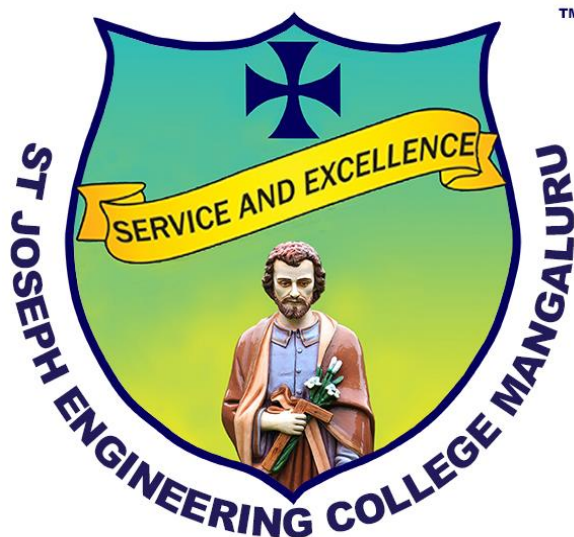# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ST JOSEPH ENGINEERING COLLEGE, MANGALURU-575028

ASSIGNMENT-1: MINI PROJECT

OBJECT ORIENTED CONCEPTS (18CS45)

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PROJECT TITLE : ONLINE TEST APP

PROBLEM STATEMENT:

Online Test App is developed or designed for educational institutes like school, colleges, and private institute to conduct logic test of their students on regular basis. This application software can reduce the hectic job of assessing the answers given by candidates manually. The registered students response or the answers can be checked automatically ad instantly. It will reduce the paper work to be integrated. The result can be shown immediately to the students reducing the anxiety.

In this Application, we build up two modules that is –

1) Registration :

In this module, the student will register with his identification details such as Name, USN, Gender, etc. And then will directly go for the quiz page.

2) Quiz Page:

In this module, the students will answers quiz related to the topic which is suggested (like a multiple choice question) and the finally he/she have to submit it .After submitting, he/she will be displayed with the result instantly so the student can verify.

SOLUTION (Source Code):

