

HOL02 – HOL Xamarin Introduction to Xamarin

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Respect the Past.
Code the Future.



Level: Introductory - Intermediate



Agenda

- Introduction to Xamarin
- Cross Platform UI with Xamarin.Forms (break at 11)
- *Lunch - 1pm-2pm*
- Breaking Through the Abstractions
- Resilient Connected Clients (Break at 4)
- Mobile First Architecture
- Done at 6

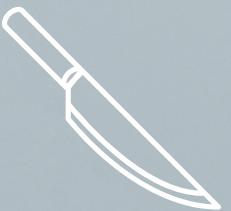
HI. I'M MARCEL



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

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

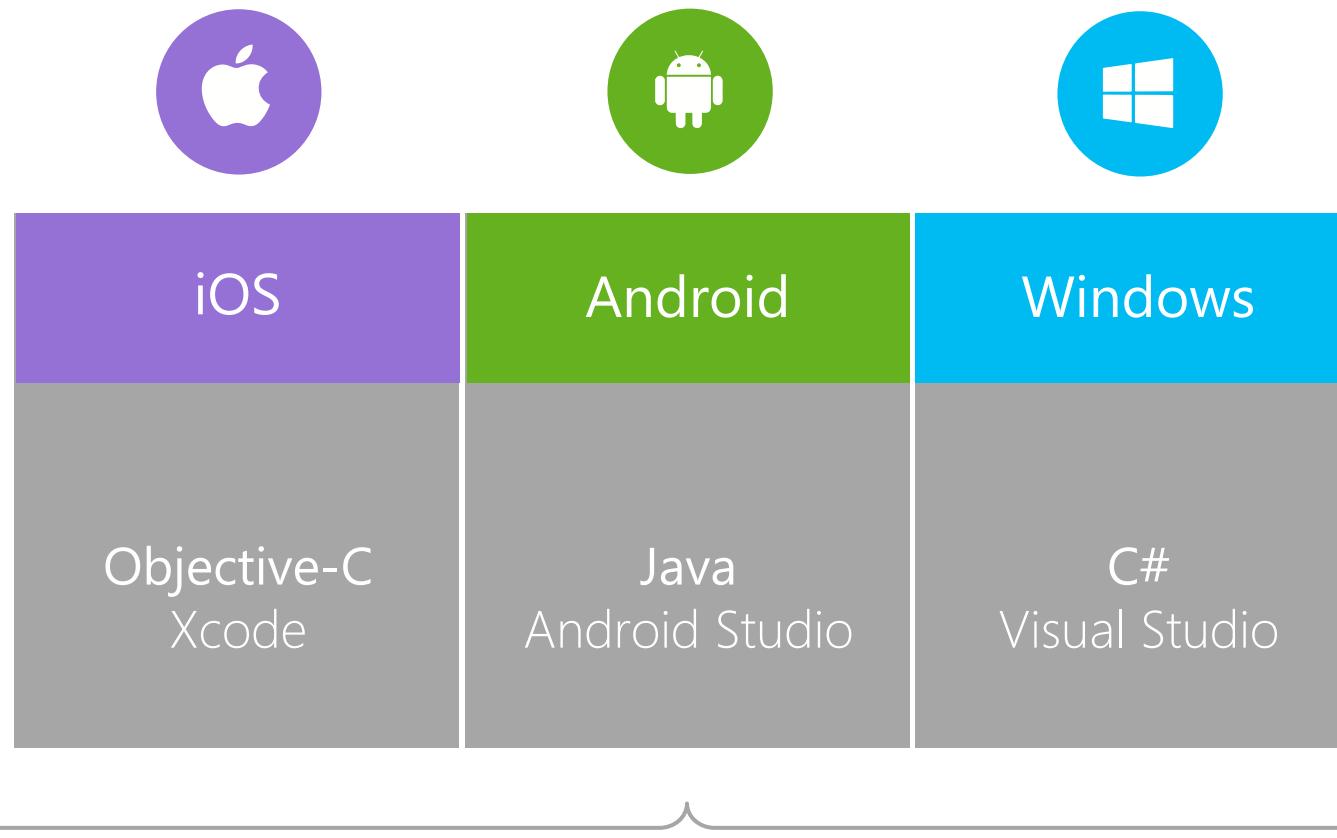
Tapped on view with class: EntryEditText 1⚡

