03 PM 7/11/2017".

NOW We click "View Issued Books"

Name	Code	Publisher	Year
man290	maths	sd publications	2014

NOW We click "View Books"

Code	Name	Publisher	Year
man101	Mathematics	R.D.Sharma	2017
man103	Mathmatics	RS Agarwal	2015
mc	g	gy	2009

//Library Management System RETURN Books

```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import java.lang.*;
import java.io.*;
```

```
import java.sql.*;

class II9 extends JFrame
{
int flag;
II9()
{
flag=0;
final JButton b1=new JButton("Submit");

JPanel p=new JPanel();
p.setLayout(null);
ImageIcon pic=new ImageIcon("return.jpg");
final JLabel l3=new JLabel(pic);
l3.setBounds(10,70,400,500);
p.add(l3);
JLabel l=new JLabel("RETURN BOOKS");
l.setFont(new Font("Arial",Font.BOLD,45));
l.setBounds(550,50,1300,70);
p.add(l);

final JLabel l1=new JLabel("CODE: ");
l1.setFont(new Font("Arial",10,30));
l1.setBounds(430,300,300,50);
p.add(l1);

final JTextField t1=new JTextField(25);
t1.setFont(new Font("Calibri",Font.BOLD,20));
t1.setBounds(550,300,500,50);
p.add(t1);

final JTextArea t=new JTextArea(400,300);
t.setFont(new Font("Arial",10,30));
t.setBounds(20,200,1300,300);
t.setVisible(false);
p.add(t);

final JLabel l2=new JLabel("");
l2.setFont(new Font("Arial",10,30));
l2.setBounds(600,550,300,50);
l2.setVisible(false);
p.add(l2);

final JButton b2=new JButton("YES");

final JButton b3=new JButton("NO");
b3.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent g)
    {
        t.setText("");
        t1.setText("");
        l1.setVisible(true);
        t1.setVisible(true);
    }
});
```

```

        b1.setVisible(true);
        l2.setVisible(false);
        b2.setVisible(false);
        t.setVisible(false);
        b3.setVisible(false);
        l3.setVisible(true);

    });

b3.setFont(new Font("Times New Roman",Font.BOLD,20));
b3.setBounds(1000,600,100,40);
b3.setVisible(false);
p.add(b3);

b1.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent y)
    {

try
{

    t.setText("");

t.append("Code \t|\t Name \t|\t Publisher \t|\t Year \n");
t.append("-----\n");
Connection c=DriverManager.getConnection("jdbc:ucanaccess://Database3.accdb");
Statement st=c.createStatement();
ResultSet rs=st.executeQuery("select * from Issued where Code='"+t1.getText()+"'");
while(rs.next())
{
    t.append(rs.getString(1) + "\t|\t" + rs.getString(2) + "\t|\t" +rs.getString(3) + "\t|\t" +rs.getString(4) + "\n");
    t.append("-----\n");
    if((rs.getString(1)).equals(t1.getText()))
        flag=1;
}
if((flag==1)&&((t1.getText()).compareTo("")!=0))
{
    l2.setText("Return the Book");
    l1.setVisible(false);
        t1.setVisible(false);
        b1.setVisible(false);
b2.setVisible(true);
        b3.setVisible(true);
        t.setVisible(true);
l2.setVisible(true);
l3.setVisible(false);
}
else
{

