Subject: Load dll with U++
Posted by BetoValle on Sat, 03 Apr 2021 14:21:15 GMT
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HI,

How should i write code in a GUI application to load
a dll.
(for example how to load the generated dll
that is in the Assembly reference "CaptureScreenDll" ?)

Thanks

Subject: Re: Load dll with U++
Posted by Novo on Sat, 03 Apr 2021 17:50:20 GMT
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Load dynamically or link against it?

Subject: Re: Load dll with U++
Posted by Novo on Sat, 03 Apr 2021 17:58:42 GMT
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You can start here: Runtime dynamic linking using .dli files

Subject: Re: Load dll with U++
Posted by BetoValle on Sat, 03 Apr 2021 22:00:00 GMT
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Hi Novo Thanks,

but

for a beginner, it is difficult to understand at first a reference to in-depth routines such as "DL"!
this topic of your link does not clarify much.

See after searching the forum, I also didn't get any practical example. So, only about 2 links commented on the "DL", then I made a comparison with some examples of Dll´s p / c ++ from the tutorialspoint, and even then, I hit my head, but in the end I got it wrong and tried it. I thank my guardian angel too!!!

..

```
//didn't have this component so I had to look for how to download...ide->menu Setup->UppHub
and select Functions4U
//in the declaration
#include <Functions4U/Functions4U.h>
...
Dl screen;
void (*yF)(int x, int y, int cx, int cy, char *filename);
...
//AA is my class with method below
// integer n is saves lives
//lifeguards that I had to adapt because
//the link https://www.ultimatepp.org/src$Functions4U$Dl$en-us.html
//that exemplifies on windows will fail (bug?) if it [b]loads repeatedly[/b]

void AA::clickDll(){
 if(n==0){

    if
(!screen.Load(AppendFileName("C:\\Temp\\outU++\\NOVOXXX\\CLANGx64.Debug.Debug_Full.
Gui", "CaptureScreenDll.dll")))
            throw Exc(Format(t_("% dll not found"), "Capture"));

          yF = (void (*)(int,int,int,int,char *))screen.GetFunction("capture_screen");

 }
       if (!yF)
          throw Exc(Format(t_("Function %s does not found in dll"), "captureScreen"));

       char* f="teste.png";
       yF(669,187,420,22,f);

       n++;

}
```

Subject: Re: Load dll with U++
Posted by Novo on Sun, 04 Apr 2021 00:06:12 GMT

BetoValle wrote on Sat, 03 April 2021 18:00
for a beginner, it is difficult to understand at first a reference to in-depth routines such as "DL"!
this topic of your link does not clarify much.

Dynamic linker
Dynamic loading
AA::clickDll() is an example of dynamic loading.
dli-files are doing the same but in a more convenient way.
Example: uppsrc/Oracle/Oci8.cpp
Another example: bazaar/Firebird/fb.cpp

Subject: Re: Load dll with U++
Posted by BetoValle on Sun, 04 Apr 2021 04:20:32 GMT

Hi Novo, Thanks

In example below with traditional way also works but ... why application freeze when set FreeLibrary ?

this will not cause a problem or in the end does the code generated in U ++ free from memory?

```
...
typedef void (*importFunction)(int, int, int, int, char *);
...
void AA::clickDll2(){
 importFunction fscreen;

 HINSTANCE hinstLib =
LoadLibrary(AppendFileName("C:\\Temp\\outU++\\NOVOXXX\\CLANGx64.Debug.Debug_Full.Gu
i", "CaptureScreenDll.dll"));
  if (hinstLib == NULL) {
   PromptOK("ERRO: não foi possível carregar a DLL\n");
   return;
  }
  fscreen = (importFunction)GetProcAddress(hinstLib, "capture_screen");
  if (fscreen == NULL) {
   PromptOK("ERRO: não foi possível achar a função na DLL\n");
              //FreeLibrary(hinstLib);  uncommenting will abort here
   return;
  }

  char* f="teste2.png";
```

```
    fscreen(0,0,500,600,f);

    //FreeLibrary(hinstLib); uncommenting will abort here

}
```

Subject: Re: Load dll with U++
Posted by Novo on Sun, 04 Apr 2021 04:27:24 GMT
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Another thing to explore: Project -> Package Organizer -> Libraries.
If you add your DLL to a list of libraries, TheIDE will link against it, and DLL will be loaded at app launch time by OS.
BTW, each application/executable is a DLL (you can link against it), and each DLL is an executable (for example, try to run /lib/x86_64-linux-gnu/libc.so.6 on Linux)

Subject: Re: Load dll with U++
Posted by Novo on Sun, 04 Apr 2021 04:39:09 GMT
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BetoValle wrote on Sun, 04 April 2021 00:20Hi Novo, Thanks

In example below with traditional way also works but ... why application freeze when set FreeLibrary ?

this will not cause a problem or in the end does the code generated in U ++ free from memory?

I do not know that. Loading and unloading of DLLs is a very complicated process.
You need to debug/trace loading/unloading in your app.
Dependency Walker can trace all DLL-related function calls on Windows.
In case of Unix you do not need any extra-tools: man ld.so

Subject: Re: Load dll with U++
Posted by mirek on Sun, 04 Apr 2021 07:58:23 GMT
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.dli is only handy if you have more than like 8 functions you want to import from the .dll.

Check CtrlCore/Win32Wnd.cpp:107 for simple way how to do this.

Or you can you DllFn:

```
  static BOOL (WINAPI *GetPointerPenInfoHistory)(UINT32 pointerId, UINT32 *entriesCount,
POINTER_PEN_INFO *penInfo);

  ONCELOCK {
   DllFn(GetPointerPenInfoHistory, "User32.dll", "GetPointerPenInfoHistory");
  };
```

Mirek

Subject: Re: Load dll with U++
Posted by BetoValle on Sun, 04 Apr 2021 17:29:09 GMT
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I conclude that the freeze occurs because
was considering 32-bit code when in reality
the compiled dll for 64 bits. Construction should consider
the path below:

```
#if defined(PLATFORM_WIN32)
 HINSTANCE hinstLib = 0;
#else
 void *hinstLib = 0;
#endif
```

So that I could go deeper I would have to build a code to obtain the addressing of the process
for an old code that would take more time.
I will skip this step and logically use the DI class.
So I only registered this complementary post because I found the reason, although I did not write
the solution, which would end up equivalent to that of the DI class itself.

Thanks!

Subject: Re: Load dll with U++
Posted by BetoValle on Wed, 07 Apr 2021 18:55:13 GMT
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Hi Mirek

using DllFn as you suggested you could put it here as you would build it to load the U++ example "CaptureScreenDll.dll"
to better understand?

Thanks

Subject: Re: Load dll with U++
Posted by JeyCi on Mon, 24 Mar 2025 20:00:19 GMT
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Does anybody use some options or flags for Linker in BuildMethod settings permanently?
