Swing GUI 기본(2)
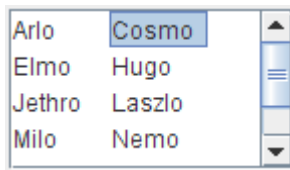
JList

JTable
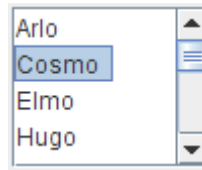
JList

- JList 형태와 Selection
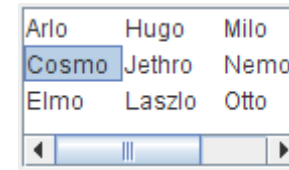 - 예 : setLayoutOrientation(JList.VERTICAL)

HORIZONTAL_WRAP
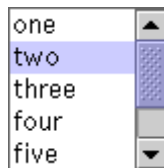

VERTICAL
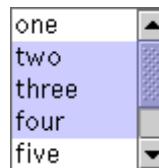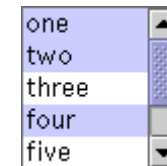

VERTICAL_WRAP

- Selection
  - ListSelectionModel

SINGLE_SELECTION

SINGLE_INTERVAL_SELECTION

MULTIPLE_INTERVAL_SELECTION
default

JList

□ JList의 모양설정

```
list = new JList(data); //data has type Object[]
list.setSelectionMode(ListSelectionModel.SINGLE_INTERVAL_SELECTION);
list.setLayoutOrientation(JList.HORIZONTAL_WRAP);
list.setVisibleRowCount(-1);
…
JScrollPane listScroller = new JScrollPane(list);
listScroller.setPreferredSize(new Dimension(250, 80));
```

□ 데이터의 설정

```
listModel = new DefaultListModel();
listModel.addElement("Jane Doe");
listModel.addElement("John Smith");
listModel.addElement("Kathy Green");
```

```
list = new JList(listModel);
```

http://docs.oracle.com/javase/tutorialJWS/ui
swing/components/ex6/ListDemo.jnlp
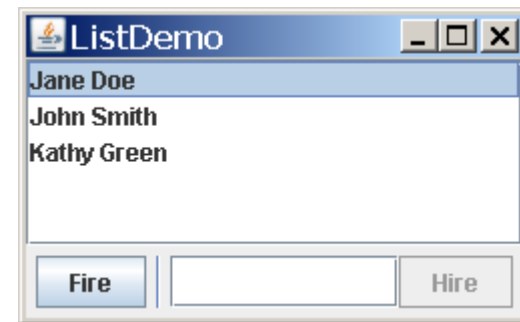
JList

- ListSelectionListener

```
class   Class 이름  implements ListSelectionListener {

public void valueChanged(ListSelectionEvent e) {
    if (e.getValueIsAdjusting() == false) {

        if (list.getSelectedIndex() == -1) {
        //No selection, disable fire button.
            fireButton.setEnabled(false);

        } else {
        //Selection, enable the fire button.
            fireButton.setEnabled(true);
        }
    }
}
```
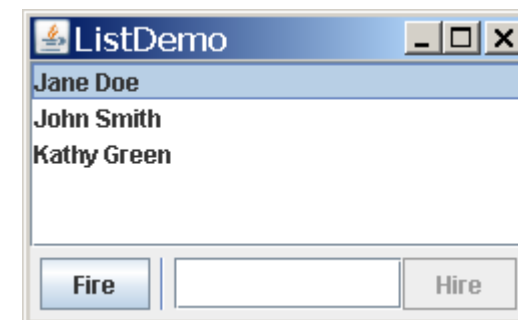
JList

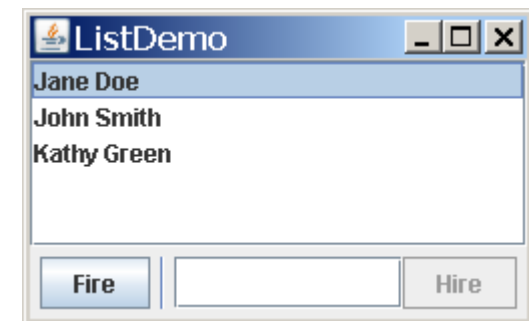- 예 : Fire, Hire Listener

```
class FireListener implements ActionListener {
    public void actionPerformed(ActionEvent e) {
        //This method can be called only if
        //there's a valid selection
        //so go ahead and remove whatever's selected.
        int index = list.getSelectedIndex();
        listModel.remove(index);
        int size = listModel.getSize();
        if (size == 0) { //Nobody's left, disable firing.
                fireButton.setEnabled(false);
        } else { //Select an index.
        if (index == listModel.getSize()) {
            //removed item in last position
            index--;
        }
        list.setSelectedIndex(index);
        list.ensureIndexIsVisible(index);
        }
    }
}
```