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

Filter devices

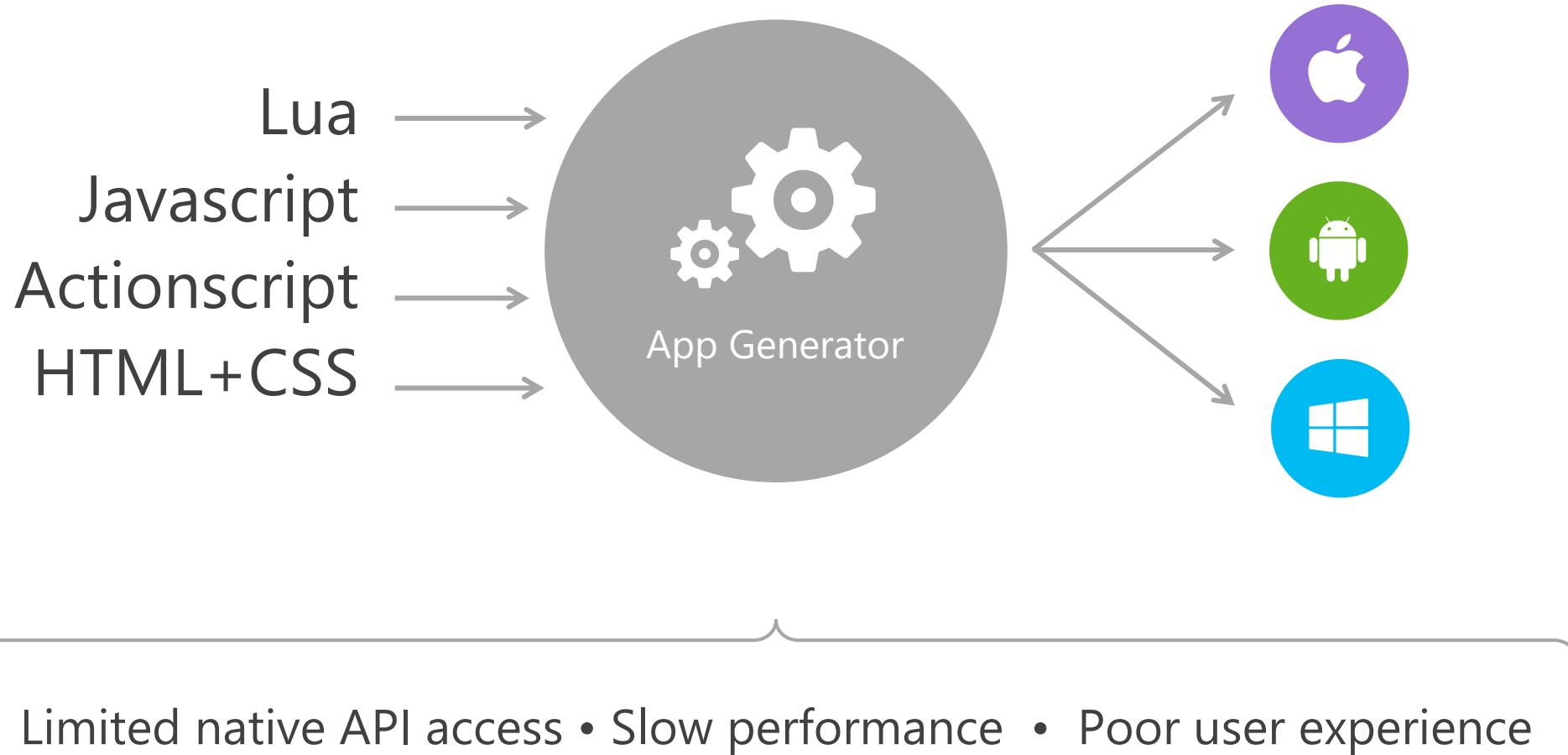
Architecting Mobile Apps

Silo Approach

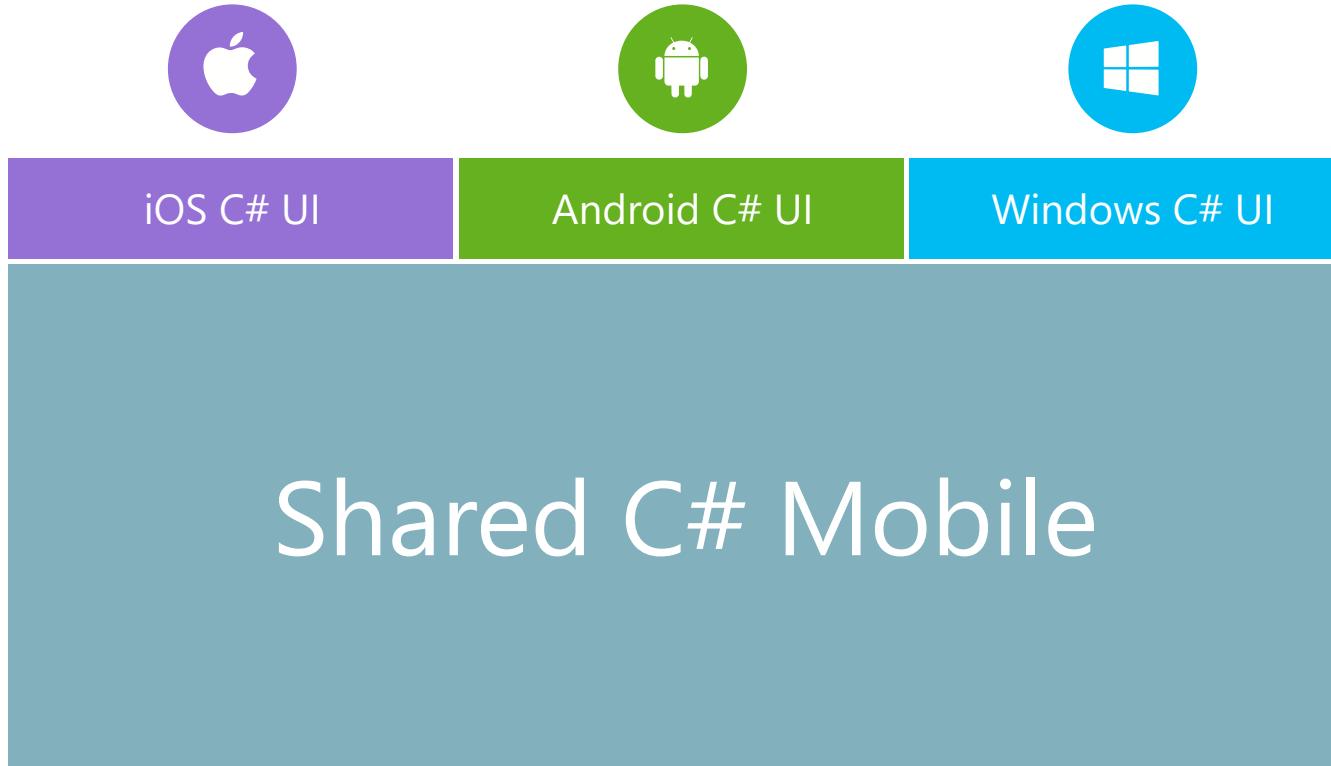


