Practical 2

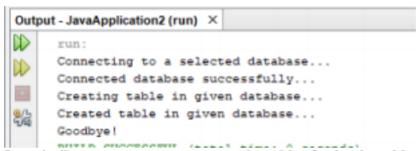
Aim: Design suitable database for Library Management System.

LibCreate.java

```
import java.sql.*;
public class LibCreate {
// JDBC driver name and database URL
static final String JDBC DRIVER = "com.mysql.jdbc.Driver";
static final String DB_URL = "jdbc:mysql://localhost/STUDENTS";
// Database credentials
static final String USER = "username";
static final String PASS = "password";
public static void main(String[] args) {
Connection conn = null;
Statement stmt = null;
//STEP 2: Register JDBC driver
Class.forName("com.mysql.jdbc.Driver");
//STEP 3: Open a connection
System.out.println("Connecting to a selected database..."); conn =
DriverManager.getConnection(DB_URL, USER, PASS);
System.out.println("Connected database successfully...");
//STEP 4: Execute a query
System.out.println("Creating table in given database...");
stmt = conn.createStatement();
String sql = "CREATE TABLE Librarian" +
"(id INTEGER not NULL, " +
" name VARCHAR(255), " +
"password VARCHAR(255), " +
"email VARCHAR(255), " +
"adderss VARCHAR(255), " +
"city VARCHAR(255), " +
"contact VARCHAR(255), " +
"PRIMARY KEY (id))";
stmt.executeUpdate(sql);
System.out.println("Created table in given database...");
}catch(SQLException se){
//Handle errors for JDBC
se.printStackTrace();
}catch(Exception e){
//Handle errors for Class.forName
e.printStackTrace();
}finally{
//finally block used to close resources
```

```
try{
  if(stmt!=null)
  conn.close();
}catch(SQLException se){
}// do nothing
try{
  if(conn!=null)
  conn.close();
}catch(SQLException se){
  se.printStackTrace();
}//end finally try
}//end try
System.out.println("Goodbye!");
}//end main
}//end LibCreate
```

Output



In a similar manner we can create the tables for books table thus completing the database structure

Practical 3a: Registration import java.sql.Connection; import java.sql.DriverManager; import java.sql.ResultSet; import java.sql.SQLException; import java.sql.Statement; import java.util.logging.Level; import java.util.logging.Logger; import javax.swing.JOptionPane; * 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. */ * @author bot public class pract2A extends javax.swing.JFrame { * Creates new form pract2A public pract2A() { initComponents(); } * This method is called from within the constructor to initialize the form. * WARNING: Do NOT modify this code. The content of this method is always * regenerated by the Form Editor. */ @SuppressWarnings("unchecked") // <editor-fold defaultstate="collapsed" desc="Generated Code"> private void initComponents() { jLabel1 = new javax.swing.JLabel(); jLabel2 = new javax.swing.JLabel(); jLabel3 = new javax.swing.JLabel(); jTextField1 = new javax.swing.JTextField(); jTextField2 = new javax.swing.JTextField(); jTextField3 = new javax.swing.JTextField();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

¡Button1 = new javax.swing.JButton();

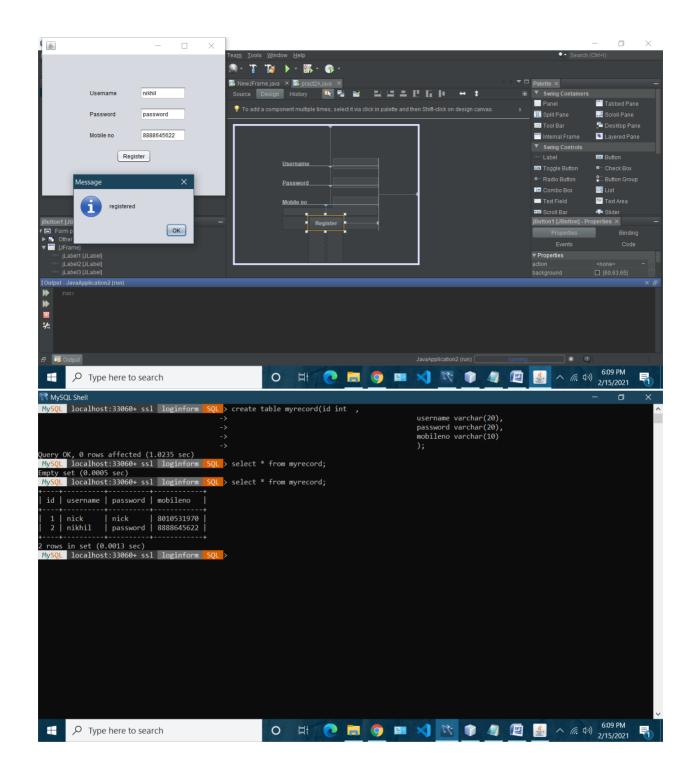
```
¡Label1.setText("Username");
    jLabel2.setText("Password");
    ¡Label3.setText("Mobile no");
    ¡Button1.setText("Register");
    jButton1.addActionListener(new java.awt.event.ActionListener() {
       public void actionPerformed(java.awt.event.ActionEvent evt) {
         ¡Button1ActionPerformed(evt);
      }
    });
    javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
    getContentPane().setLayout(layout);
    layout.setHorizontalGroup(
       layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
         .addContainerGap(104, Short.MAX_VALUE)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
           .addGroup(layout.createSequentialGroup()
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addComponent(jLabel1)
                .addComponent(iLabel2)
                .addComponent(jLabel3))
              .addGap(51, 51, 51)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
                .addComponent(jTextField3)
                .addComponent(jTextField2)
                .addComponent(jTextField1,
javax.swing.GroupLayout.PREFERRED_SIZE, 100,
javax.swing.GroupLayout.PREFERRED_SIZE)))
           .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 56,
javax.swing.GroupLayout.PREFERRED_SIZE)
              .addComponent(jButton1)
              .addGap(76, 76, 76)))
         .addGap(86, 86, 86))
    );
    layout.setVerticalGroup(
```

```
layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGroup(layout.createSequentialGroup()
         .addGap(70, 70, 70)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
           .addComponent(jLabel1)
           .addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
         .addGap(18, 18, 18)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
           .addComponent(jLabel2)
           .addComponent(jTextField2, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT SIZE, javax.swing.GroupLayout.PREFERRED SIZE))
         .addGap(18, 18, 18)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
           .addComponent(jLabel3)
           .addComponent(jTextField3, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
         .addGap(18, 18, 18)
         .addComponent(jButton1)
         .addContainerGap(72, Short.MAX_VALUE))
    );
    pack();
  }// </editor-fold>
  private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try {
    String uname= jTextField1.getText();
    String pass= jTextField2.getText();
    String mobileno= jTextField3.getText();
    Integer maxid = 0;
       Connection
conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/loginform?autoReconnect
=true&useSSL=false", "root", "root");
       Statement stmt =conn.createStatement();
       String sql= "select max(id) from myrecord";
       ResultSet result=stmt.executeQuery(sql);
       if(result.next()){
         maxid = result.getInt(1);
         //JOptionPane.showMessageDialog(this,String.valueOf(maxid));
         maxid+=1;
      }
```

```
sql="insert into myrecord values("+ maxid +",'"
            +uname+"','"+pass+"','"+mobileno+"');";
       stmt.executeUpdate(sql);
       JOptionPane.showMessageDialog(this, "registered");
    } catch (SQLException ex) {
       Logger.getLogger(pract2A.class.getName()).log(Level.SEVERE, null, ex);
    }
  }
   * @param args the command line arguments
  public static void main(String args[]) {
    /* Set the Nimbus look and feel */
    //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
    /* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and
feel.
     * For details see
http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
     */
    try {
       for (javax.swing.UIManager.LookAndFeelInfo info:
javax.swing.UIManager.getInstalledLookAndFeels()) {
          if ("Nimbus".equals(info.getName())) {
            javax.swing.UIManager.setLookAndFeel(info.getClassName());
            break:
          }
    } catch (ClassNotFoundException ex) {
java.util.logging.Logger.getLogger(pract2A.class.getName()).log(java.util.logging.Level.SEV
ERE, null, ex);
    } catch (InstantiationException ex) {
java.util.logging.Logger.getLogger(pract2A.class.getName()).log(java.util.logging.Level.SEV
ERE, null, ex);
    } catch (IllegalAccessException ex) {
java.util.logging.Logger.getLogger(pract2A.class.getName()).log(java.util.logging.Level.SEV
ERE, null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
java.util.logging.Logger.getLogger(pract2A.class.getName()).log(java.util.logging.Level.SEV
ERE, null, ex);
```

```
}
     //</editor-fold>
     /* Create and display the form */
     java.awt.EventQueue.invokeLater(new Runnable() {
       public void run() {
          new pract2A().setVisible(true);
       }
     });
  }
  // Variables declaration - do not modify
  private javax.swing.JButton jButton1;
  private javax.swing.JLabel jLabel1;
  private javax.swing.JLabel jLabel2;
  private javax.swing.JLabel jLabel3;
  private javax.swing.JTextField jTextField1;
  private javax.swing.JTextField jTextField2;
  private javax.swing.JTextField jTextField3;
  // End of variables declaration
}
```

