

## **Exercise on User Interface**

**1. Write a java program to create a frame containing three buttons (Yes, No, Close). When button yes or no is pressed, the message "Button Yes/No is pressed" gets displayed in label control. On pressing CLOSE button frame window gets closed.**

### **A. Code:-**

```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
public class ButtonDemo extends JFrame
{
    JButton yes,no,close;
    JLabel lbl;
    ButtonDemo()
    {
        yes = new JButton("YES");
        no = new JButton ("No");
        close = new JButton ("CLOSE");
        lbl = new JLabel ("");
        setLayout (new GridLayout(4,1));
        setSize (400,200);
        add(yes);
        add(no);
        add(close);
        add(lbl);
        setVisible(true);

        //setDefaultCloseOperation(JFrame.EXIT_NO_CLOSE);
    }
}
```

```

        ButtonHandler bh = new ButtonHandler();
        yes.addActionListener(bh);
        yes.addActionListener(bh);
        no.addActionListener(bh);
        close.addActionListener(bh);
    }
    class ButtonHandler implements ActionListener
    {
        public void actionPerformed(ActionEvent ae)
        {
            if (ae.getSource()==yes)
            {
                lbl.setText("Button Yes is pressed");
            }
            if (ae.getSource()==no)
            {
                lbl.setText("Button No is pressed");
            }
            if (ae.getSource()==close)
            {
                System.exit(0);
            }
        }
    }
    public static void main(String args[])
    {
        new ButtonDemo();
    }
}

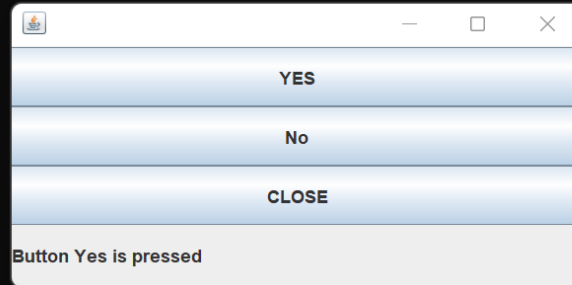
```

## **SAMPLE INPUT AND SAMPLE OUTPUT:**

```
Microsoft Windows [Version 10.0.22000.675]  
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```

```
D:\JAVA>javac ButtonDemo.java
```

```
D:\JAVA>java ButtonDemo
```



***2. Write a Java program to create three radio buttons.  
When any of them is selected, an appropriate message is  
displayed.***

### **A. Code:-**

```
import java.awt.*;  
import java.awt.event.*;  
import javax.swing.*;  
  
public class MainPage  
{  
    public static void main(String[] args)  
    {  
        final JFrame frame = new JFrame("JRadioButton Demo");  
        // implement ItemListener interface  
        class MyItemListener implements ItemListener  
        {  
            public void itemStateChanged(ItemEvent ev)
```

```

{
    boolean selected = (ev.getStateChange() == ItemEvent.SELECTED);
    AbstractButton button = (AbstractButton) ev.getItemSelectable();
    String command = button.getActionCommand();
    // build message
    String state;
    if (selected)
    {
        state = "selected";
    }
    else
    {
        state = "unselected";
    }
    String message;
    if (command.equals("Java"))
    {
        message = "The Java option has been " + state;
    }
    else if (command.equals("ASP"))
    {
        message = "The ASP.Net option has been " + state;
    }
    else
    {
        message = "The SQL option has been " + state;
    }
    // show dialog
    JOptionPane.showMessageDialog(frame, message);
}
}

```

// creates radio button and set corresponding action

// commands

```

JRadioButton rdbJava = new JRadioButton("Java");
rdbJava.setActionCommand("Java");

```

```

JRadioButton rdbASP = new JRadioButton("ASP.Net");
rdbASP.setActionCommand("ASP");

```

```

JRadioButton rdbSQL = new JRadioButton("SQL");
rdbSQL.setActionCommand("SQL");

// add event handler
MyItemListener myItemListener = new MyItemListener();
rdbJava.addItemListener(myItemListener);
rdbASP.addItemListener(myItemListener);
rdbSQL.addItemListener(myItemListener);

// add radio buttons to a ButtonGroup
final ButtonGroup group = new ButtonGroup();
group.add(rdbJava);
group.add(rdbASP);
group.add(rdbSQL);

