

**STUDENT MANAGEMENT SYSTEM**

**Dr. Mahalingam College of Engineering And**

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**DataBaseManagement System Lab (16ITL42)**

**Mini project report**

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**TABLE OF CONTENTS**

|  |  |  |
| --- | --- | --- |
| **S.No.** | **Chapter Title** | **Page No.** |
| 1 | Abstract | 3 |
| 2 | ER Diagram | 4 |
| 3 | Data Base Implementation | 5 |
| 4 | Project Code | 6 |
| 5 | Results | 19 |
| 6 | Conclusion | 23 |
| 7 | Application | 23 |
| 8 | References | 24 |

**1.ABSTRACT:**

The student management system by manual way is quiet difficult to process where it involves calculating every students attendance percentage , percentage of marks , student details. The main aim of this project is to avoid problems which will occurred when it carried manually. It is developed inorder make the activities of student management system. There is a high efficiency in accessing and managing records of every student’s data. This project is very useful in retrieving the datas of students. This project is carried out by using JAVA as front end and MYSQL as back end.

And the student management system consists of an different tables as follows,

\* Student details.

\* Course details.

\* Attendance details.

\* Marks details.

\* Class details.

**STUDENT DETAILS:**

The table studentdetails will contain details of students those who are admitted in that institution .And this consists of an attributes like roll no, student Name, department ,course details, attendance % etc..

**COURSE DETAILS:**

This table consists of course details in the of the student .This table consists different attributes as follows which course name, staff name, department, course id etc…  
**ATTENDANCE DETAILS:**

This table has an attributes like roll no, attendance percentage.

**MARKS DETAILS:**

Attributes are name of the subject, marks individually, total marks,cgpa etc..

**CLASS DETAILS:**

Attributes are class, department, no.of. student, roll no.

**2.ER DIAGRAM:**

STUDENT

DETAILS

STUDENT DATABASE

COURSE DETAILS

ATTENDANCEDETAILS

CLASS DETAILS

**3.DATABASE IMPLEMENTAION:**

Student management system database is implemented using an MYSQL and JAVA APPLICATION.

Hence with the help of an MYSQL is connected to an java application. That is frontend and backend are connected for library management system.

MYSQL is an oracle-backed open source relational database management system based on structured query language(SQL). In terms of an MYSQL certain kind of well finished query is executed and an certain output will be obtained ,which will help us to check our database by implementing into it.

After creating and executing database it will be connected to an java application for connecting an frontend and backend also. Java application is used an app called NETBEANS for executing and running a database.

In java application a program is written for library management system database as for insert, delete, update, retrieve.

* Insert operation is of which data is inserted by java application and it is directly inserted into an database.
* Retrieve operation is of retrieving data from MYSQL and display the data in java application.
* Update operation is getting an data from user in java application and updating.
* Delete operation is deleting an records in java application and which is automatically delete the records in MYSQL database.

Hence the database is mainly implemented in java application and MYSQL for student management system.