1) Registration Page:

```java
package com.mycompany.mini;
import javax.swing.*;
import java.awt.*;
import java.awt.event.*;
public class Registration {
    JFrame frmRegistration;//to construct a frame
    JLabel lblFirstName,lblLastName,lblUSN,lblGender,lblBranch,lblemail;//initialization
    JTextField txtFirstName,txtLastName,txtUSN,txtemail;
    JRadioButton rdoMale,rdoFemale;
    JButton btnSubmit;

    public void addControls(){
        lblFirstName=new JLabel("First Name:");//create a label with text
        lblFirstName.setBounds(50,50,100,30);//set the sizes
        frmRegistration.add(lblFirstName);//adding to frame
        txtFirstName=new JTextField(" ");//create a new textfield initialized with the specified text and
columns
        txtFirstName.setBounds(150,50,150,30);
        frmRegistration.add(txtFirstName);

        lblLastName=new JLabel("Last Name:");//create a label with text
        lblLastName.setBounds(50,100,100,30);//set the sizes
        frmRegistration.add(lblLastName);//adding to frame
        txtLastName=new JTextField(" ");//create a new textfield initialized with the specified text and
columns
        txtLastName.setBounds(150,100,150,30);
        frmRegistration.add(txtLastName);

        lblUSN=new JLabel("USN:");//create a label with text
        lblUSN.setBounds(50,150,100,30);//set the sizes
        frmRegistration.add(lblUSN);//adding to frame
        txtUSN=new JTextField(" ");//create a new textfield initialized with the specified text and columns
        txtUSN.setBounds(150,150,150,30);
        frmRegistration.add(txtUSN);

        btnSubmit = new JButton("Submit");
        btnSubmit.setBounds(100,350,150,30);//set the sizes
        frmRegistration.add(btnSubmit);

        lblGender=new JLabel("Gender:");//create a label with text
        lblGender.setBounds(50,250,100,30);//set the sizes
        frmRegistration.add(lblGender);
```

```java
        rdoMale= new JRadioButton("Male");//creates a unselected rediobutton with no text
        rdoMale.setBounds(150,250,80,30);
        frmRegistration.add(rdoMale);//adding to frame
        rdoFemale = new JRadioButton("Female");//creates a unselected rediobutton with no text
        rdoFemale.setBounds(250,250,80,30);
        frmRegistration.add(rdoFemale);
        ButtonGroup bgGender = new ButtonGroup();//manages the selected or unselected state for a set
of buttons
        bgGender.add(rdoMale);//adding to buttongroup
        bgGender.add(rdoFemale);

        lblBranch = new JLabel("Branch:");//create a label with text
        lblBranch.setBounds(50,200,100,30);//set the sizes
        frmRegistration.add(lblBranch);//adding to frame
        String branches[] = {"CSE", "ELN", "EEE","CIVIL","MECH"};
        JComboBox cmbBranch = new JComboBox(branches);//create a jcombobox that contains the
elements in the specified array
        cmbBranch.setBounds(150,200,100,30);
        frmRegistration.add(cmbBranch);//adding to frame

        lblemail=new JLabel("Email ID:");//create a label with text
        lblemail.setBounds(50,300,100,30);//set the sizes
        frmRegistration.add(lblemail);//adding to frame
        txtemail=new JTextField(" ");//create a new textfield initialized with the specified text and
columns
        txtemail.setBounds(150,300,150,30);
        frmRegistration.add(txtemail);


    }

    public void addActionListeners(){
        btnSubmit.addActionListener(new ActionListener(){  //method to invoke automatically whenever
we click on the registered component
            public void actionPerformed(ActionEvent e){
                String s1 = txtFirstName.getText(); //to get text from the user
                String s2 = txtLastName.getText();
                String s3 = txtUSN.getText();
                String s4 = txtemail.getText();
                JOptionPane.showMessageDialog(frmRegistration, "Submitted");//optionpane class is used to
provide standard dialog boxes , herw we use message dialog box
            }
        });
}


public void displayFrame(){
        frmRegistration = new JFrame("Registration Form");//give name to the frame
```

```java
        frmRegistration.setSize(500, 500);//used to set the size of the vector
        frmRegistration.setResizable(false);//user cannot resize the frame
        addControls();
        addActionListeners();
        frmRegistration.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);//it is used to specify one of
the several options for the close button
        frmRegistration.setLayout(null);//we can position our components by using this
        frmRegistration.setVisible(true);//it makes the frame appear on the screen
    }
    public static void main(String args[]){
        Registration reg = new Registration();
        reg.displayFrame();
    }
}
```

