The ItemEvent Class and Item GUI Components

Learning Objectives

- In this lesson you will:
  - learn how to create and use the JCheckBox, JRadioButton, JComboBox
  - understand how the ItemEvent Class and the ItemListener interface are used together in handling user events.
  - know the methods defined in the ItemListener interface

JCheckBox Class

- an item that can be selected or deselected, and which displays its state to the user
- It is used to turn an option on (true) or off (false).
- Clicking on a CheckBox changes its state from "on" to "off" or from "off" to "on ".

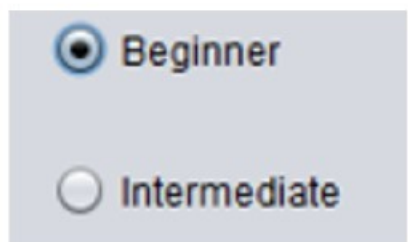
JCheckBox Class

- Commonly used constructors
  - JCheckBox() - creates an initially unselected check box button with no text, no icon.
  - JCheckBox(String text) - creates an initially unselected check box with text.
  - JCheckBox(String text, boolean selected) - creates a check box with text and specifies whether or not it is initially selected.
- Example:

```
JCheckBox chkcpp= new JCheckBox(“C++”);
JCheckBox chkjava= new JCheckBox(“Java”, true);
```

JRadioButton Class

- Used to let the user select one of a set of mutually exclusive options
- Only one of a set of option buttons can be selected at one time
- Needs a helper class: ButtonGroup
  - groups the radio buttons and manages the group's state.
  - only one of the buttons in the group can be selected
  - A selected item gets deselected when a different item in the group is subsequently selected.



JRadioButton Class

- Commonly-used constructors:
  - JRadioButton() - creates an unselected radio button with no text, no icon.
  - JRadioButton()(String text) - creates an unselected radio button with text.
  - JRadioButton()(String text, boolean selected) - creates a radio button with text and specifies whether or not it is initially selected.
  - Example:

```
JRadioButton() rb1= new JRadioButton(“Beginner”, true);
JRadioButton() rb2 = new JRadioButton(“Intermediate”);
ButtonGroup grp = new ButtonGroup();
grp.add(rb1);
grp.add(rb2);
```

JComboBox Class

- a component that combines a button or editable field and a drop-down list.
- The user can select a value from the drop-down list
- If you make the combo box editable, then the combo box includes an editable field into which the user can type a value.

JComboBox Class

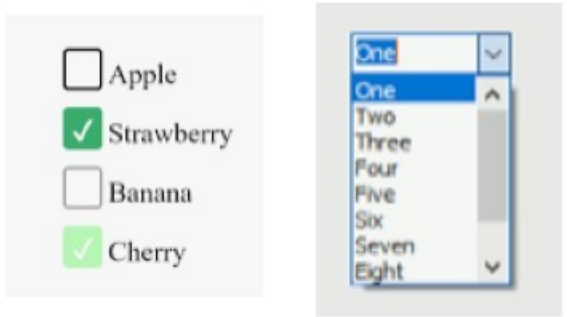
- Commonly used constructor:
  - JComboBox(E[] items) - creates a JComboBox that contains the elements in the specified array.
  - JComboBox(ComboBoxModel model) - creates a JComboBox that takes its items from an existing ComboBoxModel.

- Example:

```
String flavor[]={“Chocolate",“Strawberry",“Vanilla",“Honey",“Banana"};
JComboBox cb=new JComboBox(flavor);
```

The ItemEvent Class

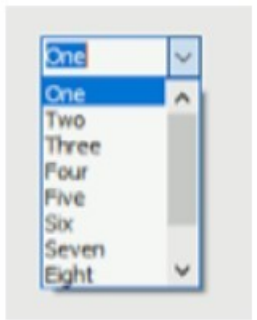
- An event that is used to determine information about the event such as which item the user selected.
- An instance of the ItemEvent class is passed to the ItemListener whenever the item selected in a list control (such as a list box or combo box) is changed.



