

Forum:[Hack Forums](#)

Thread: [\[VB.net / C#\] Events/Delegates example \[SOURCE\]](#)

Charny - July 29, 2010, 7:42 pm

Hello, I made a little events/delegates example. I did it because I was bored and I decided to make it :P. I'm sharing it with you because events and delegates can be hard when your learn them and this example could help you.

I know, there's better way to divide, but I needed a subject for the example. So I took the division.

C#

Spoiler [\(Click to View\)](#)

Divison class (Division.cs)

Code class Division

```
{
    public delegate void EventHandler(Object sender, DivisionEventArgs e); //Delegate
    public event EventHandler DivisionDone; //This event will be executed when the division will be
done.
    public event EventHandler DivisionPerZero; //This event will be executed when the divisor is 0.

    public Division() //Constructor
    {
    }

    public void Divide(int dividend, int divisor)
    {
        if (divisor == 0)
        {
            if (DivisionPerZero != null)
            {
                DivisionPerZero(this, new DivisionEventArgs(dividend, divisor, 0.0)); //Execute the
DivisionPerZero event
            }
            return;
        }

        double num = dividend/divisor;

        if(DivisionDone != null)
        {
            DivisionDone(this, new DivisionEventArgs(dividend, divisor, num)); //Execute the DivisionDone
event
        }
    }
}

class DivisionEventArgs : EventArgs //The arguments of the division.
{
```

```

public DivisionEventArgs(int a, int b, double r)
{
    dividend = a;
    divisor = b;
    result = r;
}

```

```

private int dividend;
private int divisor;
private double result;

```

```

public int Dividend
{
    get { return dividend; }
}

```

```

public int Divisor
{
    get { return divisor; }
}

```

```

public double Result
{
    get { return result; }
}
}

```

And you can use it like that :

```

Code private void TESTING_METHOD()
{
    Division division = new Division();
    division.DivisionDone += new Division.EventHandler(div_DivisionDone);
    division.DivisionPerZero += new Division.EventHandler(div_DivisionPerZero);

    division.Divide(10, 5);
}

```

```

private void div_DivisionPerZero(object sender, DivisionEventArgs e)
{
    MessageBox.Show("Error! Division per zero!");
}

```

```

private void div_DivisionDone(object sender, DivisionEventArgs e)
{
    MessageBox.Show("Result : " + e.Result.ToString());
}

```

Visual Basic .NET
 Spoiler ([Click to View](#))

Division class (Division.cs)

Code Class Division

```

Public Delegate Sub EventHandler(sender As [Object], e As DivisionEventArgs)

```

```

'Delegate
Public Event DivisionDone As EventHandler
'This event will be executed when the division will be done.
Public Event DivisionPerZero As EventHandler
'This event will be executed when the divisor is 0.
Public Sub New()
    'Constructor
End Sub

Public Sub Divide(dividend As Integer, divisor As Integer)
    If divisor = 0 Then
        If DivisionPerZero IsNot Nothing Then
            RaiseEvent DivisionPerZero(Me, New DivisionEventArgs(dividend, divisor, 0.0))
            'Execute the DivisionPerZero event
            Return
        End If
    End If

    Dim num As Double = dividend \ divisor

    RaiseEvent DivisionDone(Me, New DivisionEventArgs(dividend, divisor, num))
    'Execute the DivisionDone event
End Sub
End Class

Class DivisionEventArgs
    Inherits EventArgs
    'The arguments of the division.
    Public Sub New(a As Integer, b As Integer, r As Double)
        m_dividend = a
        m_divisor = b
        m_result = r
    End Sub

    Private m_dividend As Integer
    Private m_divisor As Integer
    Private m_result As Double

    Public ReadOnly Property Dividend() As Integer
        Get
            Return m_dividend
        End Get
    End Property

    Public ReadOnly Property Divisor() As Integer
        Get
            Return m_divisor
        End Get
    End Property

    Public ReadOnly Property Result() As Double
        Get
            Return m_result
        End Get
    End Property

