

JRadioButton

Usamos la clase JRadioButton para crear un botón de opción. El botón de opción se utiliza para seleccionar una opción de varias opciones. Se utiliza para rellenar formularios, documentos objetivos en línea y cuestionarios.

Agregamos botones de opción en un ButtonGroup para que podamos seleccionar solo un botón de opción a la vez. Usamos la clase "ButtonGroup" para crear un ButtonGroup y agregar un botón de opción en un grupo.

Métodos utilizados:

1. **JRadioButton()** : Crea un RadioButton no seleccionado sin texto.

Ejemplo:

```
JRadioButton j1 = new JRadioButton()
```

2. **JButton(String s)** : Crea un JButton con un texto específico.

Ejemplo:

```
JButton b1 = new JButton("Button")
```

3. **JLabel(String s)** : Crea un JLabel con un texto específico.

Ejemplo:

```
JLabel L = new JLabel("Label 1")
```

4. **ButtonGroup()** : Se utiliza para crear un grupo, en el que podemos añadir JRadioButton. Podemos seleccionar solo un JRadioButton en un ButtonGroup.

Pasos para agrupar los botones de opción.

- Cree una instancia de ButtonGroup mediante el método "ButtonGroup()".

```
ButtonGroup G = new ButtonGroup()
```

- Ahora agregue botones en un grupo "G", con la ayuda del método "add()".

Ejemplo:

```
G.add(Button1);  
G.add(Button2);
```

5. **isSelected()** : devolverá un valor booleano true o false, si se selecciona un JRadioButton devolverá true de lo contrario false.

Ejemplo:

```
JRadioButton.isSelected()
```

6. **Establecer(...) y obtener(...)** Métodos:

- i) Set y get se utilizan para reemplazar el acceso directo a las variables miembro desde clases

externas.

ii) En lugar de acceder directamente a las variables de los miembros de clase, defina los métodos get para acceder a estas variables y establezca métodos para modificarla

Programa 1: JRadioButton sin ActionListener

```
// Java program to show JRadioButton Example.
// in java. Importing different Package.
import java.awt.*;
import javax.swing.*;
import java.awt.event.*;

class Demo extends JFrame {

    // Declaration of object of JRadioButton class.
    JRadioButton jRadioButton1;

    // Declaration of object of JRadioButton class.
    JRadioButton jRadioButton2;

    // Declaration of object of JButton class.
    JButton jButton;

    // Declaration of object of ButtonGroup class.
    ButtonGroup G1;

    // Declaration of object of JLabel class.
    JLabel L1;

    // Constructor of Demo class.
    public Demo()
    {

        // Setting layout as null of JFrame.
        this.setLayout(null);

        // Initialization of object of "JRadioButton" class.
        jRadioButton1 = new JRadioButton();

        // Initialization of object of "JRadioButton" class.
        jRadioButton2 = new JRadioButton();

        // Initialization of object of "JButton" class.
        jButton = new JButton("Click");

        // Initialization of object of "ButtonGroup" class.
```

```
G1 = new ButtonGroup();

// Initialization of object of " JLabel" class.
L1 = new JLabel("Qualification");

// setText(...) function is used to set text of radio button.
// Setting text of "jRadioButton2".
jRadioButton1.setText("Under-Graduate");

// Setting text of "jRadioButton4".
jRadioButton2.setText("Graduate");

// Setting Bounds of "jRadioButton2".
jRadioButton1.setBounds(120, 30, 120, 50);

// Setting Bounds of "jRadioButton4".
jRadioButton2.setBounds(250, 30, 80, 50);

// Setting Bounds of "jButton".
jButton.setBounds(125, 90, 80, 30);

// Setting Bounds of JLabel "L2".
L1.setBounds(20, 30, 150, 50);

// "this" keyword in java refers to current object.
// Adding "jRadioButton2" on JFrame.
this.add(jRadioButton1);

// Adding "jRadioButton4" on JFrame.
this.add(jRadioButton2);

// Adding "jButton" on JFrame.
this.add(jButton);

// Adding JLabel "L2" on JFrame.
this.add(L1);

// Adding "jRadioButton1" and "jRadioButton3" in a Button Group "G2".
G1.add(jRadioButton1);
G1.add(jRadioButton2);
}
}

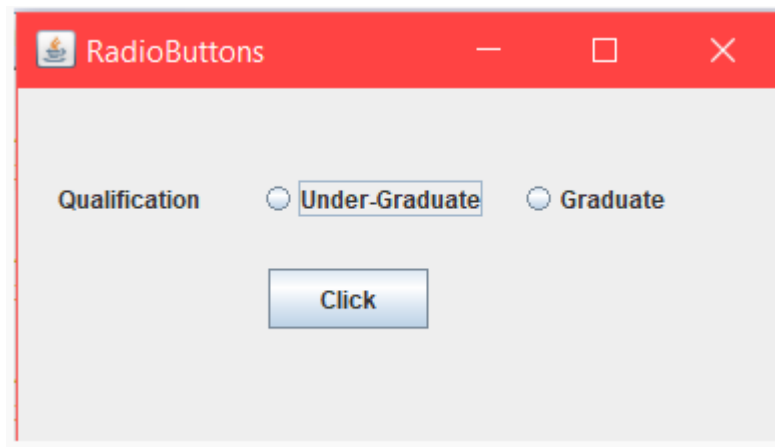
class RadioButton {
    // Driver code.
    public static void main(String args[])
    { // Creating object of demo class.
```

```
Demo f = new Demo();

// Setting Bounds of JFrame.
f.setBounds(100, 100, 400, 200);

// Setting Title of frame.
f.setTitle("RadioButtons");

// Setting Visible status of frame as true.
f.setVisible(true);
}
}
```