2) Quiz Page:

```java
package com.mycompany.mini_1;
import javax.swing.*;
import java.awt.event.*;
import java.awt.*;
public class quiz {

public static void main(String[] args){
    JFrame frmOnlineQuiz = new JFrame("Online Quiz");//to construct a frame and online quiz is the
name of the frame

    JMenuBar mbar = new JMenuBar(); //creates a new menubar
    mbar.setBounds(0,0,300,30);//to set size
    frmOnlineQuiz.add(mbar);//add menu to the menubar

    JMenu menuRegistration = new JMenu("Registration");//creates a new menu with specific name
    mbar.add(menuRegistration);//add menu to the menubar
    JMenu menuQuestions = new JMenu("Questions");//creates a new menu with specific name
    mbar.add(menuQuestions);//add menu to the menubar



    JLabel lblque1 = new JLabel("Que1 : Which data type value is returned by all trancendental math
function?");//creates a label with text
    lblque1.setBounds(30,40,450,30);//to set size
    frmOnlineQuiz.add(lblque1);//add text to the frame
    JRadioButton rdoint = new JRadioButton("int");//creates a unselected rediobutton with no text
    rdoint.setBounds(50,80,100,20);
    frmOnlineQuiz.add(rdoint);//add radiobutton to frame
    JRadioButton rdofloat = new JRadioButton("float");//creates a unselected rediobutton with no text
    rdofloat.setBounds(50,110,100,20);
```

```java
        frmOnlineQuiz.add(rdofloat);
        JRadioButton rdodouble = new JRadioButton("double");//creates a unselected rediobutton with no text
        rdodouble.setBounds(50,140,100,20);
        frmOnlineQuiz.add(rdodouble);
        JRadioButton rdolong = new JRadioButton("long");//creates a unselected rediobutton with no text
        rdolong.setBounds(50,170,100,20);
        frmOnlineQuiz.add(rdolong);
        ButtonGroup bgque1 = new ButtonGroup();//manages the selected or unselected state for a set of buttons
        bgque1.add(rdoint);//adding to buttongroup
        bgque1.add(rdofloat);
        bgque1.add(rdodouble);
        bgque1.add(rdolong);

        JLabel lblque2 = new JLabel("Que2 : Which of the following is the advantage of BigDecimal over double?");//create a label with text
        lblque2.setBounds(30,80,900,250);//to set size
        frmOnlineQuiz.add(lblque2);
        JRadioButton rdosyntax = new JRadioButton("syntax");//create a unselected rediobutton with no text
        rdosyntax.setBounds(50,220,150,20);
        frmOnlineQuiz.add(rdosyntax);//add radiobutton to frame
        JRadioButton rdomemoryusage = new JRadioButton("memory usage");//create a unselected rediobutton with no text
        rdomemoryusage.setBounds(50,250,150,20);
        frmOnlineQuiz.add(rdomemoryusage);
        JRadioButton rdogarbage = new JRadioButton("garbage creation");//create a unselected rediobutton with no text
        rdogarbage.setBounds(50,280,150,20);
        frmOnlineQuiz.add(rdogarbage);
        JRadioButton rdoprecision = new JRadioButton("precision");//create a unselected rediobutton with no text
        rdoprecision.setBounds(50,310,150,20);
        frmOnlineQuiz.add(rdoprecision);
        ButtonGroup bgque2 = new ButtonGroup();//manages the selected or unselected state for a set of buttons
        bgque2.add(rdosyntax);//adding to buttongroup
        bgque2.add(rdomemoryusage);
        bgque2.add(rdogarbage);
        bgque2.add(rdoprecision);

        JLabel lblque3 = new JLabel("Que3 : Which of the following is not a Java features?");//create a label with text
        lblque3.setBounds(30,120,1350,500);//to set size
