



Kickstarter

Gurgaon



#XamarinKickStarter

Agenda

- Introduction to Xamarin
- Cross Platform UI with Xamarin.Forms
- Azure
- Lunch
- Introduction to Test Cloud
- File -> New App Workshop



Kickstarter

Slides, Demos, & Lab - Clone or Download:
<http://github.com/xpiritbv/dev-days-labs>



Xpirit

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Xpirit



Think ahead. Act now.

Native iOS & Android Development with Xamarin

Roy Cornelissen

Xamarin – Your Complete Mobile Solution



Develop



Test



Build



Distribute



Monitor

Xamarin test cloud > MonkeyChat > master > May 24, 2016 7:37 PM

New Test Run | Support | Docs | James ▾

Overview

RECODER TEST
ScrollToEvent[AppView: Class=Xamarin.TestRec...

Filter devices

Device	OS
HTC One A9	Android 6.0.1
Huawei Nexus 6P	Android 6.0.1
LG Nexus 5X	Android 6.0.1
Samsung Galaxy S6	Android 5.1.1
HTC One M9	Android 5.0.2
Samsung Galaxy S6 Ed...	Android 5.0.2
Samsung Galaxy S5	Android 5.0
Samsung Galaxy Note ...	Android 4.3

ALL RESULTS

Recorder Test

New Test

Tapped on view with class: AppCompatButton 6⚡
Tapped on view with class: EntryEditText
Tapped on view with class: AppCompatButton
Tapped on view with class: AppCompatButton 1⚡

