



Visual Studio |

SQL Server |

TECHMENTOR |

Office & SharePoint |

Modern Apps

VSS02 – HOL Xamarin Introduction to Xamarin

The Ultimate Education Destination

2017
Orlando

Roy Cornelissen &
Marcel de Vries

X Xpirit

Level: Introductory - Intermediate

Agenda

- Introduction to Xamarin
- Cross Platform UI with Xamarin.Forms
- *Lunch - 1pm-2pm*
- Breaking Through the Abstractions
- Resilient Connected Clients
- Mobile First Architecture

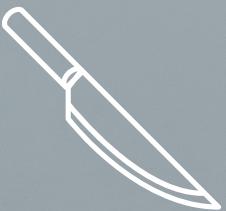
HI. I'M MARCEL



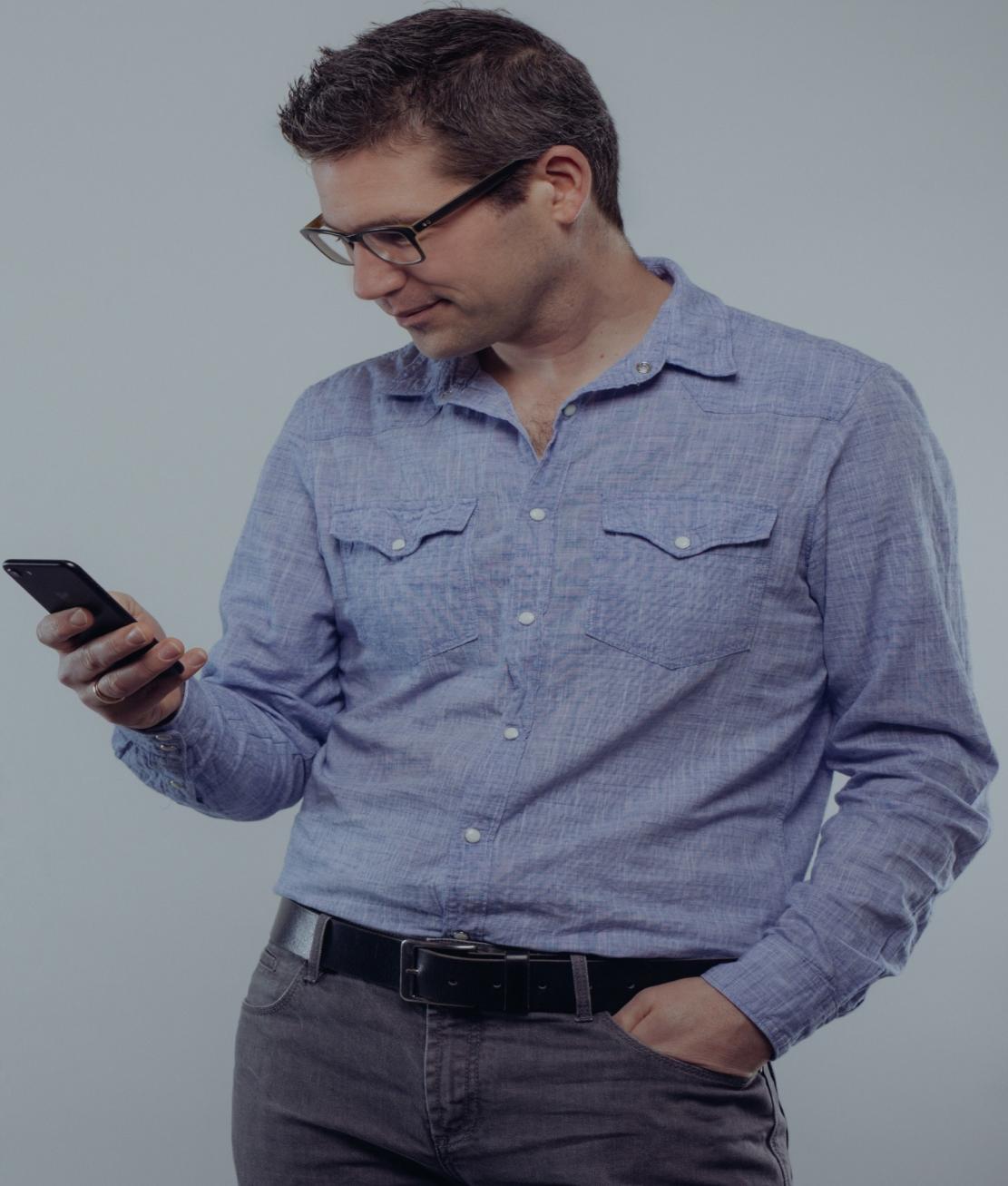
CTO
Xpirit Netherlands
@marcelv <http://fluentbytes.com>



HI. I'M ROY



@roycornelissen
blog.roycornelissen.com



Demos, & Labs - Clone or Download

github.com/xpiritbv/xamarin-hands-on-labs

Native iOS & Android Development with Xamarin

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...