        frmOnlineQuiz.add(lblque3);
        JCheckBox chkdynamic = new JCheckBox("dynamic");//create an initially unselected checkbox with text
        chkdynamic.setBounds(50, 400, 200, 20);
```

```java
        frmOnlineQuiz.add(chkdynamic);//add checkbox to frame
        JCheckBox chkarchitecture = new JCheckBox("architecture neutral");//create an initially
unselected checkbox with text
        chkarchitecture.setBounds(50, 440, 200, 20);
        frmOnlineQuiz.add(chkarchitecture);
        JCheckBox chkpointers = new JCheckBox("use of pointers");//create an initially unselected
checkbox with text
        chkpointers.setBounds(50, 480, 200, 20);
        frmOnlineQuiz.add(chkpointers);
        JCheckBox chkobject = new JCheckBox("object oriented");//create an initially unselected checkbox
with text
        chkobject.setBounds(50, 520, 200, 20);
        frmOnlineQuiz.add(chkobject);

        JLabel lblque4 = new JLabel("Que4 : _____ is used to find and fix bugs in the Java
programs.");//create a label with text
        lblque4.setBounds(30,160,1800,800);//to set size
        frmOnlineQuiz.add(lblque4);//add checkbox to frame
        JCheckBox chkJVM = new JCheckBox("JVM");//create an initially unselected checkbox with text
        chkJVM.setBounds(50, 580, 250, 20);
        frmOnlineQuiz.add(chkJVM);
        JCheckBox chkJRE = new JCheckBox("JRE");//create an initially unselected checkbox with text
        chkJRE.setBounds(50, 620, 250, 20);
        frmOnlineQuiz.add(chkJRE);
        JCheckBox chkJDK = new JCheckBox("JDK");//create an initially unselected checkbox with text
        chkJDK.setBounds(50, 660, 250, 20);
        frmOnlineQuiz.add(chkJDK);
        JCheckBox chkJDB = new JCheckBox("JDB");//create an initially unselected checkbox with text
        chkJDB.setBounds(50, 700, 250, 20);
        frmOnlineQuiz.add(chkJDB);

        JLabel lblque5 = new JLabel("Que5 : Is java platform independent?");//create a label with text
        lblque5.setBounds(30,200,1800,1070);//to set size
        frmOnlineQuiz.add(lblque5);//adding to frame
        String[] answers = {"yes","no"};//declararation of strings
        JList lstAns = new JList(answers);//create a jlist that displays the elements in the specified array
        lstAns.setBounds(50,745,300,40);
        frmOnlineQuiz.add(lstAns);//adding to frame

        JButton btnSubmit = new JButton("Submit");//creat button with the specified text
        btnSubmit.setBounds(500,750,250,30);
        frmOnlineQuiz.add(btnSubmit);

        btnSubmit.addActionListener(new ActionListener(){   //method to invoke automatically
whenever we click on the registered component
            public void actionPerformed(ActionEvent e){
```

```java
        JOptionPane.showMessageDialog(frmOnlineQuiz, "Answers \n1.double \n2.precision
\n3.use of pinters \n4.JDB \n5.yes"); //joptionpane class is used to provide standard dialog boxes ,
herw we use message dialog box


        }
    });


    frmOnlineQuiz.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);//it is used to specify one of
the several options for the close button
    frmOnlineQuiz.setSize(1000,1000); //used to set the size of the vector
    frmOnlineQuiz.setLayout(null);//we can position our components by using this
    frmOnlineQuiz.setVisible(true);//it makes the frame appear on the screen

  }

}
```
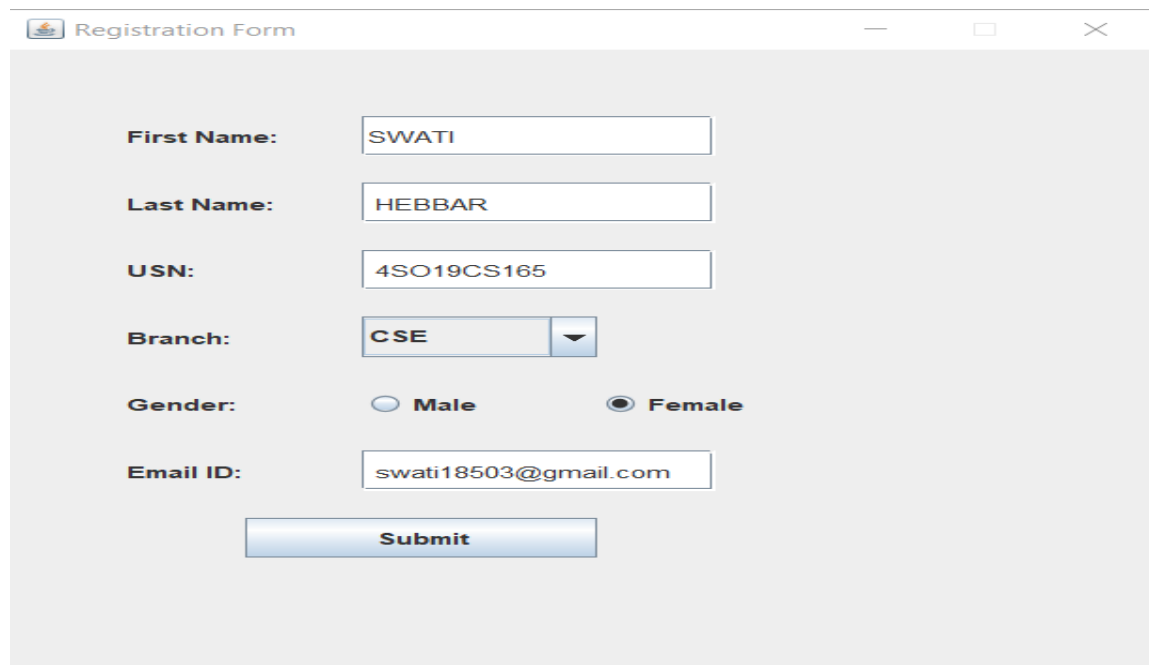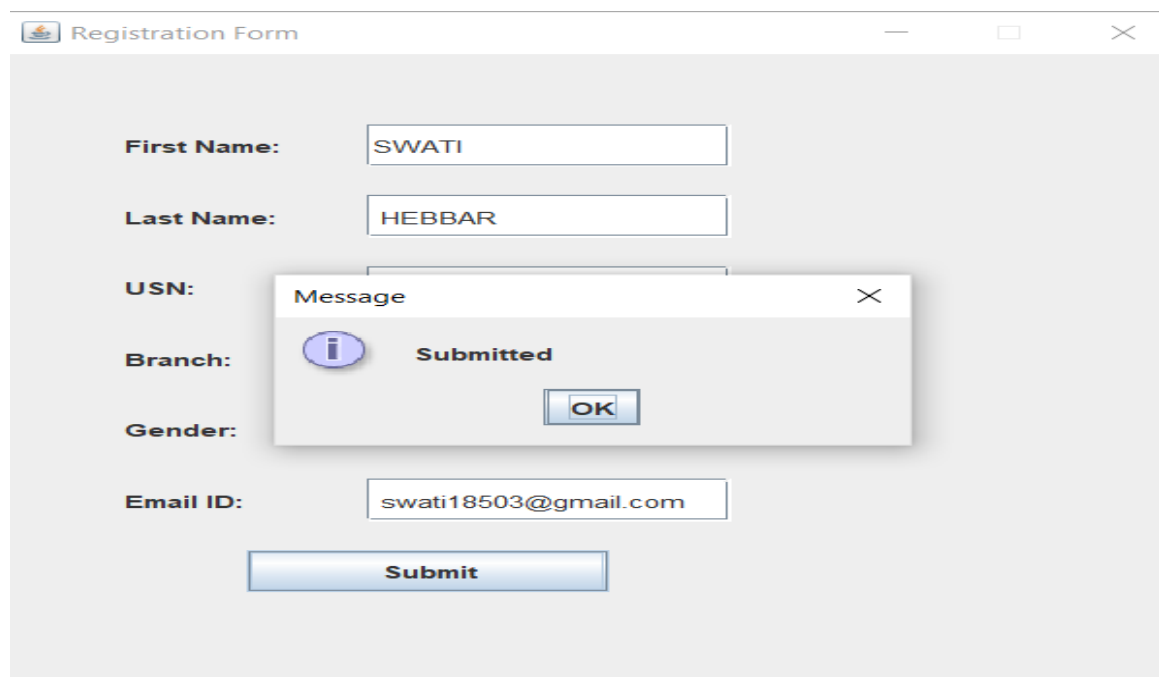
OUTPUT (Snap Shots):