```

```
End Get
End Property
End Class
And you can use it like that :
```

```
Code Private Sub TESTING_METHOD()
    Dim division As New Division()
    division.DivisionDone += New Division.EventHandler(AddressOf div_DivisionDone)
    division.DivisionPerZero += New Division.EventHandler(AddressOf div_DivisionPerZero)

    division.Divide(10, 5)
End Sub
```

```
Private Sub div_DivisionPerZero(sender As Object, e As DivisionEventArgs)
    MessageBox.Show("Error! Division per zero!")
End Sub
```

```
Private Sub div_DivisionDone(sender As Object, e As DivisionEventArgs)
    MessageBox.Show("Result : " + e.Result.ToString())
End Sub
```

Enjoy! If you have any questions, ask them here!

CometJack - July 29, 2010, 8:01 pm

That looks very confusing, can you comment a little please? Rated 5 stars :)

xhtmlphp™ - July 29, 2010, 8:26 pm

(Jul 29, 2010 08:01 PM)CometJack Wrote: [\[CITE\]](#) That looks very confusing, can you comment a little please? Rated 5 stars :)

Ya, I think Charny should do an explanation on this :P

I don't understand Delegates, I've seen them being mentioned a few times but never understood the use of them :(

Charny - July 29, 2010, 8:38 pm

(Jul 29, 2010 08:26 PM)xhtmlphp Wrote: [\[CITE\]](#) Ya, I think Charny should do an explanation on this :P

I don't understand Delegates, I've seen them being mentioned a few times but never understood the use of them :(

You can use delegates like that.. :

```
Code public delegate void Write(string str);

private void writeString(string str)
{
    MessageBox.Show(str);
}

private void writeLength(string str)
{
    MessageBox.Show(str.Length.ToString());
}
```

```
private void TestDelegate()
{
    Write write = new Write(writeString);
    write += new Write(writeLength);

    write("test");
}
```

Try this code and check the result, then you can play with the code ;).

CometJack - July 29, 2010, 8:41 pm

I get the delegate's but I don't get how you make your own event handler :(

Charny - July 29, 2010, 10:01 pm

(Jul 29, 2010 08:41 PM)CometJack Wrote: [\[CITE\]](#) I get the delegate's but I don't get how you make your own event handler :(

Read some events tutorials, you will learn it ;).

Charny - July 30, 2010, 8:34 am

A little buump! ?

enacje - July 30, 2010, 8:40 am

this is hard to learn but harder to explain it :P I can make them but I can't explain how and what lol

Charny - July 30, 2010, 7:23 pm

(Jul 30, 2010 08:40 AM)enacje Wrote: [\[CITE\]](#) this is hard to learn but harder to explain it :P I can make them but I can't explain how and what lol

Haha, same for me ?. That's why I didn't really gave informations on them.

Charny - August 6, 2010, 1:21 am

A little bump for my post :D!

laptopguy - August 7, 2010, 12:14 pm

Nice one Charny. People who call themselves programmers and don't understand this type of shit aren't tbh. And why was the thread allowed to die ? This is one of those things in this section that is actually useful, like the things Vorfin and Deathader post sometimes.

Charny - August 7, 2010, 1:24 pm

(Aug 7, 2010 12:14 PM)kRaeTwin Wrote: [\[CITE\]](#) Nice one Charny. People who call themselves programmers and don't understand this type of shit aren't tbh. And why was the thread allowed to die ? This is one of those things in this section that is actually useful, like the things Vorfin and Deathader post sometimes.

Thanks, and why is this thread dieing? Because most 'coders' here doesn't bother learning delegates & events because their IDE does everything for them..

(Sorry if it didn't make sense <.<)

Charny - August 11, 2010, 10:32 am

Bumppp! I'll do another example soon :).

killerdoob420 - August 11, 2010, 11:02 am

very nice i couldnt have explained it better

Charny - *August 11, 2010, 11:54 am*

(Aug 11, 2010 11:02 AM)killerdoob420 Wrote: [\[CITE\]](#) very nice i couldnt have explained it better
Thanks for the comment ?!