HTC One A9 Android 6.0.1

Huawei Nexus 6P Android 6.0.1

LG Nexus 5X Android 6.0.1

Samsung Galaxy S6 Android 5.1.1

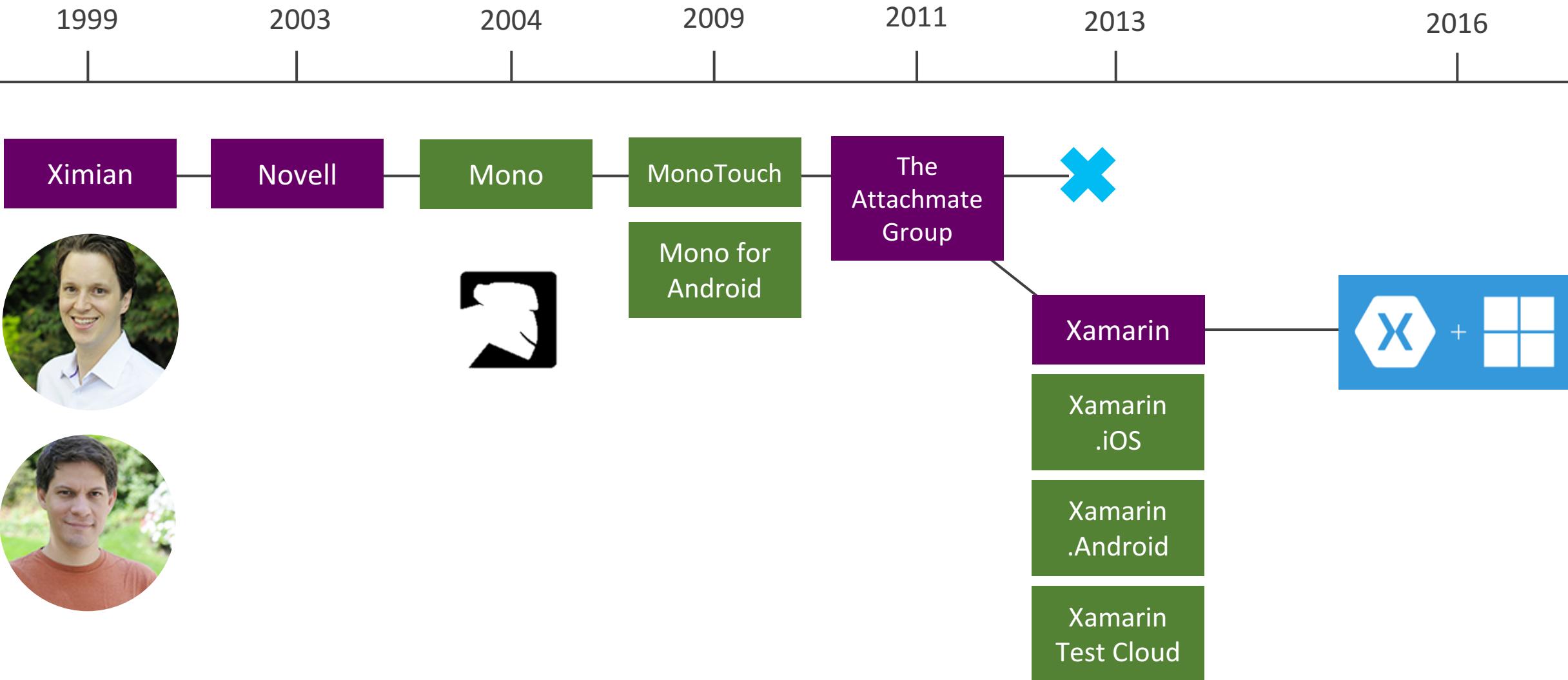
HTC One M9 Android 5.0.2

Samsung Galaxy S6 Ed... Android 5.0.2

Samsung Galaxy S5 Android 5.0

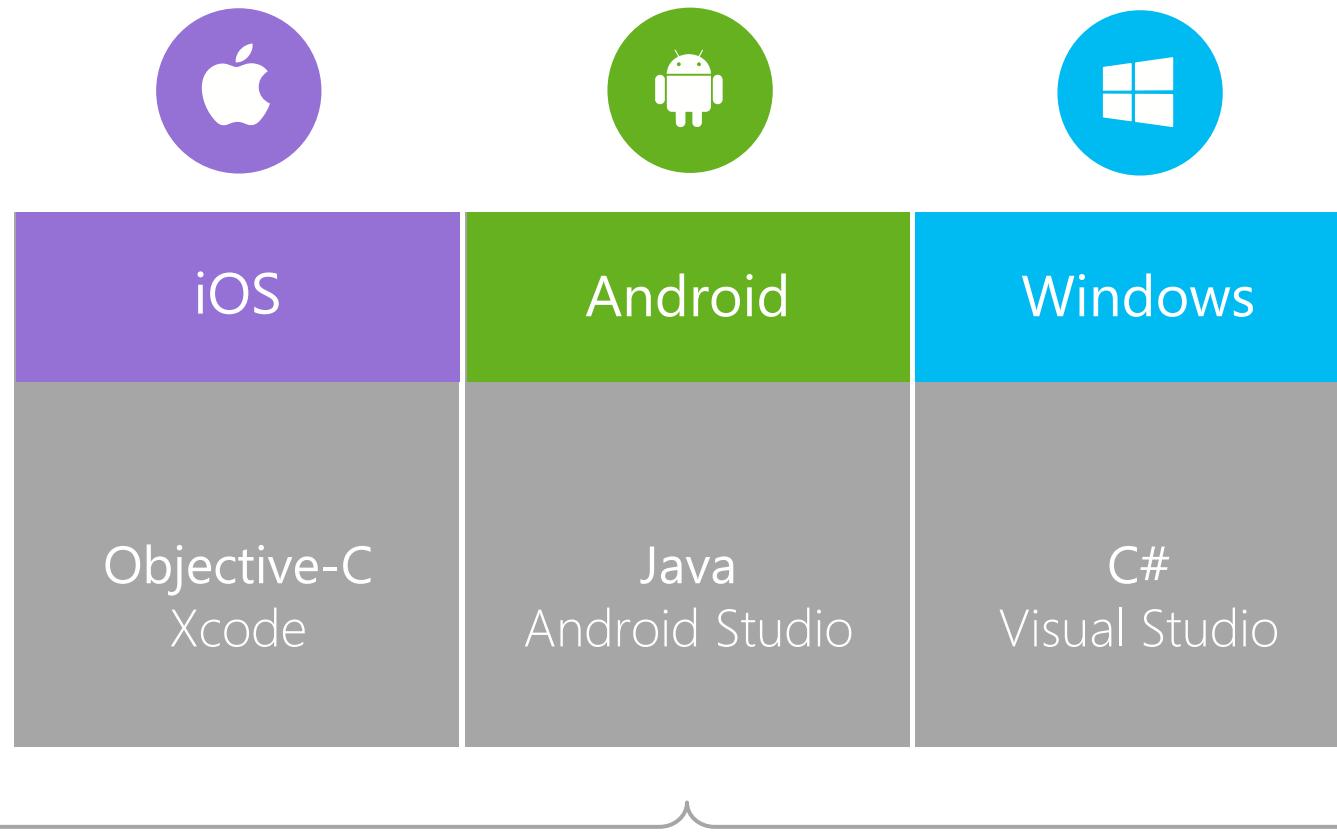
Samsung Galaxy Note ... Android 4.3

Xamarin History



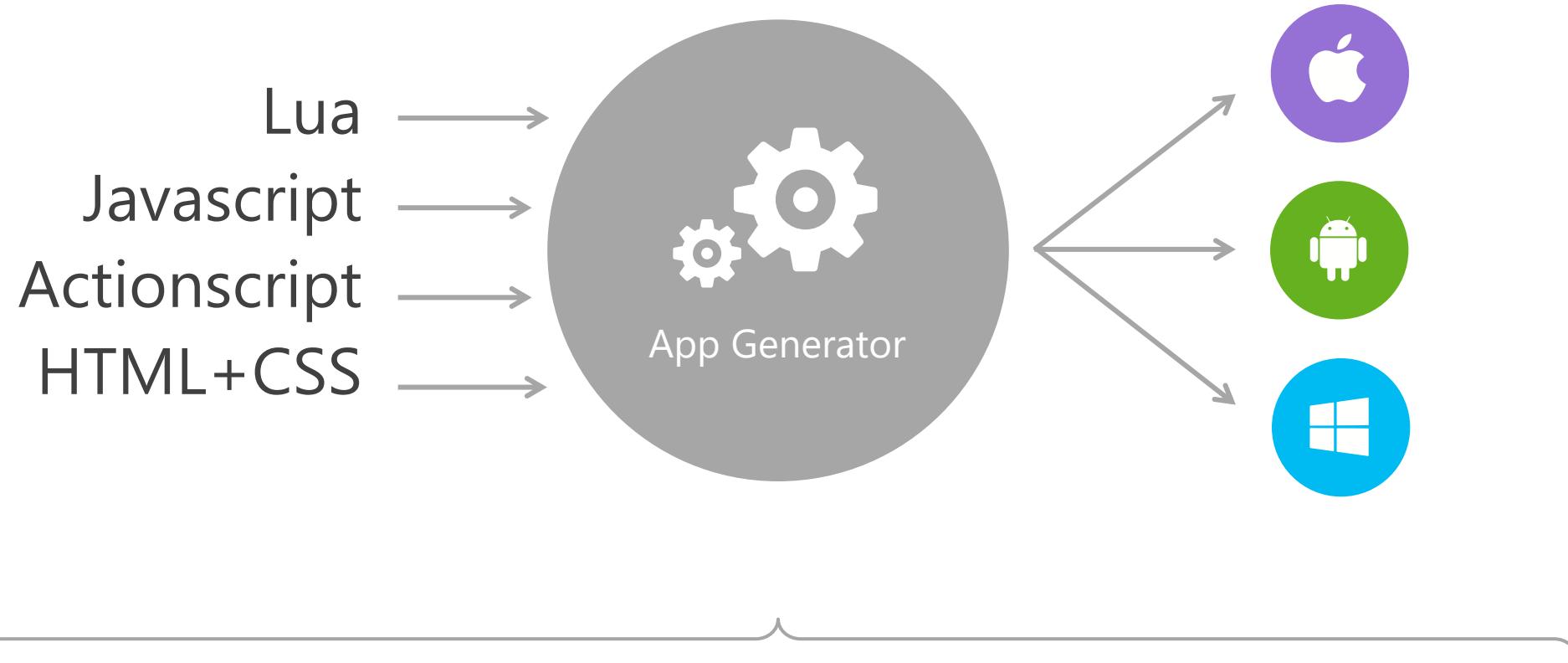
Architecting Mobile Apps

Silo Approach



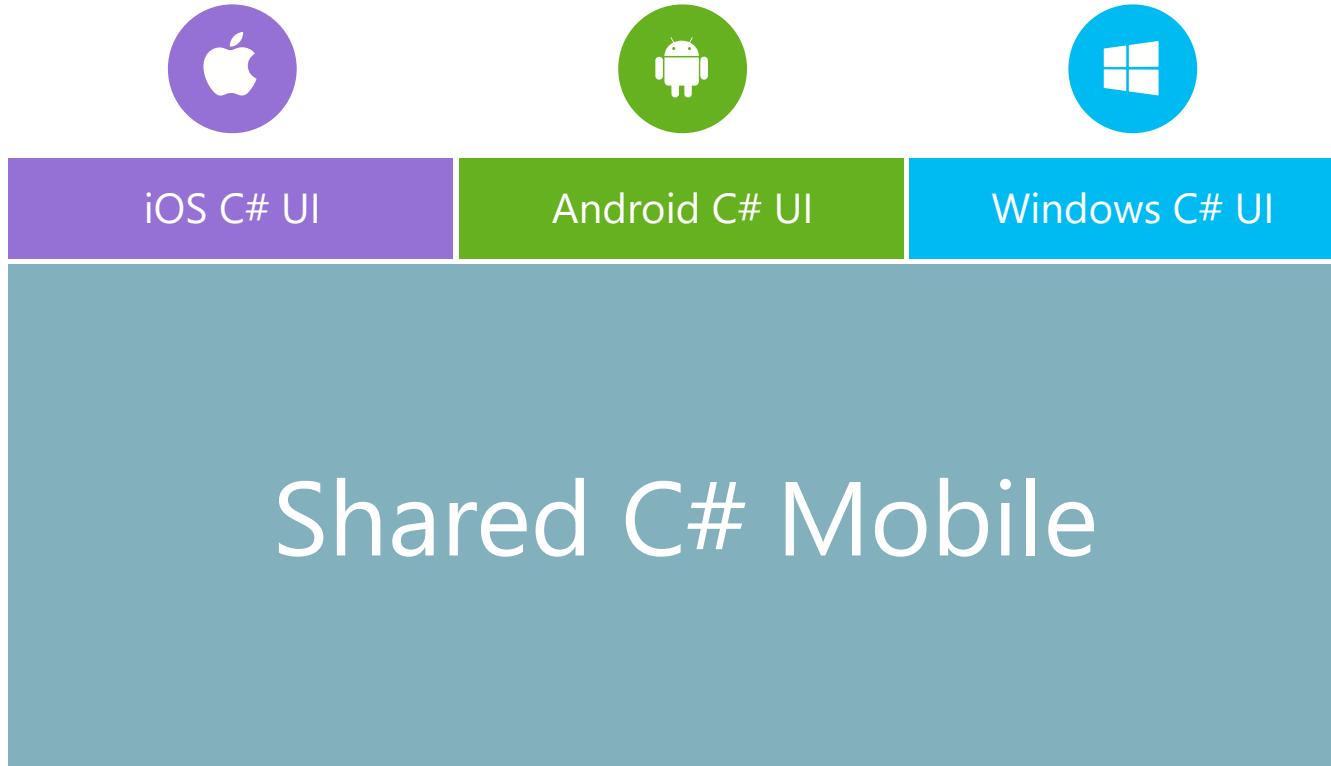
No shared code • Many languages & development environments • Multiple teams

Write Once, Run Anywhere



Limited native API access • Slow performance • Poor user experience

Xamarin's Unique Approach



Shared C# codebase • 100% native API access • High performance

Windows APIs

Microsoft.Phone	Microsoft.Networking	Windows.Storage	Windows.Foundation	Microsoft.Devices
System.Net	System	System.IO	System.Linq	System.Xml
System.Data	System.Windows	System.Numerics	System.Core	System.ServiceModel



C#

iOS – 100% API Coverage

MapKit	UIKit	iBeacon	CoreGraphics	CoreMotion
System.Net	System	System.IO	System.Linq	System.Xml
System.Data	System.Windows	System.Numerics	System.Core	System.ServiceModel