No shared code • Many languages & development environments • Multiple teams

Write Once, Run Anywhere



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#

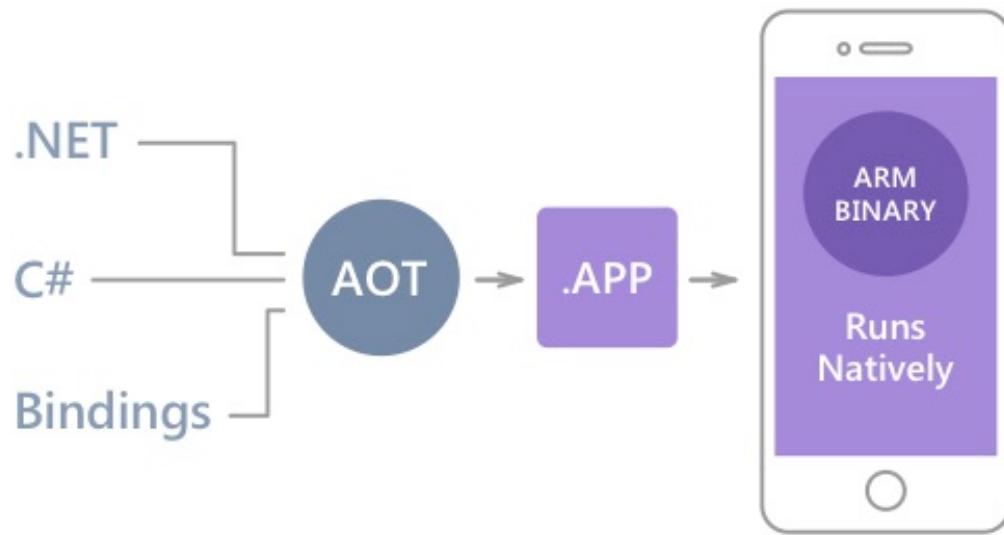
Android – 100% API Coverage

