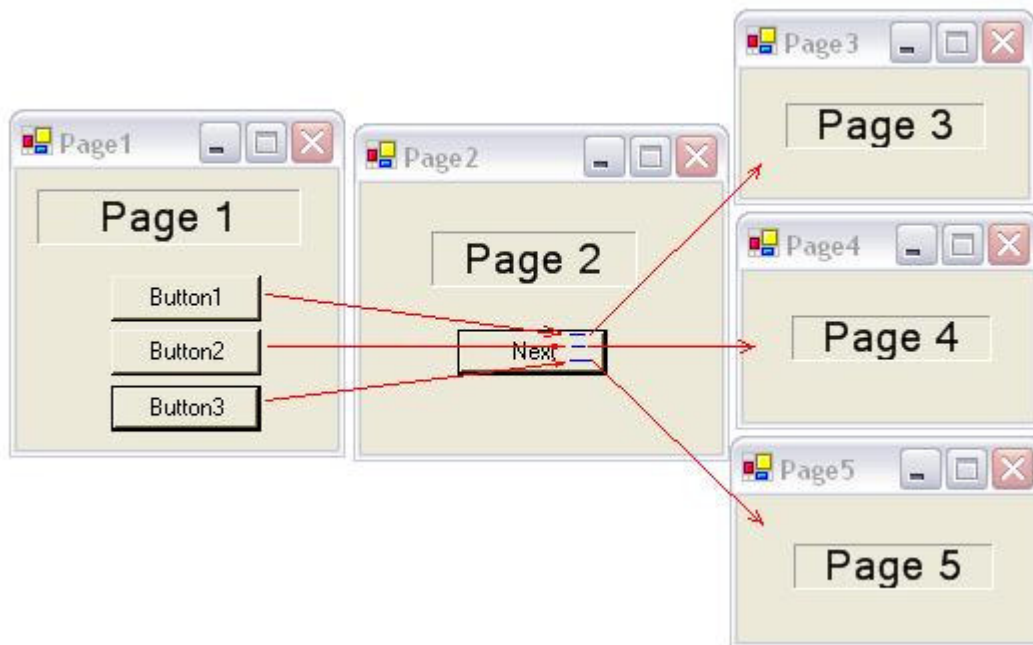


Lesson 6. Assign actions at runtime

In the previous lessons, you see that you may assign actions to events at design time. Actually, you may also assign actions to events at runtime and thus totally change actions assigned to an event. For this to happen, the performer owning the event must support a method “AssignActions”. This action requires two parameters. The first parameter indicates the event to assign actions to. The second parameter indicates the action or action list to be assigned to the event.

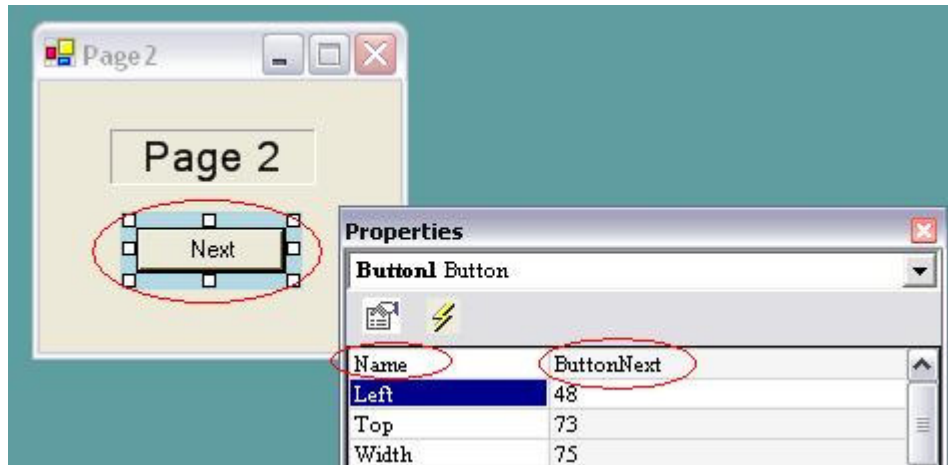
This lesson shows you how to use “AssignActions” method.

For the following example, Page 1 has 3 buttons, which all open Page 2. There is a button on Page 2, button “Next”, which may open another page and then close Page 2. The page to be opened by the “Next” button on Page 2 may be Page 3, or Page 4 or Page 5, depending on which button on Page 1 opened Page 2.



If Button 1 opened Page 2, then the “Next” button on Page 2 will open Page 3; if Button 2 opened Page 2, then the “Next” button on Page 2 will open Page 4; if Button 3 opened Page 2, then the “Next” button on Page 2 will open Page 5.

We name the “Next” button on Page 2 as “ButtonNext” by setting its Name property to “ButtonNext”.



6.1. Create actions

Suppose we created the following actions:

- “Page2.Show”
- “Page2.Close”
- “Page3.Show”
- “Page4.Show”
- “Page5.Show”.

With the above actions, we can create following action lists to be assigned to the “Click” event of the “Next” button on Page 2:

“Show Page 3 Close Page 2” – This includes two actions: “Page3.Show” and “Page2.Close”.