1) Registration Page:

2) Quiz Page:

Registration   Questions

Que1 : Which data type value is returned by all trancendental math function?

○ int

○ float

◉ double

○ long

Que2 : Which of the following is the advantage of BigDecimal over double?

○ syntax

○ memory usage

○ garbage creation

◉ precision

Que3 : Which of the following is not a Java features?

☐ dynamic

☐ architecture neutral

☑ use of pointers

☑ object oriented

Que4 : _____ is used to find and fix bugs in the Java programs.

☐ JVM

☐ JRE

☐ JDK

☑ JDB

Que5 : Is java platform independent?

yes
no

Submit

Registration   Questions

Que1 : Which data type value is returned by all trancendental math function?

○ int

○ float

◉ double

○ long

Que2 : Which of the following is the advantage of BigDecimal over double?

○ syntax

○ memory usage

○ garbage creation

◉ precision

Que3 : Which of the following is not a Java features?

☐ dynamic

☐ architecture neutral

☑ use of pointers

☑ object oriented

Que4 : _____ is used to find and fix bugs in the Java programs.

☐ JVM

☐ JRE

☐ JDK

☑ JDB

Que5 : Is java platform independent?

yes

no

Message

Answers
1.double
2.precision
3.use of pinters
4.JDB
5.yes

OK

Submit