Sri SAI RAM ENGINEERING COLLEGE

INSTITUTE OF TECHNOLOGY

West Tambaram, Chennai - 44

SAIRAM DIGITAL RESOURCES

YEAR II

SEM III

CS8392

OBJECT ORIENTED PROGRAMMING (Common to CSE, EEE, EIE, ICE, IT)

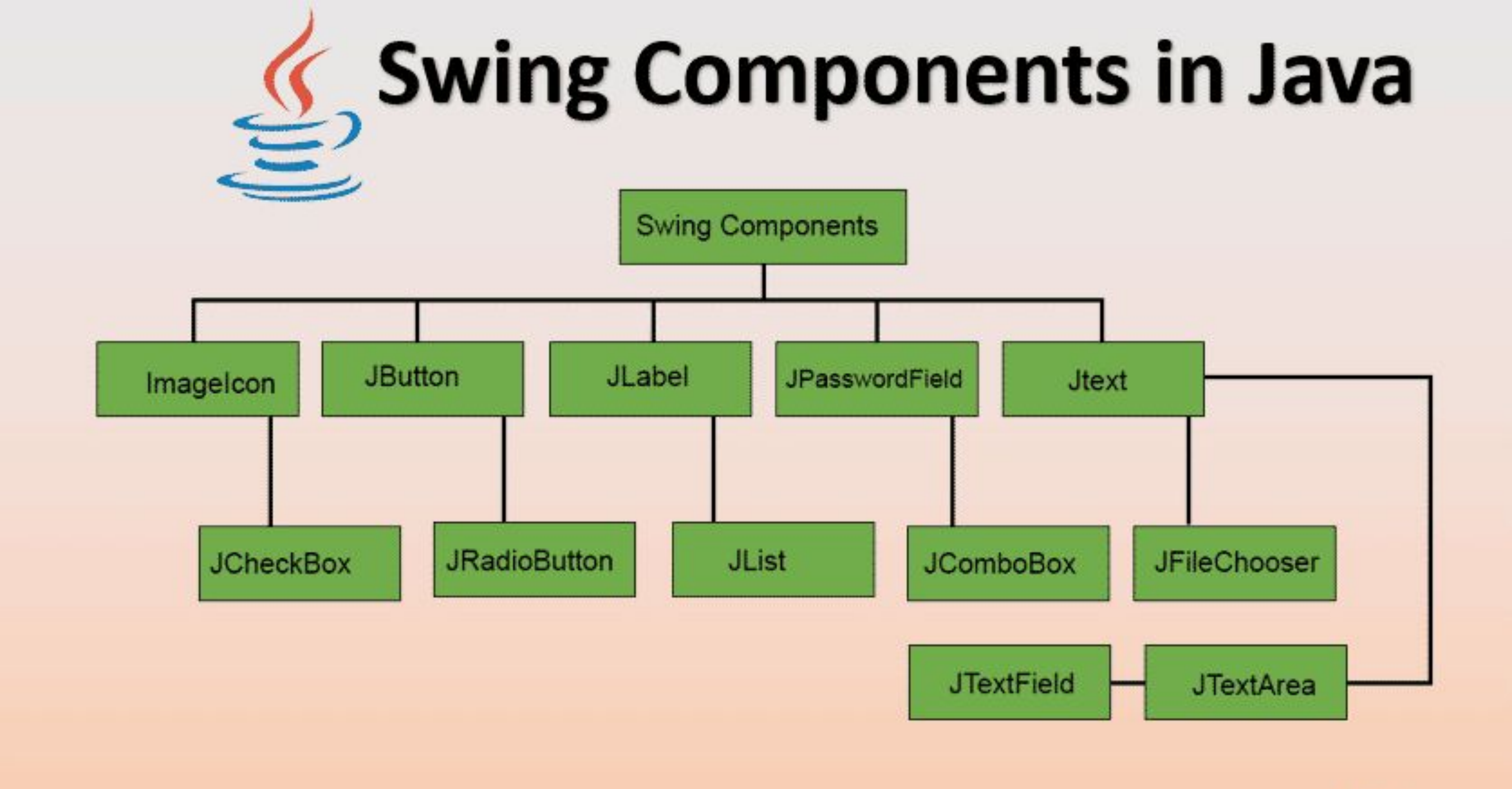
UNIT NO 5

EVENT DRIVEN PROGRAMMING

5.8 Check Boxes – Radio Buttons-Lists-choices-Scrollbars

COMPUTER SCIENCE & ENGINEERING

Swing components



Swing components

CheckBox

The JCheckBox class is used to create a checkbox. It is used to turn an option on (true) or off (false). Clicking on a CheckBox changes its state from "on" to "off" or from "off" to "on ".