ALL RESULTS 

Recorder Test

New Test 

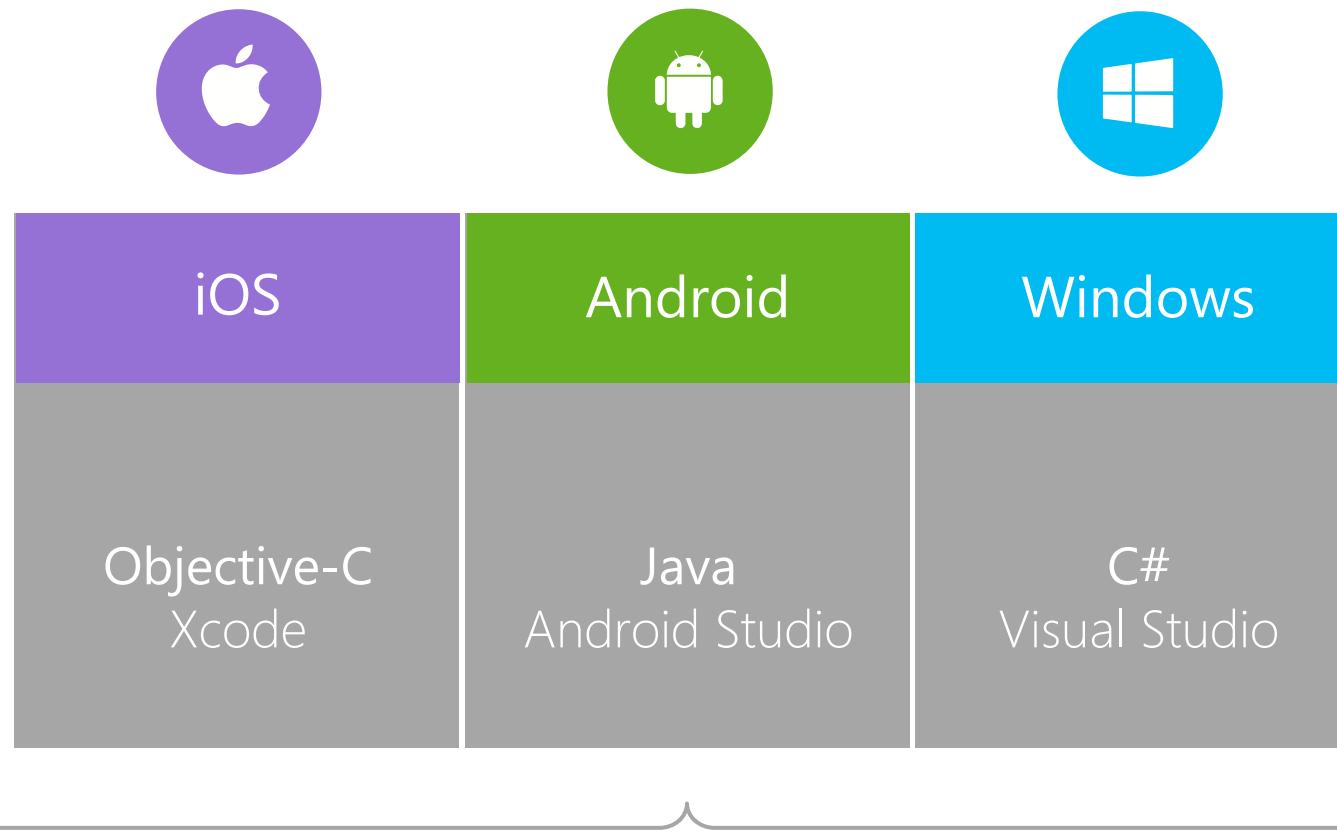
- Tapped on view with class: AppCompatButton 
- Tapped on view with class: EntryEditText
- Tapped on view with class: AppCompatButton
- Tapped on view with class: 