Hire

```java
class HireListener implements ActionListener, DocumentListener {
private boolean alreadyEnabled = false;
private JButton button;
public HireListener(JButton button) {
this.button = button;
}
//Required by ActionListener.
public void actionPerformed(ActionEvent e) {
    String name = employeeName.getText();
    //User didn't type in a unique name...
    if (name.equals("") || alreadyInList(name)) {
        Toolkit.getDefaultToolkit().beep();
        employeeName.requestFocusInWindow();
        employeeName.selectAll();
        return;
    }
    int index = list.getSelectedIndex(); //get selected index
    if (index == -1) { //no selection, so insert at beginning
        index = 0;
    } else { //add after the selected item
        index++;
    }
    listModel.insertElementAt(employeeName.getText(), index);
    //If we just wanted to add to the end, we'd do this:
    //listModel.addElement(employeeName.getText());
    //Reset the text field.
    employeeName.requestFocusInWindow();
    employeeName.setText("");
    //Select the new item and make it visible.
    list.setSelectedIndex(index);
    list.ensureIndexIsVisible(index);
} 1
```

ListDemo

Jane Doe
John Smith
Kathy Green

Fire | | Hire

JTable

□ 모양과 데이터

The Header contains Column labels

Each Cell displays a data item

Each Column displays one type of data

String[] columnNames = {"First Name", "Last Name", "Sport", "# of Years", "Vegetarian"};

Object[][] data = {
    {"Kathy", "Smith",
     "Snowboarding", new Integer(5), new Boolean(false)},
    {"John", "Doe",
     "Rowing", new Integer(3), new Boolean(true)},
    {"Sue", "Black",
     "Knitting", new Integer(2), new Boolean(false)},
    {"Jane", "White",
     "Speed reading", new Integer(20), new Boolean(true)},
    {"Joe", "Brown",
     "Pool", new Integer(10), new Boolean(false)}
};

JTable table = new JTable(data, columnNames);

JTable

- Container에 Table 넣기

JScrollPane scrollPane = new JScrollPane(table);
table.setFillsViewportHeight(true);

- Table Column Width 설정

```
TableColumn column = null;
for (int i = 0; i < 5; i++) {
    column = table.getColumnModel().getColumn(i);
    if (i == 2) {
        column.setPreferredWidth(100); //third column is bigger
    } else {
        column.setPreferredWidth(50);
    }
}
```

http://docs.oracle.com/javase/tutorial/uiswing/examples/components
/SimpleTableDemoProject/src/components/SimpleTableDemo.java

