

## Chapter 15 Creating User Interfaces

1. 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(ImageIcon)` method to set an icon in the button. Use the `setPressedIcon(ImageIcon)` method to set a pressed icon in the button. Use the `setRolloverIcon(ImageIcon)` method to set a rollover icon in the button.
2. 

```
jbtOK.setForeground(Color.RED);
jbtOK.setBackground(Color.YELLOW);
jbtOK.setMnemonic(' K ');
jbtOK.setToolTipText("Click OK to proceed");
jbtOK.setHorizontalAlignment(SwingConstants.RIGHT);
jbtOK.setVerticalAlignment(SwingConstants.BOTTOM);
jbtOK.setHorizontalTextPosition(SwingConstants.LEFT);
jbtOK.setVerticalTextPosition(SwingConstants.TOP);
jbtOK.setIconTextGap(5);
```
3. You use `JCheckBox jchk = new JCheckBox("Red")`, for example, to create a check box and use `JCheckBox jchk = new JCheckBox("Red", true)`, for example, to create a check box with the box checked initially. To determine whether a box is checked using `jchk.isSelected()`.
4. The action event from buttons `Left` and `Right` will be not be processed.
5. You use `JRadioButton jrb = new JRadioButton("On")`, for example, to create a radio button and use `JRadioButton jrb = new JRadioButton("On", true)`, for example, to create a radio button with the radio button selected initially. 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.
6. 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..
7. 

```
jbtOK.setForeground(Color.RED);
jbtOK.setBackground(Color.YELLOW);
jbtOK.setMnemonic(' K ');
jbtOK.setToolTipText("Click OK to proceed");
jbtOK.setHorizontalAlignment(SwingConstants.RIGHT);
jbtOK.setVerticalAlignment(SwingConstants.BOTTOM);
jbtOK.setHorizontalTextPosition(SwingConstants.LEFT);
jbtOK.setVerticalTextPosition(SwingConstants.TOP);
jbtOK.setIconTextGap(5);
```

8. `TextField jtf = new TextField("Welcome to Java", 10)`. To check whether a text field is empty, use `if (jtf.getText().trim().length() == 0)`.
9. You use `TextArea jta = new TextArea(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`.
10. 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");`
11. You can create it using `new JList(object[])`.
12. You use the default constructor of `JScrollBar` to create a scroll bar and use the `setOrientation(JScrollBar.HORIZONTAL)` to display it horizontally.
13. You use the default constructor of `JSlider` to create a scroll bar and use the `setOrientation(JSlider.VERTICAL)` to display it vertically.
14. See the section "Creating Multiple Windows."