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Subject: THISBACK1 works well, how can i make it with lambda

Posted by [MuratAKAR](#) on Thu, 22 Jun 2017 01:41:26 GMT

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First of all, I would like to thank all the developers.

I have a form with 100 button. When i click a button, its Label change to "X". I made it with THISBACK1. How can i make it with lambda.

```
class AnaForm: public WithAnaFormGUI<TopWindow>
{
    Button butonlar[100];
    void btnDuzenle(Button*);
    typedef AnaForm CLASSNAME;
public:
    AnaForm();
};

void AnaForm::btnDuzenle(Button* btnDuzenle)
{
    btnDuzenle->SetLabel("X");
}

AnaForm::AnaForm()
{
    CtrlLayout(*this, "Deneme");

    for(int i=0;i<100;i++)
    {
        butonlar[i].LeftPosZ(i%10*30,28).TopPosZ(i/10*30,28);
        butonlar[i].SetLabel(String()<<i);
        Add(butonlar[i]);

        butonlar[i]<<THISBACK1(btnDuzenle, &butonlar[i]); //this works well

        butonlar[i]<<[](){ //How can i make it with lambda

    };
    }
}
```

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#### File Attachments

1) [2017-06-22\\_042606.png](#), downloaded 702 times

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Subject: Re: THISBACK1 works well, how can i make it with lambda  
Posted by [Oblivion](#) on Thu, 22 Jun 2017 09:36:22 GMT  
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Hello,

You are actually capturing nothing ("[]") while you really need to capture variables either by reference ("&") or by copy ("=").

(Note that in both cases (whether you use [&] or [=]) the "this" pointer will be automatically captured, so you'll have access to AnaForm class' members such as butonlar[] array.):

Also, you really don't need a (empty) parameter list here. It can be omitted.

```
butonlar[i]<<[&]{ btnDuzenle(&butonlar[i]); }; // this should work, since butonlar[] is a member of AnaForm class.
```

```
butonlar[i]<<[=]{ btnDuzenle(&butonlar[i]); }; // this should work too.
```

```
// And you can also get rid of the member function AnaForm::btnDuzenle()
```

```
butonlar[i]<<[=]{ butonlar[i].SetLabel("X"); }; // this is IMO a more elegant solution in such simple cases (given your example code).
```

Best regards,  
Oblivion

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Subject: Re: THISBACK1 works well, how can i make it with lambda  
Posted by [MuratAKAR](#) on Thu, 22 Jun 2017 21:13:01 GMT  
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I've tried all of them before. But they did not work. Because variable i has value 100 after for loop so when a button pressed lambda function looks butonlar[100] and crash.

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Subject: Re: THISBACK1 works well, how can i make it with lambda  
Posted by [Oblivion](#) on Fri, 23 Jun 2017 06:29:49 GMT  
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Hello Murat,

It doesn't seem to be a lambda problem then. Maybe you overlooked something in the loop?  
If you could provide a test-case, I may be able to help.

[Turkish:]

Sorun lambda fonksiyon gibi görünmüyor.

Best regards,  
Oblivion

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Subject: Re: THISBACK1 works well, how can i make it with lambda  
Posted by [MuratAKAR](#) on Fri, 23 Jun 2017 21:52:02 GMT  
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```
#include <CtrlLib/CtrlLib.h>

using namespace Upp;

class AnaForm: public TopWindow
{
    Button butonlar[100];
    void btnDuzenle(Button*);
    typedef AnaForm CLASSNAME;
public:
    AnaForm();
};

void AnaForm::btnDuzenle(Button* btnDuzenle)
{
    btnDuzenle->SetLabel("X");
}

AnaForm::AnaForm()
{
    SetRect(100,100,320,345);
    for(int i=0;i<100;i++)
    {
        butonlar[i].LeftPosZ(i%10*30,28).TopPosZ(i/10*30,28);
        butonlar[i].SetLabel(String()<<i);
        Add(butonlar[i]);
        //butonlar[i]<<THISBACK1(btnDuzenle, &butonlar[i]); Works well

        //butonlar[i]<<[&]{ btnDuzenle(&butonlar[i]); }; Not Works
```

```
butonlar[i]<=[=]{ btnDuzenle(&butonlar[i]); }; //Works well
butonlar[i]<=[=]{ butonlar[i].SetLabel("X"); };//Works well

}
}
```

```
GUI_APP_MAIN
{
    SetLanguage(GetSystemLNG());
    AnaForm frm;
    frm.Run();
}
```

```
butonlar[i]<=[=]{ btnDuzenle(&butonlar[i]); }; //Works well
butonlar[i]<=[=]{ butonlar[i].SetLabel("X"); };//Works well
```

Sory, I have not tried both. Problem solved. Thanks..

Turkish:

bayramlar. :)

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Subject: Re: THISBACK1 works well, how can i make it with lambda  
Posted by [mirek](#) on Sat, 24 Jun 2017 12:58:43 GMT  
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Oblivion wrote on Thu, 22 June 2017 11:36

```
butonlar[i]<=[&]{ btnDuzenle(&butonlar[i]); }; // this should work, since butonlar[] is a member of
AnaForm class.
```

Careful here! Do you really want to capture i by reference?

Personally, I believe that the use [ & ] should be restrict only for cases where lambda is used as 'local function' (not stored anywhere).

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Subject: Re: THISBACK1 works well, how can i make it with lambda  
Posted by [Oblivion](#) on Sun, 25 Jun 2017 19:20:06 GMT  
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Hello Mirek,

Of course you are right. I simply pointed the possible ways.

On storing references and pointers to callbacks, I asked a question here:

[http://www.ultimatepp.org/forums/index.php?t=msg&goto=48350&#msg\\_48350](http://www.ultimatepp.org/forums/index.php?t=msg&goto=48350&#msg_48350)

If you have time, I'd be grateful if you could share your thoughts on the matter. (I need to solve this problem before I publish the SSH package for U++)

Best regards,

Oblivion