**4.PROGRAM:**

**package goks007;**

**import java.sql.\*;**

**import java.awt.\*;**

**import java.util.\*;**

**import javax.swing.\*;**

**public class NewJFrame extends javax.swing.JFrame {**

**String s,t,s1;**

**String uname="root";**

**String url="jdbc:mysql://localhost:3307/gp2";**

**String password="dbms";**

**int i,x;**

**public NewJFrame() {**

**initComponents();**

**}**

**@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();**

**jLabel4 = new javax.swing.JLabel();**

**jLabel5 = new javax.swing.JLabel();**

**jLabel6 = new javax.swing.JLabel();**

**jLabel7 = new javax.swing.JLabel();**

**jButton1 = new javax.swing.JButton();**

**jButton2 = new javax.swing.JButton();**

**jTextField1 = new javax.swing.JTextField();**

**jTextField2 = new javax.swing.JTextField();**

**jTextField3 = new javax.swing.JTextField();**

**jTextField4 = new javax.swing.JTextField();**

**jTextField5 = new javax.swing.JTextField();**

**jTextField6= new javax.swing.JTextField();**

**setDefaultCloseOperation(javax.swing.WindowConstants.EXIT\_ON\_CLOSE);**

**jLabel1.setText("Name");**

**jLabel2.setText("Rollno");**

**jLabel3.setText("Age");**

**jLabel4.setText("Dp");**

**jLabel5.setText("Student management system");**

**jLabel6.setText("att%");**

**jLabel7.setText("course marks");**

**jLabel8.setText("cgpa");**

**jButton1.setText("Insert");**

**jButton1.addActionListener(new java.awt.event.ActionListener() {**

**public void actionPerformed(java.awt.event.ActionEvent evt) {**

**jButton1ActionPerformed(evt);**

**}**

**});**

**jButton2.setText("Retrieve");**

**jButton2.addActionListener(new java.awt.event.ActionListener() {**

**public void actionPerformed(java.awt.event.ActionEvent evt) {**

**jButton2ActionPerformed(evt);**

**}});**

**jTextField1.setText("jTextField1");**

**jTextField2.setText("jTextField2");**

**jTextField3.setText("jTextField3");**

**jTextField4.setText("jTextField4");**

**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(148, 148, 148)**

**.addComponent(jLabel5))**

**.addGroup(layout.createSequentialGroup()**

**.addGap(29, 29, 29)**

**.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)**

**.addGroup(layout.createSequentialGroup()**

**.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)**

**.addComponent(jLabel1)**

**.addComponent(jLabel2)**

**.addComponent(jLabel3)**

**.addComponent(jLabel4))**

**.addGap(31, 31, 31)**

**.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING) .addComponent(jTextField4, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE,**

**javax.swing.GroupLayout.PREFERRED\_SIZE) .addComponent(jTextField3, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE,**

**javax.swing.GroupLayout.PREFERRED\_SIZE) .addComponent(jTextField2, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE,**

**javax.swing.GroupLayout.PREFERRED\_SIZE) .addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE))).addGroup(layout.createSequentialGroup() .addComponent(jButton1) .addGap(32, 32, 32).addComponent(jButton2))))).addGap(193, 193, Short.MAX\_VALUE))**

**);**

**layout.setVerticalGroup(**

**layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)**

**.addGroup(layout.createSequentialGroup()**

**.addGap(22, 22, 22)**

**.addComponent(jLabel5)**

**.addGap(18, 18, 18)**

**.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))**

**.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)**

**.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))**

**.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)**

**.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)**

**.addGroup(layout.createSequentialGroup()**

**.addComponent(jLabel3)**

**.addGap(18, 18, 18)**

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

**.addComponent(jLabel4)**

**.addComponent(jTextField4, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE)))**

**.addComponent(jTextField3, 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.LEADING)**

**.addComponent(jButton1)**

**.addComponent(jButton2))**

**.addContainerGap(101, Short.MAX\_VALUE))**

**);**

**pack();**

**}// </editor-fold>**

**private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {**

**try {**

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

**Connection con=DriverManager.getConnection(url,uname,password);**

**n=jTextField1.getText();**

**r=Integer.parseInt(jTextField2.getText());**

**a=Integer.parseInt(jTextField4.getText());**

**c=Integer.parseInt(jTextField5.getText());**

**crs=jTextField6.getText();**

**d=jTextField7.getText();**

**Statement st=con.createStatement();**

**st.execute(("insert into t2(name,rollno,age,dp) values('"+s+"',"+i+","+x+",'"+t+"');"));**

**st.execute("commit");**

**System.out.println("Records Are Inserted")**

**st.close();**

**con.close();**

**} catch(Exception e) {**

**e.printStackTrace();**

**}**

**// TODO add your handling code here:**

**}**

**private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {**

**try**

**{**

**int i;**

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

**Connection con=DriverManager.getConnection(url,uname,password);**

**Statement st=con.createStatement();**

**ArrayList<String[]> tableData=new ArrayList<>(); // you need a dynamic sized container for the results**

**ResultSet rs = st.executeQuery( "SELECT \* FROM t2" ); // query the database**

**while ( rs.next() ){**

**r=rs.getInt(2);**

**a=Integer.toString(i);**

**c=rs.getInt(3);**

**s1= Integer.toString(x);**

**tableData.add(new String[]{ rs.getString(1),s,s1,rs.getString(4)});**

**}**

**String[][] tableRows = tableData.toArray(new String[tableData.size()][]); // convert the ArrayList to a regular Array**