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

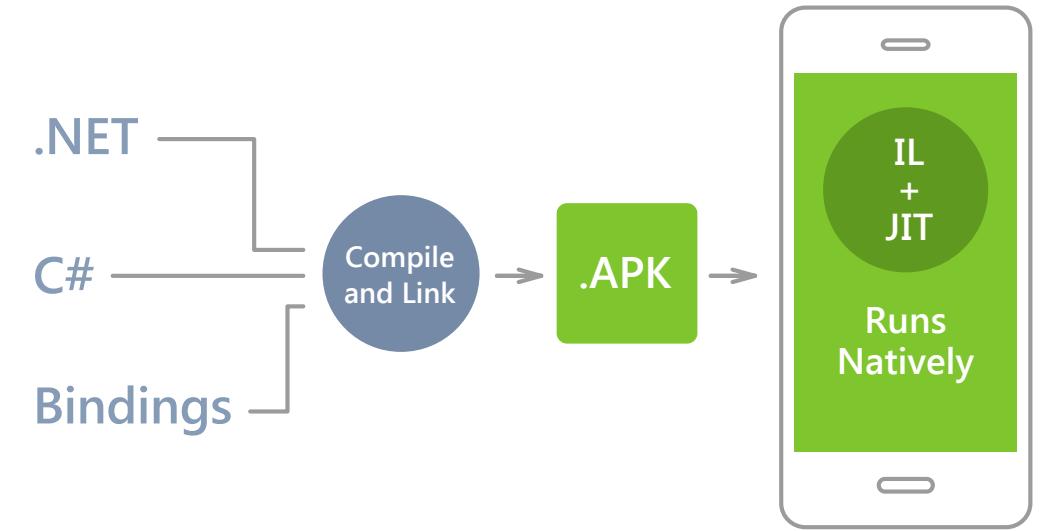


C#

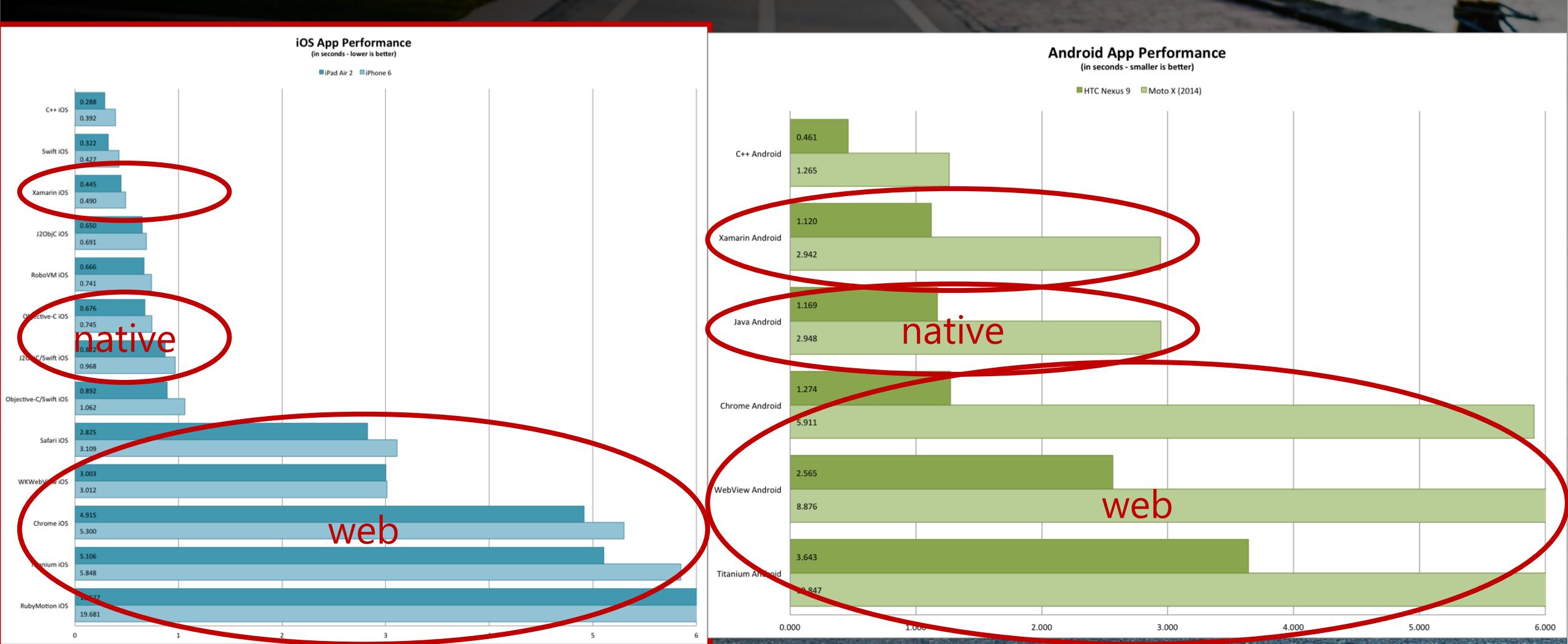
Native Performance



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.