C#

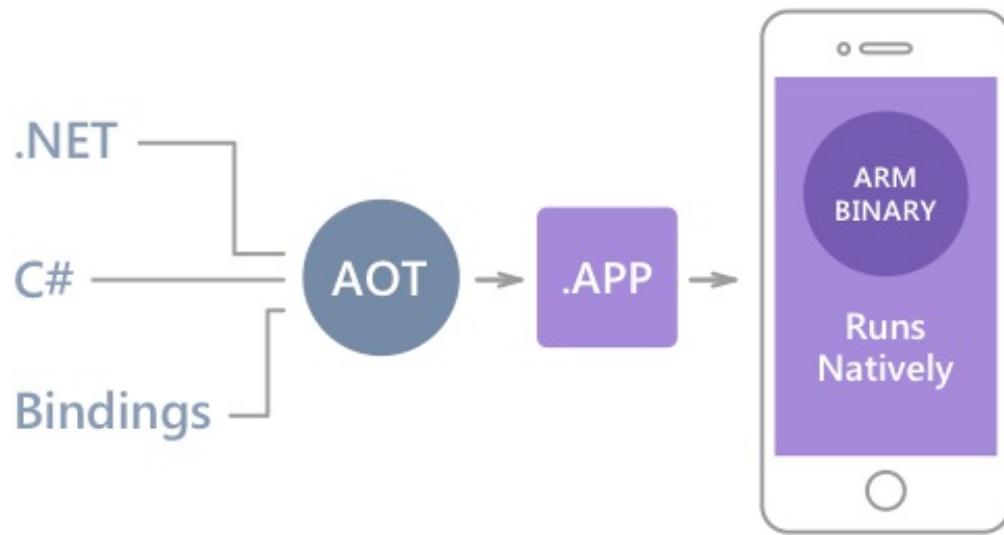
Android – 100% API Coverage

Text-to-speech	ActionBar	Printing Framework	Renderscript	NFC
System.Net	System	System.IO	System.Linq	System.Xml
System.Data	System.Windows	System.Numerics	System.Core	System.ServiceModel

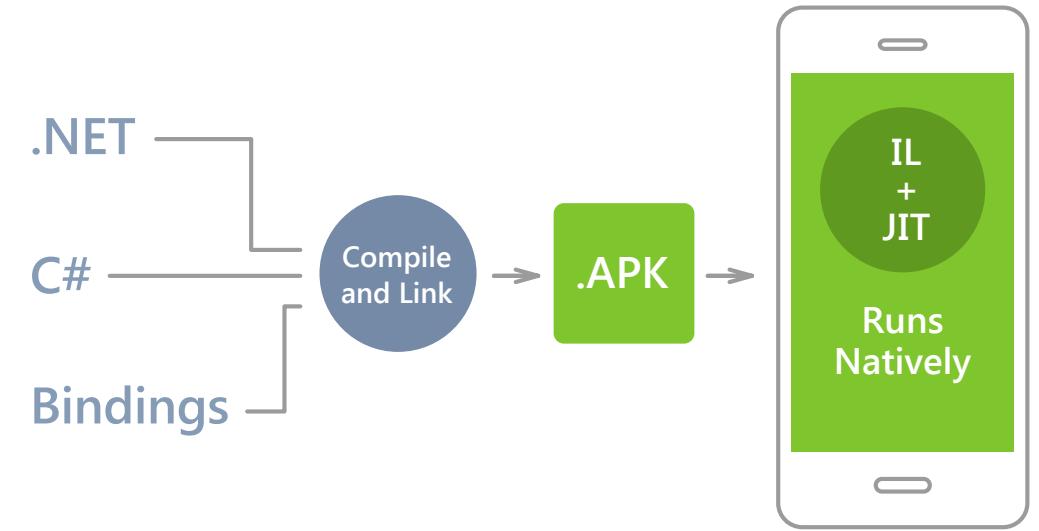


C#

Native Performance

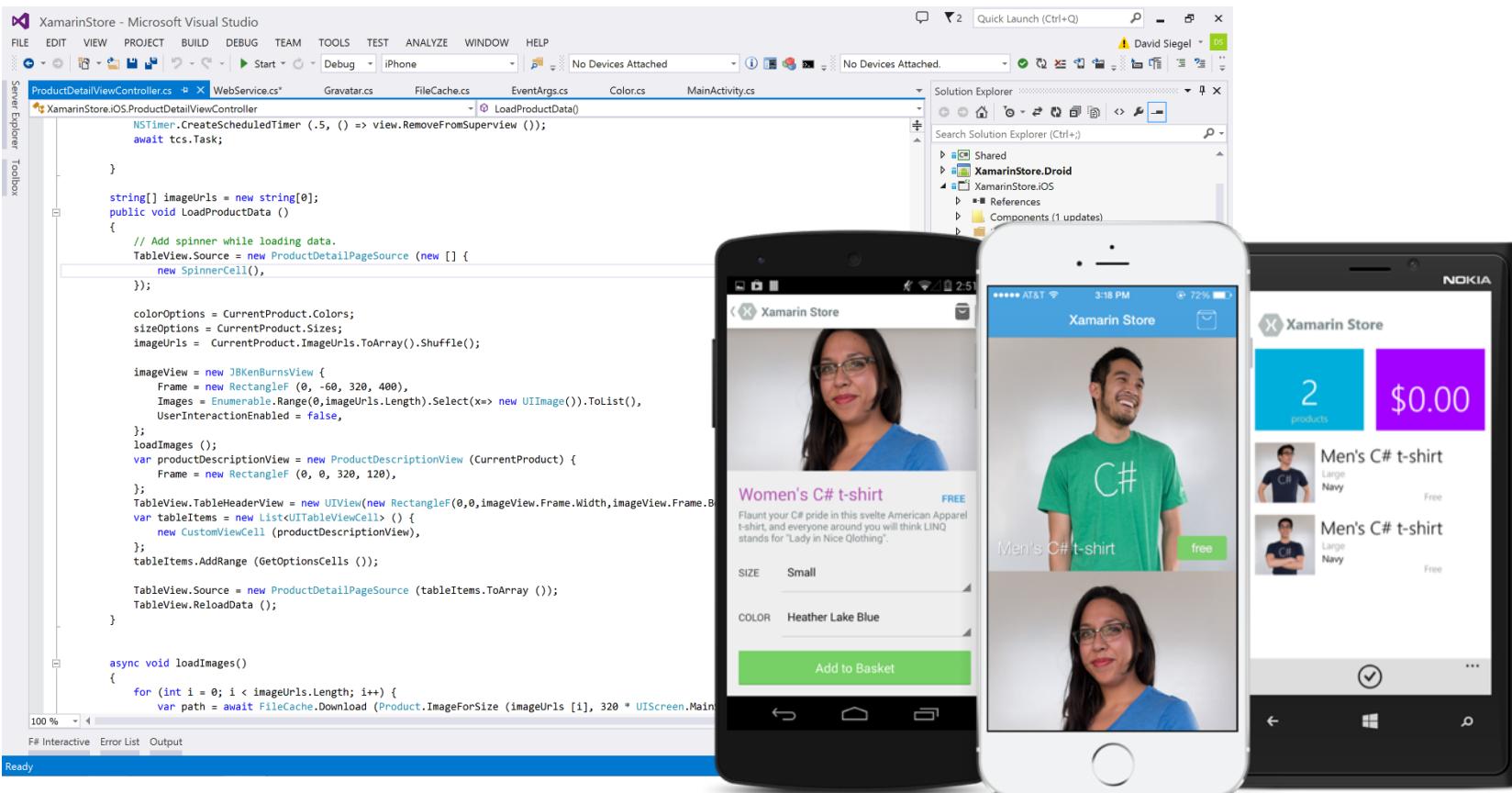


Xamarin.iOS does full Ahead Of Time (AOT) compilation to produce an ARM binary for Apple's App Store.



Xamarin.Android takes advantage of Just In Time (JIT) compilation on the Android device.

Anything you can do in Objective-C, Swift, or Java can be done in C# and Visual Studio with Xamarin.





