
Subject: THISBACK and inheritance

Posted by [rafiwui](#) on Mon, 03 Jul 2017 14:15:22 GMT

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I had an interesting issue with a MenuBar and a THISBACK.

I made three classes: MenuBarWindow, FnWindow and MyWindow.

- MenuBarWindow only has the MenuBar attribute and the method I want as its callback.
- FnWindow inherits from MenuBarWindow and has some buttons for the F1-F8 keys and the corresponding callback methods.
- MyWindow inherits from FnWindow and is the main window in my application.

Here is an example code:

```
class MenuBarWindow : public TopWindow
{
protected:
    MenuBar m_menuBar;

public:
    typedef MenuBarWindow CLASSNAME;
    MenuBarWindow(int _sizeX, int _sizeY);

protected:
    virtual void MenuBarMain(Bar& _bar) = 0;
};

MenuBarWindow::MenuBarWindow(int _sizeX, int _sizeY)
{
    SetRect(0, 0, Zx(_sizeX), Zy(_sizeY + m_menuBar.GetStdHeight(m_menuBar.GetFont())));
    AddFrame(m_menuBar);
    m_menuBar.Set(THISBACK(MenuBarMain));
}

class FnWindow : public MenuBarWindow
{
protected:
    Button b_fn1;
    // ...
    Button b_fn8;

public:
    typedef FnWindow CLASSNAME;
    FnWindow(int _sizeX, int _sizeY);

private:
    virtual void OnClickFn1() = 0;
    // ...
```

```

    virtual void OnClickFn8() = 0;
};

FnWindow::FnWindow(int _sizeX, int _sizeY)
    : MenuBarWindow(_sizeX, _sizeY)
{
    // Adding buttons here...

    b_fn1 <<= THISBACK(OnClickFn1);
    // ...
    b_fn8 <<= THISBACK(OnClickFn8);
}

// MyWindow header...
MyWindow::MyWindow(int _sizeX, int _sizeY)
    : FnWindow(_sizeX, _sizeY)
{
    // do sth...
}

```

In the MyWindow files are declarations and definitions for the virtual methods.

If I run this the program stops and shows me this and exits the application when you continue:

If I remove virtual void MenuBarMain(Bar& _bar) = 0; and move
m_menuBar.Set(THISBACK(MenuBarMain)); from MenuBarWindow to MyWindow everything
works fine.

At first I thought this is because the method is pure virtual and needs an implementation in the
class from where I call it or use THISBACK but then I should get this strange behaviour after my
changes as well because I do the same with the button callbacks but they work perfectly.

So does anyone has an idea why this is happening? Is this a generell C++ thing or is it a U++
thing?

File Attachments

1) [UppCallbackProblem.PNG](#), downloaded 809 times

7FF70864FED0	mov [rsp+0x8],rcx
7FF70864FED5	sub rsp,byte +0x48
7FF70864FED9	mov rax,[rsp+0x50]
7FF70864FEDE	mov [rsp+0x28],rax
7FF70864FEE3	lea rax,[rel 0x87abd10]
7FF70864FEEA	mov [rsp+0x20],rax
7FF70864FEEF	xor r9d,r9d
7FF70864FEF2	xor r8d,r8d
7FF70864FEF5	xor edx,edx
7FF70864FEF7	mov ecx,0x1
7FF70864FEFC	call dword 0x7ff7081e6753
7FF70864FF01	mov [rsp+0x30],eax
7FF70864FF05	cmp dword [rsp+0x30],byte +0x0
7FF70864FF0A	jz 0x7ff70864ff1a
7FF70864FF0C	cmp dword [rsp+0x30],byte +0x1
7FF70864FF11	jz 0x7ff70864ff15
7FF70864FF13	jmp short 0x7ff70864ff1e
7FF70864FF15	int3
7FF70864FF16	↪ mov al,0x1
7FF70864FF18	jmp short 0x7ff70864ff20
7FF70864FF1A	mov al,0x1
7FF70864FF1C	jmp short 0x7ff70864ff20
7FF70864FF1E	xor al,al
7FF70864FF20	add rsp,byte +0x48
7FF70864FF24	ret