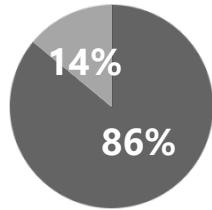


<http://bit.ly/mobile-app-performance>

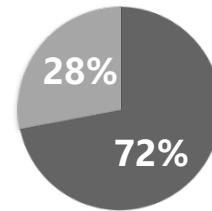
DOES IT PERFORM?

Code sharing stats

iCircuit



Touch Draw

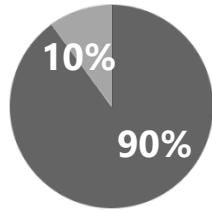
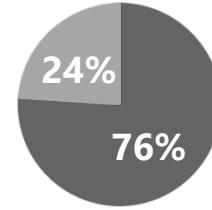
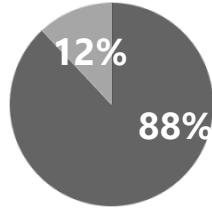
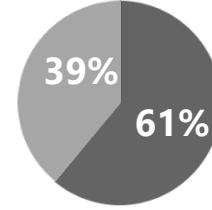
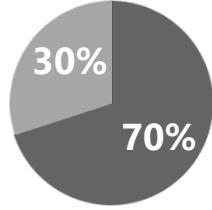


