iOS4Unity

Easy native iOS from C#

# Introduction

iOS4Unity is an easy-to-use Unity plugin that exposes native iOS APIs to C#. The iOS APIs have been C#-ified and not just the method and property names! NSString and NSNumber are automatically converted to System.String and System.Double respectively. Callbacks from Objective-C are exposed by using simple C# events. Along with this goodness, iOS4Unity is developed entirely in managed C# code.

For complete documentation on the iOS APIs, refer to Apple’s documentation [here](https://developer.apple.com/library/ios/navigation/). In most cases, the APIs have been cleaned up for C# so Xamarin’s documentation [here](http://iosapi.xamarin.com/?link=root:/ios-classic) will bear a closer resemblance to the types exposed by iOS4Unity.

# How does it work? Should I be scared?

iOS4Unity uses p/invoke (platform invoke) to call the native [Object-C runtime functions](https://developer.apple.com/library/mac/documentation/Cocoa/Reference/ObjCRuntimeRef/index.html) from C#. This is the same technique [Xamarin](http://xamarin.com/) uses for iOS development in C# (if you’ve heard of it), except iOS4Unity uses a much more basic and stripped down version that is more optimal for game development. Callbacks are setup using Unity’s MonoPInvokeCallbackAttribute and some cleverness to give Objective-C to callback into your C# code that works completely under Unity’s AOT compilation.

Next, let’s look at some sample code for a few scenarios.

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