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

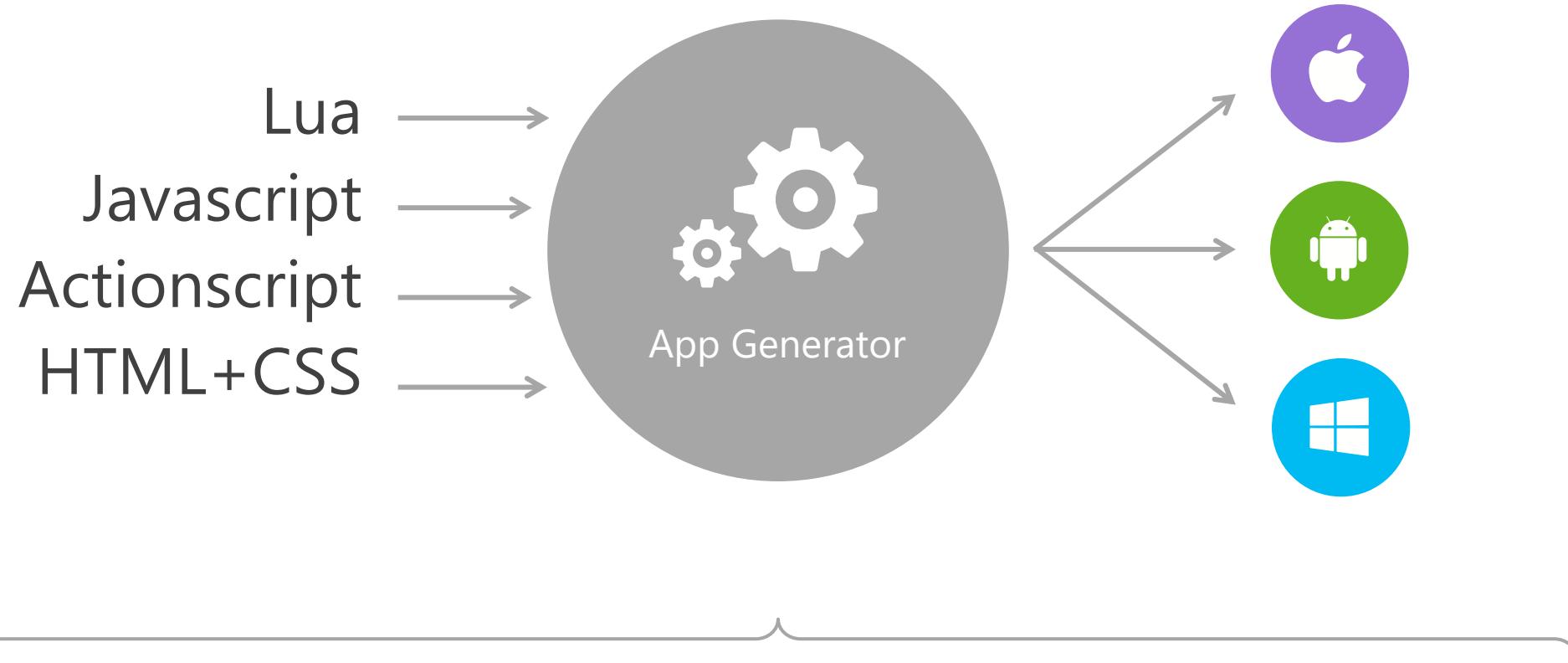
Architecting Mobile Apps

Silo Approach



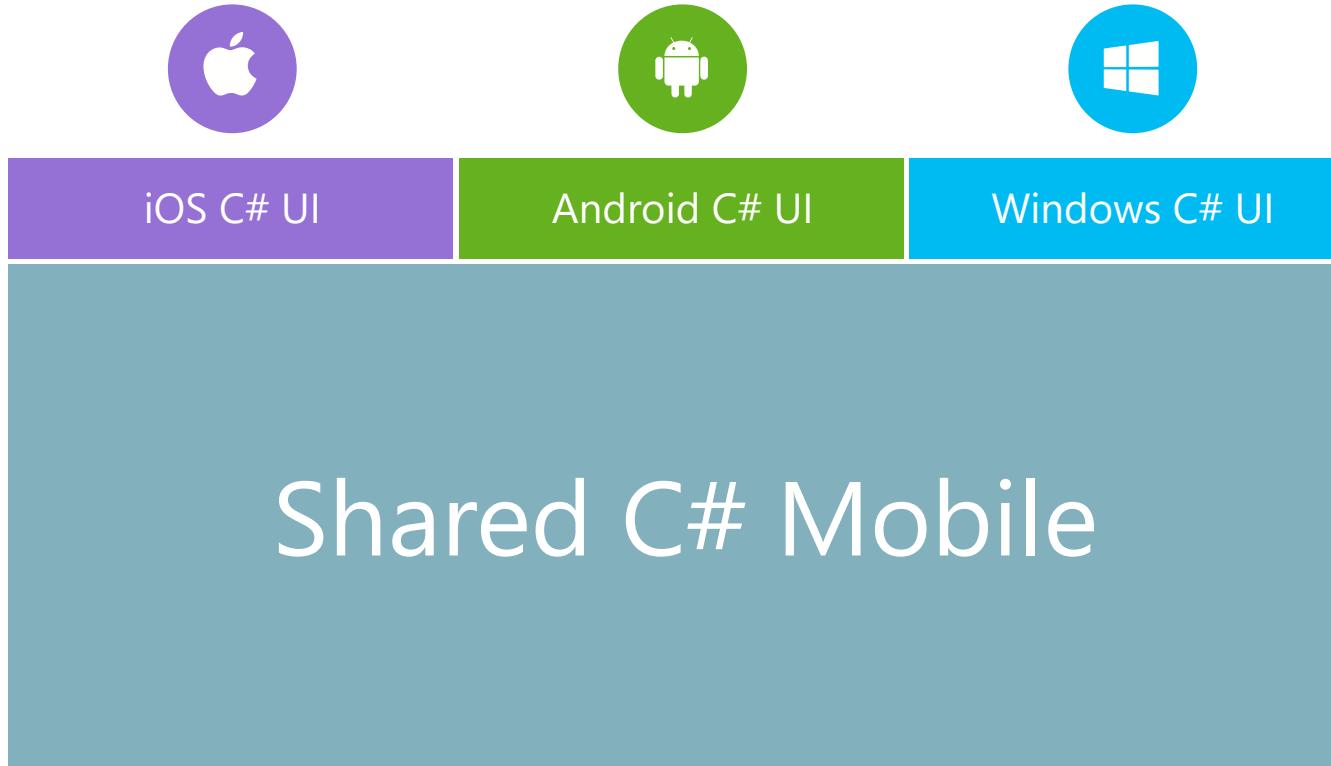
No shared code • Many languages & development environments • Multiple teams