Output:



Practical 3b: login

import java.sql.Connection; import java.sql.DriverManager; import java.sql.ResultSet; import java.sql.SQLException; import java.sql.Statement;

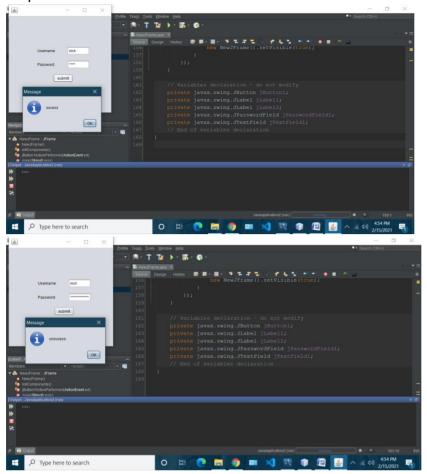
```
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;
* To change this license header, choose License Headers in Project Properties.
* To change this template file, choose Tools | Templates
* and open the template in the editor.
*/
* @author bot
public class NewJFrame extends javax.swing.JFrame {
   * Creates new form NewJFrame
  public NewJFrame() {
    initComponents();
  }
   * This method is called from within the constructor to initialize the form.
   * WARNING: Do NOT modify this code. The content of this method is always
   * regenerated by the Form Editor.
  @SuppressWarnings("unchecked")
  // <editor-fold defaultstate="collapsed" desc="Generated Code">
  private void initComponents() {
    jTextField1 = new javax.swing.JTextField();
    jLabel1 = new javax.swing.JLabel();
    jLabel2 = new javax.swing.JLabel();
    jButton1 = new javax.swing.JButton();
    jPasswordField1 = new javax.swing.JPasswordField();
    setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
    jLabel1.setText("Username");
    jLabel2.setText("Password");
    ¡Button1.setText("submit");
    jButton1.addActionListener(new java.awt.event.ActionListener() {
       public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```
¡Button1ActionPerformed(evt);
      }
    });
    ¡PasswordField1.setText("¡PasswordField1");
    javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
    getContentPane().setLayout(layout);
    layout.setHorizontalGroup(
       layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGroup(layout.createSequentialGroup()
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
           .addGroup(layout.createSequentialGroup()
             .addGap(96, 96, 96)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addComponent(jLabel1)
                .addComponent(jLabel2))
             .addGap(41, 41, 41)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
                .addComponent(jTextField1, javax.swing.GroupLayout.DEFAULT_SIZE,
74, Short.MAX_VALUE)
                .addComponent(jPasswordField1,
javax.swing.GroupLayout.PREFERRED_SIZE, 1, Short.MAX_VALUE)))
           .addGroup(layout.createSequentialGroup()
             .addGap(149, 149, 149)
             .addComponent(jButton1)))
         .addContainerGap(73, Short.MAX_VALUE))
    );
    layout.setVerticalGroup(
       layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGroup(layout.createSequentialGroup()
         .addGap(102, 102, 102)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
           .addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
           .addComponent(jLabel1))
         .addGap(18, 18, 18)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
           .addComponent(jLabel2)
           .addComponent(jPasswordField1,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
```

```
.addGap(18, 18, 18)
         .addComponent(jButton1)
         .addContainerGap(101, Short.MAX_VALUE))
    );
    pack();
  }// </editor-fold>
  private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    String uname=jTextField1.getText();
    String pass;
    pass = String.valueOf(jPasswordField1.getPassword());
    //JOptionPane.showMessageDialog(this, pass);
    try {
       Connection con
=DriverManager.getConnection("jdbc:mysql://localhost:3306/loginform?autoReconnect=true
&useSSL=false","root","root");
       Statement stmt=con.createStatement();
       String sql="select * from myrecord where username=""+uname+" and
password=""+pass+"";";
       //JOptionPane.showMessageDialog(this, sql);
       ResultSet r=stmt.executeQuery(sql);
       if(r.next())
       {JOptionPane.showMessageDialog(this, "sucess");}
       else
       {{JOptionPane.showMessageDialog(this, "unsucess");}}
    } catch (SQLException ex) {
       Logger.getLogger(NewJFrame.class.getName()).log(Level.SEVERE, null, ex);
    }
  }
   * @param args the command line arguments
  public static void main(String args[]) {
    /* Set the Nimbus look and feel */
    //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
    /* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and
feel.
```

```
* For details see
http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
     try {
       for (javax.swing.UIManager.LookAndFeelInfo info:
javax.swing.UIManager.getInstalledLookAndFeels()) {
          if ("Nimbus".equals(info.getName())) {
            javax.swing.UIManager.setLookAndFeel(info.getClassName());
            break:
          }
       }
     } catch (ClassNotFoundException ex) {
java.util.logging.Logger.getLogger(NewJFrame.class.getName()).log(java.util.logging.Level.
SEVERE, null, ex);
     } catch (InstantiationException ex) {
java.util.logging.Logger.getLogger(NewJFrame.class.getName()).log(java.util.logging.Level.
SEVERE, null, ex);
     } catch (IllegalAccessException ex) {
java.util.logging.Logger.getLogger(NewJFrame.class.getName()).log(java.util.logging.Level.
SEVERE, null, ex);
     } catch (javax.swing.UnsupportedLookAndFeelException ex) {
java.util.logging.Logger.getLogger(NewJFrame.class.getName()).log(java.util.logging.Level.
SEVERE, null, ex);
     //</editor-fold>
     /* Create and display the form */
     java.awt.EventQueue.invokeLater(new Runnable() {
       public void run() {
          new NewJFrame().setVisible(true);
    });
  }
  // Variables declaration - do not modify
  private javax.swing.JButton jButton1;
  private javax.swing.JLabel jLabel1;
  private javax.swing.JLabel jLabel2;
  private javax.swing.JPasswordField jPasswordField1;
  private javax.swing.JTextField jTextField1;
  // End of variables declaration
}
```

