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]);

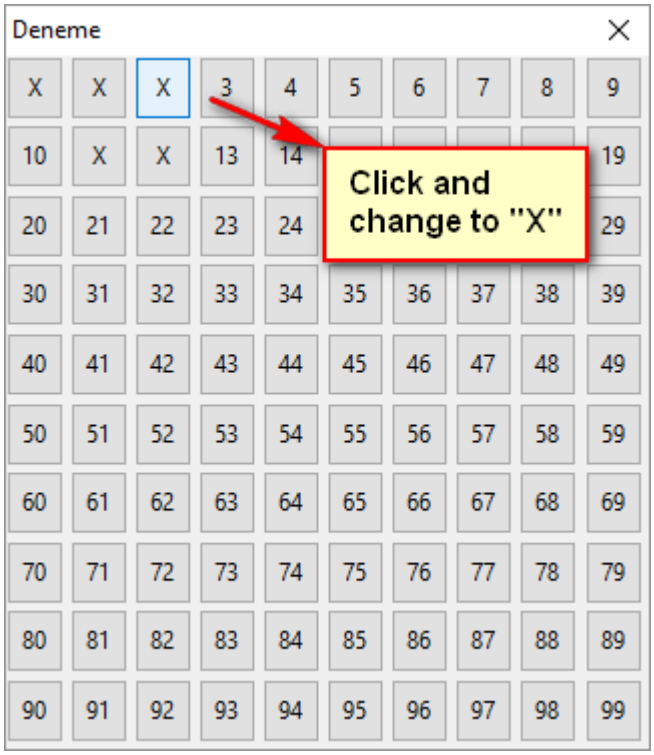
  butonlar[i]<<THISBACK1(btnDuzenle, &butonlar[i]); //this works well

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

  };
 }
}
```

File Attachments

1) 2017-06-22_042606.png, downloaded 1154 times



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

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.

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 fonksyion gibi görünmüyor.

Best regards,
Oblivion

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.

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 anywehere).

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=48 350&#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