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#

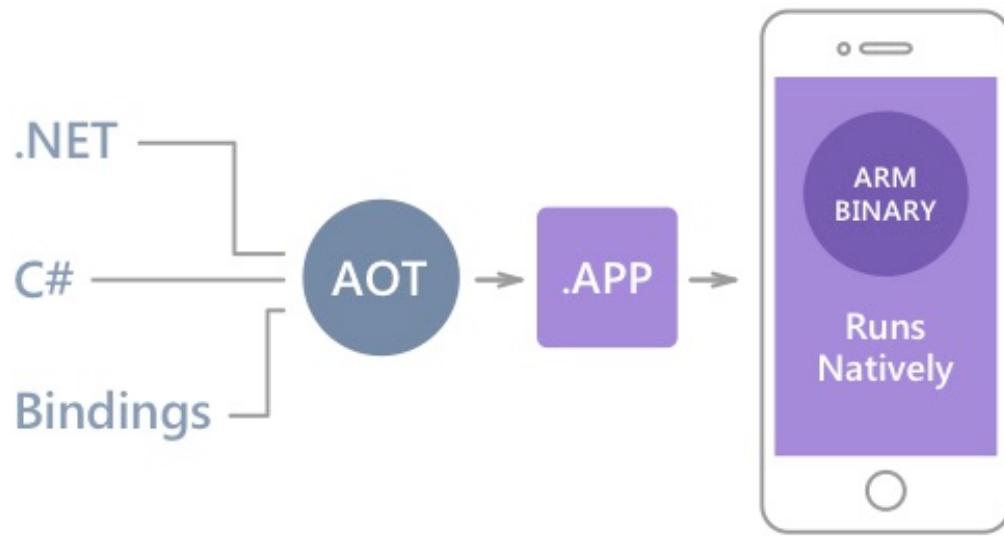
Android – 100% API Coverage

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

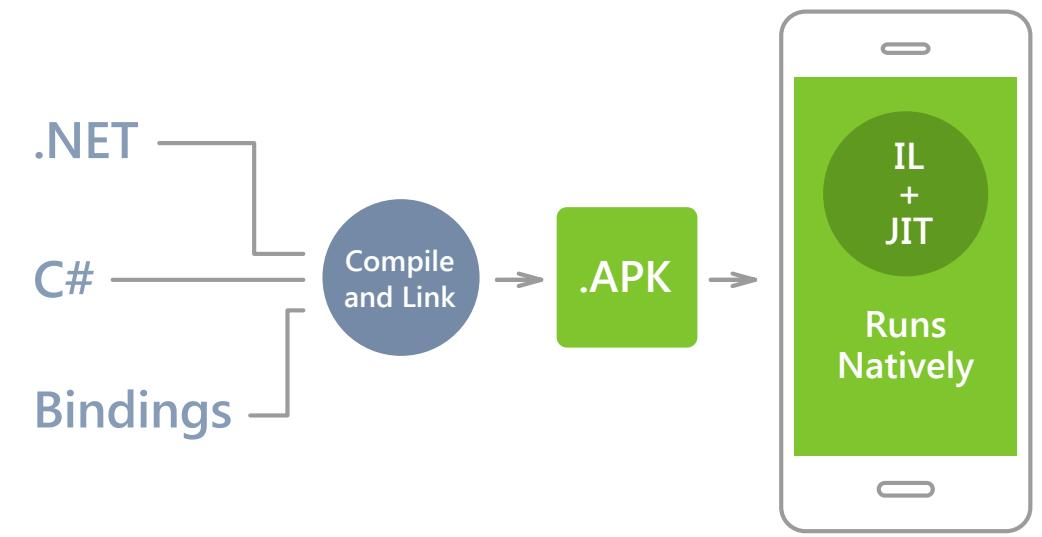


C#

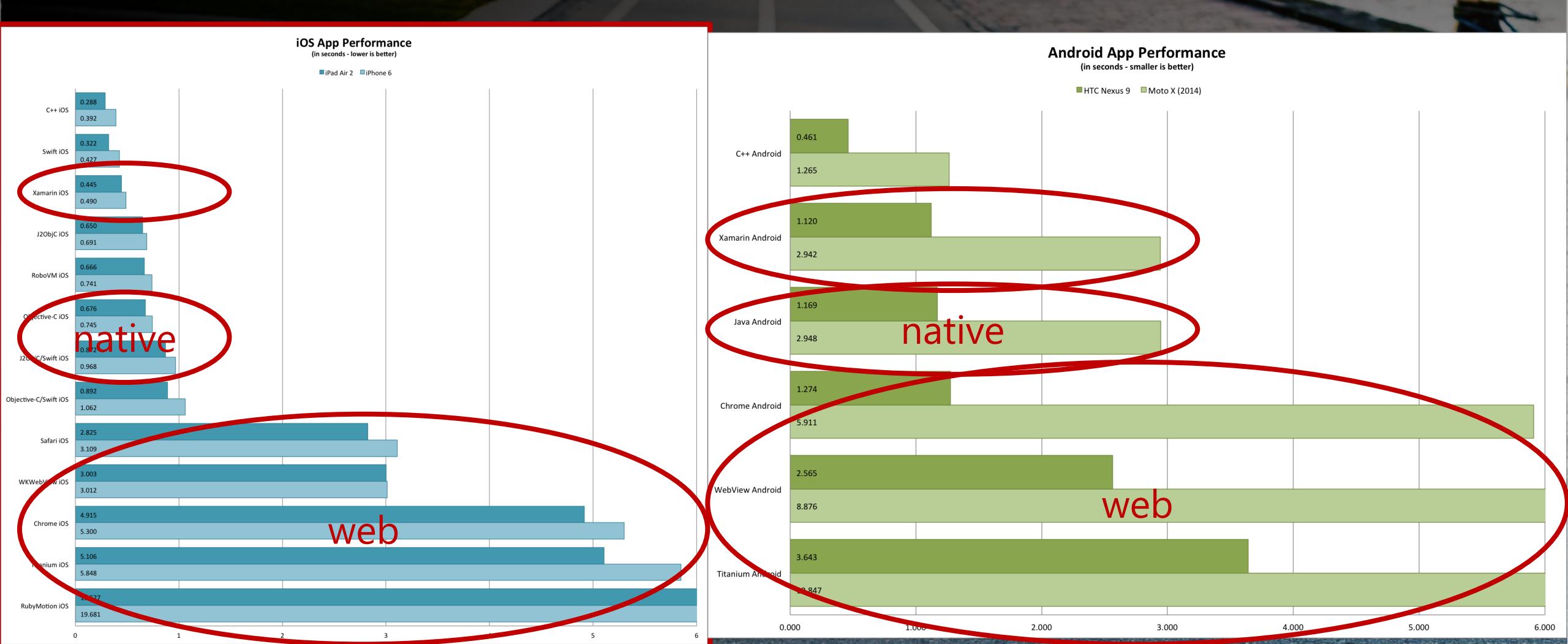
Native Performance



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.