Output:



Practical 3C: Change Password

```
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;
```

/*

- * 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.

"/

/**

* @author bot

```
*/
public class chapass extends javax.swing.JFrame {
  /**
   * Creates new form chapass
  public chgpass() {
    initComponents();
  }
   * This method is called from within the constructor to initialize the form.
   * WARNING: Do NOT modify this code. The content of this method is always
   * regenerated by the Form Editor.
   */
  @SuppressWarnings("unchecked")
  // <editor-fold defaultstate="collapsed" desc="Generated Code">
  private void initComponents() {
    jLabel1 = new javax.swing.JLabel();
    jLabel2 = new javax.swing.JLabel();
    ¡Label3 = new javax.swing.JLabel();
    jLabel4 = new javax.swing.JLabel();
    jTextField1 = new javax.swing.JTextField();
    jTextField3 = new javax.swing.JTextField();
    ¡Button1 = new javax.swing.JButton();
    jPasswordField1 = new javax.swing.JPasswordField();
    ¡PasswordField2 = new javax.swing.JPasswordField();
    setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
    jLabel1.setText("Usernme");
    jLabel2.setText("Old Password");
    jLabel3.setText("Mobile no");
    jLabel4.setText("New Password");
    jTextField1.addActionListener(new java.awt.event.ActionListener() {
       public void actionPerformed(java.awt.event.ActionEvent evt) {
         jTextField1ActionPerformed(evt);
    });
    jButton1.setText("Update Password");
    jButton1.addActionListener(new java.awt.event.ActionListener() {
```

```
public void actionPerformed(java.awt.event.ActionEvent evt) {
         ¡Button1ActionPerformed(evt);
    });
    ¡PasswordField1.setText("¡PasswordField1");
    iPasswordField2.setText("iPasswordField2");
    javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
    getContentPane().setLayout(layout);
    layout.setHorizontalGroup(
       layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGroup(layout.createSequentialGroup()
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
           .addGroup(layout.createSequentialGroup()
              .addGap(71, 71, 71)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
                .addComponent(jLabel4)
                .addComponent(jLabel3)
                .addComponent(jLabel2)
                .addComponent(jLabel1))
             .addGap(64, 64, 64)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
                .addComponent(iTextField1)
                .addComponent(jTextField3)
                .addComponent(jPasswordField1,
javax.swing.GroupLayout.PREFERRED SIZE, javax.swing.GroupLayout.DEFAULT SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jPasswordField2,
javax.swing.GroupLayout.PREFERRED SIZE, javax.swing.GroupLayout.DEFAULT SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)))
           .addGroup(layout.createSequentialGroup()
              .addGap(134, 134, 134)
              .addComponent(jButton1)))
         .addContainerGap(60, Short.MAX_VALUE))
    );
    layout.setVerticalGroup(
       layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGroup(layout.createSequentialGroup()
         .addGap(69, 69, 69)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
```

