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Subject: Buttons in Array using ArrayCtrl

Posted by [nejnadusho](#) on Fri, 09 Nov 2012 18:30:44 GMT

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Hi,

I have been trying to stuff an array with buttons and use it with ArrayCtrl and I had not had the chance to succeed.

I have been trying the following.

The .lay file has just one ArrayCtrl myArray; thrown alone on a single layout.

main.cpp

```
#include "test.h"
```

```
test::test()
{
```

```
    //Array<Button*> myButt;
    //Button* a = new Button;
    //Button* b = new Button;
    //myButt.Add(a);
    //myButt.Add(b);
```

```
    Array<Button> myButt;
    myButt.Add();
    myButt.Add();
```

```
CtrlLayout(*this, "Window title");
myArray.AddColumn("List of Tables");
```

```
    //myArray.Add(myButt[0]->SetLabel("Push1"));
    //myArray.Add(myButt[1]->SetLabel("Push2"));
```

```
myArray.Add(myButt[0].SetLabel("Push1"));
myArray.Add(myButt[1].SetLabel("Push2"));
```

```
}
```

```
GUI_APP_MAIN
```

```
{
    test().Run();
```

```
}
```

My goal is to have a column of buttons in ArrayCtrl.

As you can see I have also been trying to be just pointers of buttons which I believe is preferable.

Any help/suggestions will be greatly appreciated.

Best,  
nejnio

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Subject: Re: Buttons in Array using ArrayCtrl  
Posted by [forlano](#) on Fri, 09 Nov 2012 19:17:56 GMT  
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Hello,

have you had a look to ArrayCtrlSetCtrl package in reference assembly?

Regards,  
Luigi

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Subject: Re: Buttons in Array using ArrayCtrl  
Posted by [nejnadusho](#) on Fri, 09 Nov 2012 19:48:56 GMT  
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Luigi,

Thank you.  
Yes I have been trying to figure exactly this out.

I just tweaked the code a little now I have no compiling errors but it does not display the buttons, however, the rows are there and clickable but once I click them the app crashes.

```
#include "test.h"
```

```
test::test()  
{  
    Array<Button> myButt;  
    myButt.Add();
```

```

myButt.Add();

CtrlLayout(*this, "Window title");
myArray.AddColumn("List of Tables");

myArray.Add();
myArray.Add();

myArray.SetCtrl(0,0, myButt[0].SetLabel("Push1").SizePos());
myArray.SetCtrl(1,0, myButt[1].SetLabel("Push2").SizePos());

}

GUI_APP_MAIN
{
    test().Run();
}

```

I just cannot get complete understanding of the ArrayCtrlSetCtrl package.

Best,  
nejnio

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Subject: Re: Buttons in Array using ArrayCtrl  
 Posted by [omari](#) on Sat, 10 Nov 2012 13:32:33 GMT  
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Hi,  
 you can use WidgetFactory callback:

.h

```

#define LAYOUTFILE <XXXXXXX/XXX.lay>
#include <CtrlCore/lay.h>

```

```

struct test : WithXXX<TopWindow> {

```

```

typedef test CLASSNAME;
test();
void WidgetFactory(int line, One<Ctrl>& x);
void OnButton(int n);
};

```

.cpp

```

#include <CtrlLib/CtrlLib.h>

```

```

using namespace Upp;

```

```

#include "test.h"

```

```

void test::OnButton(int n)
{
    PromptOK(AsString(n));
}

```

```

void test::WidgetFactory(int line, One<Ctrl>& x)
{
    Button& b = x.Create<Button>();
    b.SetLabel("Line " + AsString(line));
    b.LeftPos(10, 60).TopPos(4, 16);

    b <=<= THISBACK1(OnButton, line);
}

```

```

test::test()
{
    CtrlLayout(*this, "Window title");
    myArray.AddColumn("List of Tables").Ctrls(THISBACK(WidgetFactory));

```

```

myArray.SetLineCy( 20);

```

```

myArray.Add();
myArray.Add();
myArray.Add();
myArray.Add();
myArray.Add();
}

```

```

GUI_APP_MAIN
{
    test().Run();
}

```

Regards,  
Omari

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Subject: Re: Buttons in Array using ArrayCtrl  
Posted by [nejnadusho](#) on Tue, 27 Nov 2012 21:47:18 GMT  
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Omari,

Thank you very much for your help.  
It totally works.

However, I am not clear how this widget factory is working.  
I guess I do not understand the Ctrls well.

I read the code and understand everything, but this line.

```
myArray.AddColumn("List of Tables").Ctrls(THISBACK(WidgetFactory));
```

What is it happening on this line? Is there a notion of a constructor in that line or what?

And why not adding/removing a button with every  
myArray.Add();  
//for example like  
myArray.Add(add.button);  
instead of by default in the way it is currently?

Thank you very much for your time.

Best,  
nejnio

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Subject: Re: Buttons in Array using ArrayCtrl  
Posted by [nejnadusho](#) on Thu, 29 Nov 2012 18:49:34 GMT  
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OK I think I understood. What is going on in the factory. Still how come the factory is not taking two param which are not optional and that is not an error?!?!?!?

However, how can I edit cell by cell in the grid/array.

myArray[0][1]; does not work here.

I looked the spec of Array Ctrl and still no luck in figuring it out.

Thank you for your help.

Best,  
nejnio

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Subject: Re: Buttons in Array using ArrayCtrl  
Posted by [omari](#) on Sat, 01 Dec 2012 14:56:01 GMT  
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Hi,

ArrayCtrl has three overload of the Ctrl's method, one of them is described in the reference manual as:

The methods sets up a factory which the ArrayCtrl uses as necessary to create new Ctrl's for editing a given column. The argument of this function is a callback, which, upon execution, should allocate (normally using the new operator) the desired editor object and set it to its argument. If the position of Ctrl is equivalent to 'SetRect(0, 0, 0, 0)', which is the default value, Ctrl is resized to fit the ArrayCtrl cell accurately, otherwise the position represents the position within the cell.  
factory callback used for new control creation  
Return value \*this

you can edit a cell by : myArray.Set(row, col, value);

Regards,  
Omari

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