Always Up-to-Date

Same-day support:

- iOS 5
- iOS 6
- iOS 7
- iOS 7.1
- iOS 8
- iOS 9
- iOS 10

Full support for:

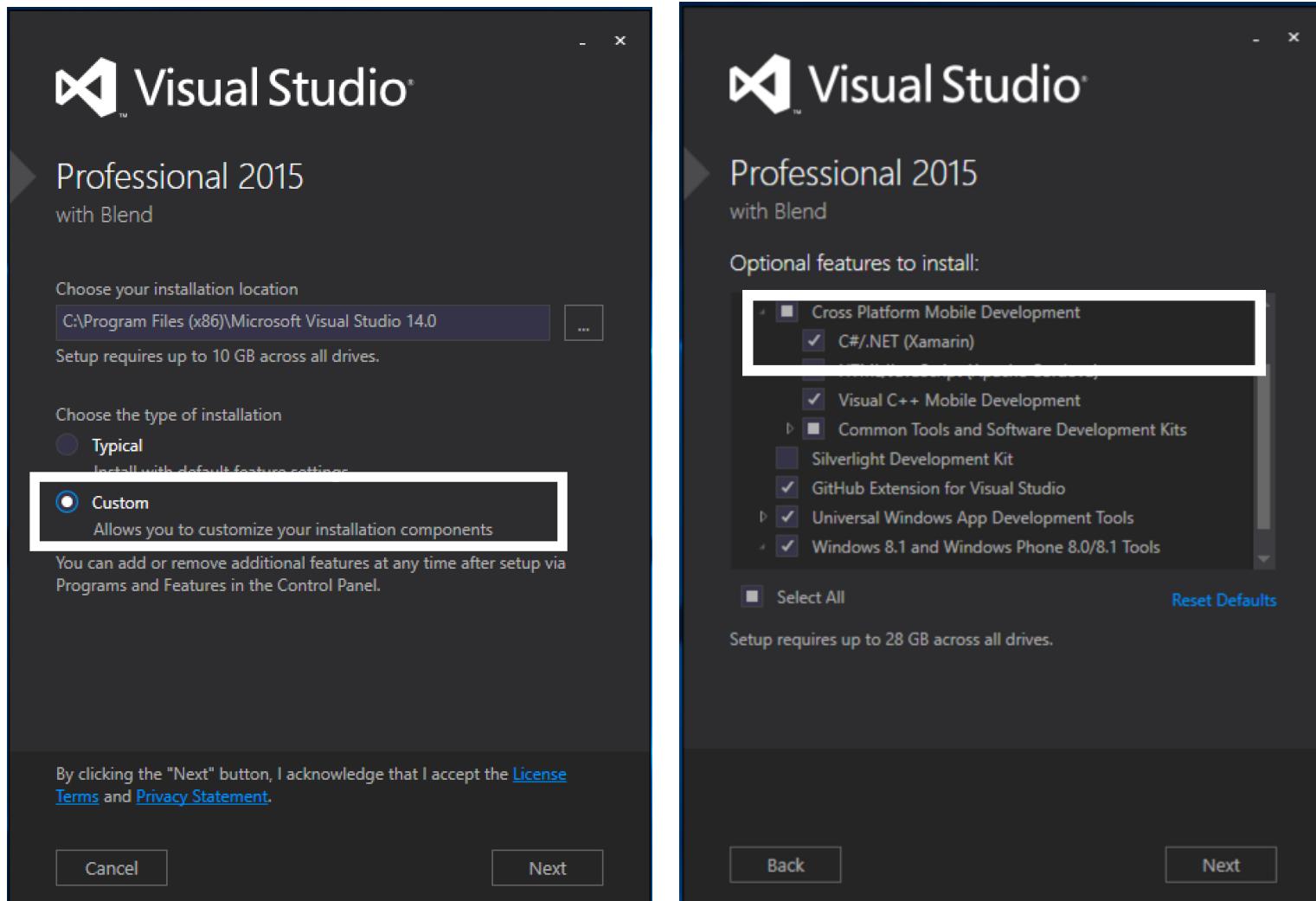
- Apple Watch
- Android Wear
- Amazon Fire TV
- Google Glass
- and much more

Development Experience

Xamarin is included in
Visual Studio

Including Community Edition!

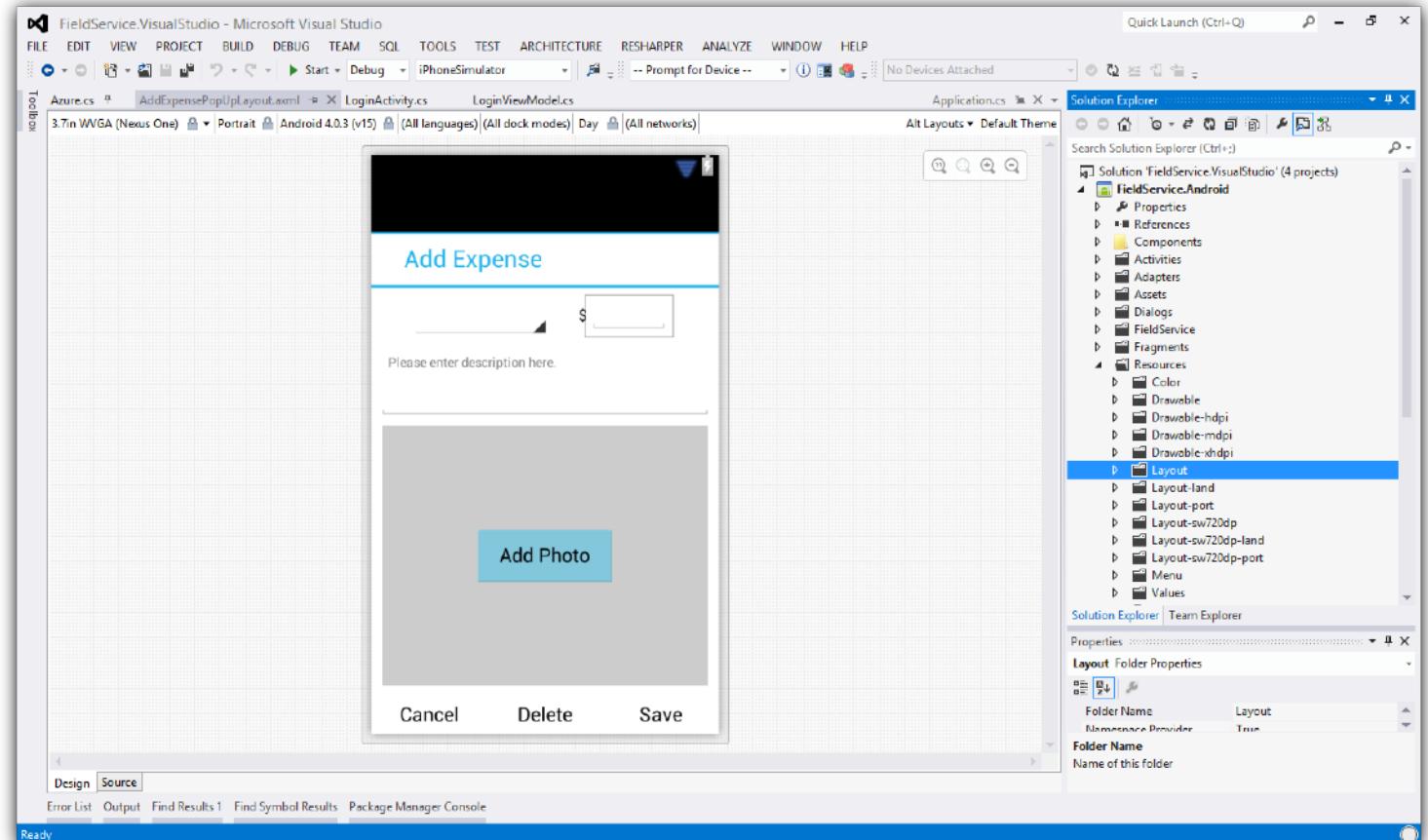
Visual Studio Integration



Xamarin.com/Download

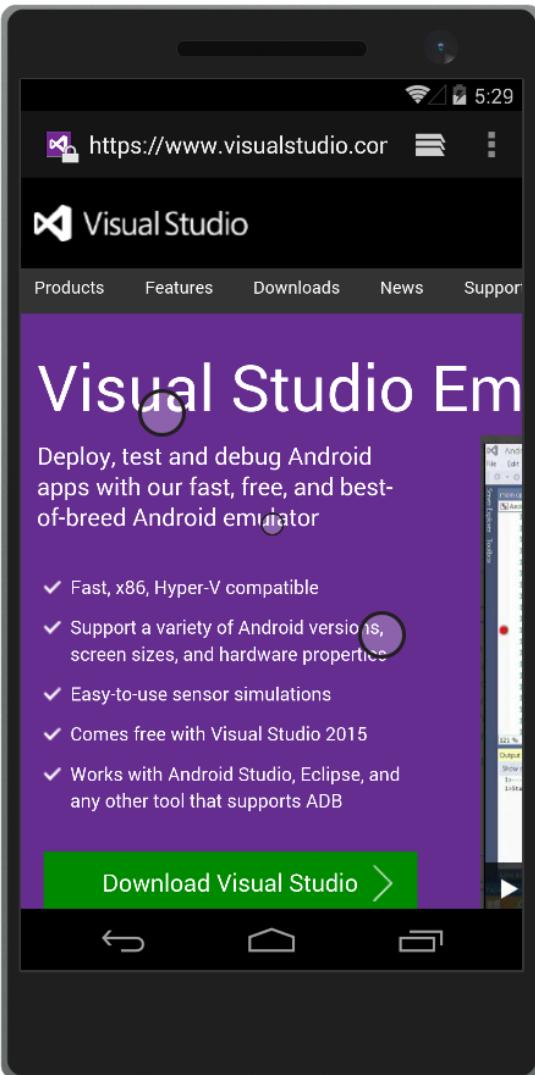
Android Designer

- Create UI with drag & drop simplicity
- Target multiple screen sizes, resolutions and Android versions
- Layouts saved in standard Android XML files