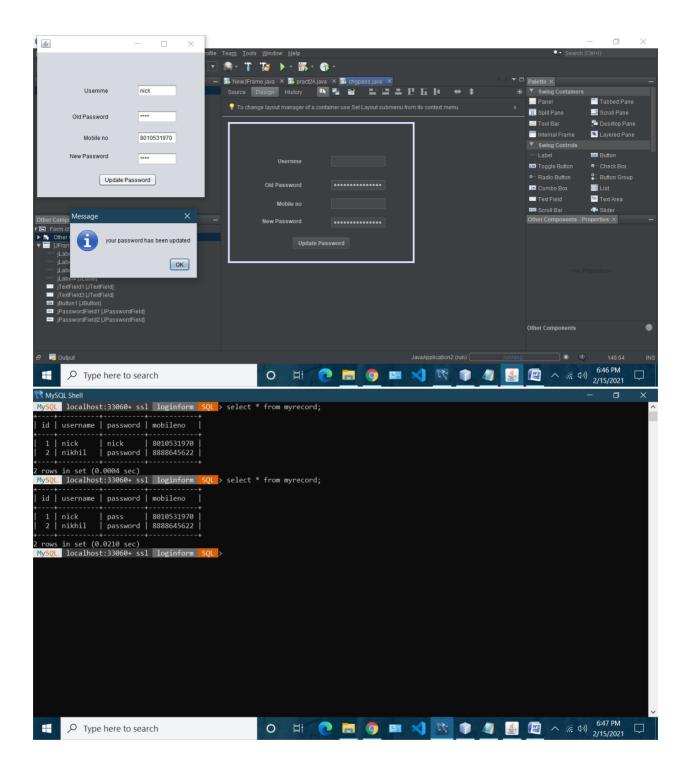
```
.addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT SIZE, javax.swing.GroupLayout.PREFERRED SIZE)
           .addComponent(jLabel1))
         .addGap(29, 29, 29)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
           .addComponent(jLabel2)
           .addComponent(jPasswordField1,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
         .addGap(18, 18, 18)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
           .addComponent(jTextField3, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
           .addComponent(jLabel3))
         .addGap(18, 18, 18)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
           .addComponent(iLabel4)
           .addComponent(jPasswordField2,
javax.swing.GroupLayout.PREFERRED SIZE, javax.swing.GroupLayout.DEFAULT SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
         .addGap(18, 18, 18)
         .addComponent(jButton1)
         .addContainerGap(24, Short.MAX_VALUE))
    );
    pack();
  }// </editor-fold>
  private void jTextField1ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
  }
  private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try {
    String uname= jTextField1.getText();
    String pass= String.valueOf(jPasswordField1.getPassword());
    String mobileno= jTextField3.getText();
    String newpass= String.valueOf(jPasswordField2.getPassword());
       Connection
conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/loginform?autoReconnect
```

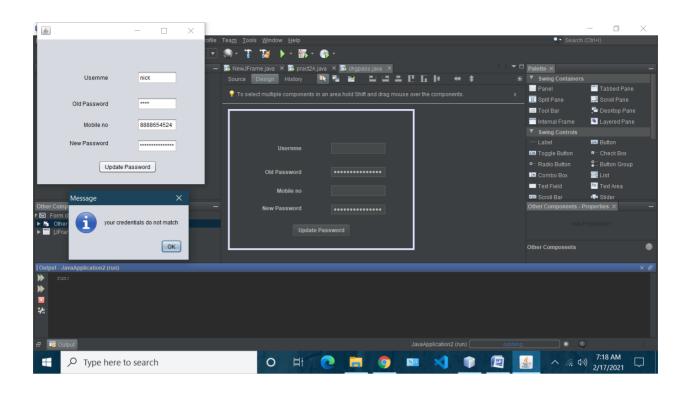
=true&useSSL=false", "root", "root");

```
Statement stmt =conn.createStatement();
       String sgl= "select id from myrecord where username=""+ uname
            + "' and password ='"+pass+"' and mobileno=""+mobileno+"';";
       ResultSet result=stmt.executeQuery(sql);
       if(result.next()){
          sql="update myrecord set password="+newpass+" where
id=""+result.getInt(1)+"";";
          stmt.executeUpdate(sql);
          JOptionPane.showMessageDialog(this,"your password has been updated");
       }
       else{
          JOptionPane.showMessageDialog(this, "your credentials do not match");
    } catch (SQLException ex) {
       Logger.getLogger(pract2A.class.getName()).log(Level.SEVERE, null, ex);
    }
  }
   * @param args the command line arguments
  public static void main(String args[]) {
    /* Set the Nimbus look and feel */
    //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
    /* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and
feel.
     * For details see
http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
     */
    try {
       for (javax.swing.UIManager.LookAndFeelInfo info:
javax.swing.UIManager.getInstalledLookAndFeels()) {
         if ("Nimbus".equals(info.getName())) {
            javax.swing.UIManager.setLookAndFeel(info.getClassName());
            break;
         }
     } catch (ClassNotFoundException ex) {
java.util.logging.Logger.getLogger(chgpass.class.getName()).log(java.util.logging.Level.SEV
ERE, null, ex);
    } catch (InstantiationException ex) {
```

```
java.util.logging.Logger.getLogger(chgpass.class.getName()).log(java.util.logging.Level.SEV
ERE, null, ex);
    } catch (IllegalAccessException ex) {
java.util.logging.Logger.getLogger(chgpass.class.getName()).log(java.util.logging.Level.SEV
ERE, null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
java.util.logging.Logger.getLogger(chgpass.class.getName()).log(java.util.logging.Level.SEV
ERE, null, ex);
    //</editor-fold>
    /* Create and display the form */
    java.awt.EventQueue.invokeLater(new Runnable() {
       public void run() {
          new chgpass().setVisible(true);
       }
    });
  }
  // Variables declaration - do not modify
  private javax.swing.JButton jButton1;
  private javax.swing.JLabel jLabel1;
  private javax.swing.JLabel jLabel2;
  private javax.swing.JLabel jLabel3;
  private javax.swing.JLabel jLabel4;
  private javax.swing.JPasswordField jPasswordField1;
  private javax.swing.JPasswordField jPasswordField2;
  private javax.swing.JTextField jTextField1;
  private javax.swing.JTextField jTextField3;
  // End of variables declaration
}
```

Output:





Practical 3D: Delete Account

import java.sql.Connection;

```
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;

/*
 * 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.
 */

/**
 * @author bot
 */
public class Pract2D extends javax.swing.JFrame {
```

```
* Creates new form Pract2D
public Pract2D() {
  initComponents();
}
/**
* This method is called from within the constructor to initialize the form.
* WARNING: Do NOT modify this code. The content of this method is always
* regenerated by the Form Editor.
*/
@SuppressWarnings("unchecked")
// <editor-fold defaultstate="collapsed" desc="Generated Code">
private void initComponents() {
  jLabel1 = new javax.swing.JLabel();
  jLabel2 = new javax.swing.JLabel();
  jLabel3 = new javax.swing.JLabel();
  jTextField1 = new javax.swing.JTextField();
  ¡TextField3 = new javax.swing.JTextField();
  ¡Button1 = new javax.swing.JButton();
  jPasswordField1 = new javax.swing.JPasswordField();
  setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
  ¡Label1.setText("Usernme");
  jLabel2.setText("Password");
  jLabel3.setText("Mobile no");
  jTextField1.addActionListener(new java.awt.event.ActionListener() {
     public void actionPerformed(java.awt.event.ActionEvent evt) {
       jTextField1ActionPerformed(evt);
    }
  });
  jButton1.setText("Delete record");
  jButton1.addActionListener(new java.awt.event.ActionListener() {
     public void actionPerformed(java.awt.event.ActionEvent evt) {
       jButton1ActionPerformed(evt);
    }
  });
  jPasswordField1.setText("jPasswordField1");
```

```
javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
    getContentPane().setLayout(layout);
    layout.setHorizontalGroup(
       layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGroup(layout.createSequentialGroup()
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
           .addGroup(layout.createSequentialGroup()
             .addGap(77, 77, 77)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
                .addComponent(jLabel3)
                .addComponent(jLabel2)
                .addComponent(jLabel1))
             .addGap(64, 64, 64)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
                .addComponent(jTextField1)
                .addComponent(jTextField3)
                .addComponent(jPasswordField1,
javax.swing.GroupLayout.PREFERRED SIZE, javax.swing.GroupLayout.DEFAULT SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)))
           .addGroup(layout.createSequentialGroup()
             .addGap(137, 137, 137)
             .addComponent(jButton1)))
         .addContainerGap(82, Short.MAX_VALUE))
    ):
    layout.setVerticalGroup(
       layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGroup(layout.createSequentialGroup()
         .addGap(69, 69, 69)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
           .addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
           .addComponent(jLabel1))
         .addGap(29, 29, 29)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
           .addComponent(jPasswordField1,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
           .addComponent(jLabel2))
         .addGap(18, 18, 18)
```

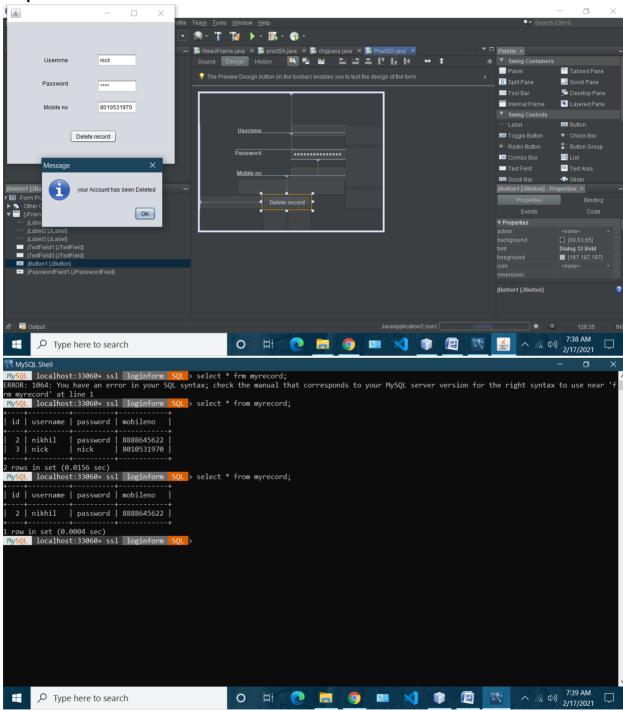
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

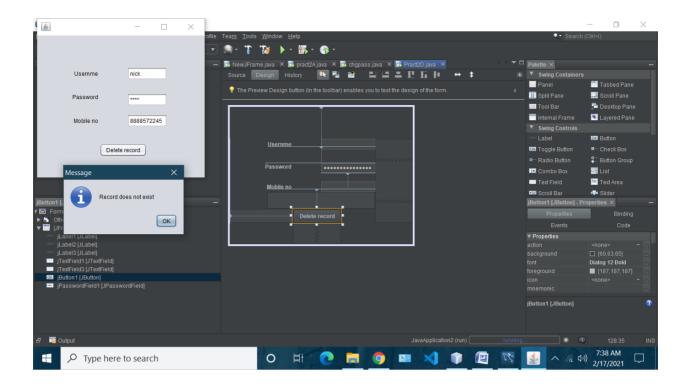
```
.addComponent(jTextField3, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addComponent(jLabel3))
         .addGap(36, 36, 36)
         .addComponent(jButton1)
         .addContainerGap(46, Short.MAX_VALUE))
    );
    pack();
  }// </editor-fold>
  private void jTextField1ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
  }
  private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try {
       String uname= jTextField1.getText();
       String pass= String.valueOf(jPasswordField1.getPassword());
       String mobileno= jTextField3.getText();
       Connection
conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/loginform?autoReconnect
=true&useSSL=false", "root", "root");
       Statement stmt =conn.createStatement();
       String sql= "select id from myrecord where username=""+ uname
       + "' and password ='"+pass+"' and mobileno='"+mobileno+"';";
       ResultSet result=stmt.executeQuery(sql);
       if(result.next()){
         sql="Delete from myrecord where id=""+result.getInt(1)+"";";
         stmt.executeUpdate(sql);
         JOptionPane.showMessageDialog(this,"your Account has been Deleted");
       }
       else{
         JOptionPane.showMessageDialog(this,"Record does not exist");
       }
    } catch (SQLException ex) {
       Logger.getLogger(pract2A.class.getName()).log(Level.SEVERE, null, ex);
    }
  }
   * @param args the command line arguments
```

```
*/
  public static void main(String args[]) {
     /* Set the Nimbus look and feel */
    //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
    /* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and
feel.
     * For details see
http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
     */
    try {
       for (javax.swing.UIManager.LookAndFeelInfo info:
javax.swing.UIManager.getInstalledLookAndFeels()) {
          if ("Nimbus".equals(info.getName())) {
            javax.swing.UIManager.setLookAndFeel(info.getClassName());
            break;
          }
    } catch (ClassNotFoundException ex) {
java.util.logging.Logger.getLogger(Pract2D.class.getName()).log(java.util.logging.Level.SEV
ERE, null, ex);
    } catch (InstantiationException ex) {
java.util.logging.Logger.getLogger(Pract2D.class.getName()).log(java.util.logging.Level.SEV
ERE, null, ex);
    } catch (IllegalAccessException ex) {
java.util.logging.Logger.getLogger(Pract2D.class.getName()).log(java.util.logging.Level.SEV
ERE, null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
java.util.logging.Logger.getLogger(Pract2D.class.getName()).log(java.util.logging.Level.SEV
ERE, null, ex);
    }
    //</editor-fold>
    /* Create and display the form */
    java.awt.EventQueue.invokeLater(new Runnable() {
       public void run() {
          new Pract2D().setVisible(true);
       }
    });
  // Variables declaration - do not modify
  private javax.swing.JButton jButton1;
  private javax.swing.JLabel jLabel1;
```

```
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JPasswordField jPasswordField1;
private javax.swing.JTextField jTextField1;
private javax.swing.JTextField jTextField3;
// End of variables declaration
}
```