Syntax:

CheckBox chkBox_name = new JCheckBox(“Text_box_Label”, true);

Example:

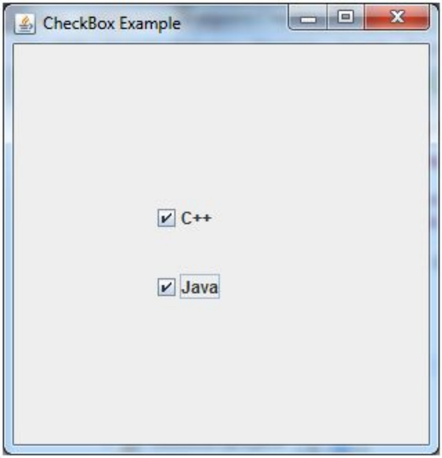
CheckBox chkBox = new JCheckBox(“Show Help”, true);

The second parameter in the constructor. It is a boolean value that indicates the default state of the check-box. True means the check-box is defaulted to on state.

Swing components

CheckBox Example:

```
import javax.swing.*;
public class CheckBoxExample
{
    CheckBoxExample(){
        JFrame f= new JFrame("CheckBox Example");
        JCheckBox checkBox1 = new JCheckBox("C++");
        checkBox1.setBounds(100,100, 50,50);
        JCheckBox checkBox2 = new JCheckBox("Java", true);
        checkBox2.setBounds(100,150, 50,50);
f.add(checkBox1);
        f.add(checkBox2);
        f.setSize(400,400);
        f.setLayout(null);
        f.setVisible(true);
    }
public static void main(String args[])
    {
 new CheckBoxExample();
    }}
```



Swing components

RadioButton

The JRadioButton class is used to create a radio button. It is used to choose one option from multiple options. It is widely used in exam systems or quiz.

It should be added in ButtonGroup to select one radio button only.

JRadioButton is used to render a group of radio buttons in the UI. A user can select one choice from the group.

Syntax:

```
ButtonGroup name = new ButtonGroup();

JRadioButton button1 = new JRadioButton(“Value1”, true/false);

JRadioButton button2 = new JRadioButton(“Value2”);

JRadioButton button n = new JRadioButton(“Valuen”);

                    radioGroup.add(button1);

                    radioGroup.add(button2);

                    radioGroup.add(button n);
```

Swing components

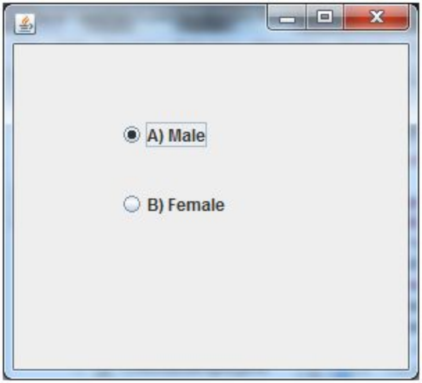
RadioButton Example:

```
ButtonGroup radioGroup = new ButtonGroup();
JRadioButton rb1 = new JRadioButton(“Easy”, true);
JRadioButton rb2 = new JRadioButton(“Medium”);
JRadioButton rb3 = new JRadioButton(“Hard”);
radioGroup.add(rb1);
radioGroup.add(rb2);
radioGroup.add(rb3);
```

Swing components

RadioButton Example

```
import javax.swing.*;

public class RadioButtonExample {

JFrame f;

RadioButtonExample(){

f=new JFrame();

JRadioButton r1=new JRadioButton("A)
Male");

JRadioButton r2=new JRadioButton("B)
Female");

r1.setBounds(75,50,100,30);

r2.setBounds(75,100,100,30);
ButtonGroup bg=new ButtonGroup();

bg.add(r1);bg.add(r2);

f.add(r1);f.add(r2);

f.setSize(300,300);

f.setLayout(null);

f.setVisible(true);

}

public static void main(String[] args) {

    new RadioButtonExample();

}

}
```



Swing components

List

The object of JList class represents a list of text items. The list of text items can be set up so that the user can choose either one item or multiple items. It inherits JComponent class.

