# Advanced JAVA Programming
# Report On
# Student Management System

## 1. Rationale:-

The objective of the project is to maintain the database of the Student (which includes Name, Roll No, Course and Marks) and to display the result the same.

The program consists of different Swing components like JLabel, JTextField, and JButton.

## 2. Aim of the Project:-

This project is a program that manages all the data of student studying in school/colleges which will help the staff to maintain the database of every student.

**Benefits of project are:-**

a)Accuracy of the student record which can be checked anytime.

b)It will save time.

c)Less manual effort.

## 3. Course Outcomes Addressed:-

Develop programs using GUI Framework (AWT and Swing).

Handle events of AWT and Swings components.

Develop programs to handle events in Java Programming.

Develop Java programs using networking concepts.

Develop program using database.

## 4. Literature Review:-

Referred following sites:-

- https://code-projects.org/student-information-system-java/

## 5. Actual Methodology Followed:-

a)Collecting Information.

b)Developing Program logic.

c)Implementing the Program.

```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import javax.swing.JFrame.*;
import java.sql.*;
public class Stdpro extends
JFrame implements
ActionListener
{
JLabel l1,l2,l3,l4,l5,l11,l22,l33;
JButton b1, b2;
JTextField t1,t2,t3,t4;
Connection con;
Stdpro()
{
getContentPane().setLayout(ne
w GridLayout(10,4));
l1=new JLabel("Name:");
l2=new JLabel("Roll No:");
l3=new JLabel("Course:");
l4=new JLabel("Marks:");
l5=new JLabel();
b1=new JButton("Submit");
b2=new JButton("Show
Result");
t1=new JTextField(20);
t2=new JTextField(5);
t3=new JTextField(10);
t4=new JTextField(5);
getContentPane().add(l1);
getContentPane().add(t1);
getContentPane().add(l2);
getContentPane().add(t2);
getContentPane().add(l3);
getContentPane().add(t3);
getContentPane().add(l4);
getContentPane().add(t4);
getContentPane().add(b1);
getContentPane().add(b2);
getContentPane().add(l5);
b1.addActionListener(this);
b2.addActionListener(this);
}
public void
actionPerformed(ActionEvent e)
{
if (e.getSource()==b1)
{
try
{
Class.forName("Sun.jdbc.odbc.J
dbcOdbcDriver");
l5.setText("Driver loaded...");
}
catch(Exception e1)
{
System.out.println(e1.getMessa
ge());
}
try
{
con=DriverManager.getConnect
ion("jdbc:odbc:11_14");
Statement
st=con.createStatement();
PreparedStatement
ps=con.prepareStatement("inse
rt into Student values(?,?,?,?)");
String sname=t1.getText();
int
roll_no=Integer.parseInt(t2.getT
ext());
String course=t3.getText();
int
marks=Integer.parseInt(t4.getT
ext());
ps.setString(1,sname);
ps.setInt(2,roll_no);
ps.setString(3,course);
ps.setInt(4,marks);
```

```
ps.executeUpdate();
l5.setText("Data Inserted
Successfully");
}
catch(SQLException e2)
{
System.out.println(e2.getMessa
ge());
}
}
if (e.getSource()==b2)
{
JLabel j1,j2,j3,j4,l1,l2,l3,l4;
j1=new JLabel("Name");
j2=new JLabel("Roll no");
j3=new JLabel("Course");
j4=new JLabel("Marks");
l11= new JLabel("");
l22=new JLabel("");
l33=new JLabel("");
l1= new JLabel();
l2= new JLabel();
l3= new JLabel();
l4= new JLabel();
getContentPane().add(l11);
getContentPane().add(l22);
getContentPane().add(l33);
getContentPane().add(j1);
getContentPane().add(j2);
getContentPane().add(j3);
getContentPane().add(j4);
getContentPane().add(l1);
getContentPane().add(l2);
getContentPane().add(l3);
getContentPane().add(l4);
try
{
Statement
st1=con.createStatement();
PreparedStatement
ps1=con.prepareStatement("sel
ect * from Student"); ResultSet
rs=ps1.executeQuery(); int
n=rs.getMetaData().getColumn
Count();
for(int i=1;i<=n;i++) {
System.out.println(rs.getMetaD
ata().getColumnLabel(i)+"\t"); }
while(rs.next()) { for(int
i=1;i<=n;i++) {
getContentPane().add(new
JLabel(rs.getString(i))); } }
rs.close(); con.close(); }
catch(SQLException e3) {
System.out.println(e3.getMessa
ge()); } } } public static void
main(String args[]) { Stdpro
s=new Stdpro();
s.setSize(300,300);
s.setVisible(true);
s.setDefaultCloseOperation(JFra
me.EXIT_ON_CLOSE);
}
}
```