Android Hyper-V Emulators for PC

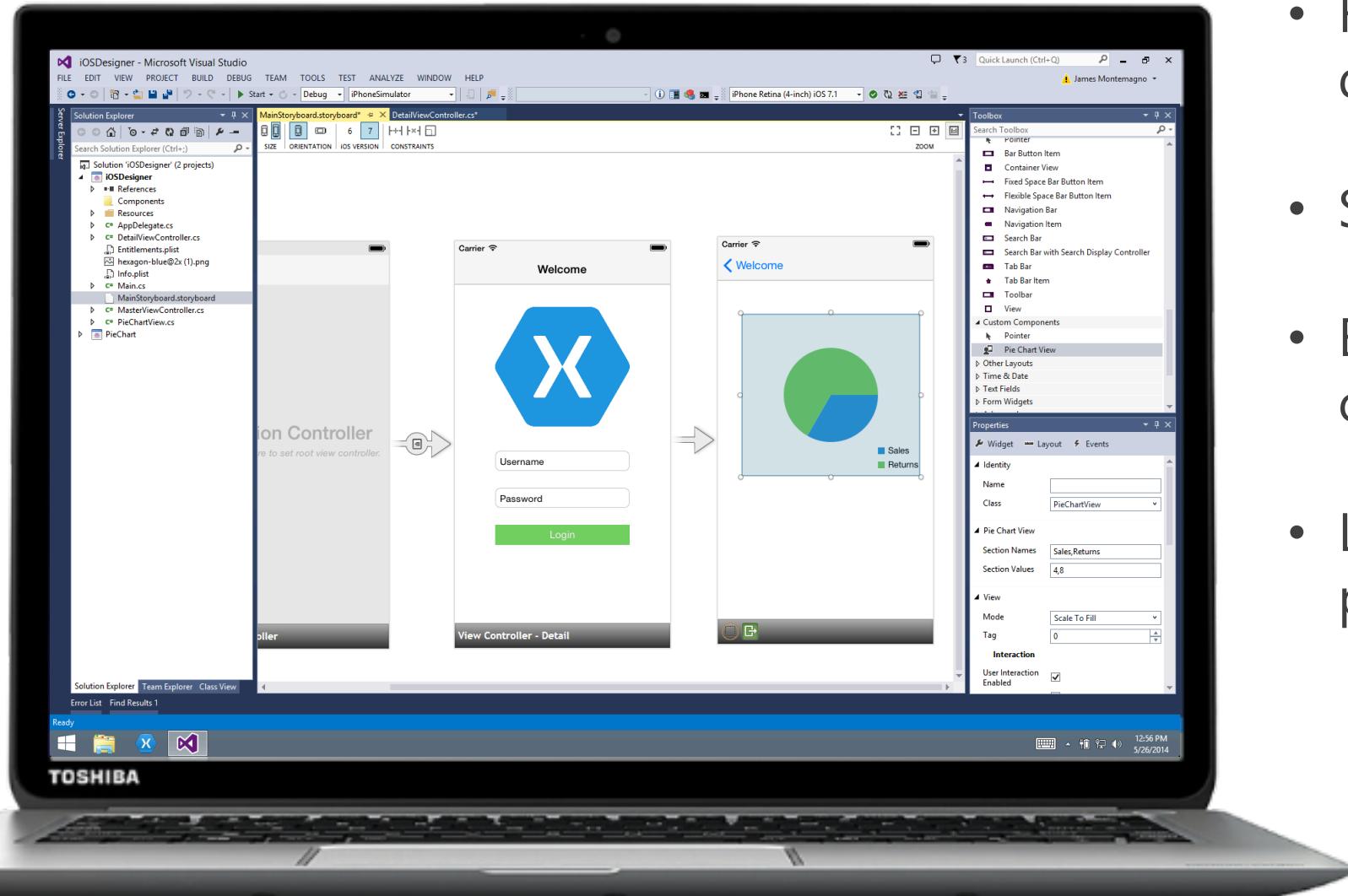
- Multi-Touch Enabled
- Super Fast
- Rotate, screenshots, location changes, and more!

A screenshot of the "Device Profiles" screen in the Visual Studio Emulator for Android application. On the left, there's a vertical toolbar with icons for close, minimize, maximize, and navigation. The main area has a title "Device Profiles" and a dropdown menu set to "All API Levels". Below this is a list of five device profiles:

- 5" Lollipop (5.1.1) XXHDPI Phone
API Level 22 (Lollipop, 5.1.1)
1 GB
- 7" KitKat (4.4) XHDPI Tablet
API Level 19 (KitKat, 4.4)
634 MB
- 5.7" KitKat (4.4) XHDPI Phone
API Level 19 (KitKat, 4.4)
456 MB
- 5" KitKat (4.4) XXHDPI Phone
API Level 19 (KitKat, 4.4)
722 MB
- 5.5" Lollipop (5.1.1) XXHDPI Phone
API Level 22 (Lollipop, 5.1.1)

<http://bit.ly/hyperv-android>

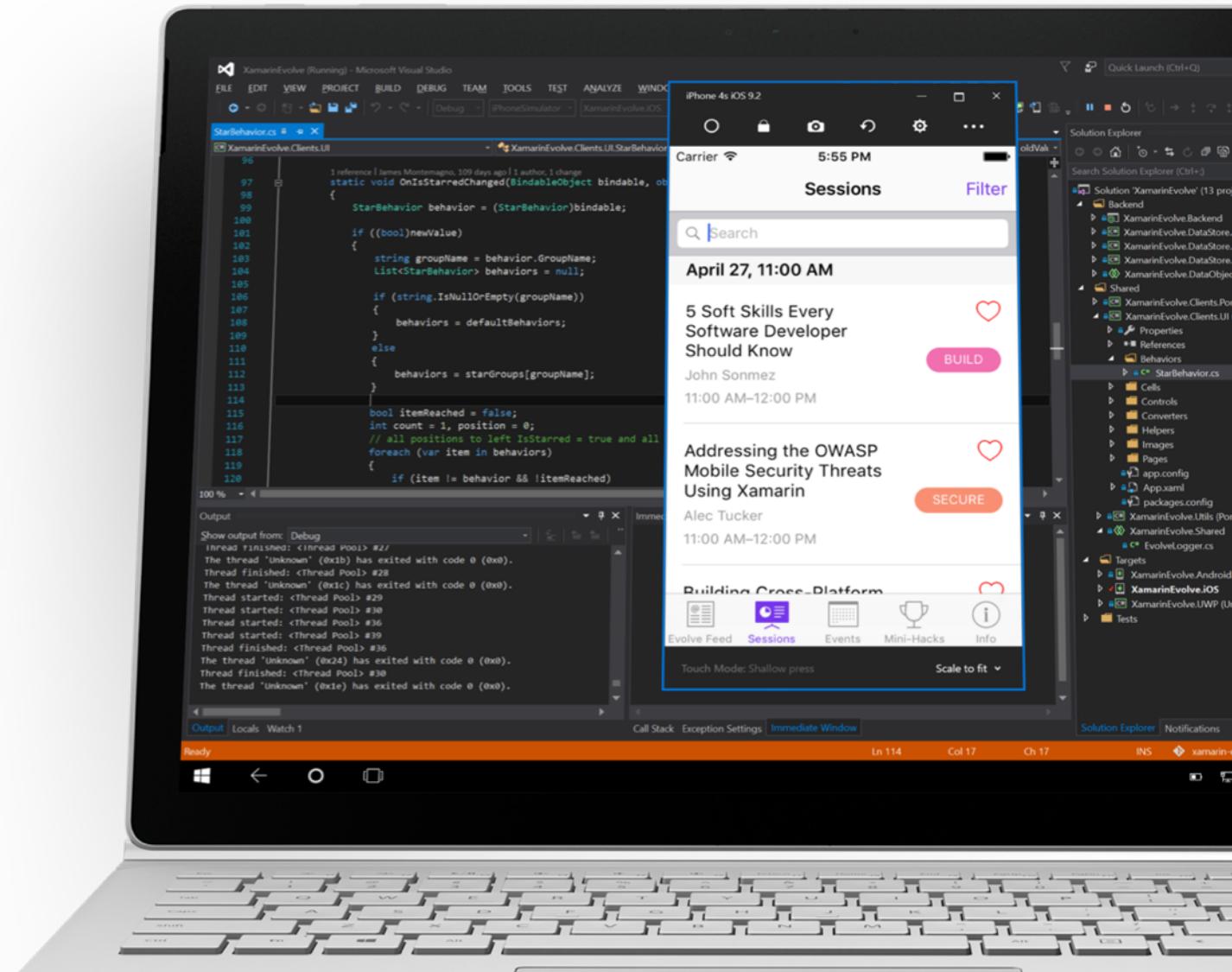
Xamarin Designer for iOS



- Follows familiar Visual Studio designer idioms
- Supports all UIKit elements
- Edit custom and 3rd party components
- Live preview of changes to properties