JList in java is a swing component that displays a list of objects and allows the user to select one or more items. JList is like ListViews in other programming languages where it allows us to represent a list of items.

Syntax:

```
JList list_name=new JList();   //creates an empty blank list
```

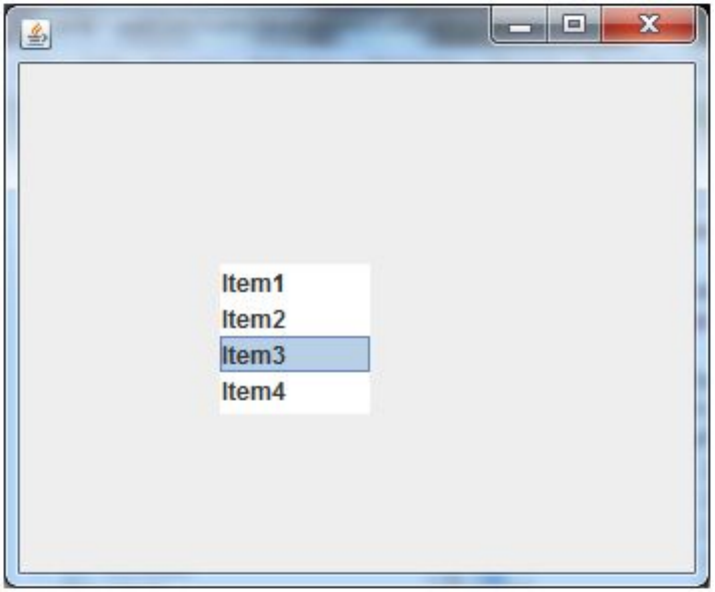
```
JList list_name=new JList(array_id);  //creates an new list with the elements of the array.
```

Swing components

List Example:

```
import javax.swing.*;
public class ListExample
{
    ListExample(){
       JFrame f= new JFrame();
       DefaultListModel<String> l1 = new
DefaultListModel<>();
         l1.addElement("Item1");
         l1.addElement("Item2");
         l1.addElement("Item3");
         l1.addElement("Item4");
         JList<String> list = new JList<>(l1);
         list.setBounds(100,100, 75,75);
         f.add(list);
         f.setSize(400,400);
         f.setLayout(null);
         f.setVisible(true);
    }
```

```
public static void main(String args[])
    {
  ListExample l= new ListExample();
    }}
```



```
Item1
Item2
Item3
Item4
```

Swing components

JOptionPane

The JOptionPane class is used to provide standard dialog boxes such as message dialog box, confirm dialog box and input dialog box. These dialog boxes are used to display information or get input from the user. The JOptionPane class inherits JComponent class.

JOptionPane is a class that is used to provide standard dialog boxes. It is a part of Java Swing which is used for creating window-based applications. JOptionPane is a component from Java Swing and it deals with dialog boxes especially. The dialog boxes can be of any type such as confirm dialog box, message dialog box or input dialog box.

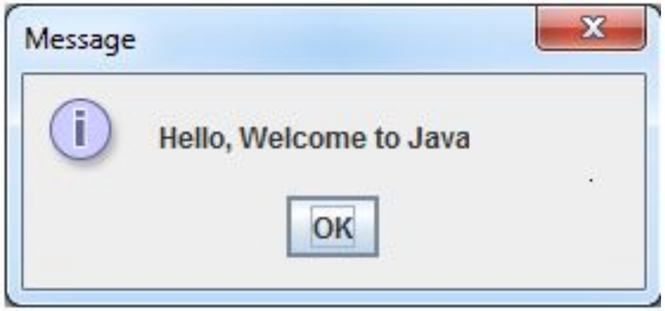
Syntax:

```
JOptionPane.showMessageDialog( null, "Alert Text message" );
```

Swing components

JOptionPane Example

```
import javax.swing.*;

public class OptionPaneExample {

JFrame f;

OptionPaneExample(){

    f=new JFrame();

    JOptionPane.showMessageDialog(f,"Hello, Welcome to Java ");

}

public static void main(String[] args) {

    new OptionPaneExample();

}

}
```