jCheckboxes or jComboBox

addItemListener

LISTEN



ItemEvent

ItemListener

LISTEN

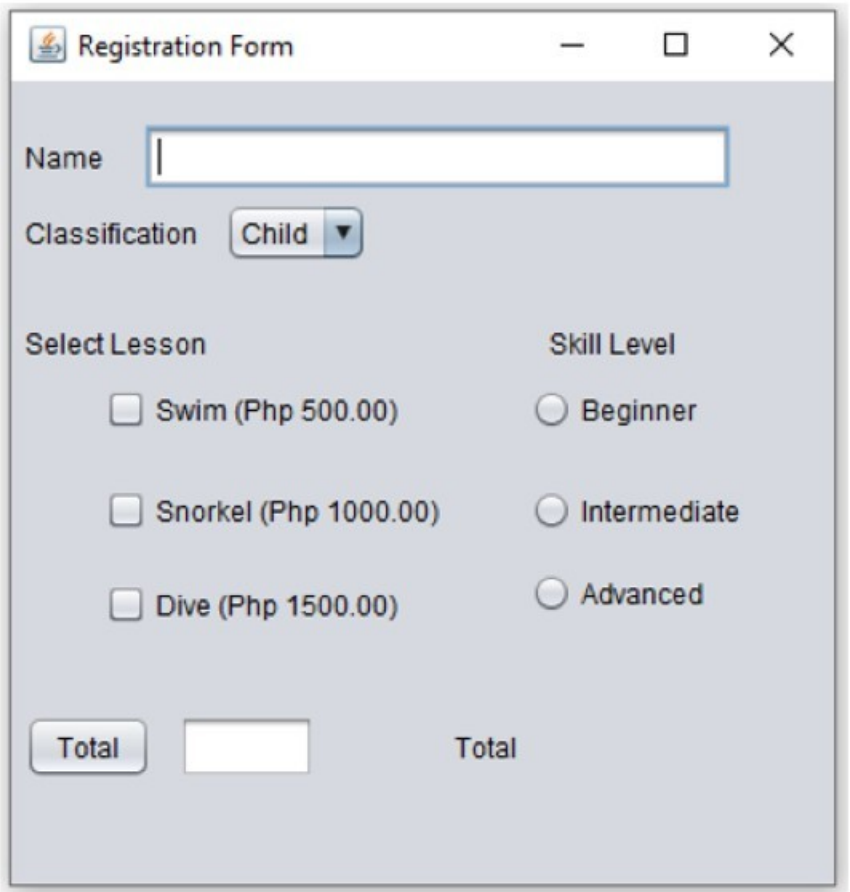
ItemEvent

itemStateChanged()

ItemListener Event Handler Methods

- getItem()
  - returns the item that was selected or deselected
- getSource()
  - returns the object on which the event occurred
  - This is used when there is more than one ItemListener objects
- getStateChange()
  - returns either SELECTED or DESELECTED to indicate whether the item was selected or deselected

Example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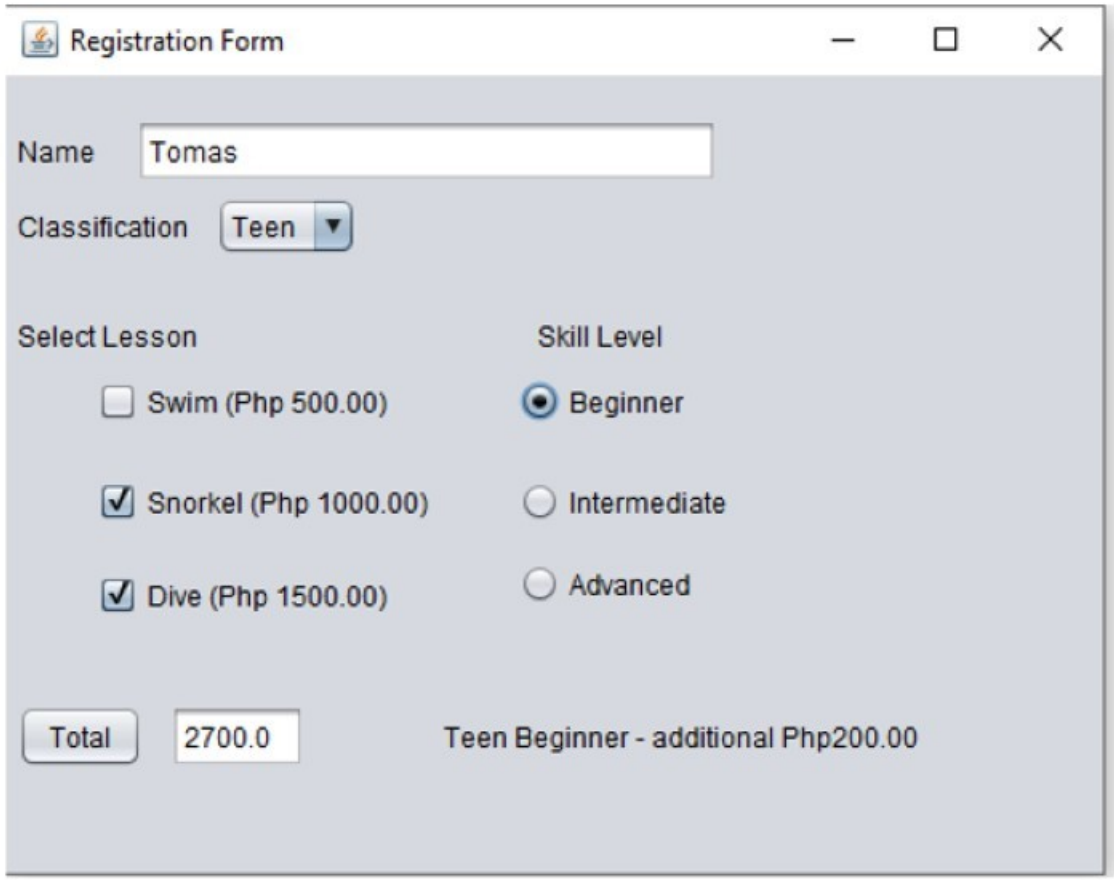
Name
Classification
Child
Select Lesson
Skill Level
Swim (Php 500.00)
Snorkel (Php 1000.00)
Dive (Php 1500.00)
Beginner
Intermediate
Advanced
Total
Total


Registration Form
Name
Tomas
Classification
Teen
Select Lesson
Skill Level
Swim (Php 500.00)
Snorkel (Php 1000.00)
Dive (Php 1500.00)
Beginner
Intermediate
Advanced
Total
2700.0
Teen Beginner - additional Php200.00

Summary

- ItemEvent is the event generated when an item is selected from a combo box, radio button or checkbox
- To handle events that involve the ItemEvent, its corresponding listener which is ItemListener should be registered. The codes that need to be executed when the event occurs should be written in the itemStateChange() method defined in the ItemListener interface.