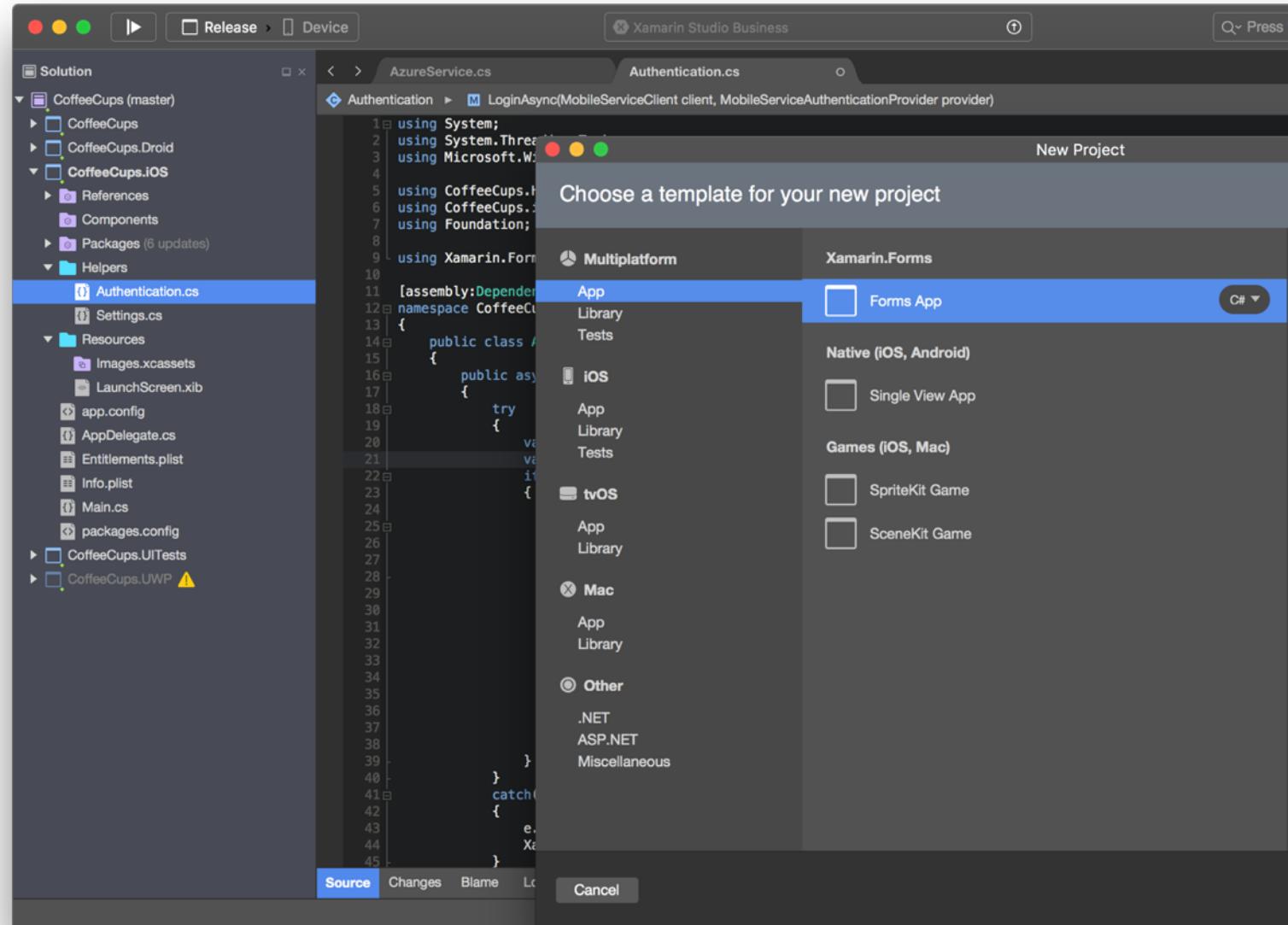
Visual Studio iOS Simulator Remoting

- Multi-Touch Enabled
- Pressure Sensitive
- Super Fast
- Rotate, screenshots, location changes
- Never leave VS



*available as a preview

Xamarin Studio – Mac



Open Source – open.xamarin.com



Xamarin SDK

Documentation Community

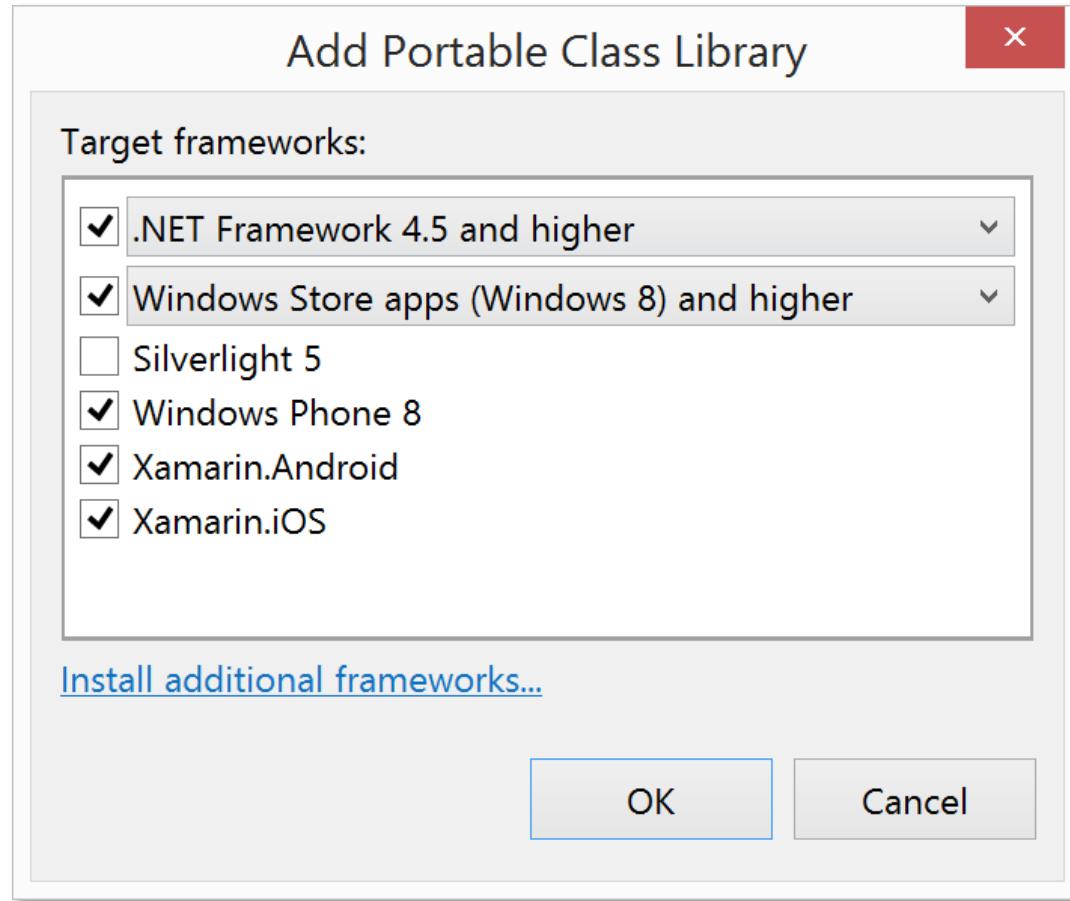
Contribute

Build the future of apps
with Xamarin.

Xamarin SDK is now fully available under the MIT license.