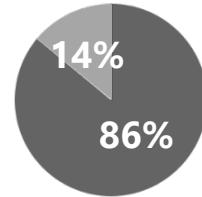


<http://bit.ly/mobile-app-performance>

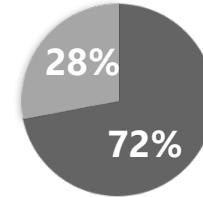
DOES IT PERFORM?

Code sharing stats

iCircuit

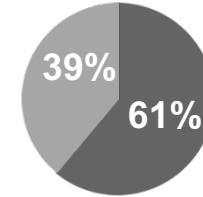
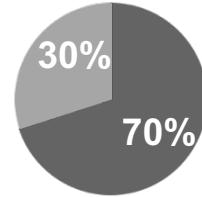


Touch Draw

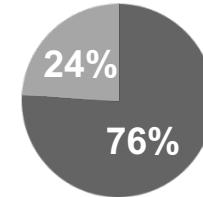
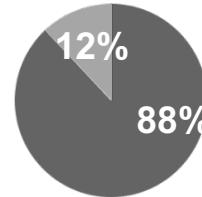


Android

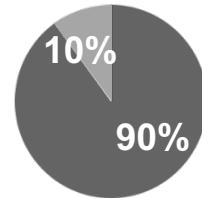
iOS



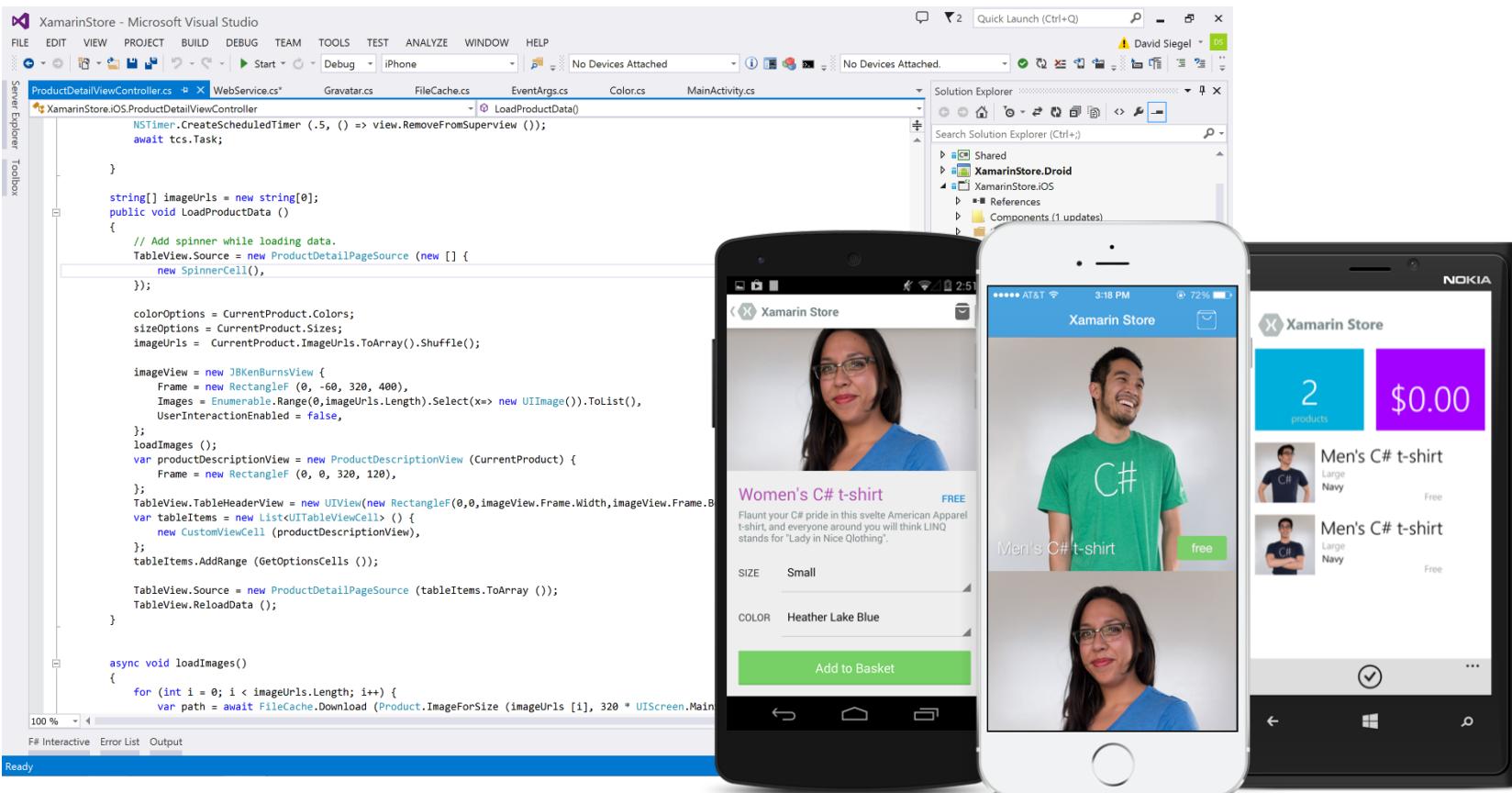
Mac



Windows



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 8
- iOS 9
- iOS 10
- iOS 11

Full support for:

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

Development Experience

Xamarin is included in
Visual Studio

Including Community Edition!