JTable

❑ Selection 구현

```
class SharedListSelectionHandler implements ListSelectionListener {
    public void valueChanged(ListSelectionEvent e) {
        ListSelectionModel lsm = (ListSelectionModel)e.getSource();

        int firstIndex = e.getFirstIndex();
        int lastIndex = e.getLastIndex();
        boolean isAdjusting = e.getValueIsAdjusting();
        output.append("Event for indexes "
                    + firstIndex + " - " + lastIndex
                    + "; isAdjusting is " + isAdjusting
                    + "; selected indexes:");

        if (lsm.isSelectionEmpty()) {
            output.append(" <none>");
        } else {
            // Find out which indexes are selected.
            int minIndex = lsm.getMinSelectionIndex();
            int maxIndex = lsm.getMaxSelectionIndex();
            for (int i = minIndex; i <= maxIndex; i++) {
                if (lsm.isSelectedIndex(i)) {
                    output.append(" " + i);
                }
            }
        }
        output.append(newline);
    }
}
```
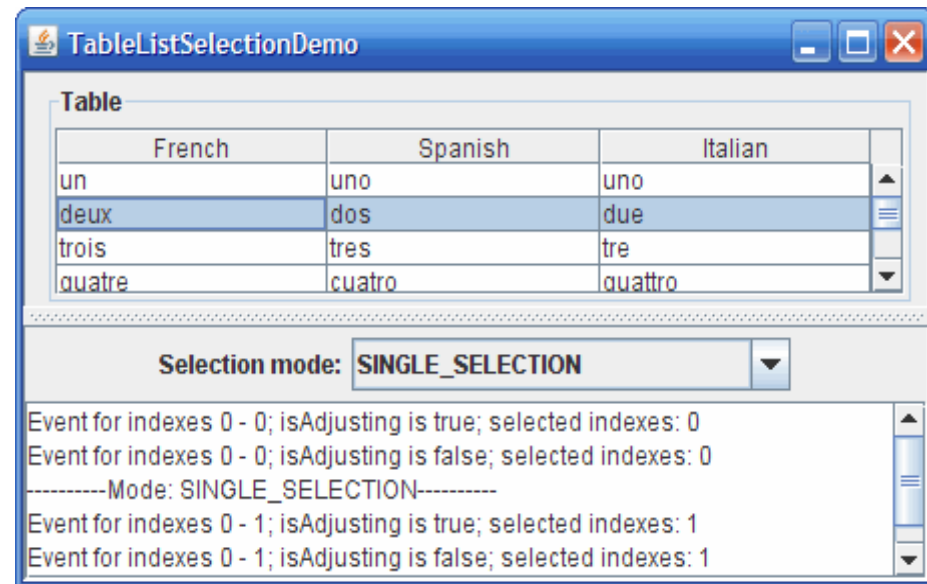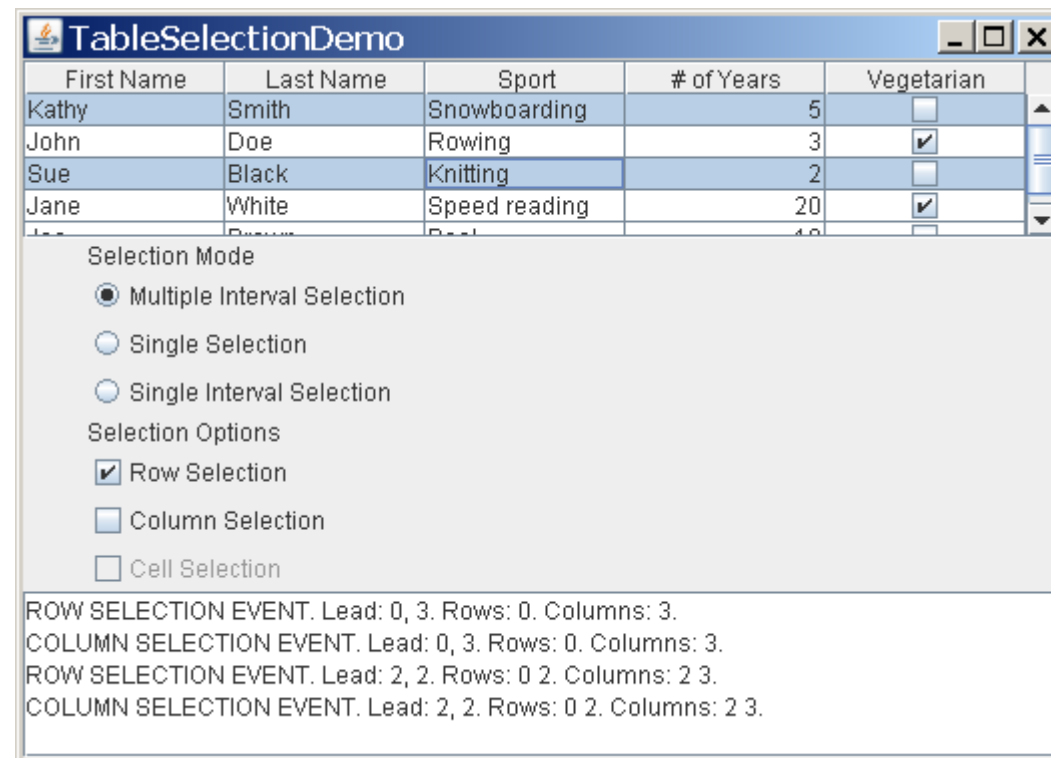
JTable