Sharing Code

Portable Class Libraries



1 Assembly
Multiple Platforms

Including:
Xamarin.iOS and Xamarin.Android

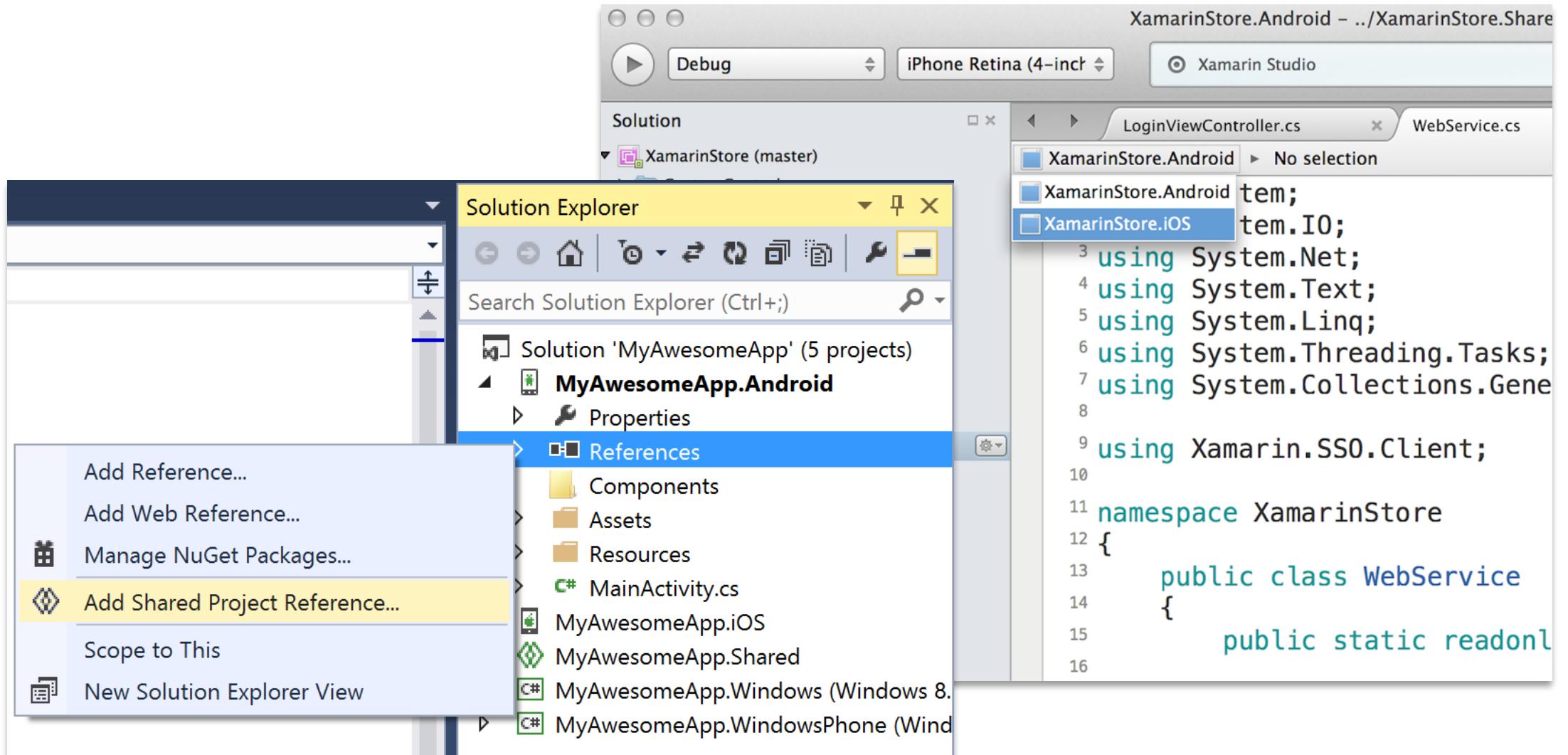
NuGet

The screenshot shows two windows related to NuGet package management:

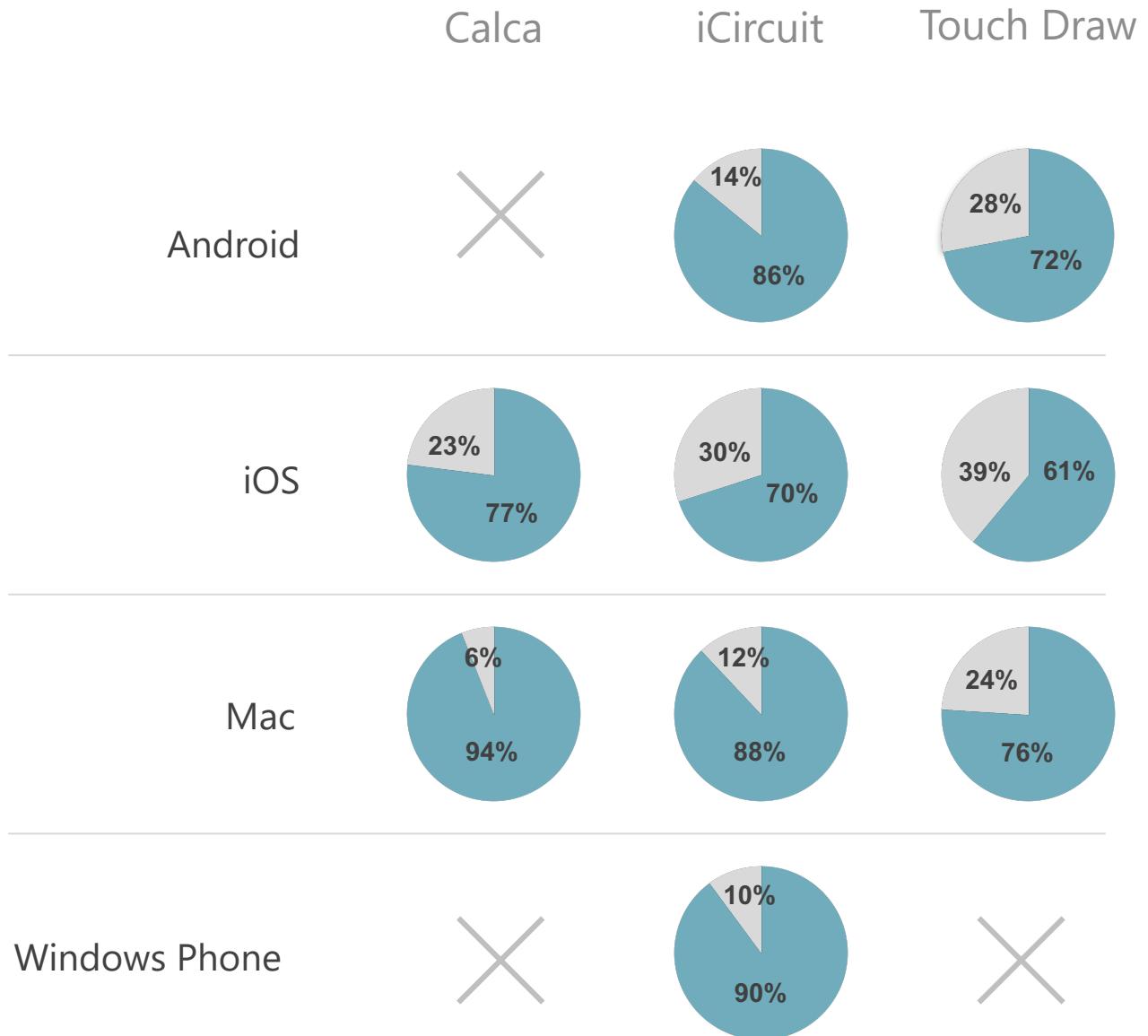
- Left Window (nuget.org):** An "Add Packages" dialog with a search bar containing "xamarin". It lists several Xamarin-related packages:
 - Xamarin.Social
 - Xamarin.Auth
 - Xamarin.Mobile
 - Xamarin.InAppBilling
 - Xamarin.FacebookBinding
 - BugSense plugin for Xamarin Android application
- Right Window (PlanetXamarin.WinStore - Manage NuGet Packages):** A list of packages found in the "Online" section, sorted by "Most Downloads".
 - EntityFramework**: Entity Framework is Microsoft's recommended data access technology for new applications.
 - Json.NET**: Json.NET is a popular high-performance JSON framework for .NET. An "Install" button is visible next to its listing.
 - jQuery**: jQuery is a new kind of JavaScript Library. jQuery is a fast and concise JavaScript Library that simplifies HTML...
 - WebGrease**: Web Grease is a suite of tools for optimizing javascript, css files and images.
 - Microsoft ASP.NET MVC**: This package contains the runtime assemblies for ASP.NET MVC.
 - Microsoft HTTP Client Libraries**: This package provides a programming interface for modern HTTP/REST based applications.
 - Microsoft ASP.NET Web API 2.2**: This package contains everything you need to host ASP.NET Web API on IIS.