Output:





Practical 3E

Aim: Develop business logic layer for Library Management System.

```
LibrarianDoa.java
```

```
import java.sql.*;
public class LibrarianDao {
       Connection con=null;
       public static int save(String name, String password, String email, String address, String
city, String contact) {
              int status=0;
                              try{
                      Class.forName("com.mysql.jdbc.Driver");
               con=DriverManager.getConnection("jdbc:mysql://localhost:3306/test","","")
                        ; PreparedStatement ps=con.prepareStatement("insert into
          librarian(name, password, email, address, city, contact)
               values(?,?,?,?,?)"); ps.setString(1,name);
                      ps.setString(2,password);
                      ps.setString(3,email);
                      ps.setString(4,address);
                      ps.setString(5,city);
                      ps.setString(6,contact);
                      status=ps.executeUpdate();
                      con.close();
               }catch(Exception e){System.out.println(e);}
              return status;
       public static int delete(int id){
              int status=0;
              try{
                      Class.forName("com.mysql.jdbc.Driver");
              con=DriverManager.getConnection("jdbc:mysql://localhost:3306/test","","")
                      ; PreparedStatement ps=con.prepareStatement("delete from librarian
where id=?");
                      ps.setInt(1,id);
                      status=ps.executeUpdate();
                      con.close();
               }catch(Exception e){System.out.println(e);}
              return status:
        }
       public static boolean validate(String name,String password){
              boolean status=false;
              try{
                      Connection con=DB.getConnection();
                       PreparedStatement ps=con.prepareStatement("select * from librarian
where name=? and password=?");
                      ps.setString(1,name);
                      ps.setString(2,password);
                      ResultSet rs=ps.executeQuery();
```

```
status=rs.next();
                      con.close();
               }catch(Exception e){System.out.println(e);}
              return status;
       }
}
LibrarianForm.java
import java.awt.BorderLayout;
import java.awt.EventQueue;
import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.border.EmptyBorder;
import javax.swing.GroupLayout;
import javax.swing.GroupLayout.Alignment;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import java.awt.Font;
import java.awt.Color;
import javax.swing.JTextField;
import javax.swing.JPasswordField;
import
javax.swing.LayoutStyle.ComponentPlacement;
import javax.swing.JButton;
import java.awt.event.ActionListener;
import java.awt.event.ActionEvent;
public class LibrarianForm extends JFrame {
       static LibrarianForm frame;
       private JPanel contentPane;
       private JTextField textField;
       private JTextField textField 1;
       private JTextField textField_2;
       private JTextField textField_3;
       private JTextField textField 4;
       private JPasswordField passwordField;
        * Launch the application.
       public static void main(String[] args) {
              EventQueue.invokeLater(new Runnable() {
                     public void run() {
                             try {
                                    frame = new LibrarianForm();
                                    frame.setVisible(true);
                             } catch (Exception e) {
```

```
e.printStackTrace();
                     }
       });
}
/**
* Create the frame.
public LibrarianForm() {
       setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE)
       ; setBounds(100, 100, 450, 450);
       contentPane = new JPanel();
       contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));
       setContentPane(contentPane);
      JLabel lblAddLibrarian = new JLabel("Add Librarian");
      lblAddLibrarian.setForeground(Color.DARK GRAY);
      lblAddLibrarian.setFont(new Font("Tahoma", Font.PLAIN,
      22));
      JLabel lblName = new JLabel("Name:");
      JLabel lblPassword = new JLabel("Password:");
      JLabel lblEmail = new JLabel("Email:");
      JLabel lblAddress = new JLabel("Address:");
      JLabel lblCity = new JLabel("City:");
      JLabel lblContactNo = new JLabel("Contact No:");
      textField = new JTextField();
      textField.setColumns(10);
      textField_1 = new JTextField();
      textField_1.setColumns(10);
      textField 2 = new JTextField();
      textField_2.setColumns(10);
      textField_3 = new JTextField();
      textField_3.setColumns(10);
      textField_4 = new JTextField();
      textField_4.setColumns(10);
      passwordField = new JPasswordField();
```

```
JButton btnNewButton = new JButton("Add Librarian");
             btnNewButton.addActionListener(new ActionListener() {
                    public void actionPerformed(ActionEvent e) {
                    String name=textField.getText();
                    String password=String.valueOf(passwordField.getPassword());
                    String email=textField 1.getText();
                    String address=textField 2.getText();
                    String city=textField_3.getText();
                    String contact=textField 4.getText();
                    int i=LibrarianDao.save(name, password, email, address, city,
                    contact); if(i>0){
      JOptionPane.showMessageDialog(LibrarianForm.this,"Librarian added
successfully!");
                           AdminSuccess.main(new String[]{});
                           frame.dispose();
                     }else{
                            JOptionPane.showMessageDialog(LibrarianForm.this,"Sorry,
unable to save!");
              });
             btnNewButton.setForeground(Color.DARK_GRAY);
             JButton btnBack = new JButton("Back");
             btnBack.addActionListener(new ActionListener() {
                    public void actionPerformed(ActionEvent e) {
                    AdminSuccess.main(new String[]{});
                    frame.dispose();
              });
             GroupLayout gl_contentPane = new GroupLayout(contentPane);
             gl contentPane.setHorizontalGroup(
                    gl_contentPane.createParallelGroup(Alignment.TRAILING)
                           .addGroup(gl_contentPane.createSequentialGroup()
                                  .addGap(20)
       .addGroup(gl contentPane.createParallelGroup(Alignment.LEADING,
                                         false) .addComponent(lblPassword,
GroupLayout.DEFAULT_SIZE, 62, Short.MAX_VALUE)
                                         .addComponent(lblName)
                                          .addComponent(lblEmail,
GroupLayout.PREFERRED_SIZE, 31,
                                         GroupLayout.PREFERRED_
                                         SIZE)
                                         .addComponent(lblAddress,
          GroupLayout.DEFAULT_SIZE, GroupLayout.DEFAULT_SIZE,
                   Short.MAX_VALUE) .addComponent(lblCity,
```

```
GroupLayout.PREFERRED SIZE, 31, GroupLayout.PREFERRED SIZE)
                                      .addComponent(lblContactNo,
GroupLayout.DEFAULT SIZE, GroupLayout.DEFAULT SIZE, Short.MAX VALUE))
                                .addGap(58)
      .addGroup(gl_contentPane.createParallelGroup(Alignment.LEADING,
                                      false) .addComponent(textField 4,