Android

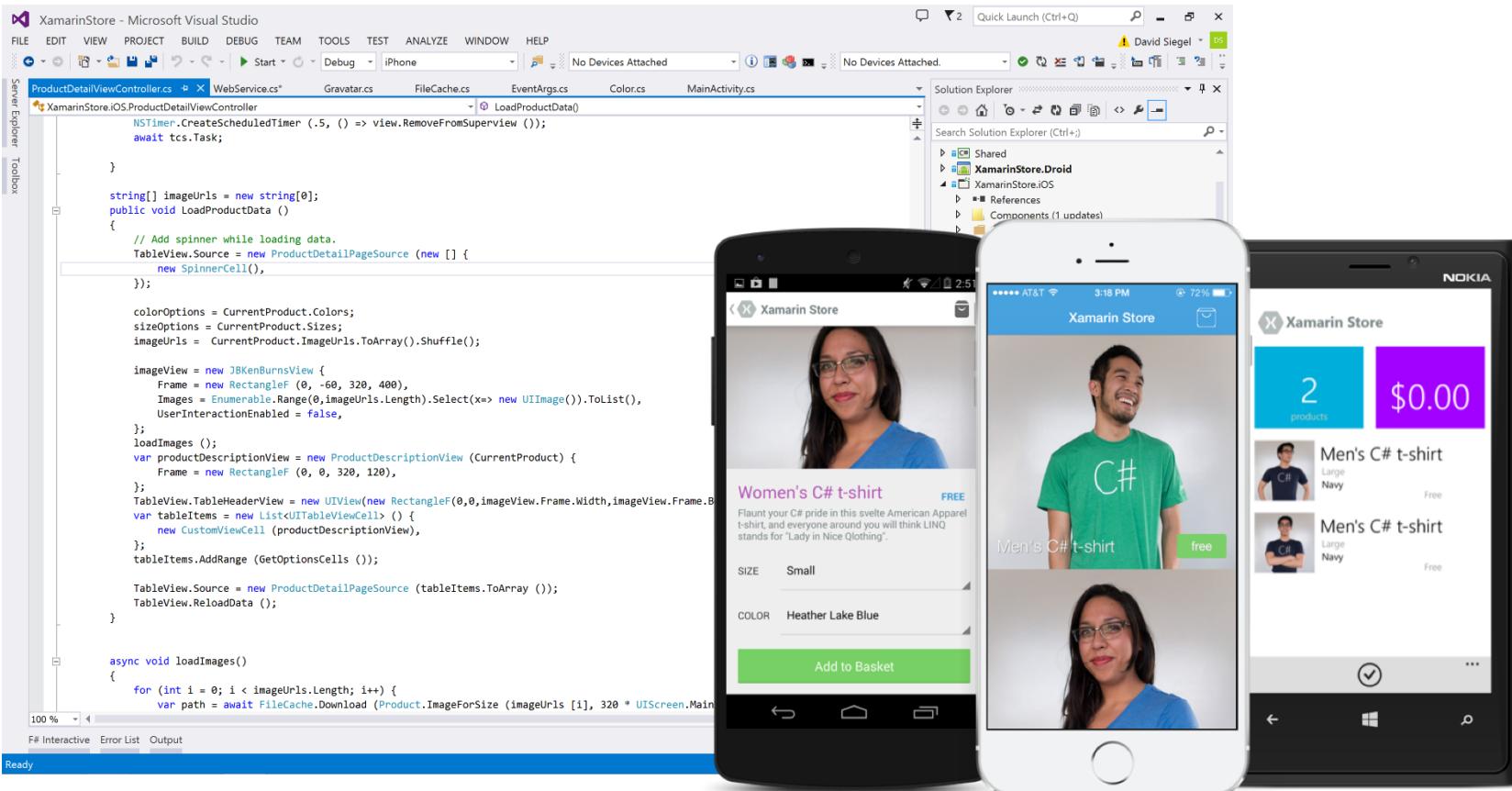
iOS

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 person sitting at a desk, viewed from the side. They are wearing a light gray t-shirt with a "Xamarin OPEN SOURCE" logo. On their lap is a silver laptop with several stickers: a unicorn, a flag, a .NET logo, an Apple logo, and a "YES WE CODE" sticker. The desk is cluttered with books, papers, and other office supplies. In the background, there's a window with a view of a city skyline.