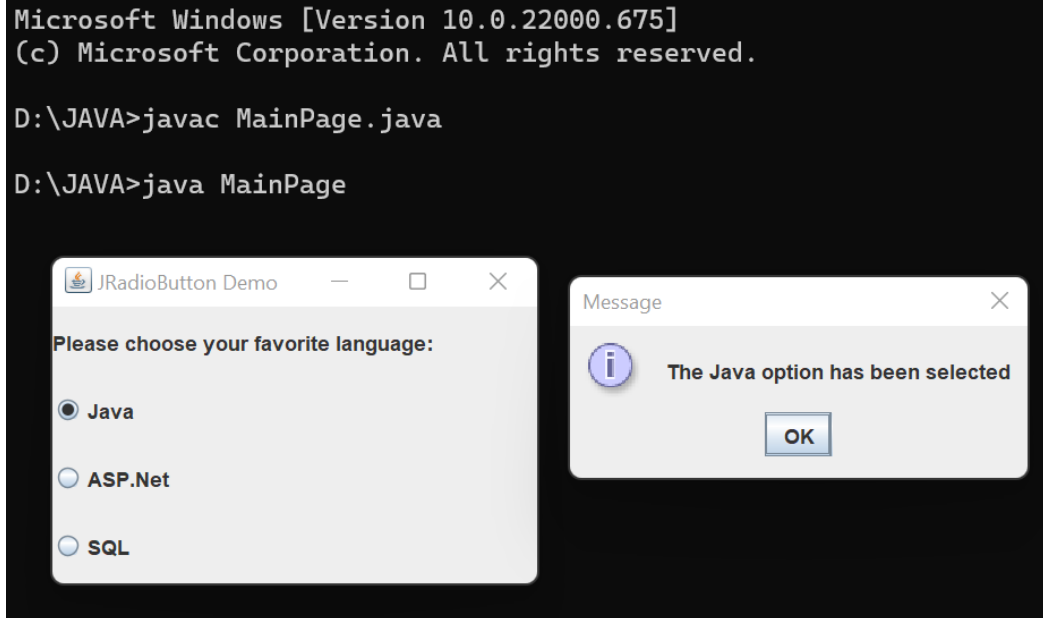
// Frame setting
frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
frame.setSize(300, 200);
Container cont = frame.getContentPane();

cont.setLayout(new GridLayout(0, 1));
cont.add(new JLabel("Please choose your favorite language: "));
cont.add(rdbJava);
cont.add(rdbASP);
cont.add(rdbSQL);

frame.setVisible(true);
}
}

```

## **SAMPLE INPUT AND SAMPLE OUTPUT:**



***3. Using AWT, write a program to create two buttons named “Red” and “Blue”. When a button is pressed the background colour should be set to the colour named by the button’s label.***

### **A. Code:-**

```
import java.awt.*;  
import java.awt.event.*;  
public class Main extends Frame implements ActionListener {  
    Button btnRed, btnBlue;  
    Main() {  
        super("AWT Buttons");  
        btnRed = new Button("Red");  
        btnRed.setBounds(25, 50, 250, 30);  
        btnRed.addActionListener(this);  
        this.add(btnRed);  
        btnBlue = new Button("Blue");  
        btnBlue.setBounds(25, 100, 250, 30);
```

```

btnBlue.addActionListener(this);
this.add(btnBlue);
this.setSize(300, 160);
this.setLayout(null);
this.setVisible(true);
this.addWindowListener(new WindowAdapter() {
    public void windowClosing(WindowEvent e) {
        dispose();
    }
});
}
public static void main(String[] args) {
    new Main();
}
@Override
public void actionPerformed(ActionEvent e) {
    if (e.getSource() == btnRed) {
        this.setBackground(Color.RED);
    } else if (e.getSource() == btnBlue) {
        this.setBackground(Color.BLUE);
    }
}
}

```

## **SAMPLE INPUT AND SAMPLE OUTPUT:**

```

Microsoft Windows [Version 10.0.22000.675]
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```

```

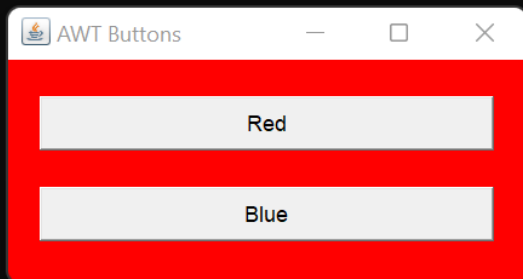
D:\JAVA>javac Main.java

```

```

D:\JAVA>java Main

```



**4. Using AWT, write a program to create two buttons labelled 'A' and 'B'. When button 'A' is pressed, it displays your personal information (Name, Course, Roll No, College) and when button 'B' is pressed, it displays your CGPA in previous semester.**

