

Re: C# and C++ Past, Present, Future :: Software Engineer

Source:

<http://www.tech-archive.net/Archive/DotNet/microsoft.public.dotnet.languages.csharp/2004-04/1459.html>

From: Adam W Root (adam_at_canright.com)

Date: 04/05/04

Date: Mon, 5 Apr 2004 15:50:39 -0700

What you need to recognize about C# over C++ is that it is managed. Managed means overhead. C# is not derived from C++, no matter what anybody says. The syntax has similarities, that is about it.

Performance is much slower than a C++ app, the footprint is much larger (in terms of RAM and executable size). The benefit is that many of the complex problems of software programming have been solved for you. That means higher productivity. You can write games in C# and get decent results, but you won't see any C# in Doom 3 or Half Life 2.

Yes, .NET apps can be run on Unix, etc. (<http://www.go-mono.org/> or <http://www.go-mono.com/>) I also saw an article awhile back about Microsoft releasing a version of the framework for Unix-flavor OSes (don't quote me, but someone has to be able to verify that).

.NET has many of the IPC problems solved as well. It is extremely (relative, i know) easy to write client/server apps, n-tier apps, etc.

As far as OO, it is all in there. You mentioned templates... C# does not support something like C++ templates, but (at a high level) this is supposed to be addressed with generics in version 2 of the language.

So once again, you are trading productivity and maintainability for performance when switching to C# from C++ (there are other tradeoffs, too, you can explore those later).

Disclaimer: this is not a comprehensive list of features/pros/cons of the language. Just wanted to give you an idea.

Adam

"kuphryn" <anonymous@discussions.microsoft.com> wrote in message news:0441E3AF-727A-4795-BE4F-BB58CD212429@microsoft.com...

> Hello.

>

- > *I am a C++ programmer with limited experience (design) using C#. From my experience, C#, like Java, is a derivative of C++. However, Microsoft is able to blend C# and C++, getting the best out of the Java design.*
- >
- > *With the recent settlement between MS and SUN, I think that MS will remain the top desktop software company. Bottomline: C# should surpass Java given that it is in fact platform-independent.*
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- > *I have some basic questions on the C# language.*
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- > *Currently, does a C# application run on a non-Win32/Win64 platform (UNIX, Mac, wireless)?*
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- > *How does C# compare to C++ in terms of object-oriented design (inheritance, template, etc) on a large-scale project?*
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- > *How does C# compare to C++ for client/server applications including various IPC concepts, multithreading, multiple processes, etc?*
- >
- > *How does C# compare to C++ for processor-intensive applications including games, 3D-render, multimedia, etc?*
- >
- > *I read some reviews on two books on C# by Jeff Prosise and Charles Petzold. In general, readers find the books GUI-oriented. How good is C# for performance-imperative applications?*
- >
- > *Thanks,*
- >
- > *Kuphryn*