Salida:[DescargarEjemplo](#)**Programa 2: JRadioButton con ActionListener**

```
// Java program to show JRadioButton Example.
// in java. Importing different Package.
import java.awt.*;
import javax.swing.*;
import java.awt.event.*;

class Demo extends JFrame {

    // Declaration of object of JRadioButton class.
    JRadioButton jRadioButton1;

    // Declaration of object of JRadioButton class.
    JRadioButton jRadioButton2;

    // Declaration of object of JButton class.
    JButton jButton;
```

```
// Declaration of object of ButtonGroup class.
ButtonGroup G1;

// Declaration of object of JLabel class.
JLabel L1;

// Constructor of Demo class.
public Demo()
{

    // Setting layout as null of JFrame.
    this.setLayout(null);

    // Initialization of object of "JRadioButton" class.
    jRadioButton1 = new JRadioButton();

    // Initialization of object of "JRadioButton" class.
    jRadioButton2 = new JRadioButton();

    // Initialization of object of "JButton" class.
    jButton = new JButton("Click");

    // Initialization of object of "ButtonGroup" class.
    G1 = new ButtonGroup();

    // Initialization of object of "JLabel" class.
    L1 = new JLabel("Qualification");

    // setText(...) function is used to set text of radio button.
    // Setting text of "jRadioButton2".
    jRadioButton1.setText("Under-Graduate");

    // Setting text of "jRadioButton4".
    jRadioButton2.setText("Graduate");

    // Setting Bounds of "jRadioButton2".
    jRadioButton1.setBounds(120, 30, 120, 50);

    // Setting Bounds of "jRadioButton4".
    jRadioButton2.setBounds(250, 30, 80, 50);

    // Setting Bounds of "jButton".
    jButton.setBounds(125, 90, 80, 30);

    // Setting Bounds of JLabel "L2".
    L1.setBounds(20, 30, 150, 50);
```

```
// "this" keyword in java refers to current object.
// Adding "jRadioButton2" on JFrame.
this.add(jRadioButton1);

// Adding "jRadioButton4" on JFrame.
this.add(jRadioButton2);

// Adding "jButton" on JFrame.
this.add(jButton);

// Adding JLabel "L2" on JFrame.
this.add(L1);

// Adding "jRadioButton1" and "jRadioButton3" in a Button Group "G2".
G1.add(jRadioButton1);
G1.add(jRadioButton2);

// Adding Listener to JButton.
jButton.addActionListener(new ActionListener() {
    // Anonymous class.

    public void actionPerformed(ActionEvent e)
    {
        // Override Method

        // Declaration of String class Objects.
        String qual = " ";

        // If condition to check if jRadioButton2 is selected.
        if (jRadioButton1.isSelected()) {

            qual = "Under-Graduate";
        }

        else if (jRadioButton2.isSelected()) {

            qual = "Graduate";
        }
        else {

            qual = "NO Button selected";
        }

        // MatDialog to show information selected radio buttons.
        JOptionPane.showMessageDialog(Demo.this, qual);
    }
});
```

```

    }
}

class RadioButton {
    // Driver code.
    public static void main(String args[])
    { // Creating object of demo class.
        Demo f = new Demo();

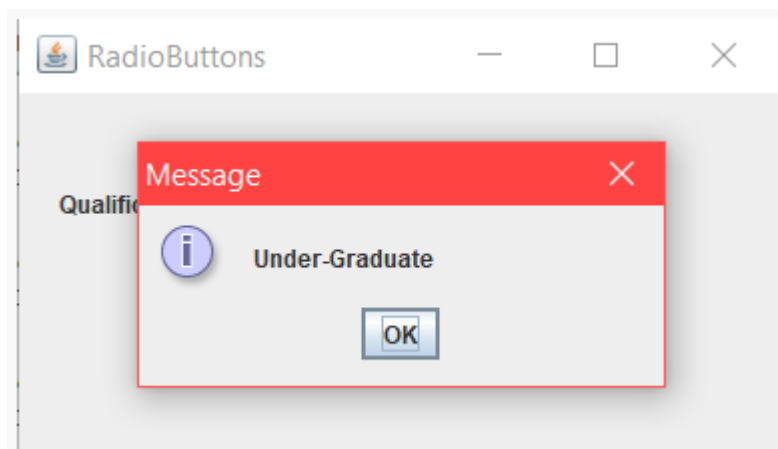
        // Setting Bounds of JFrame.
        f.setBounds(100, 100, 400, 200);

        // Setting Title of frame.
        f.setTitle("RadioButtons");

        // Setting Visible status of frame as true.
        f.setVisible(true);
    }
}