GroupLayout.DEFAULT SIZE, 177, Short.MAX VALUE)
                                       .addComponent(textField_3,
GroupLayout.DEFAULT SIZE, 177, Short.MAX VALUE)
                                       .addComponent(textField 2,
GroupLayout.DEFAULT_SIZE, 177, Short.MAX_VALUE)
                                       .addComponent(textField_1,
GroupLayout.DEFAULT SIZE, 177, Short.MAX VALUE)
                                       .addComponent(textField,
GroupLayout.DEFAULT SIZE, 177, Short.MAX VALUE)
                                       .addComponent(passwordField))
                                .addContainerGap(107, Short.MAX VALUE))
                          .addGroup(gl contentPane.createSequentialGroup()
                                .addContainerGap(151, Short.MAX_VALUE)
                                .addComponent(lblAddLibrarian)
                                .addGap(144))
                         .addGroup(gl_contentPane.createSequentialGroup()
                                .addContainerGap(160, Short.MAX_VALUE)
                                .addComponent(btnNewButton,
               GroupLayout.PREFERRED_SIZE, 131,
           GroupLayout.PREFERRED SIZE).addGap(133))
                         .addGroup(gl_contentPane.createSequentialGroup()
                                .addContainerGap(200, Short.MAX VALUE)
                                .addComponent(btnBack)
                                .addGap(169))
             );
             gl_contentPane.setVerticalGroup(
                   gl_contentPane.createParallelGroup(Alignment.LEADING)
                         .addGroup(gl_contentPane.createSequentialGroup()
                                .addComponent(lblAddLibrarian)
                                .addGap(18)
      .addGroup(gl contentPane.createParallelGroup(Alignment.LEADING)
      .addGroup(gl_contentPane.createSequentialGroup()
                                             .addComponent(lblName)
                                             .addGap(18)
                                             .addComponent(lblPassword))
      .addGroup(gl_contentPane.createSequentialGroup()
                                              .addComponent(textField,
GroupLayout.PREFERRED SIZE, GroupLayout.DEFAULT SIZE,
GroupLayout.PREFERRED_SIZE)
```

```
.addPreferredGap(ComponentPlacement.UNRELATED)
                                              .addComponent(passwordField,
GroupLayout.PREFERRED SIZE, GroupLayout.DEFAULT SIZE,
GroupLayout.PREFERRED_SIZE)))
                                 .addGap(18)
      .addGroup(gl contentPane.createParallelGroup(Alignment.BASELINE
                                       ) .addComponent(lblEmail)
                                        .addComponent(textField 1,
GroupLayout.PREFERRED SIZE, GroupLayout.DEFAULT SIZE,
GroupLayout.PREFERRED_SIZE))
                                 .addGap(18)
      .addGroup(gl contentPane.createParallelGroup(Alignment.BASELINE
                                       ) .addComponent(lblAddress)
                                       .addComponent(textField 2,
GroupLayout.PREFERRED_SIZE, GroupLayout.DEFAULT_SIZE,
GroupLayout.PREFERRED_SIZE))
                                 .addGap(18)
      . add Group (gl\_content Pane. create Parallel Group (Alignment. BASELINE)) \\
                                       ) .addComponent(lblCity)
                                        .addComponent(textField 3.
GroupLayout.PREFERRED_SIZE, GroupLayout.DEFAULT_SIZE,
GroupLayout.PREFERRED_SIZE))
                                 .addGap(18)
      . add Group (gl\_content Pane. create Parallel Group (Alignment. BASELINE)) \\
                                       ) .addComponent(lblContactNo)
                                       .addComponent(textField 4,
GroupLayout.PREFERRED_SIZE, GroupLayout.DEFAULT_SIZE,
GroupLayout.PREFERRED_SIZE))
                                 .addGap(18)
                                 .addComponent(btnNewButton,
GroupLayout.PREFERRED SIZE, 36, GroupLayout.PREFERRED SIZE)
                                 .addPreferredGap(ComponentPlacement.RELATED,
57, Short.MAX_VALUE)
                                 .addComponent(btnBack)
                                 .addGap(19)
             );
             contentPane.setLayout(gl_contentPane);
}
ViewLibrarian.java
import java.awt.BorderLayout;
import java.awt.EventQueue;
import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
```

```
import java.sql.ResultSetMetaData;
import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.JScrollPane;
import javax.swing.border.EmptyBorder;
import javax.swing.JTable;
public class ViewLibrarian extends JFrame {
       private JPanel contentPane;
       private JTable table;
       public static void main(String[] args) {
              EventQueue.invokeLater(new Runnable() {
                     public void run() {
                            try {
                                   ViewLibrarian frame = new ViewLibrarian();
                                   frame.setVisible(true);
                             } catch (Exception e) {
                                   e.printStackTrace();
                             }
                      }
              });
       }
       /**
        * Create the frame.
       public ViewLibrarian() {
              setDefaultCloseOperation(JFrame.HIDE_ON_CLOSE);
              setBounds(100, 100, 450, 300);
              contentPane = new JPanel();
              contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));
              contentPane.setLayout(new BorderLayout(0, 0));
              setContentPane(contentPane);
              String data∏=null;
              String column[]=null;
              try{
                     Connection con=DB.getConnection();
                      PreparedStatement ps=con.prepareStatement("select * from
librarian", ResultSet. TYPE SCROLL SENSITIVE, ResultSet. CONCUR UPDATABLE)
                          ; ResultSet rs=ps.executeQuery();
                     ResultSetMetaData rsmd=rs.getMetaData();
                     int cols=rsmd.getColumnCount();
                     column=new String[cols];
                     for(int i=1;i <= cols;i++)
                            column[i-1]=rsmd.getColumnName(i);
                      }
```

```
rs.last();
                      int rows=rs.getRow();
                      rs.beforeFirst();
                      data=new String[rows][cols];
                      int count=0;
                      while(rs.next()){
                             for(int i=1;i \le cols;i++)
                                    data[count][i-1]=rs.getString(i);
                             count++;
                      con.close();
               }catch(Exception e){System.out.println(e);}
              table = new JTable(data,column);
              JScrollPane sp=new JScrollPane(table);
              contentPane.add(sp, BorderLayout.CENTER);
       }
}
DeleteLibrarian.java
import java.awt.BorderLayout;
import java.awt.EventQueue;
import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.border.EmptyBorder;
import javax.swing.GroupLayout;
import javax.swing.GroupLayout.Alignment;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JTextField;
import javax.swing.JButton;
import java.awt.Font;
import java.awt.event.ActionListener;
import java.awt.event.ActionEvent;
public class DeleteLibrarian extends JFrame {
       static DeleteLibrarian frame;
       private JPanel contentPane;
       private JTextField textField;
        * Launch the application.
       public static void main(String[] args) {
```