/* DefaultTableModel을 구현하여 JTable을 생성한다. */

    tablemodel = new DefaultTableModel();

    tablemodel.setColumnIdentifiers(new String[] {"이름", "나이", "성별"});

    table = new JTable(tablemodel);

    scroll = new JScrollPane(table);

```
public void actionPerformed(ActionEvent e) {

    Object obj = e.getSource();

    /* 추가 버튼이 눌린 경우 */

    if((JButton)obj == btn1)

    {

        /* TextField에 입력된 데이터를 JTable에 삽입함 */

        tablemodel.addRow(new String[] {txt1.getText().toString(),
txt2.getText().toString(),     txt3.getText().toString()});
        txt1.setText(null);
        txt2.setText(null);
        txt3.setText(null);
    }

        /* 삭제 버튼이 눌린 경우 */

    else if((JButton)obj == btn2)
    {
        /* 예외처리. 선택된 row가 있어야 한다 */
        if(table.getSelectedRow() >= 0)
        {
            tablemodel.removeRow(table.getSelectedRow());
        }

    }

}
```
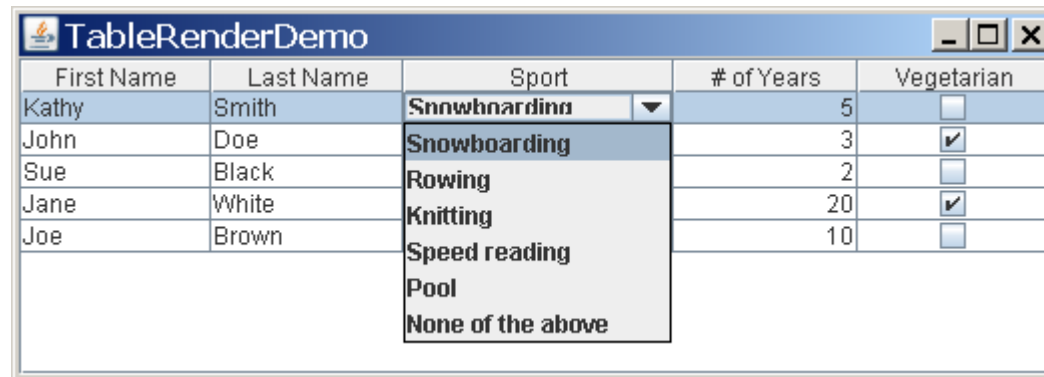
http://blog.naver.com/seokcrew/30086327869

JTable

□ Selection Demo

JTable

❑ Render

http://docs.oracle.com/javase/tutorial/uiswing/examples/components/index.html#TableRenderDemo

JTable
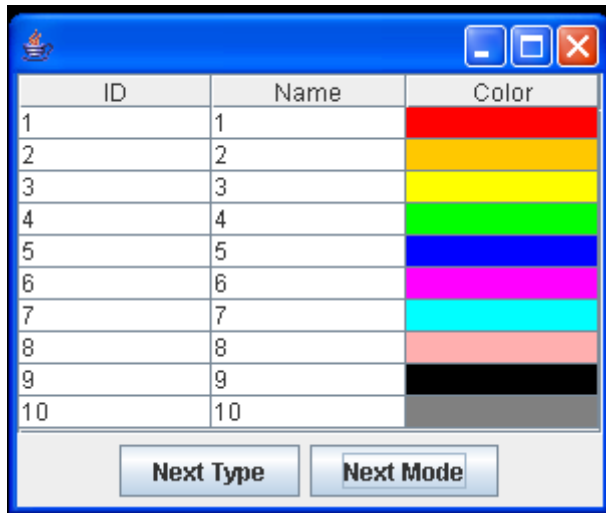
```java
class MyTableCellRenderer extends JLabel implements
TableCellRenderer {
    final Border blueBorder =
BorderFactory.createLineBorder(Color.BLUE);

    MyTableCellRenderer() {
        setOpaque(true);
    }

    public Component getTableCellRendererComponent(JTable table,
        Object value, boolean isSelected, boolean hasFocus, int row,
        int col) {
        setBackground((Color) value);
        if (isSelected) {
            setBorder(blueBorder);
        } else {
            setBorder(BorderFactory.createEmptyBorder());
        }
        return this;
    }
}

class MyTableModel extends DefaultTableModel {
    Object data[][] = { { "1", Color.RED }, { "2", Color.ORANGE },
        { "3", Color.YELLOW }, { "4", Color.GREEN },
        { "5", Color.BLUE }, { "6", Color.MAGENTA },
        { "7", Color.CYAN }, { "8", Color.PINK },
        { "9", Color.BLACK }, { "10", Color.GRAY } };

    MyTableModel() {
        setColumnIdentifiers(new String[] { "ID", "Name", "Color" });
        for (int i = 0, n = data.length; i < n; i++)
            addRow(new Object[] { new Integer(i + 1), data[i][0],
                data[i][1] });
    }

    public boolean isCellEditable(int row, int column) {
        return (column != 0);
    }
}
```