```

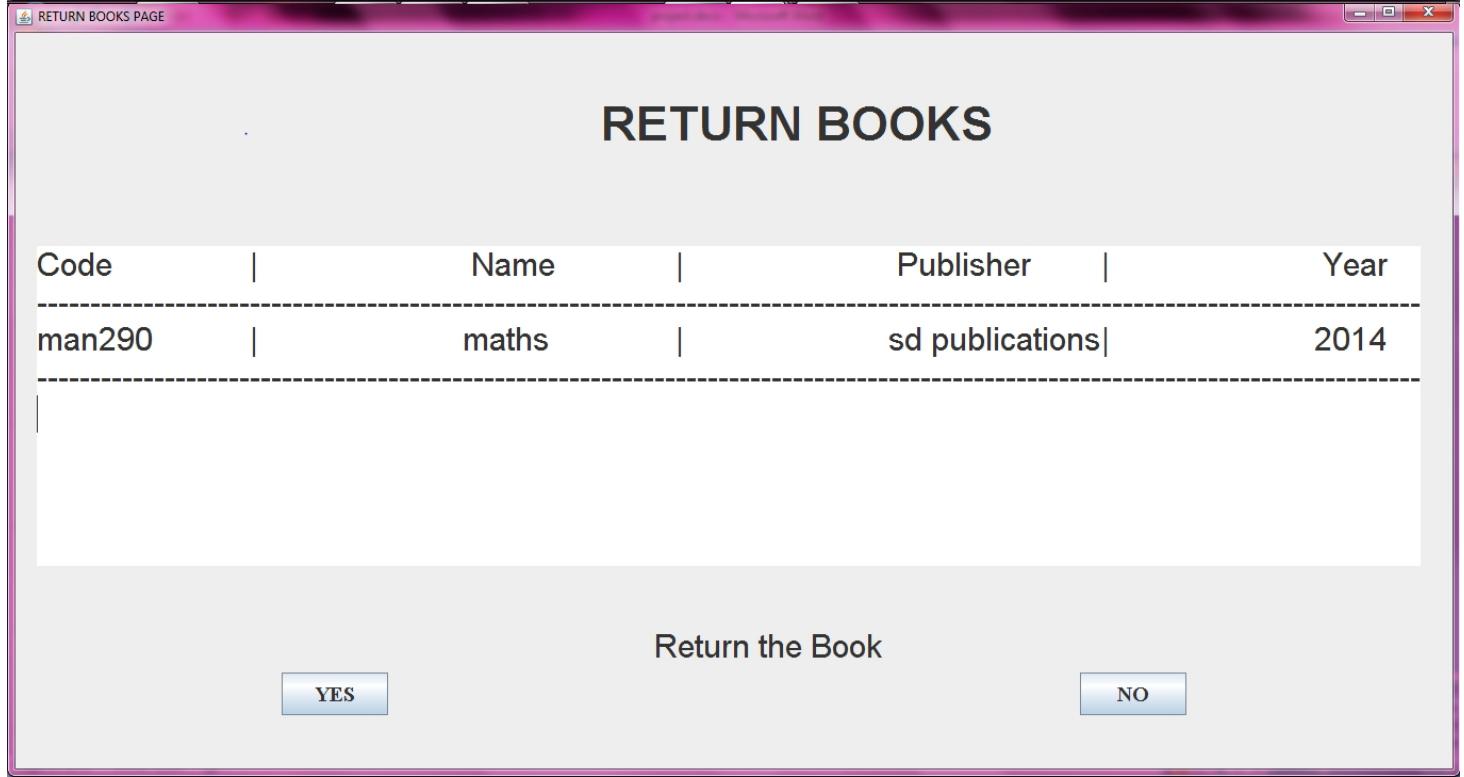
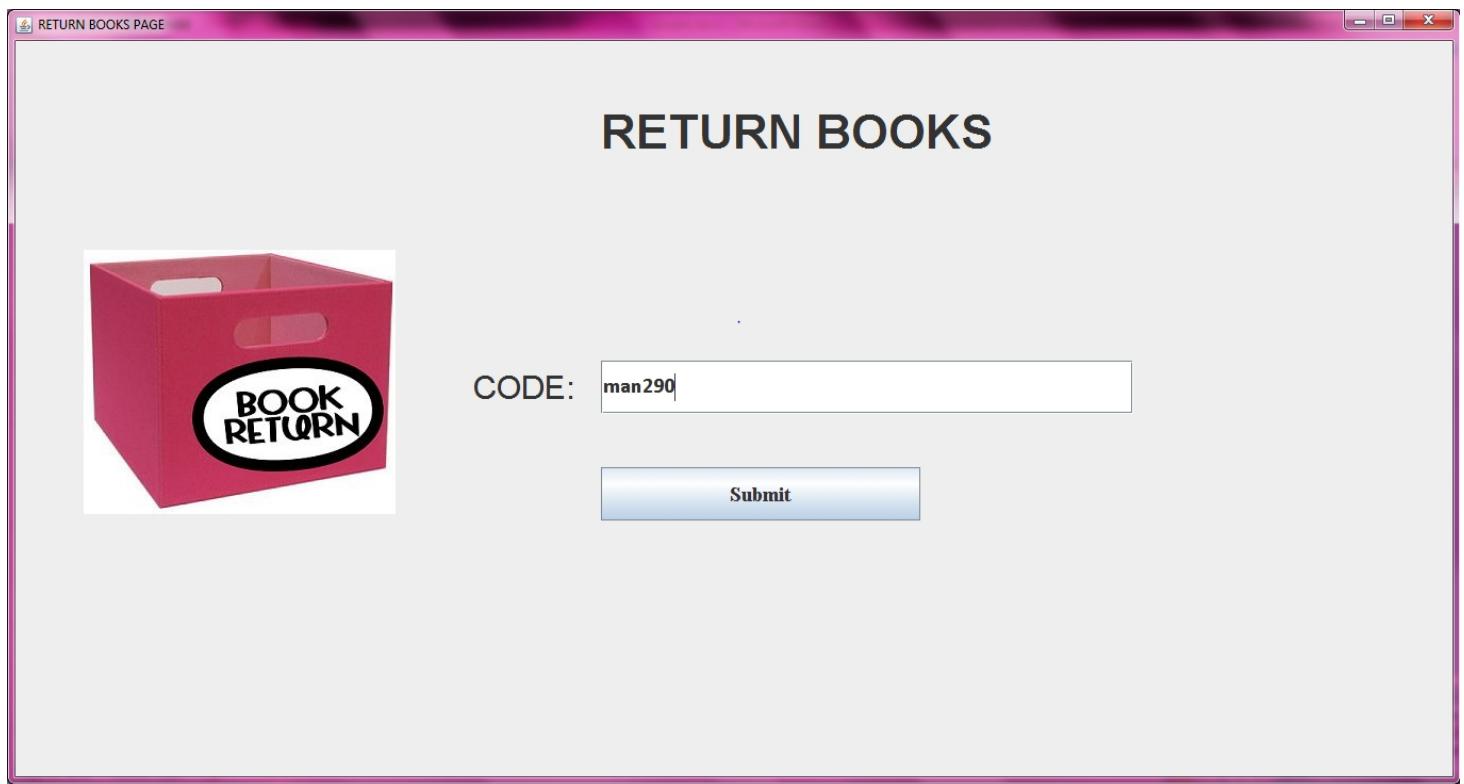
```

        l2.setText("No Book Found");
        l2.setVisible(true);
        l1.setVisible(true);
            t1.setVisible(true);
            b1.setVisible(true);
    }}
catch(Exception e)
{
e.printStackTrace();
}}));
b1.setFont(new Font("Times New Roman",Font.BOLD,20));
b1.setBounds(550,400,300,50);
p.add(b1);
b2.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent g)
    {
try
{
Connection c1=DriverManager.getConnection("jdbc:ucanaccess://Database3.accdb");
Statement s=c1.createStatement();
ResultSet rst=s.executeQuery("select * from Issued where Code='"+t1.getText()+"'");
while(rst.next())
{
String re="insert into book values('"+rst.getString(1)+"','"+rst.getString(2)+"','"+rst.getString(3)+"','"+rst.getString(4)+"')";
s.executeUpdate(re);
}
String o="delete * from Issued where Code='"+t1.getText()+"'";
s.executeUpdate(o);

lla f2=new lla();
f2.setSize(1366,728);
f2.setVisible(true);
f2.setTitle("BOOK RETURNED PAGE");
f2.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
dispose();
}
catch(Exception u)
{
u.printStackTrace();
}}));
b2.setFont(new Font("Times New Roman",Font.BOLD,20));
b2.setBounds(250,600,100,40);
b2.setVisible(false);
p.add(b2);

setContentPane(p);
}
}

