

## Chapter 13 Creating User Interfaces

1. use `setBackground(Color)`, `setForeground(Color)`, and `setFont(Font)` to set background, foreground, and font.
2. You use `JButton jbt = new JButton("OK")` to create a button `b` with the label OK. You use `jbt.setText("New label")` to change the label to New label, for example. Use the `setIcon()` method to set an icon in the button.
3. You can have a border for any subclass of `JComponent`. To create a titled border on a `JPanel`, create an instance of the titled border using the `TitledBorder` constructor, and add the instance to the `JPanel` using the `setBorder()` method.
4. `Component` and `JComponent` are concrete classes, so you cannot create instances from them. The last line is wrong, because you cannot add an object to a container. Only an instance of `Component` can be added to a container.
5. The effect is that only one button is added to the container.
6. It displays only two buttons. The buttons cannot be shared.
7. Yes. (See the NOTE box in the section on Buttons).
8. You use `JCheckBox jchk = new JCheckBox("Red")`, for example, to create a check box and `jchk.isSelected()` to check whether it is checked.
9. The action event from buttons Left and Right will be not be processed.
10. You use `JRadioButton jrb = new JRadioButton()`, for example, to create a radio button and use `jrb.isSelected()` to check if a radio button is selected. To group radio buttons, create an instance of `ButtonGroup`, and add radio buttons to this instance.
11. You use `JLabel jlbl = new JLabel("Address")` to create a label named Address, and `jlbl.setText("New Name")` to change the name to New Name. Use the `setIcon()` method to set an icon in the label..
12. `JTextField jtf = new JTextField("Welcome to Java", 10)`. To check whether a text field is empty, use `if (jtf.getText().trim().length() == 0)`.
13. You use `JTextArea jta = new JTextArea(10, 20)` to create a text area with 10 rows and 20 columns in the viewing area, and `jta.append()` or `jta.insert()` to add new lines into the text area. To make the text area to scroll, you need to add the text area to a `JScrollPane`.

14. You use `JComboBox jcbo = new JComboBox()` to create a combo box, `jcbo.addItem(Object s)` to add a string item, and `c.getItem(int Index)` to retrieve an item. Therefore, to add three items, the code might look like this:  

```
jcbo.addItem("Item 1");  
jcbo.addItem("Item 2");  
jcbo.addItem("Item 3");
```
15. You can create it using `new JList(object[])`.
16. You use the default constructor of `JScrollBar` to create a scroll bar and use the `setOrientation(JScrollBar.HORIZONTAL)` to display it horizontally.
17. You use the default constructor of `JSlider` to create a scroll bar and use the `setOrientation(JSlider.VERTICAL)` to display it vertically.
18. See the section "Creating Multiple Windows."