Xamarin
OPEN SOURCE

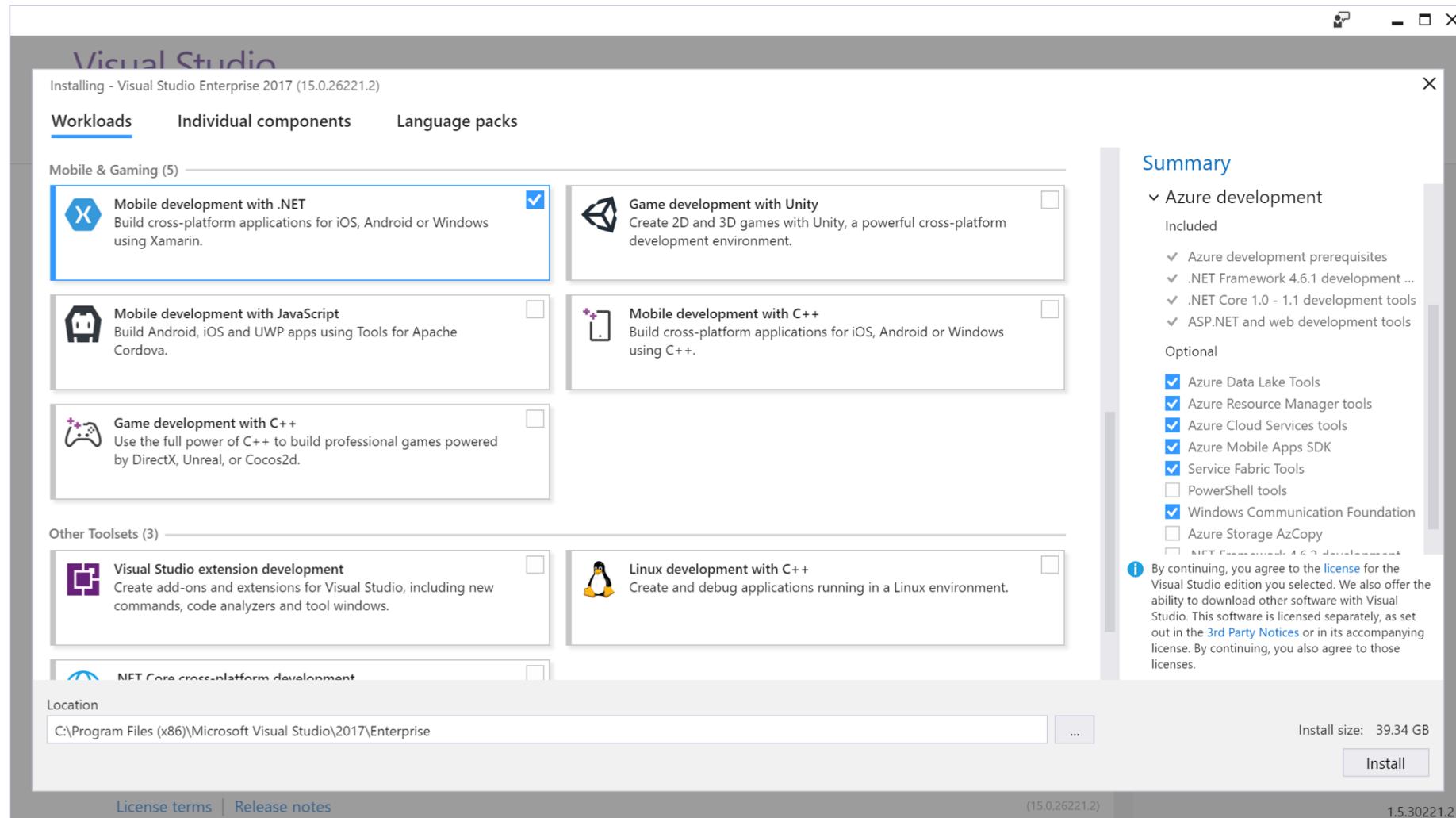
Xamarin SDK Documentation Community

Contribute

Build the future of apps with Xamarin.

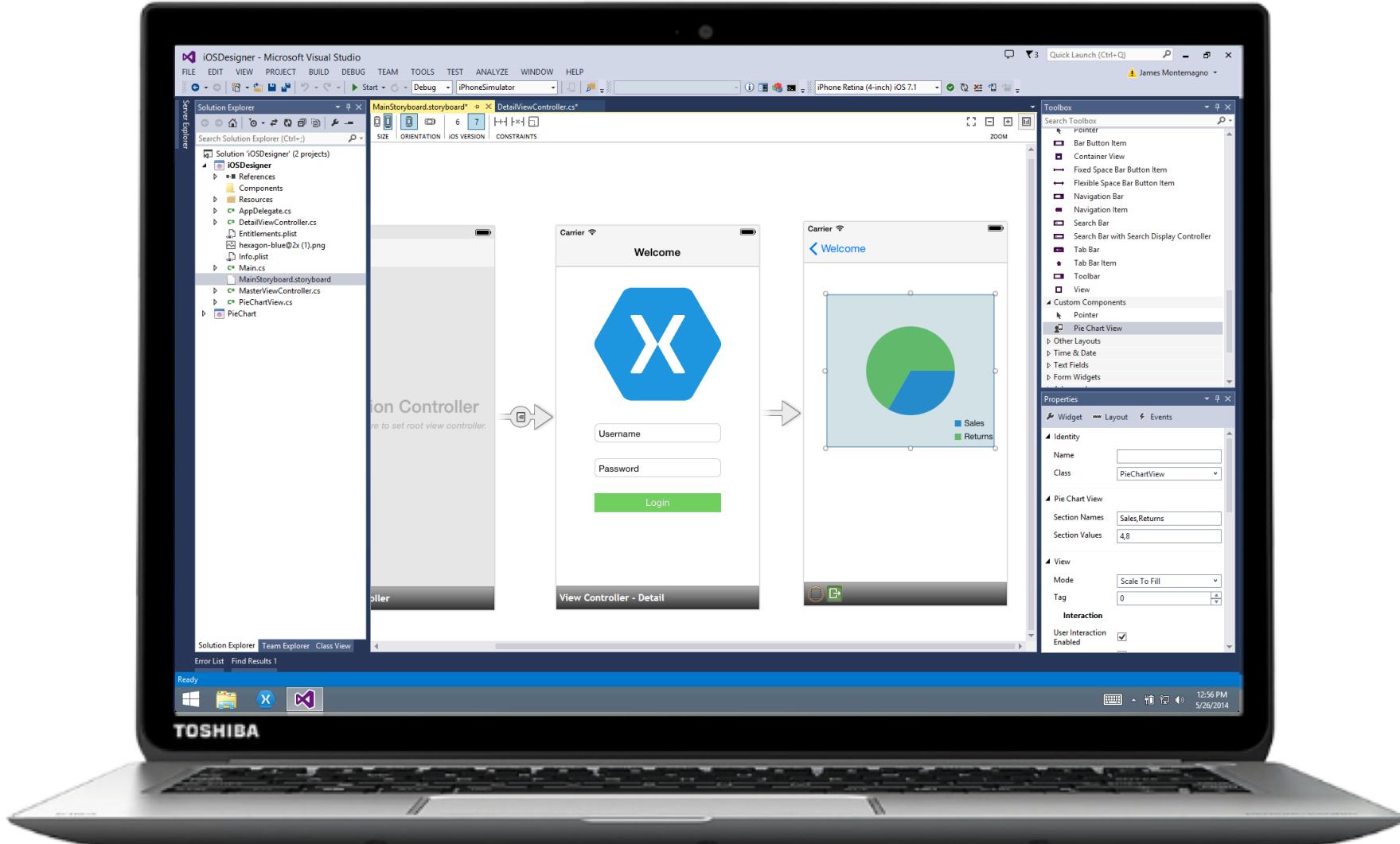
Xamarin SDK is now fully available under the MIT license.