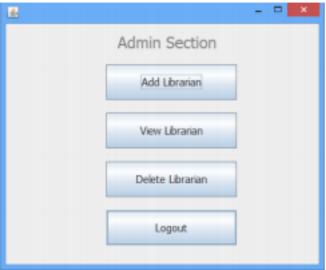
EventQueue.invokeLater(new Runnable() {

```
public void run() {
                             try {
                                    frame = new DeleteLibrarian();
                                    frame.setVisible(true);
                             } catch (Exception e) {
                                    e.printStackTrace();
                      }
               });
       }
       /**
        * Create the frame.
       public DeleteLibrarian() {
              setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
              setBounds(100, 100, 450, 300);
              contentPane = new JPanel();
              contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));
              setContentPane(contentPane);
              JLabel lblEnterId = new JLabel("Enter Id:");
              textField = new JTextField();
              textField.setColumns(10);
              JButton btnDelete = new JButton("Delete");
              btnDelete.addActionListener(new ActionListener() {
                     public void actionPerformed(ActionEvent e) {
                             String sid=textField.getText();
                             if(sid==null||sid.trim().equals("")){
           JOptionPane.showMessageDialog(DeleteLibrarian.this,"Id can't be
                                    blank"); }else{
                                    int id=Integer.parseInt(sid);
                                    int i=LibrarianDao.delete(id);
                                    if(i>0){
       JOptionPane.showMessageDialog(DeleteLibrarian.this,"Record deleted
successfully!");
                                     }else{
          JOptionPane.showMessageDialog(DeleteLibrarian.this,"Unable to delete given
                                             id!"); }
                             }
                      }
              });
              btnDelete.setFont(new Font("Tahoma", Font.PLAIN, 13));
              JButton btnNewButton = new JButton("Back");
              btnNewButton.addActionListener(new ActionListener() {
```

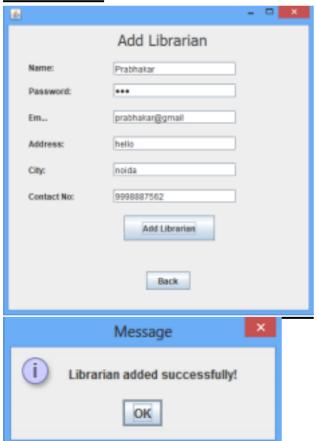
```
public void actionPerformed(ActionEvent e) {
                          AdminSuccess.main(new String[]{});
                          frame.dispose();
                    }
             });
             btnNewButton.setFont(new Font("Tahoma", Font.PLAIN, 13));
             GroupLayout gl contentPane = new
             GroupLayout(contentPane);
             gl_contentPane.setHorizontalGroup(
                   gl contentPane.createParallelGroup(Alignment.LEADING)
                          .addGroup(gl contentPane.createSequentialGroup()
                                 .addGap(39)
                                 .addComponent(lblEnterId)
                                 .addGap(57)
                                 .addComponent(textField,
GroupLayout.PREFERRED_SIZE, 178, GroupLayout.PREFERRED_SIZE)
                                 .addContainerGap(107,
                                 Short.MAX_VALUE))
                           .addGroup(Alignment.TRAILING,
gl_contentPane.createSequentialGroup()
                                 .addContainerGap(175, Short.MAX VALUE)
                                 .addComponent(btnDelete,
                GroupLayout.PREFERRED SIZE, 109,
           GroupLayout.PREFERRED_SIZE) .addGap(140))
                           .addGroup(Alignment.TRAILING,
gl_contentPane.createSequentialGroup()
                                 .addContainerGap(322, Short.MAX_VALUE)
                                 .addComponent(btnNewButton,
                GroupLayout.PREFERRED SIZE, 92,
        GroupLayout.PREFERRED_SIZE) .addContainerGap())
             gl_contentPane.setVerticalGroup(
                   gl contentPane.createParallelGroup(Alignment.LEADING)
                          .addGroup(gl_contentPane.createSequentialGroup()
                                 .addGap(19)
      .addGroup(gl_contentPane.createParallelGroup(Alignment.LEADING
                                       ) .addComponent(textField,
GroupLayout.PREFERRED_SIZE, GroupLayout.DEFAULT_SIZE,
GroupLayout.PREFERRED_SIZE)
                                       .addComponent(lblEnterId))
                                 .addGap(33)
                                 .addComponent(btnDelete,
                GroupLayout.PREFERRED SIZE, 33,
           GroupLayout.PREFERRED_SIZE) .addGap(43)
                                 .addComponent(btnNewButton)
                                 .addContainerGap(78, Short.MAX_VALUE))
             );
             contentPane.setLayout(gl_contentPane);
```

}

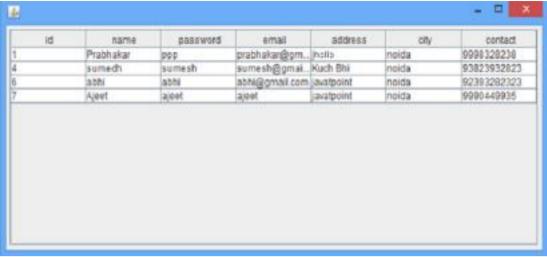
Output Admin Module after login



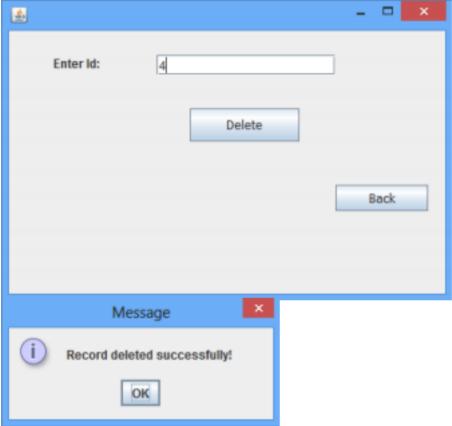
Add Librarian



View Librarian



Delete Librarian



Similarly we can inculcate book management and Librarian update functionalities in the Librarian module.