“Show Page 4 Close Page 2” – This includes two actions: “Page4.Show” and “Page2.Close”.

“Show Page 5 Close Page 2” – This includes two actions: “Page5.Show” and “Page2.Close”.

You should be able to create the above actions and action lists.

6.2. Create actions to assign actions at runtime

The above 3 action lists are supposed to be assigned to the “Click” event of the “Next” Button on Page 2. But we cannot assign them at design time, because we do not know which one to assign at design time.

At runtime, when the user clicks Button1 on Page 1, Page 2 appears and the action list “Show Page 3 Close Page 2” should be assigned to the “Click” event of the “Next” Button on Page 2.

At runtime, when the user clicks Button2 on Page 1, Page 2 appears and the action list “Show Page 4 Close Page 2” should be assigned to the “Click” event of the “Next” Button on Page 2.

At runtime, when the user clicks Button3 on Page 1, Page 2 appears and the action list “Show Page 5 Close Page 2” should be assigned to the “Click” event of the “Next” Button on Page 2.

Here the key thing you need to learn is that [[Assigning the action list “Show Page 3 Close Page 2” to the “Click” event of the “Next” Button on Page 2](#)] is an action. This action is made from the “AssignActions” method of the “Next” button on Page 2. The first parameter of the action is the “Click” event; the second parameter of the action is the action list “Show Page 3 Close Page 2”.

When the user clicks the Button1 on Page 1, this action is executed and the action list “Show Page 3 Close Page 2” is assigned to the “Click” event of the “Next” button on Page 2. Now clicking the “Next” button on Page 2 will open Page 3.

Similarly, that [[Assigning the action list “Show Page 4 Close Page 2” to the “Click” event of the “Next” Button on Page 2](#)] is an action. This action is made from the “AssignActions” method of the “Next” button on Page 2. The first parameter of the action is the “Click” event; the second parameter of the action is the action list “Show Page 4 Close Page 2”.

When the user clicks the Button2 on Page 1, this action is executed and the action list “Show Page 4 Close Page 2” is assigned to the “Click” event of the “Next” button on Page 2. Now clicking the “Next” button on Page 2 will open Page 4.

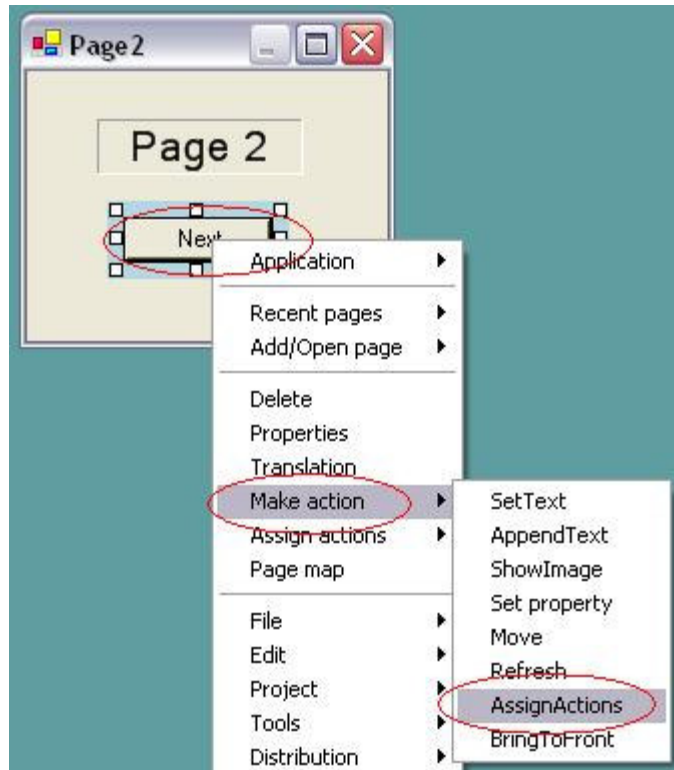
Similarly, that [[Assigning the action list “Show Page 5 Close Page 2” to the “Click” event of the “Next” Button on Page 2](#)] is an action. This action is made from the “AssignActions” method of the “Next” button on Page 2. The first parameter of the action is the “Click” event; the second parameter of the action is the action list “Show Page 5 Close Page 2”.


When the user clicks the Button3 on Page 1, this action is executed and the action list “Show Page 5 Close Page 2” is assigned to the “Click” event of the “Next” button on Page 2. Now clicking the “Next” button on Page 2 will open Page 5.

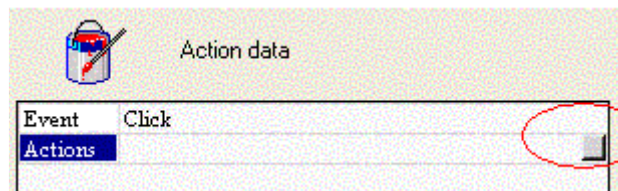
Now let’s make the first action.