Open Source – open.xamarin.com

A photograph of a man sitting at a desk, working on a laptop. The laptop screen shows various stickers, including a unicorn, a flag, a .NET logo, and a 'YES WE CODE' logo. The man is wearing a grey t-shirt with the 'Xamarin OPEN SOURCE' logo. The desk is cluttered with books, papers, and other office supplies, suggesting a busy developer's workspace.

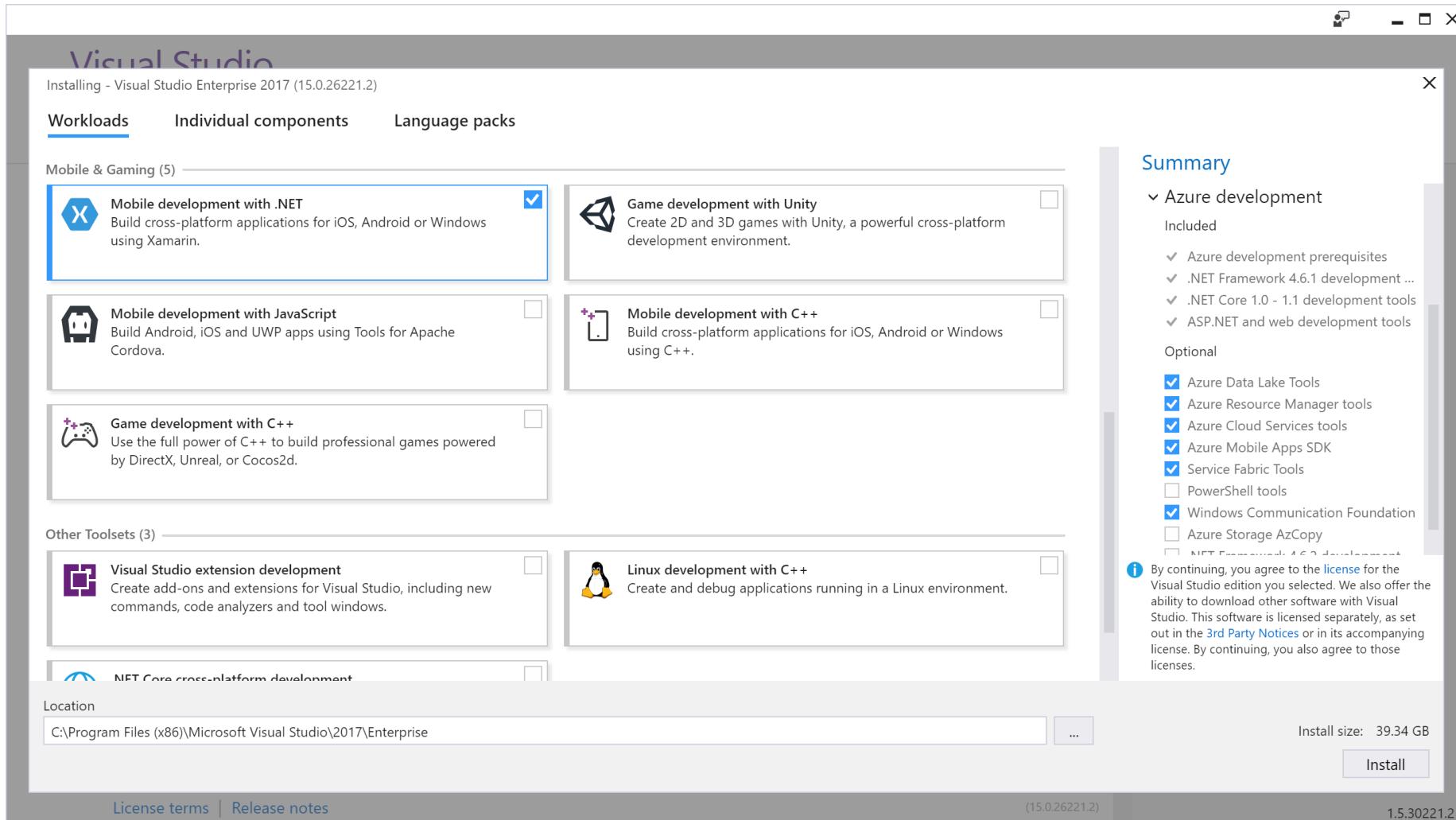
Xamarin
OPEN SOURCE

Xamarin SDK Documentation Community Contribute

Build the future of apps with Xamarin.