```



When we click YES

//Library Management System issue book

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

class lla extends JFrame
{
```

```

lla()
{
JPanel p=new JPanel();
p.setLayout(null);
JLabel l=new JLabel("BOOK RETURNED SUCCESSFULLY");
l.setFont(new Font("Ariel",Font.BOLD,50));
l.setBounds(300,200,1300,70);
p.add(l);

JButton b1=new JButton("RETURN ANOTHER");
b1.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent e)
    {
        II9 f2=new II9();
        f2.setSize(1366,728);
        f2.setVisible(true);
        f2.setTitle("RETURN BOOKS PAGE");
        f2.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
        dispose();
    }
});
b1.setFont(new Font("Times New Roman",Font.BOLD,20));
b1.setBounds(530,350,250,50);
p.add(b1);
JButton b2=new JButton("EXIT");
b2.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent e)
    {
        dispose();
    }
});
b2.setFont(new Font("Times New Roman",Font.BOLD,20));
b2.setBounds(530,520,250,50);
p.add(b2);
setContentPane(p);
}
}

```

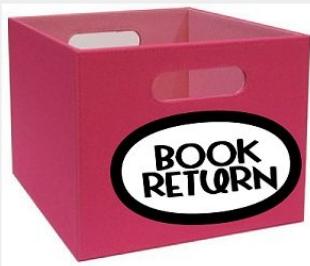
BOOK RETURNED SUCCESSFULLY

[RETURN ANOTHER](#)

[EXIT](#)

[RETURN ANOTHER](#)

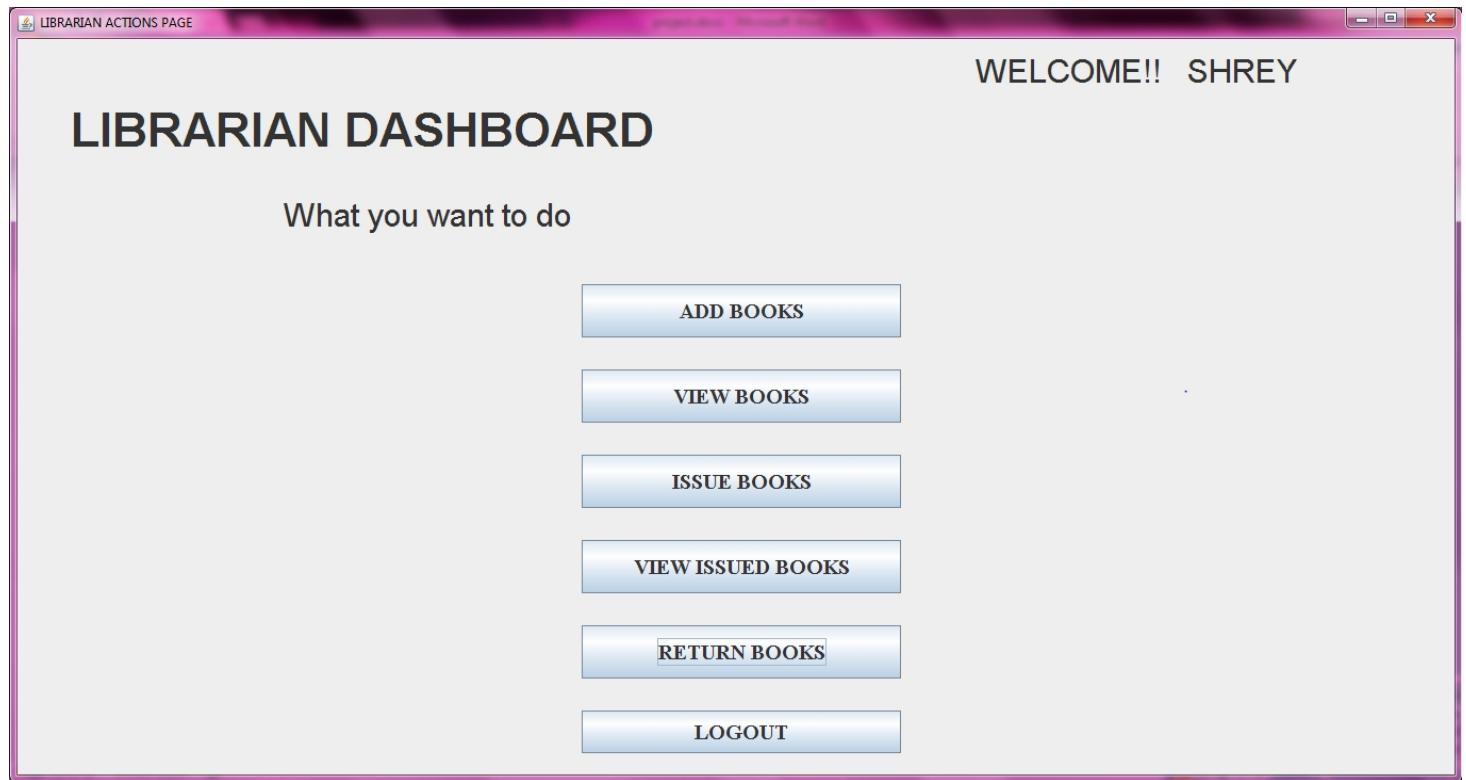
RETURN BOOKS



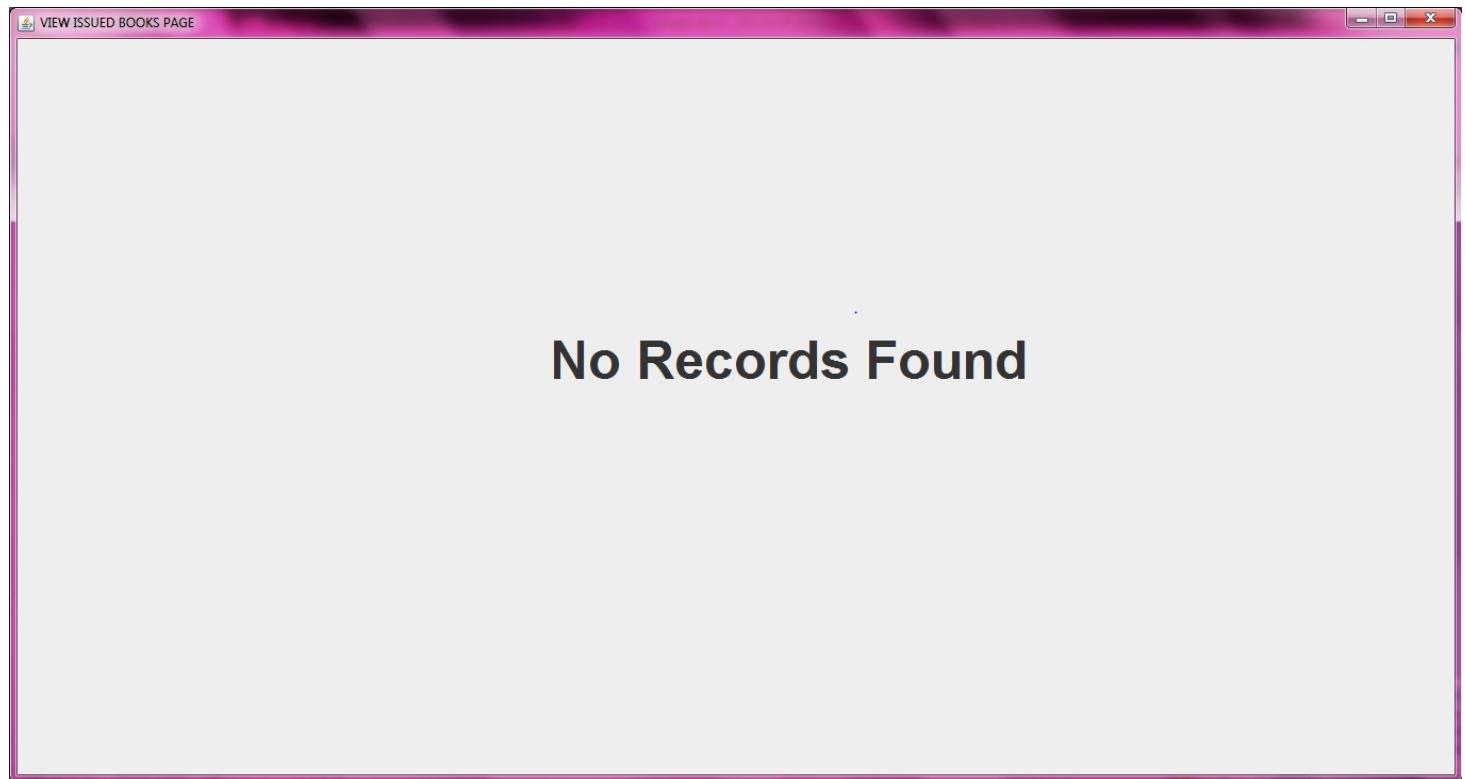
CODE:

[Submit](#)

[EXIT](#)



Now we check “View Issued Books”



Now we click “View Books”

VIEW BOOKS PAGE

Code	Name	Publisher	Year
man101	Mathematics	R.D.Sharma	2017
man103	Mathmatics	RS Agarwal	2015
mc	g	gy	2009
man290	maths	sd publications	2014

WHEN WE CLICK “LOGOUT”

