



RAMA UNIVERSITY

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FACULTY OF ENGINEERING & TECHNOLOGY

BCS-503: Object Oriented Techniques

Lecture-36

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OBJECTIVES

In this PPT, you will learn to:

❖ Describe GUI Components

❖ JLabel

❖ JTextField

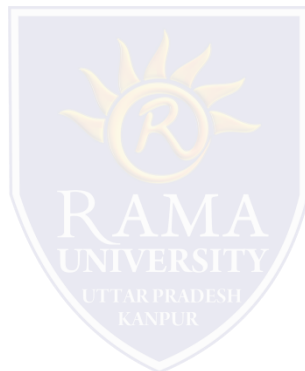
❖ JTextArea

❖ JButton

❖ JCheckBox

❖ JRadioButton

❖ JComboBox



DESCRIBING SWING GUI COMPONENTS

JLabel

label JLabel

Properties	Description
<ol style="list-style-type: none">1. A label is not interactive and does not respond to any input events	<ol style="list-style-type: none">1. Displays a label on form2. In Swing, labels can display text as well as images

Method	Description
getLabelFor()	Gets the label for the specified component.
getText()	Returns the text string that the label displays.
getVerticalAlignment()	Returns the alignment of the label's contents along the Y axis.
setIcon(Icon icon)	Defines the icon the label will display.
setLabelFor(Component c)	Sets the label for the specified component.
setText(String text)	Defines the single line of text this component will display.

DESCRIBING SWING GUI COMPONENTS (Contd.)

JTextField

 JTextField

Method	Description
<code>getColumns()</code>	Returns the number of columns in the text field.
<code>setColumns(int columns)</code>	Sets the number of columns in the text field, and then invalidates the layout.
<code>setHorizontalAlignment(int value)</code>	Sets the horizontal alignment of the text within the text field. The following constants can be used for <i>value</i> : <code>JTextField.LEADING</code> , <code>JTextField.CENTER</code> and <code>JTextField.TRAILING</code> .

DESCRIBING SWING GUI COMPONENTS (Contd.)

JTextArea



JTextArea

Properties	Description
<ol style="list-style-type: none">1. JTextArea component accepts several lines of text from the user.	<ol style="list-style-type: none">1. JTextArea allows the user to edit the text that is entered.



DESCRIBING SWING GUI COMPONENTS (Contd.)

JButton



JButton

Properties	Description
<ol style="list-style-type: none">JButton class is derived from the <code>avax.swing.AbstractButton</code> class which, in turn extends from the <code>JComponent</code> class.	<ol style="list-style-type: none">JButton object consists of a text label, image icon or both, that describes the purpose of the button and an empty area around the text/icon with a border.

DESCRIBING SWING GUI COMPONENTS (Contd.)

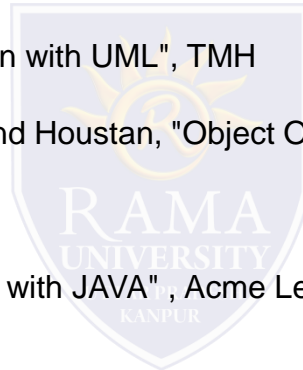
JComboBox

 JComboBox

Properties	Description
1. In Swing, the combo box is represented by the JComboBox class.	1. ComboBox is a combination of a text field and drop-down list that lets the user either type in a value or select it from a list that is displayed to the user.

REFERENCES

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2. Grady Booch, James Rumbaugh, Ivar Jacobson, "The Unified Modeling Language User Guide", Pearson Education
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5. Booch, Maksimchuk, Engle, Young, Conallen and Houston, "Object Oriented Analysis and Design with Applications", Pearson Education
6. Pandey, Tiwari, " Object Oriented Programming with JAVA" , Acme Learning
7. <https://www.javatpoint.com/java-tutorial>
8. <https://www.tutorialspoint.com/java/index.htm>
9. https://www.tutorialspoint.com/object_oriented_analysis_design/index.htm
10. <https://www.slideshare.net/niitstudentcare/>



MULTIPLE CHOICE QUESTION

Multiple Choice Question:

Q1. Which of the following method is used to set a frame, say f with size 300 × 200 pixels?

JFrame f = new JFrame();

- a) f.setSize(300, 200);
- b) f.setSize(200, 300);
- c) f.paint(300, 200);
- d) f.setVisible(300, 200);

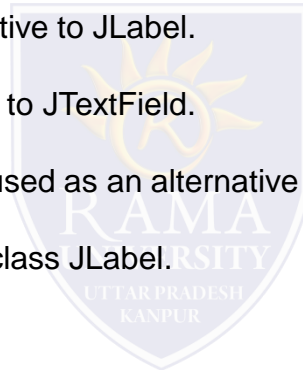


MULTIPLE CHOICE QUESTION

Multiple Choice Question:

Q2. Select the correct statement(s) in the following.

- a) JTextField cannot be used as an alternative to JLabel.
- b) JLabel cannot be used as an alternative to JTextField.
- c) Button grouped radio button cannot be used as an alternative to JComboBox.
- d) The class JPasswordField extends the class JLabel.

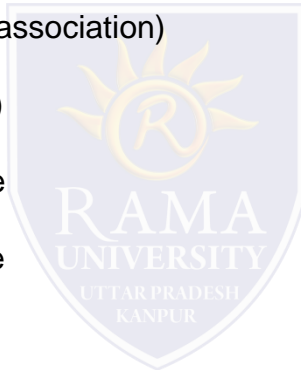


MULTIPLE CHOICE QUESTION

Multiple Choice Question:

Q3. What is(are) the way(s) to create a Frame using Java Swing?

- a) By creating the object of Frame class (association)
- b) By extending Frame class (inheritance)
- c) By importing a package named JFrame
- d) By declaring a class with name JFrame



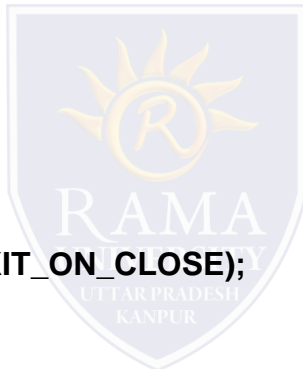
MULTIPLE CHOICE QUESTION

Multiple Choice Question:

```
Q4. import java.awt.*;
import javax.swing.*;
public class Test {
public static void main(String[ ] args) {
JFrame frame = new JFrame("My Frame");
frame.add(new JButton("OK"));
frame.add(new JButton("Cancel"));
frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
frame.setSize(200, 200);
frame.setVisible(true);
}
}
```

Which button will be displayed?

- a) OK
- b) Cancel
- c) both
- d) None



MULTIPLE CHOICE QUESTION

Multiple Choice Question:

Q5. Which of the following class is used to create a pop-up list of items from which the user may choose?

- a) JList
- b) JComboBox
- c) JLabel
- d) JCheckBox



Summary

In this PPT, you learned that:

- A component is placed on a user interface and can be made visible or resized. The commonly used components are JLabel, JTextField, JTextArea, JButton, JCheckBox, JRadioButton and JComboBox.