d)Implementing the database.

Student

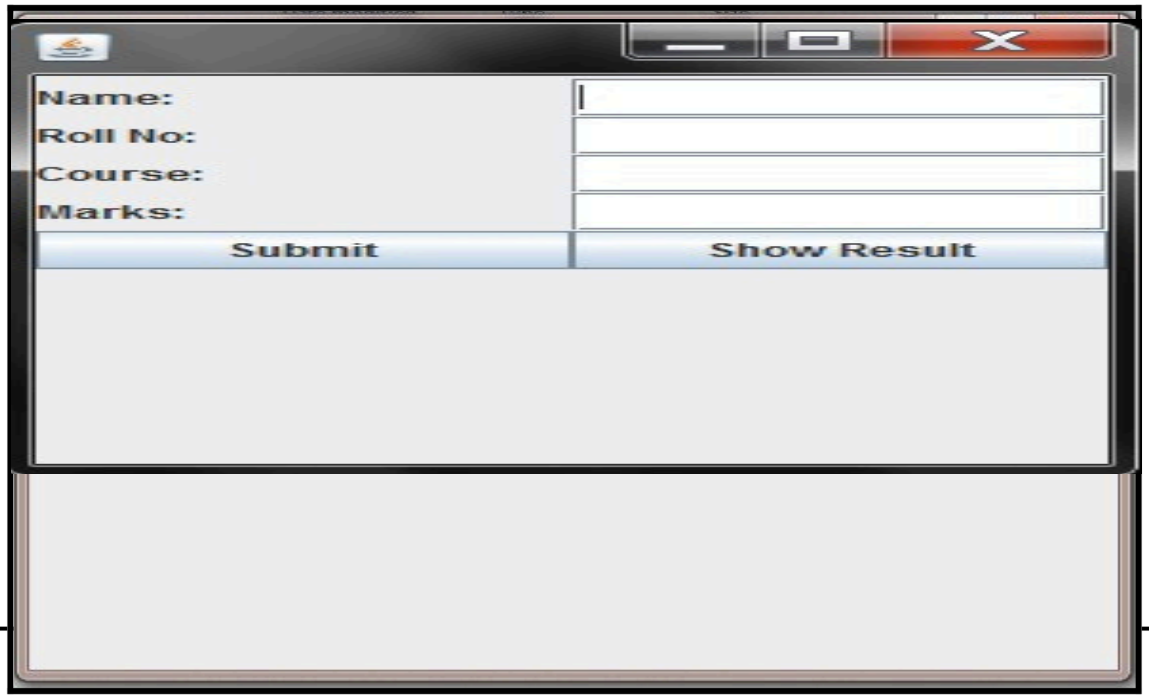
| sname | roll_no | course | marks |
|---|---|---|---|
| Sohan | 11 | tyif | 82 |
| Tejas | 23 | TYIF | 56 |
| Tanmay | 8 | TYIF | 99 |
| Hardik | 12 | IF | 75 |

