

Create a custom means of managing the event invocation list

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/*
C#: The Complete Reference
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*/

// Create a custom means of managing the event invocation
list.

using System;

// Declare a delegate for an event.
delegate void MyEventHandler();

// Declare an event class that holds up to 3 events.
class MyEvent {
MyEventHandler[] evnt = new MyEventHandler[3];

public event MyEventHandler SomeEvent {
// Add an event to the list.
add {
int i;

for(i=0; i < 3; i++) if(evnt[i] == null) { evnt[i] = value;
break; } if (i == 3) Console.WriteLine("Event list full."); }
// Remove an event from the list. remove { int i; for(i=0; i <
3; i++) if(evnt[i] == value) { evnt[i] = null; break; } if (i
== 3) Console.WriteLine("Event handler not found."); } } //
This is called to fire the events. public void OnSomeEvent() {
for(int i=0; i < 3; i++) if(evnt[i] != null) evnt[i](); } } //
```

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Create some classes that use MyEventHandler. class W { public
void Whandler() { Console.WriteLine("Event received by W
object"); } } class X { public void Xhandler() {
Console.WriteLine("Event received by X object"); } } class Y {
public void Yhandler() { Console.WriteLine("Event received by
Y object"); } } class Z { public void Zhandler() {
Console.WriteLine("Event received by Z object"); } } public
class EventDemo4 { public static void Main() { MyEvent evt =
new MyEvent(); W w0b = new W(); X x0b = new X(); Y y0b = new
Y(); Z z0b = new Z(); // Add handlers to the event list.
Console.WriteLine("Adding events."); evt.SomeEvent += new
MyEventHandler(w0b.Whandler); evt.SomeEvent += new
MyEventHandler(x0b.Xhandler); evt.SomeEvent += new
MyEventHandler(y0b.Yhandler); // Can't store this one -- full.
evt.SomeEvent += new MyEventHandler(z0b.Zhandler);
Console.WriteLine(); // Fire the events. evt.OnSomeEvent();
Console.WriteLine(); // Remove a handler.
Console.WriteLine("Remove x0b.Xhandler."); evt.SomeEvent -=
new MyEventHandler(x0b.Xhandler); evt.OnSomeEvent();
Console.WriteLine(); // Try to remove it again.
Console.WriteLine("Try to remove x0b.Xhandler again.");
evt.SomeEvent -= new MyEventHandler(x0b.Xhandler);
evt.OnSomeEvent(); Console.WriteLine(); // Now, add Zhandler.
Console.WriteLine("Add z0b.Zhandler."); evt.SomeEvent += new
MyEventHandler(z0b.Zhandler); evt.OnSomeEvent(); } } [/csharp]
```