**A. Code:-**

```
import java.awt.*;
import java.awt.event.*;
public class Main extends Frame implements ActionListener {
    Button btnInfo, btnCGPA;
    Main() {
        super("Student Details");
        btnInfo = new Button("A");
        btnInfo.setBounds(25, 125, 450, 100);
        btnInfo.addActionListener(this);
        this.add(btnInfo);
        btnCGPA = new Button("B");
        btnCGPA.setBounds(25, 300, 450, 100);
        btnCGPA.addActionListener(this);
        this.add(btnCGPA);
        this.setSize(500, 500);
        this.setLayout(null);
        this.setVisible(true);
        this.setLocationRelativeTo(null);
        this.addWindowListener(new WindowAdapter() {
            public void windowClosing(WindowEvent e) {
                dispose();
            }
        });
    }
    public static void main(String[] args) {
        new Main();
    }
    @Override
```



```

public void actionPerformed(ActionEvent e) {
    if (e.getSource() == btnInfo) {
        new Information(
            "Kandula Lohith",
            "B.Tech Computer Science and Engineering",
            "AP20110010161",
            "SRM UNIVERSITY"
        );
    } else if (e.getSource() == btnCGPA) {
        new CGPA("8.95");
    }
}
}
}

```

```

// Information Field
//import java.awt.*;
//import java.awt.event.*;
class Information extends Frame {
    Button btnClose;
    Panel panelForm;
    Label labelName, labelCourse, labelRollNo, labelCollege;
    TextField fieldName, fieldCourse, fieldRollNo, fieldCollege;
    Information(String name, String course, String rollNo, String college) {
        super("Personal Information");
        labelName = new Label("Name:");
        labelName.setBounds(20, 20, 80, 30);
        labelCourse = new Label("Course:");
        labelCourse.setBounds(20, 50, 80, 30);
        labelRollNo = new Label("Roll No.:");
        labelRollNo.setBounds(20, 80, 80, 30);
        labelCollege = new Label("College:");
        labelCollege.setBounds(20, 110, 80, 30);
        fieldName = new TextField(name);
        fieldName.setBounds(100, 22, 200, 24);
        fieldName.setEditable(false);
        fieldCourse = new TextField(course);
        fieldCourse.setBounds(100, 52, 200, 24);
        fieldCourse.setEditable(false);
        fieldRollNo = new TextField(rollNo);
    }
}

```

```

fieldRollNo.setBounds(100, 82, 200, 24);
fieldRollNo.setEditable(false);
fieldCollege = new TextField(college);
fieldCollege.setBounds(100, 112, 200, 24);
fieldCollege.setEditable(false);
btnClose = new Button("Close");
btnClose.setBounds(100, 150, 125, 30);
btnClose.addActionListener(new ActionListener() {
@Override
public void actionPerformed(ActionEvent e) {
dispose();
}
});
panelForm = new Panel();
panelForm.setLayout(null);
panelForm.add(labelName);
panelForm.add(fieldName);
panelForm.add(labelCourse);
panelForm.add(fieldCourse);
panelForm.add(labelRollNo);
panelForm.add(fieldRollNo);
panelForm.add(labelCollege);
panelForm.add(fieldCollege);
panelForm.add(btnClose);
this.add(panelForm);
this.setSize(350, 250);
this.setVisible(true);
this.setLayout(null);
this.setLocationRelativeTo(null);
this.addWindowListener(new WindowAdapter() {
public void windowClosing(WindowEvent e) {
dispose();
}
});
}
}

```

```

// CGPA Field
//import java.awt.*;

```

```

//import java.awt.event.*;
class CGPA extends Frame {
    Label l;
    Button btnClose;
    CGPA(String cgpa) {
        super("Previous Year CGPA");
        l = new Label("Your CGPA was: " + cgpa);
        l.setBounds(10, 50, 280, 30);
        l.setAlignment(Label.CENTER);
        btnClose = new Button("Close");
        btnClose.setBounds(20, 85, 260, 30);
        btnClose.addActionListener(new ActionListener() {
            @Override
            public void actionPerformed(ActionEvent e) {
                dispose();
            }
        });
        this.add(l);
        this.add(btnClose);
        this.setSize(300, 150);
        this.setLayout(null);
        this.setVisible(true);
        this.setLocationRelativeTo(null);
        this.addWindowListener(new WindowAdapter() {
            public void windowClosing(WindowEvent e) {
                dispose();
            }
        });
    }
}

```

## **SAMPLE INPUT AND SAMPLE OUTPUT:**

Microsoft Windows [Version 10.0.22000.675]  
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D:\JAVA>javac Main.java

D:\JAVA>java Main

Student Details

A

B

Personal Information

Name: Kandula Lohith

Course: B.Tech Computer Science and Engin

Roll No.: AP20110010161

College: SRM UNIVERSITY

Close

Previous Year CGPA

Your CGPA was: 8.95

Close