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Subject: Link error when using polymorphism

Posted by [lucpolak](#) on Sat, 03 May 2008 18:14:20 GMT

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Hi all,

i'm Lucas and i'm new in using TheIDE. I have a problem.

I have an abstract class named DBConnector and a derived class MySqlConnection.  
When compiling, all is ok but i always have the link error :

```
vtable for VirtualSofts::SQL::DBConnector(referenced from
d:\ultimate++\out\easybat\mingw.debug_full.gui.main.noblitz\ erpsystem.o:290;
.text$_ZN12VirtualSofts3SQL11DBConnectorC2Ev; Vir
tualSofts::SQL::DBConnector::DBConnector(void);
VirtualSofts::SQL::DBConnector::DBConnector())
```

I've tried to declare a constructor for DBConnector but the problem persists.

Here the code of DBConnector :

```
namespace VirtualSofts
{
    namespace SQL
    {
        class DBConnector
        {
        protected:
            bool m_Connected;
            String m_errorState;

        public:
            virtual ~DBConnector()
            {
                Disconnect();
            }
            //-----

            //-----
            virtual bool Connect(String db);
            virtual bool Disconnect();

            //-----
            // Accesseurs
            //-----
            inline bool IsConnected() const { return m_Connected; }

            //-----
        }
    }
}
```

```

//-----
virtual int SQLExecDML(const String &request);
virtual cResultSet SQLExecQuery(const String &request);

//-----
// Gestion des Erreurs
//-----
String GetLastError() const {return m_errorState;}

};
}
}

```

and here the code of MySQLConnector :

```

namespace VirtualSofts
{
    namespace SQL
    {
        class MySQLConnector: public DBConnector
        {
            //...

        public:
            //-----

            //-----
            virtual bool Connect(String db);
            virtual bool Disconnect();

            //-----

            //-----
            virtual int SQLExecDML(const String &request);
            virtual cResultSet SQLExecQuery(const String &request);

        };
    }
}

```

The problem appears when i instantiate the object by this way :  
 DBConnector \*dbcnx = new MySQLConnector();

The code is ok ?  
 If i not use the virtual functions, all is ok...

Thanks for help ^^,

Lucas

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Subject: Re: Link error when using polymorphism  
Posted by [bytefield](#) on Sat, 03 May 2008 23:07:44 GMT  
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Have you tried to declare a virtual destructor for MySQLConnector?

P.S.: use

[CODE][[/CODE]  
tags to differentiate source code from post content.

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Subject: Re: Link error when using polymorphism  
Posted by [lucpolak](#) on Sun, 04 May 2008 08:34:34 GMT  
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hello bytefield,

i've tried to declare a virtual destructor for the derived class but the problem persists...

it's strange...

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Subject: Re: Link error when using polymorphism  
Posted by [bytefield](#) on Sun, 04 May 2008 10:42:46 GMT  
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At me, your code work well.  
I provide bellow a test package.  
You may specify which platform, compiler and u++ version you use.

(Ubuntu 8.04, u++ SVN.219(built on Ubuntu 7.10), g++ compiler)

Compiler version:

Using built-in specs.

Target: i486-linux-gnu

Configured with: ../src/configure -v --enable-languages=c,c++,fortran,objc,obj-c++,treelang  
--prefix=/usr --enable-shared --with-system-zlib --libexecdir=/usr/lib --without-included-gettext  
--enable-threads=posix --enable-nls --with-gxx-include-dir=/usr/include/c++/4.2  
--program-suffix=-4.2 --enable-clocale=gnu --enable-libstdcxx-debug --enable-objc-gc  
--enable-mpfr --enable-targets=all --enable-checking=release --build=i486-linux-gnu  
--host=i486-linux-gnu --target=i486-linux-gnu

Thread model: posix

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gcc version 4.2.3 (Ubuntu 4.2.3-2ubuntu7)

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### File Attachments

1) [SQLPoly.zip](#), downloaded 299 times

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Subject: Re: Link error when using polymorphism

Posted by [lucpolak](#) on Sun, 04 May 2008 17:57:01 GMT

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Hi,

Your package works fine but in my application, i use at least 3 packages, main application which uses DBConnector package and MySQLConnector package.

I seems thats "packaged" version doesn't works. I join a version of a test application that don't work.

This application uses the packages below :

- \* DBConnector package
- \* MySQLConnector package
- \* SQLTest package

Can you tell me why this package don't works ?

Thanks,

Lucas

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### File Attachments

1) [Test Application.zip](#), downloaded 293 times

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Subject: Re: Link error when using polymorphism

Posted by [bytefield](#) on Sun, 04 May 2008 18:33:15 GMT

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Well, there are some problems.

You forgot to implement some functions

```
bool DBConnector::Disconnect()
{
}
```

```
bool DBConnector::Connect(String db)
{
```

```
}
```

```
int DBConnector::SQLExecDML(const String &request)
```

```
{  
}
```

```
cResultSet DBConnector::SQLExecQuery(const String &request)
```

```
{  
}
```

if you put these functions in DBConnector.cpp all thing goes normally, and program compiles without errors.

I've commented out

```
//#include <Toolkit/Tools.h>
```

```
//using namespace VirtualSofts::Tools;
```

in every file, because you didn't provided that package, and also included in your project Core package if you want to use u++ Strings.

The program compiles well, but there are memory leaks and guess that is because you mix Ultimate++ code (String which is moveable and implement pick concept) with std containers which use deep copy concept. So you should use U++ containers or use std::string with std containers instead of Upp::String with std containers.

As suggestion: never mix Ultimate++ with STL and use case sensitive package name, because it matter on Linux platform.

( you provided MySQLconnector instead of MySQLConnector)

P.S.: SQL is implemented in Ultimate++ so you may use it if you need.

Edit: it didn't implement a polymorphic type.

Andrei

## File Attachments

1) [SQLTest.zip](#), downloaded 286 times

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Subject: Re: Link error when using polymorphism

Posted by [lucpolak](#) on Sun, 04 May 2008 19:06:23 GMT

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Thanks, it's works,

I've not implement the missing functions because these are virtuals methods. I've passed its as pure virtual methods and the linking is ok.

The project is initially coded with VS6.0 and a lot of source code is original. I've not finished to migrate it to UPP. Thanks for the explications between the two env.