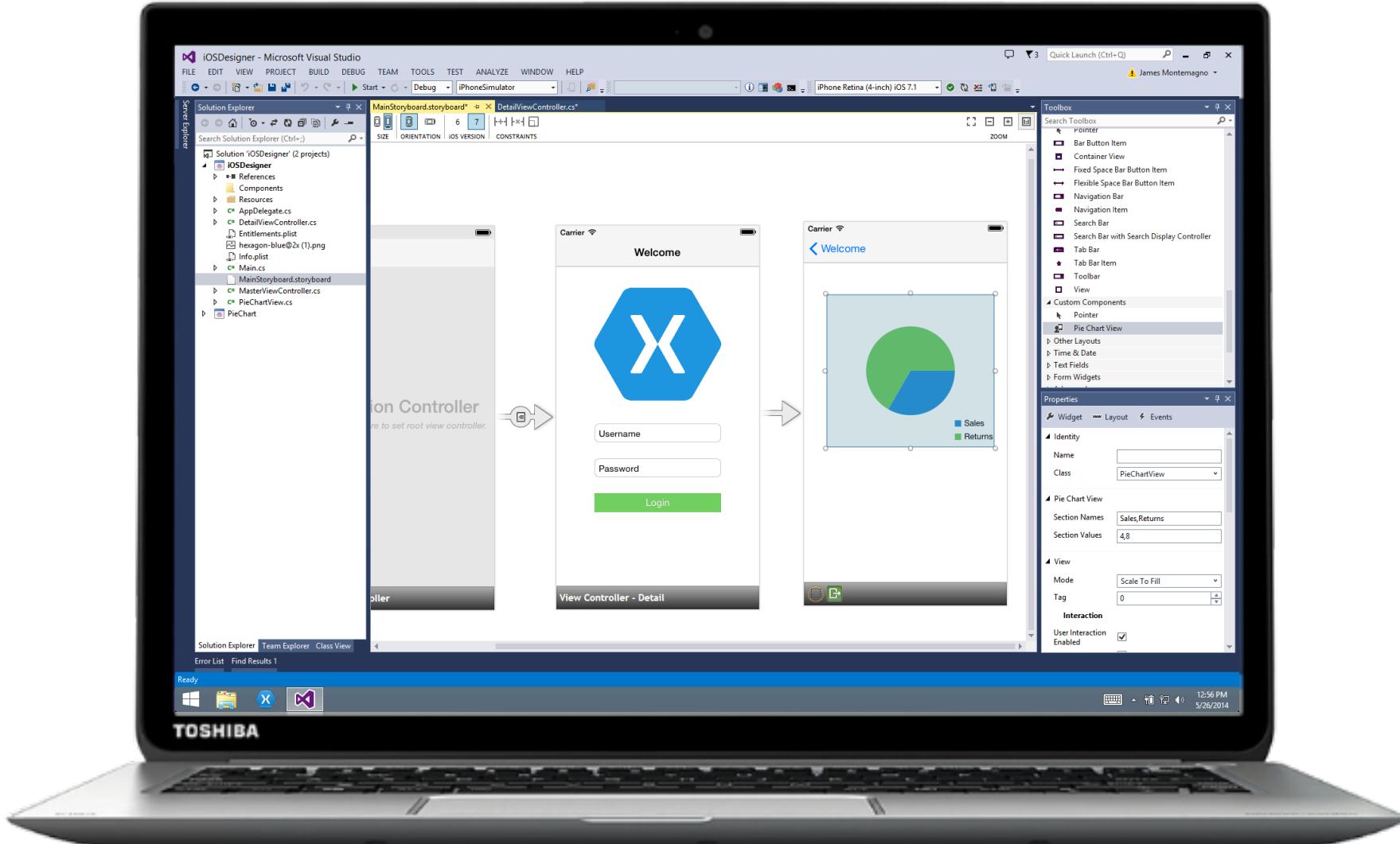
Xamarin SDK is now fully available under the MIT license.