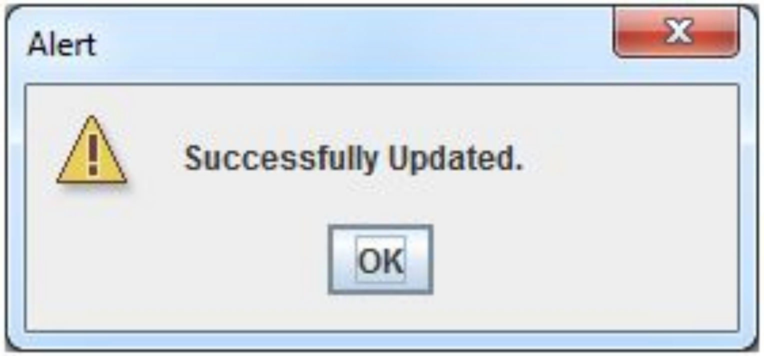


Hello, Welcome to Java

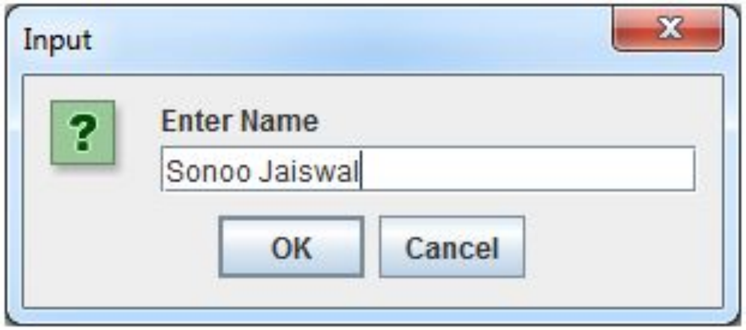
Swing components

JOptionPane Example

```
import javax.swing.*;

public class OptionPaneExample {

JFrame f;

OptionPaneExample(){

    f=new JFrame();

JOptionPane.showMessageDialog(f,"Successfully Updated.","Alert",JOptionPane.WARNING_MESSAGE);

 String name=JOptionPane.showInputDialog(f,"Enter Name");

}

public static void main(String[] args) {

    new OptionPaneExample();

                                }     }
```


Alert

Successfully Updated.


Input

Enter Name

Sonoo Jaiswal

Swing components

ScrollBar

The object of JScrollbar class is used to add horizontal and vertical scrollbar. It is an implementation of a scrollbar. It inherits JComponent class.

Syntax:

JScrollBar scrollbar_id=new JScrollBar();

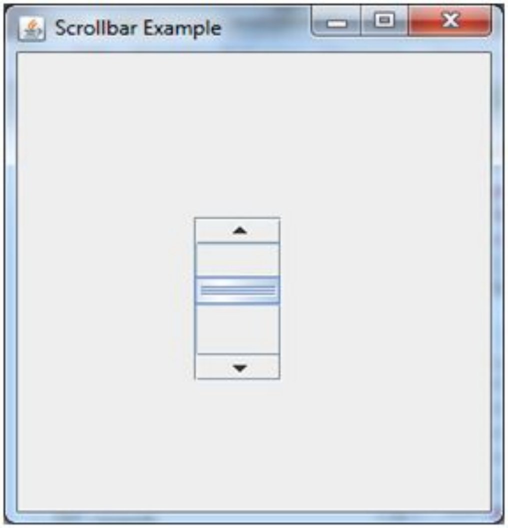
To create a scrollbar in swing, you use JScrollBar class. You can create either vertical or horizontal scrollbar.

Constructors	Descriptions
JScrollBar()	Creates a vertical scrollbar.
JScrollBar(int orientation)	Creates a scrollbar with a given orientation.
JScrollBar(int orientation, int value, int extent, int min, int max)	Creates a scrollbar with a given orientation and initialize the following scrollbar's properties: value, extent, minimum, and maximum.

Swing components

ScrollBar Example:

```
import javax.swing.*;

class ScrollBarExample

{

ScrollBarExample(){

    JFrame f= new JFrame("Scrollbar
Example");

 JScrollBar s=new JScrollBar();

s.setBounds(100,100, 50,100);

f.add(s);

f.setSize(400,400);

f.setLayout(null);

f.setVisible(true);

}

public static void main(String args[])

{

new ScrollBarExample();

}}
```



Video Links

https://youtu.be/niJ1tANWwFk