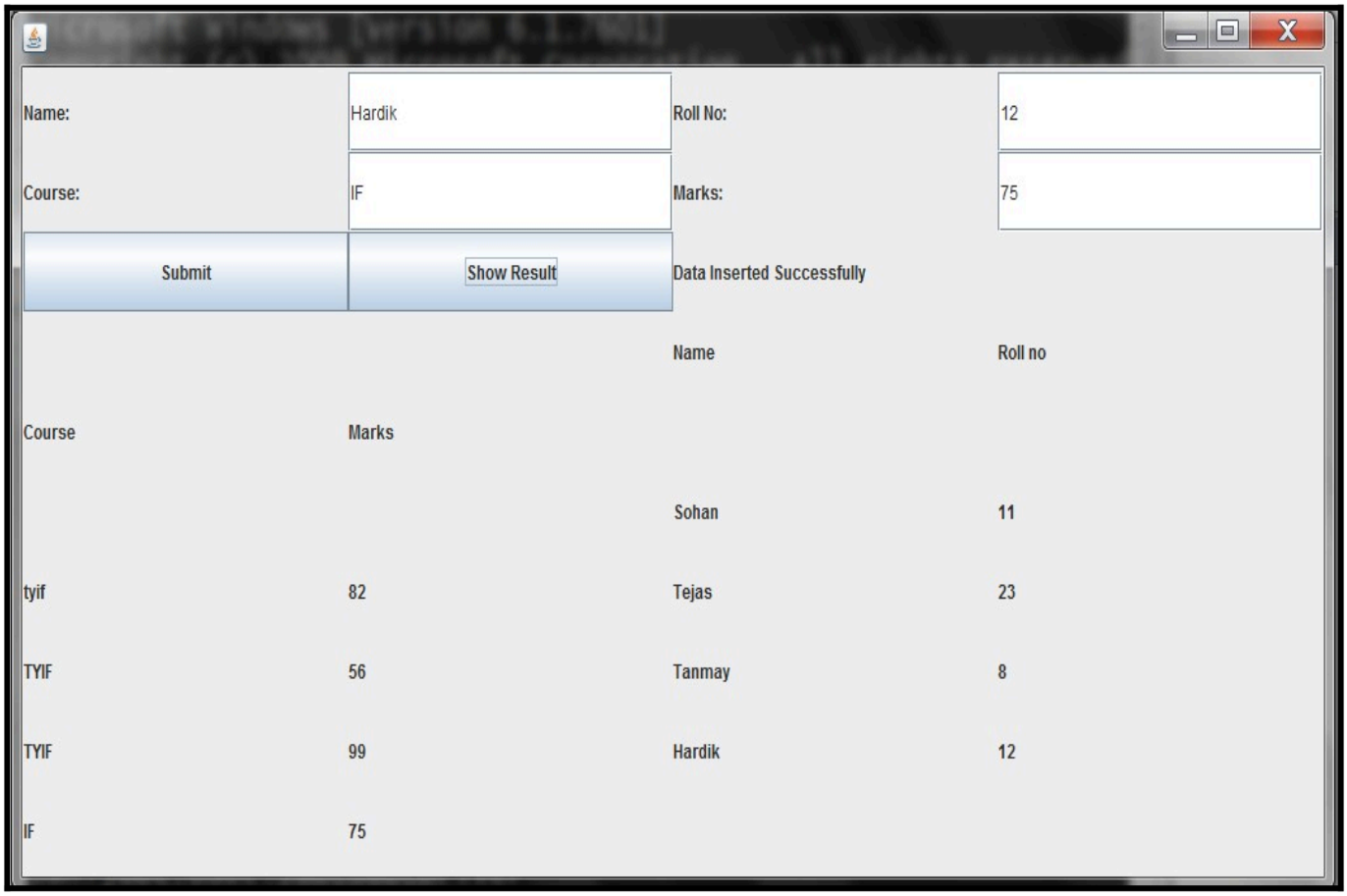
e)Testing program for desired output.
f)Preparing Micro-Project report.

## 6. Actual Resources Used:-

| Name of Resource | Sr. No | Specifications | Quantity |
|---|---|---|---|
| | 1) MS-Word. | Any Version. | 1 |
| | 2) JDK. | 1.3 Or above. | 1 |
| | 3) Command Prompt. | OS:Windows 7/8/10 | 1 |
| | 4) MS-Access | Any Version. | 1 |

## 7. Outputs of the Projects:-






**8. Skill Developed / Learning outcome of this Project:-**

From analyzing of database structure and their relations to creating the database and tables, all these have strengthened our understanding, especially when doing part of the codes.

**9. Applications of this Project:-**

We can also use this for college submission, Minor project and Major project for the student.

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