Because this action is to assign an action list to the “Click” event of the “Next” button on Page 2, the “Next” button should be the action owner.

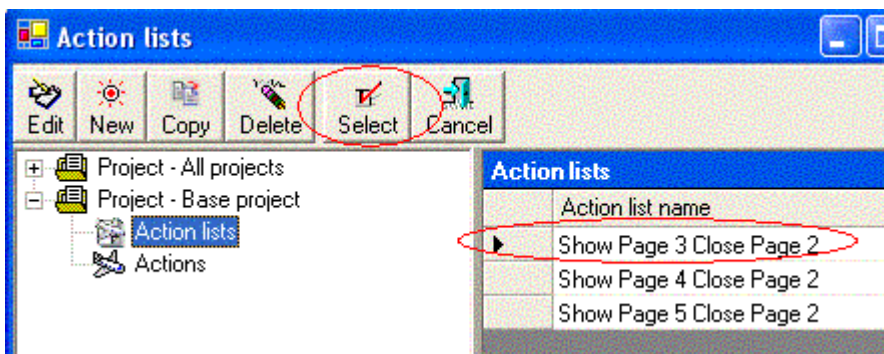
Right-click on the “Next” Button on Page 2 because the “Next” button is the owner of the “Click” event; select “Make action”, select “AssignActions” method,



Give an action name, say, “ButtonNext.AssignActionsOpenPage3”. Note we choose this name because that “ButtonNext” is the name of the action owner, “AssignActions” is the method for the action, and “OpenPage3” is a short description of this action. The Action data dialogue box appears. The first parameter is “Event”. We choose “Click” because that is the event we want to assign the actions to. The second parameter is “Actions”. Click the button  to pick an action:



In the action lists, select “Show Page 3 Close Page 2”:

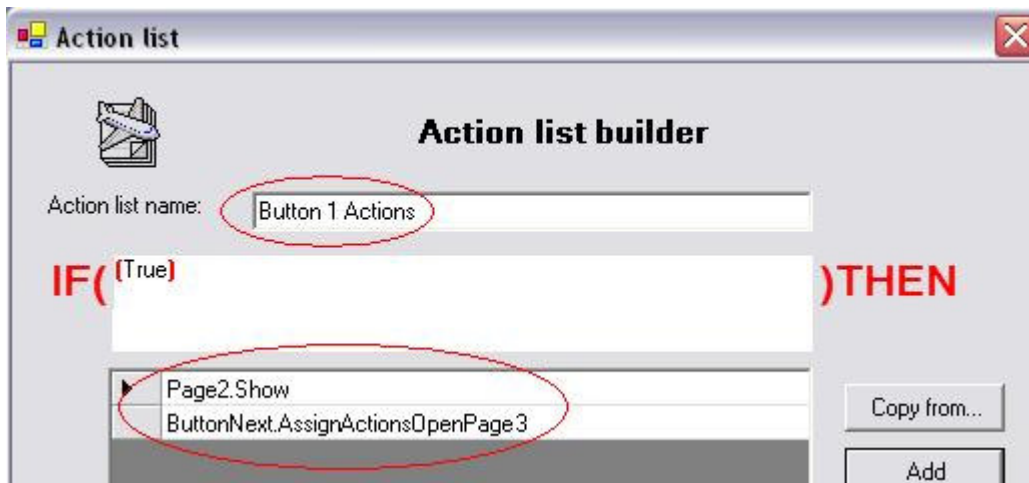


Click Finish button, and we are done.

In the same way, we may create actions “ButtonNext.AssignActionsOpenPage4” and “ButtonNext.AssignActionsOpenPage5” by setting the second parameter to “Show Page 4 Close Page 2” and “Show Page 5 Close Page 2” respectively.

6.3. Create action lists for buttons on Page 1

When button 1 on Page 1 is clicked, we want to call “Show Page 2”, and then call “ButtonNext.AssignActionsOpenPage3”. We may make these two actions into an action list and assign it to the “Click” event of Button 1 on Page 1. Let’s call this action list “Button 1 Actions”:



Similarly, we can create “Button 2 Actions” to include “Show Page 2” and “ButtonNext.AssignActionsOpenPage4”, and “Button 3 Actions” to include “Show Page 2” and “ButtonNext.AssignActionsOpenPage5”.

6.4. Assign action lists to buttons on Page 1

Right-click on Button 1 on Page 1, select “Assign actions”, select “Button 1 actions”.

Right-click on Button 2 on Page 1, select “Assign actions”, select “Button 2 actions”.

Right-click on Button 3 on Page 1, select “Assign actions”, select “Button 3 actions”.

We are done.

6.5. What we learned in this lesson

- Most Performers have a method called “AssignActions”. The method can be used to change the event handlers (actions) at runtime.
- For each event handler to be assigned at runtime, use “AssignActions” to create an action. At runtime, call the action when you want to assign the event handler.

6.6. Exercises

Limnor Codeless Programming System – Lesson 6

Exercise 1. Create the sample application described in this lesson from scratch. Run the application and verify that it works as described at the beginning of this lesson.