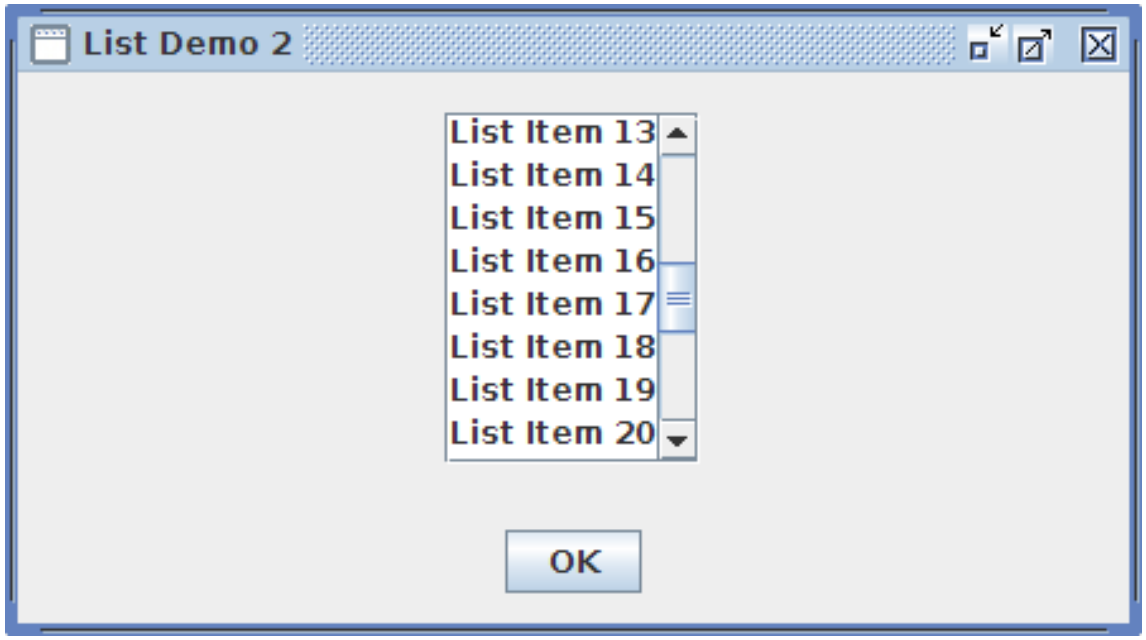
19. GUI Programming :: The *JScrollPane* Class

Sometimes a *JList* contains more list items than can be displayed at one time. In this situation, we can create a *javax.swing.JScrollPane* object and add the *JList* to the *JScrollPane*:



We create the *JList* as before, but call *setVisibleRowCount*(**int** *numRows*) to specify the number of list items to display at one time:

```
final JList<String> list = new JList<>(listItems);
list.setSelectionMode(ListSelectionModel.SINGLE_SELECTION);
list.setLayoutOrientation(JList.VERTICAL);
list.setVisibleRowCount(8);
```

19. GUI Programming :: The *JScrollPane* Class

Next we create a *JScrollPane* object and add *list* to the *JScrollPane* by passing *list* to the *JScrollPane* constructor:

```
JScrollPane listScrollPane = new JScrollPane(list);
```

19. GUI Programming :: The *JScrollPane* Class :: *ListDemo2* Example

```
//*************************************************************************
// CLASS: ListDemo2 (ListDemo2.java)
//*************************************************************************
import java.awt.event.ActionListener;
import java.awt.event.ActionEvent;
import javax.swing.Box;
import javax.swing.BoxLayout;
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JList;
import javax.swing.JOptionPane;
import javax.swing.JPanel;
import javax.swing.JScrollPane;
import javax.swing.ListSelectionModel;

/**
 * This application demonstrates how to create a vertical list using the javax.
 * swing.JList and javax.swing.JScrollPane classes.
 */
public class ListDemo2 {
  public static void main(String[] args) { new ListDemo2().run(); }
  public void run() {
    // Use the Swing look and feel.
    JFrame.setDefaultLookAndFeelDecorated(true);
```

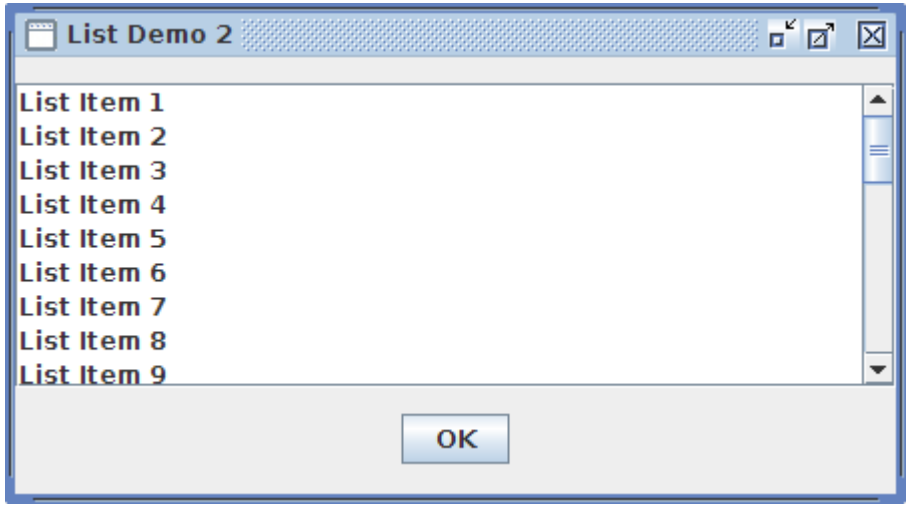
19. GUI Programming :: The *JScrollPane* Class :: *ListDemo2* (continued)

```
// Create an array of 30 strings to be added to the JList.
String[] listItems = new String[30];
for (int i = 0; i < 30; ++i) listItems[i] = "List Item " + (i + 1);

// Create a JList where each list item is a String. setVisibleRowCount()
// specifies that we wish to make the JList large enough to display 8
// list items at a time.
final JList<String> list = new JList<>(listItems);
list.setSelectionMode(ListSelectionModel.SINGLE_SELECTION);
list.setLayoutOrientation(JList.VERTICAL);
list.setVisibleRowCount(8);

// Create a JScrollPane to contain the JList.
JScrollPane listScrollPane = new JScrollPane(list);

// Add the JScrollPane to a FlowLayout panel.
JPanel listPanel = new JPanel();
listPanel.add(listScrollPane);
```



19. GUI Programming :: The *JScrollPane* Class :: *ListDemo2* (continued)

```
JButton butOk = new JButton("OK");
butOk.setAlignmentX(0.5f);
butOk.addActionListener(
  new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent pEvent) {
      int index = list.getSelectedIndex();
      String msg;
      if (index == -1) {
        msg = "You did not select a list item!";
      } else {
        msg = "You selected: " + list.getSelectedValue();
        msg += " which is at index " + index;
      }
      JOptionPane.showMessageDialog(null, msg);
    }
  });

JPanel mainPanel = new JPanel();
mainPanel.setLayout(new BoxLayout(mainPanel, BoxLayout.Y_AXIS));
mainPanel.add(Box.createVerticalGlue());
mainPanel.add(listPanel);
mainPanel.add(Box.createVerticalGlue());
mainPanel.add(butOk);
mainPanel.add(Box.createVerticalGlue());
```

19. GUI Programming :: The *JScrollPane* Class :: *ListDemo2* (continued)

```
        JFrame frame = new JFrame("List Demo 2");
        frame.setSize(450, 250);
        frame.add(mainPanel);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.setVisible(true);
    }
}
```