**String[] columnNames = {**

**"Name","rollno" ,"age","Dp","crse","cgpa" // name your table columns**

**};**

**JFrame f = new JFrame(); // you need a window to display the JTable**

**f.setDefaultCloseOperation( JFrame.EXIT\_ON\_CLOSE );**

**JTable table = new JTable( tableRows, columnNames ); // thats how you put the data into the JTable**

**f.add( new JScrollPane( table ) ); // add the JTable to the window**

**f.pack();**

**f.setVisible( true ); // finished**

**}**

**catch(Exception e) {**

**e.printStackTrace();**

**}**

**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.JButton jButton2;**

**private javax.swing.JLabel jLabel1;**

**private javax.swing.JLabel jLabel2;**

**private javax.swing.JLabel jLabel3;**

**private javax.swing.JLabel jLabel4;**

**private javax.swing.JLabel jLabel5;**

**private javax.swing.JTextField jTextField1;**

**private javax.swing.JTextField jTextField2;**

**private javax.swing.JTextField jTextField3;**

**private javax.swing.JTextField jTextField4;**

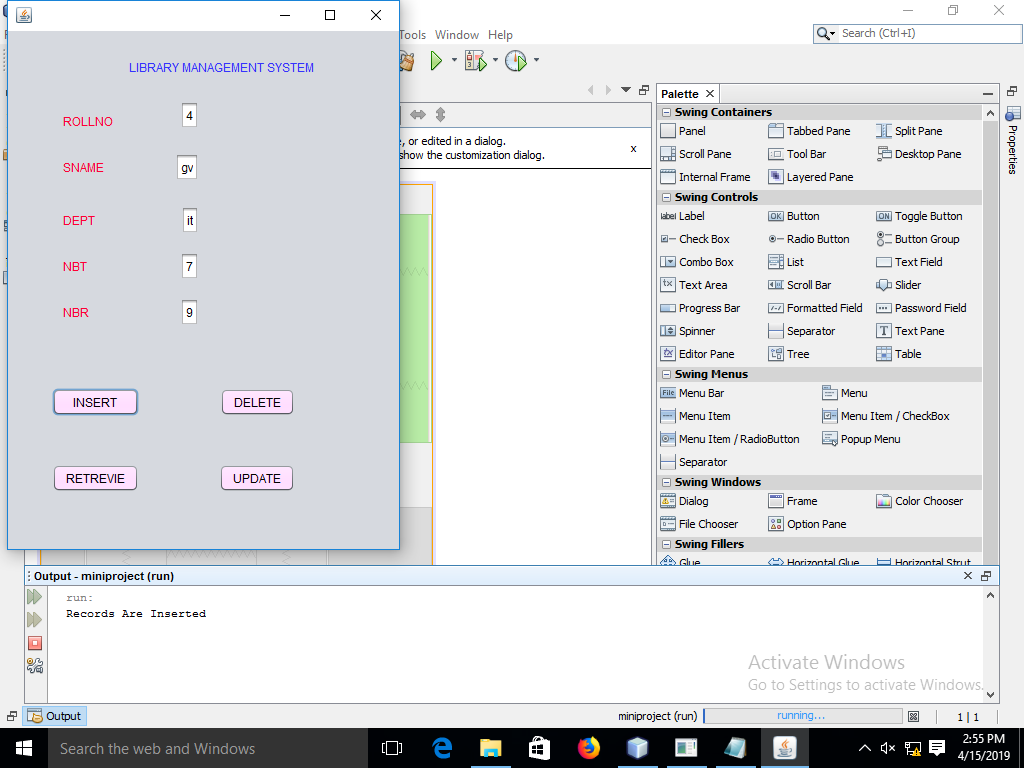
**// End of variables declaration**

**}**

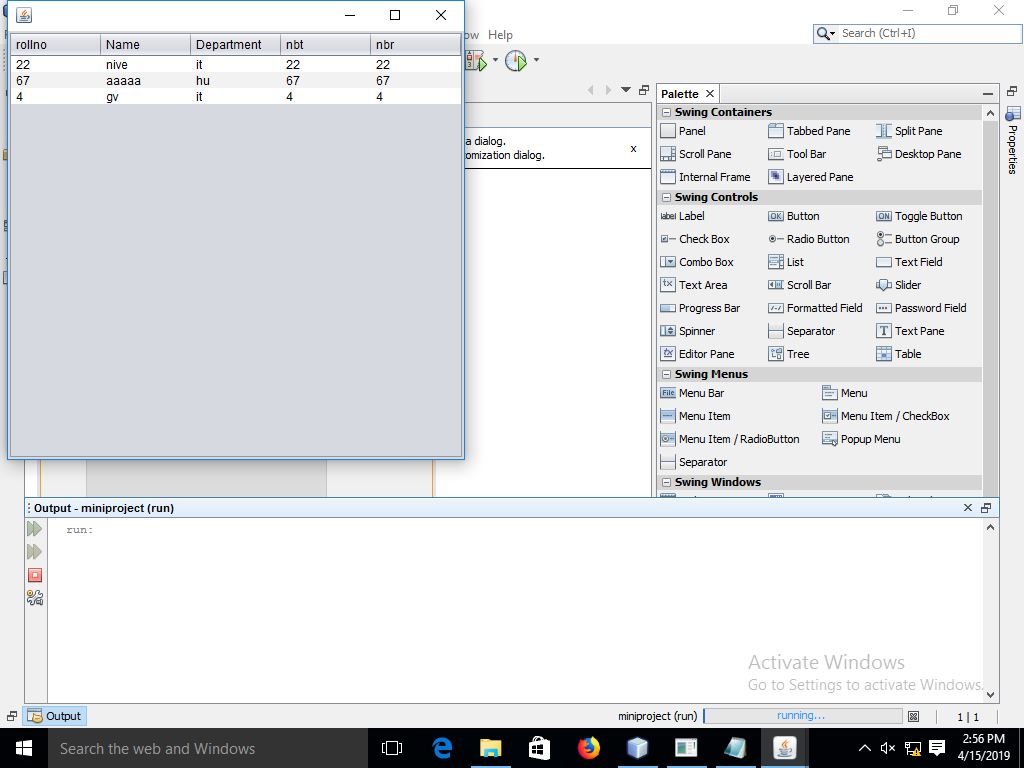
**rollno**

**5.RESULT:**

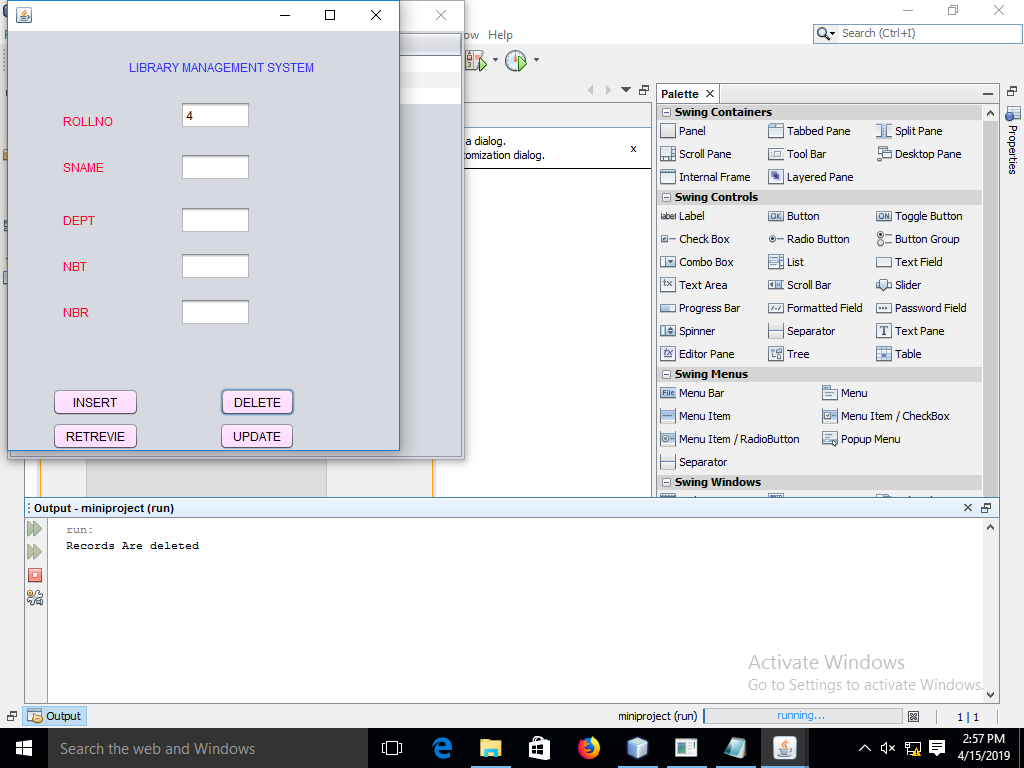
INSERT:

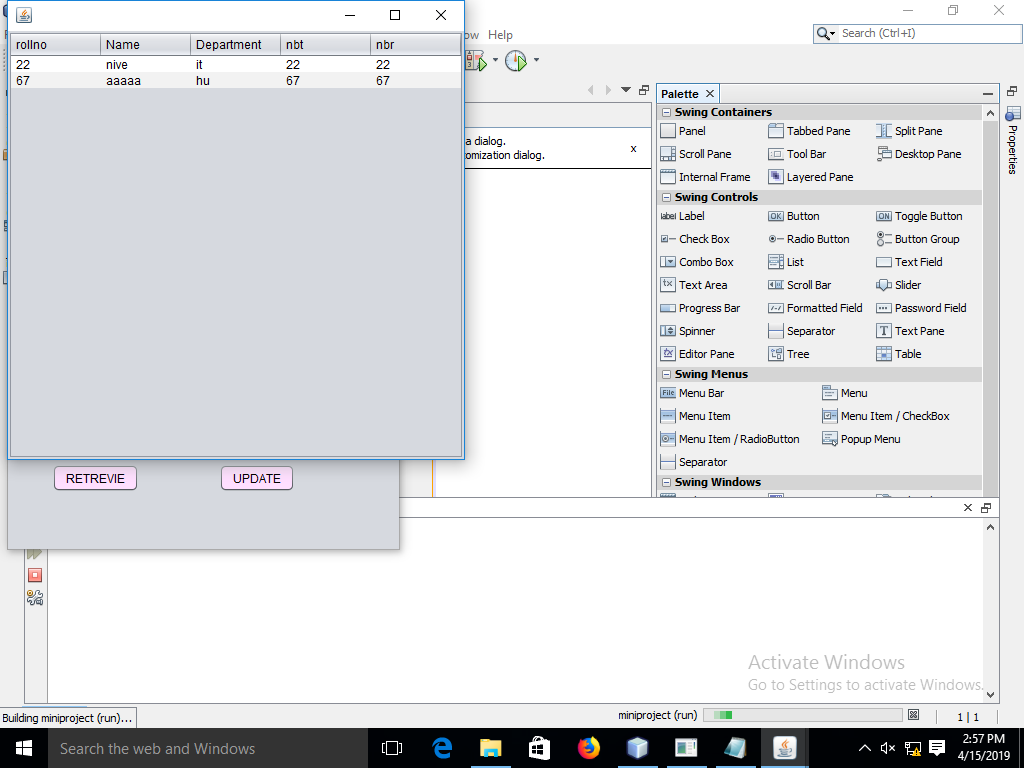
****

RETRIEVE:

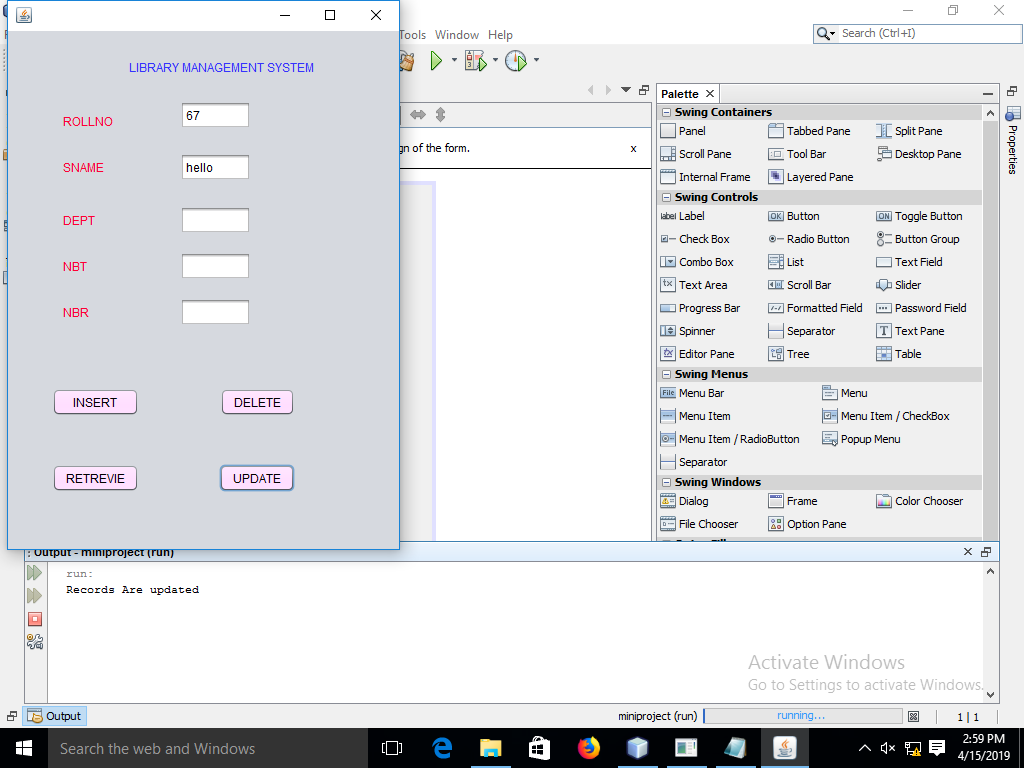
****

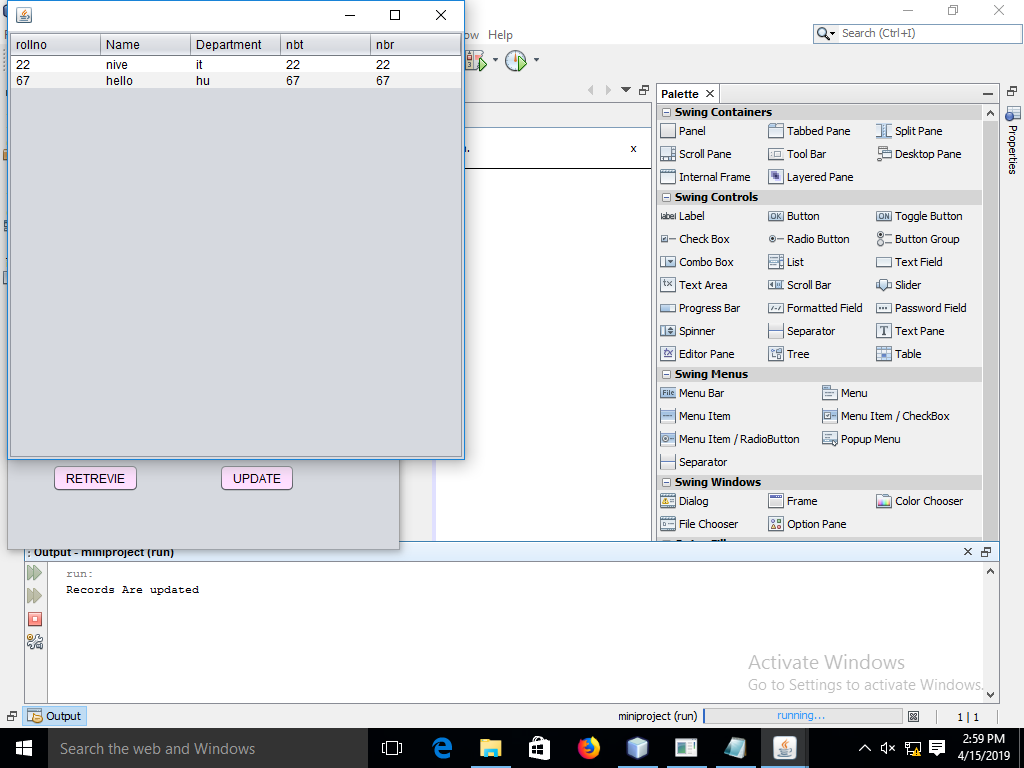
DELETE:





UPDATE:





**6.CONCLUSION:**

Thus the program for student management system is executed successfully by using an javacode and connected with the mysql database.

**7.APPLICATION:**

This may be used to calculate every students information separately.

This may be used in every institutions , companies etc..

**8.REFERENCES:**

https://blog.school-time.co/importance-library-management-system/.

www.educorptech.com/software/librarymanagementsystem/.