Visual Studio Integration



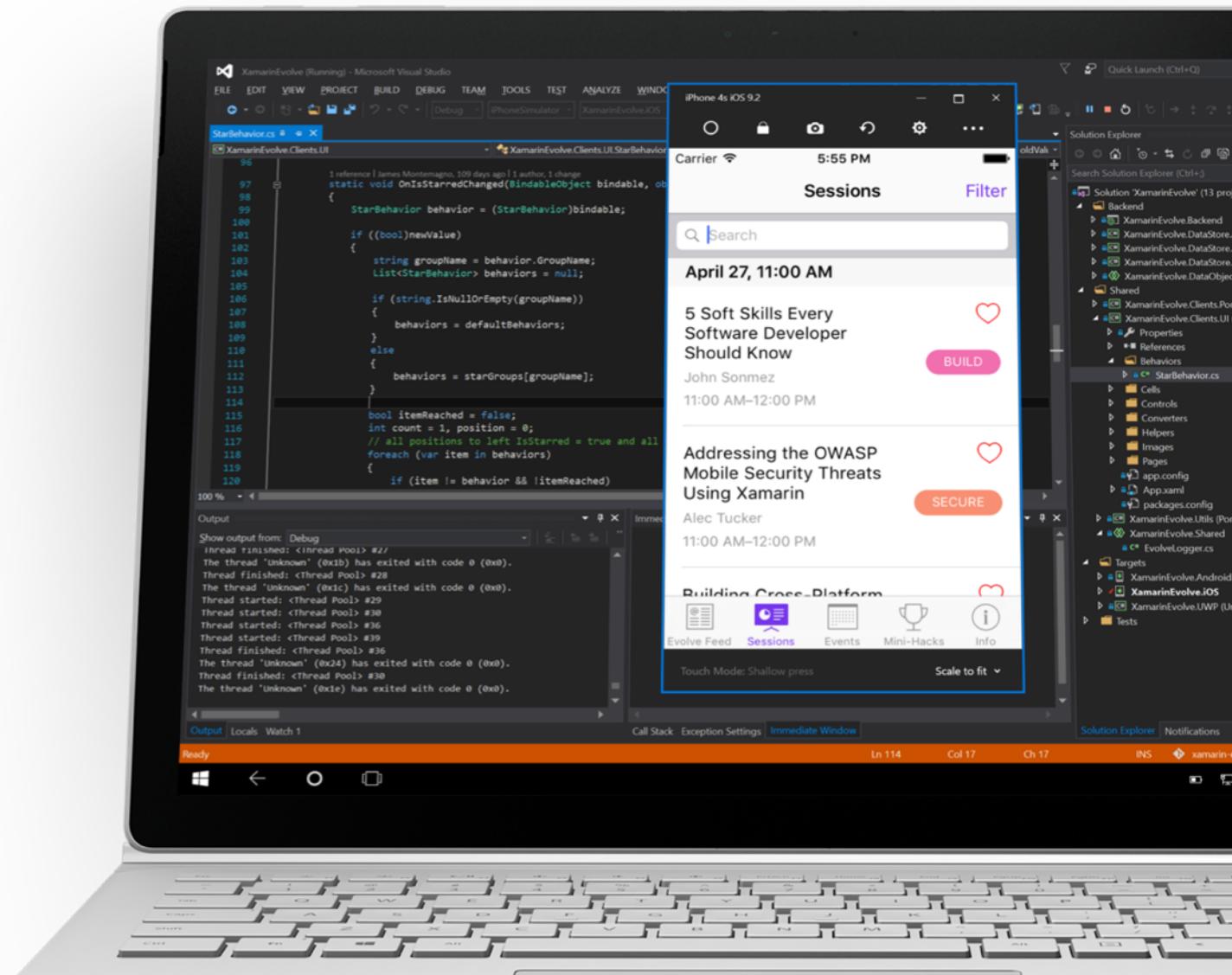
Xamarin.com/Download

Xamarin for Visual Studio



Visual Studio iOS Simulator Remoting

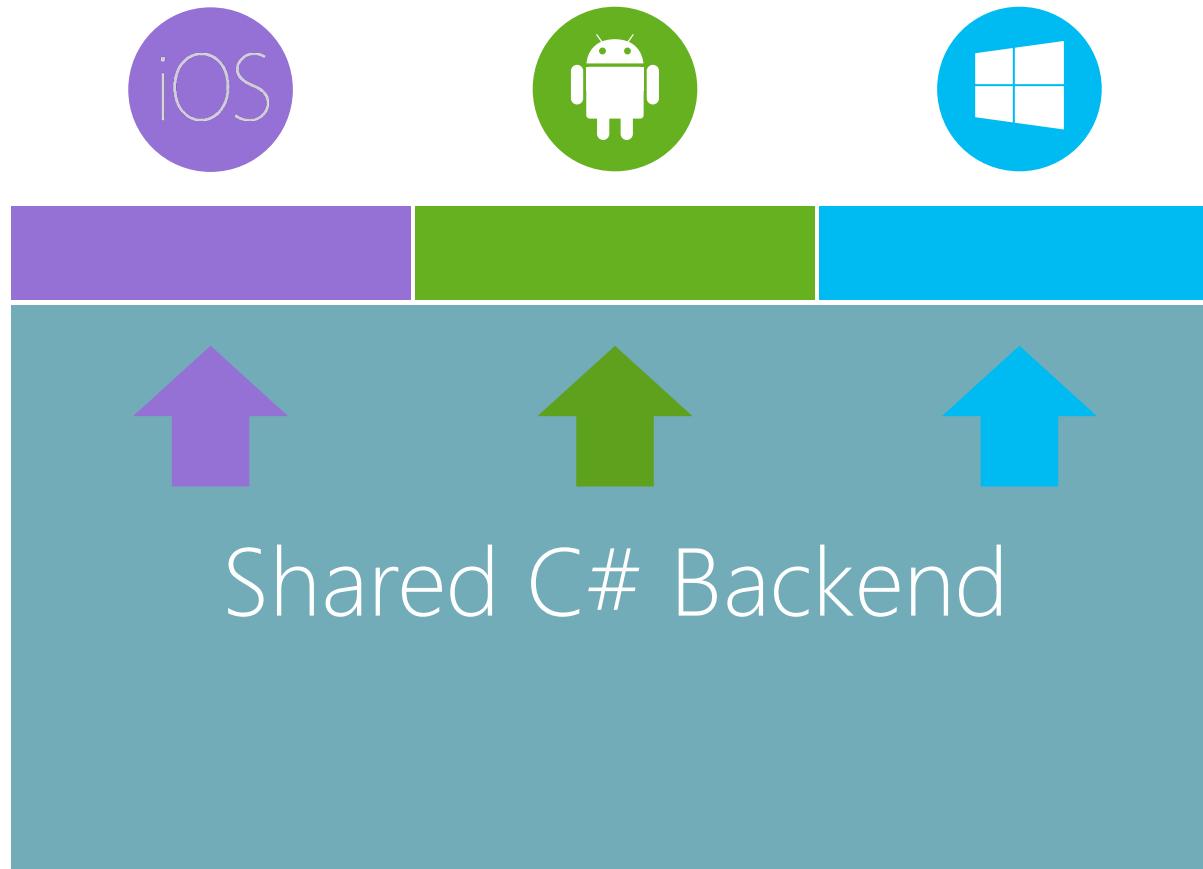
- Multi-Touch Enabled
- Pressure Sensitive
- Super Fast
- Rotate, screenshots, location changes
- Never leave VS



*Requires Visual Studio Enterprise

Validate your installation

Lab





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?

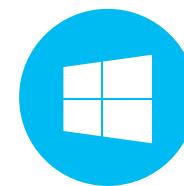
```
Speak("Hello World");
```



AVSpeechSynthesizer

TextToSpeech

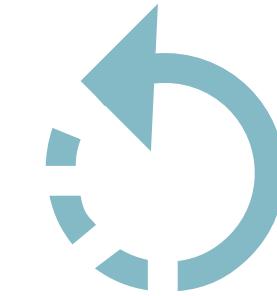
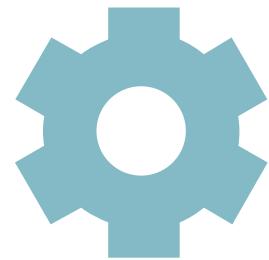
SpeechSynthesizer



Plugins for Xamarin & Windows

Xamarin.com/plugins

Common API



Let's build a native app

Lab – app-helloworld
pick Android or iOS (or both)