```

Salida:



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Programa 3 Programa para crear un grupo simple de botones de opción (con imagen) y agregarles un oyente de elementos

```

// Java Program to create a simple group of radio buttons
// (with image )and add item listener to them
import java.awt.event.*;
import java.awt.*;
import javax.swing.*;
class solve extends JFrame implements ItemListener {

```

```

    // frame
    static JFrame f;

```

```
// radiobuttons
static JRadioButton b, b1;

// create a label
static JLabel l1;

// main class
public static void main(String[] args)
{
    // create a new frame
    f = new JFrame("frame");

    // create a object
    solve s = new solve();

    // create a panel
    JPanel p = new JPanel();

    // create a new label
    JLabel l = new JLabel("which website do you like?");
    l1 = new JLabel("geeksforgeeks selected");

    // create Radio buttons
    b = new JRadioButton("geeksforgeeks", new ImageIcon("f:/gfg.jpg"));
    b1 = new JRadioButton("others");

    // create a button group
    ButtonGroup bg = new ButtonGroup();

    // add item listener
    b.addItemListener(s);
    b1.addItemListener(s);

    // add radio buttons to button group
    bg.add(b);
    bg.add(b1);

    b.setSelected(true);

    // add button and label to panel
    p.add(l);
    p.add(b);
    p.add(b1);
    p.add(l1);

    f.add(p);
```



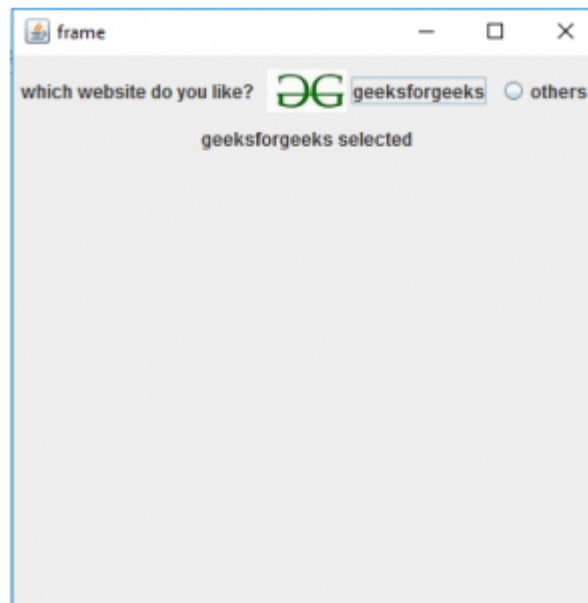
```
// set the size of frame
f.setSize(400, 400);

f.show();
}

public void itemStateChanged(ItemEvent e)
{
    if (e.getSource() == b) {
        if (e.getStateChange() == 1) {
            l1.setText("geeksforgeeks selected");
        }
    }
    else {

        if (e.getStateChange() == 1) {
            l1.setText("others selected");
        }
    }
}
}
```

Salida:



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Bibliografía:

- Extraído de [<<JRadioButton | Java Swing>>](#). Consultado el 28 de noviembre del 2022