Finding the default application for opening a particular file type on Windows

I'm developing an application targeting .NET Framework 2.0 using C# for which I need to be able to find the default application that is used for opening a particular file type.

I know that, for example, if you just want to open a file using that application you can use something like:

```
System.Diagnostics.Process.Start( "C:\...\...\myfile.html" );
```

to open an HTML document in the default browser, or

```
System.Diagnostics.Process.Start( "C:\...\...\myfile.txt" );
```

to open a text file in the default text editor.

However, what I want to be able to do is to open files that don't necessarily have a *.txt* extension (for example), in the default text editor, so I need to be able to find out the default application for opening *.txt* files, which will allow me to invoke it directly.

I'm guessing there's some Win32 API that I'll need to P/Invoke in order to do this, however a quick look with both Google and MSDN didn't reveal anything of much interest; I did find a very large number of completely irrelevant pages, but nothing like I'm looking for. If anyone knows which API/methods I should be using I'd be very happy to hear from you.

Many thanks!

c# .net windows file-type

edited Dec 5 '12 at 10:09

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Bart Read

Why is this community wiki? – Ohad Schneider 2 days ago

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6 Answers

You can check under registry section `HKEY_CLASSES_ROOT` for the extension and action details. Documentation for this is on MSDN. Alternatively, you can use the IQueryAssociations interface.

edited Jan 5 '12 at 16:51

Roger Lipscombe
35.8k 18 115 230

answered Oct 2 '08 at 13:47

curtisk
8,898 3 27 50

in my view, the usage of FindExecutable is the more nice way: stackoverflow.com/a/9540278/2427749 – this.myself Jul 29 '13 at 15:07

add a comment

Doh! Of course.

`HKEY_CLASSES_ROOT\.txt`

includes a reference to

`HKEY_CLASSES_ROOT\txtfile`

which contains a subkey

`HKEY_CLASSES_ROOT\txtfile\shell\open\command`

which references Notepad.

Sorted, many thanks!

Bart

answered Oct 2 '08 at 13:52


Bart Read
845 2 8 17

add a comment

Here is a blog post with about this topic. The code samples are in VB.net, but it should be easy to port them to C#.

answered Oct 2 '08 at 13:48


xsl
7,637 7 43 95

1 I took the liberty of converting that code to C# and modifying it a bit: stackoverflow.com/a/17773554/67824 – Ohad Schneider Jul 21 '13 at 14:47

add a comment

You can just query the registry. First get the Default entry under HKEY_CLASSES_ROOT\.ext

That will give you the classname. For example .txt has a default of txtfile

Then open up HKEY_CLASSES_ROOT\txtfile\Shell\Open\Command

That will give you the default command used.

answered Oct 2 '08 at 13:50


Tom
1,510 8 10

add a comment

Can you use the registry?

HKEY_CLASSES_ROOT.txt\ShellNew

answered Oct 2 '08 at 13:46


Ken
1,728 1 11 15

add a comment

All current answers are unreliable. The registry is an implementation detail and indeed such code is broken on my Windows 8.1 machine. The proper way to do this is using the Win32 API, specifically AssocQueryString:

```
[DllImport("Shlwapi.dll", CharSet = CharSet.Unicode)]
public static extern uint AssocQueryString(AssocF flags, AssocStr str, string
pszAssoc, string pszExtra, [Out] StringBuilder pszOut, ref uint pcchOut);
```

Sample usage:

```
static string AssocQueryString(AssocStr association, string extension)
{
    public const int S_OK = 0;
    public const int S_FALSE = 1;

    uint length = 0;
    uint ret = AssocQueryString(AssocF.None, association, extension, null, null, ref
length);
    if (ret != S_FALSE)
    {
        throw new InvalidOperationException("Could not determine associated string");
    }

    var sb = new StringBuilder((int)length); // (length-1) will probably work too as
the marshaller adds null termination
    ret = AssocQueryString(AssocF.None, association, extension, null, sb, ref length);
    if (ret != S_OK)
    {
        throw new InvalidOperationException("Could not determine associated string");
    }

    return sb.ToString();
}
```

edited 2 days ago

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Ohad Schneider

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