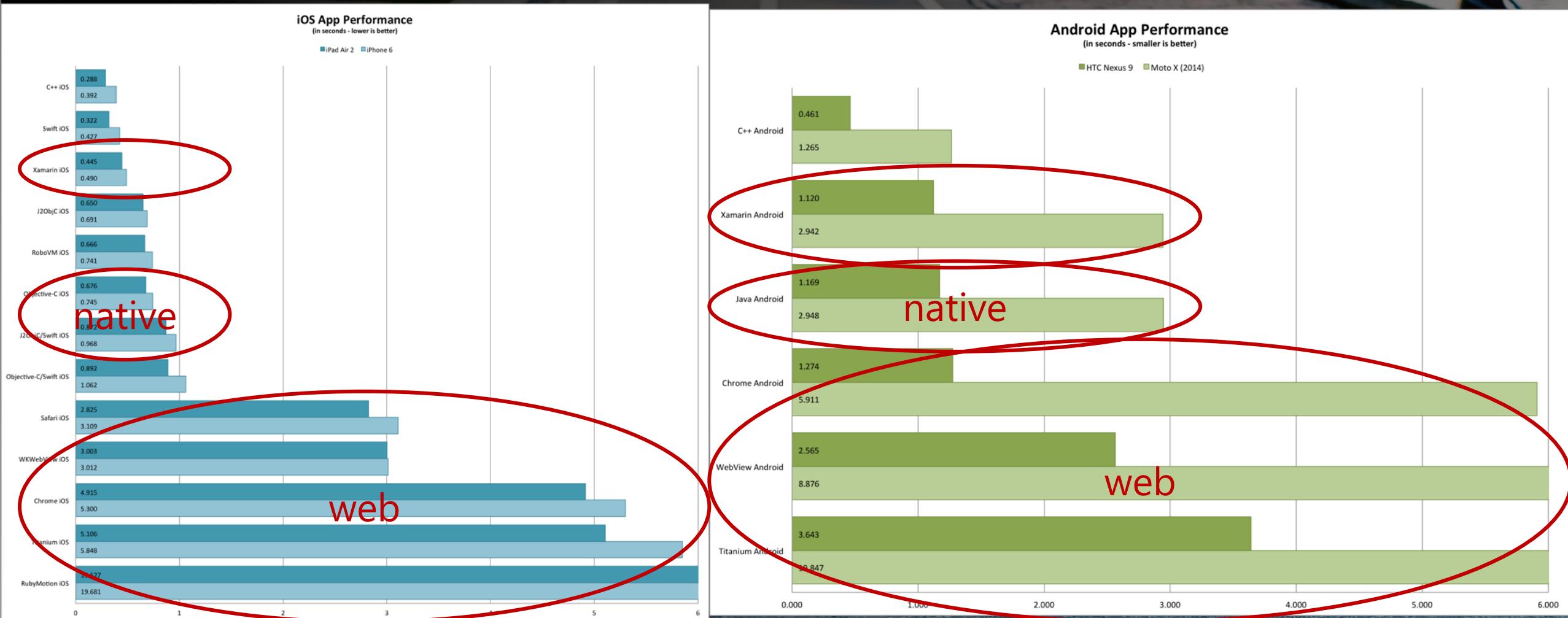
Both windows include standard operating system window controls (minimize, maximize, close) and a "Close" button at the bottom right of the main window.

Shared Projects



Code Sharing Stats



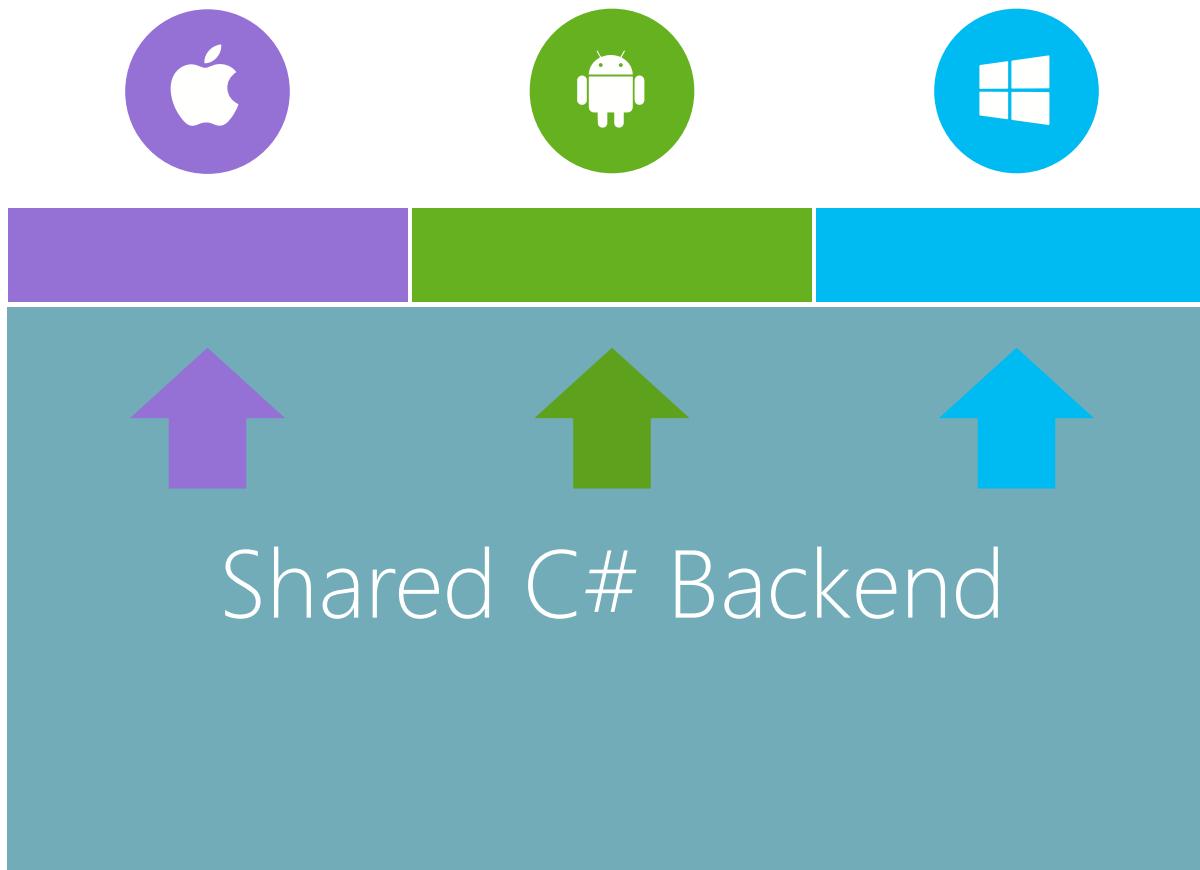


<http://bit.ly/mobile-app-performance>

DOES IT PERFORM?

Let's Build an App

Simplifying Development





UI+APIs

Battery
GPS
Lights
Notifications
Settings
Text To Speech

UI + APIs

Battery
GPS
Lights
Notifications
Settings
Text To Speech

UI + APIs

Battery
GPS
Lights
Notifications
Settings
Text To Speech

Platform Specific Code

What if we didn't have to write this code?

What if we could access it from shared code?

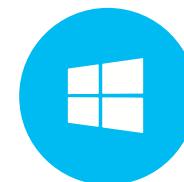
```
Speak("Hello World");
```



AVSpeechSynthesizer

TextToSpeech

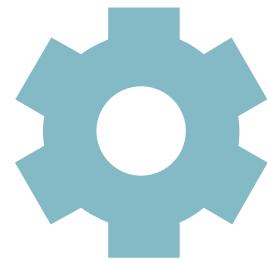
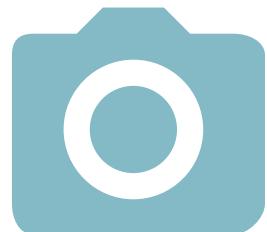
SpeechSynthesizer



Plugins for Xamarin

github.com/xamarin/plugins

Common API



10 Minute Break

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