Visual Studio Integration



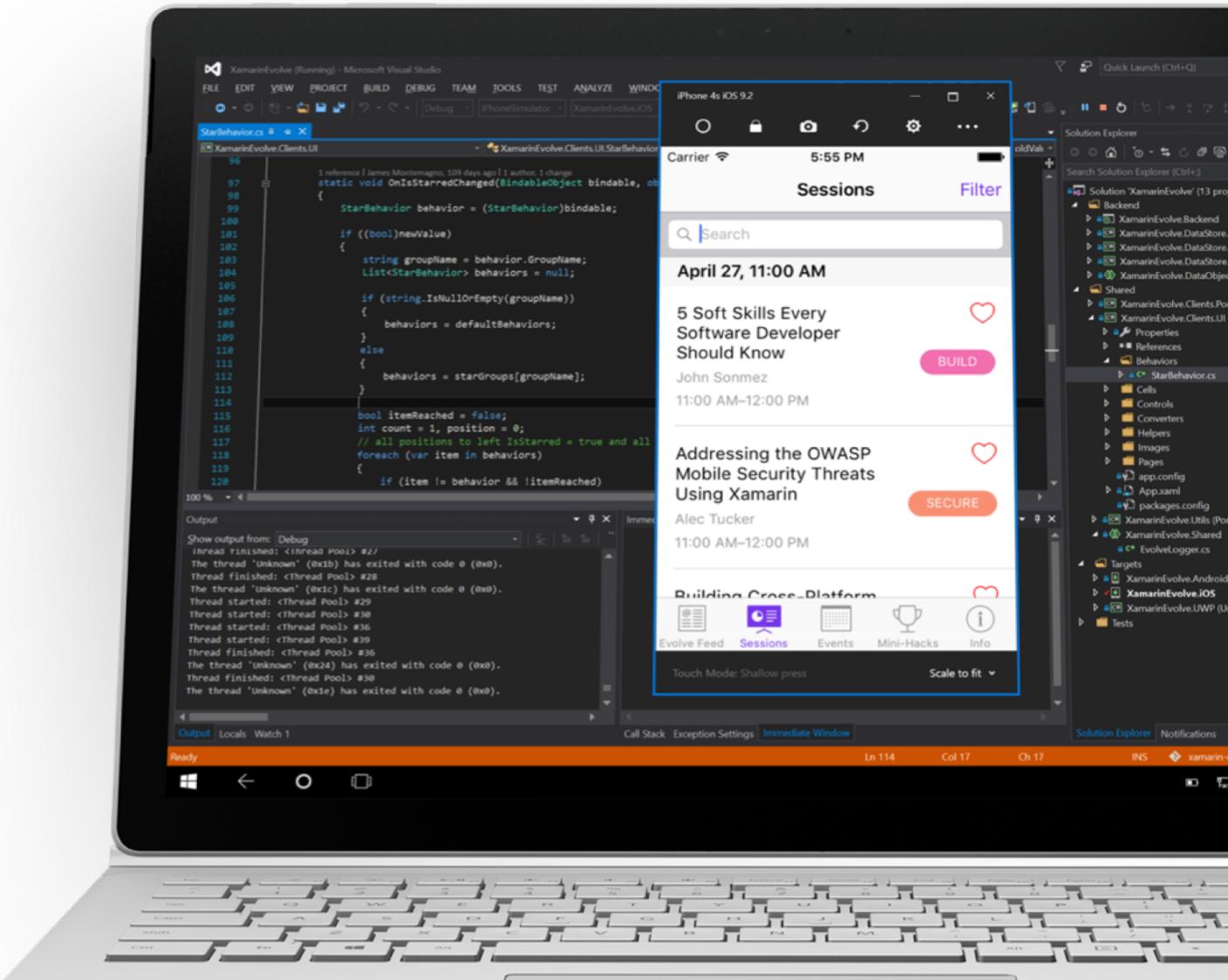
Xamarin.com/Download

Xamarin for Visual Studio



Visual Studio iOS Simulator Remoting

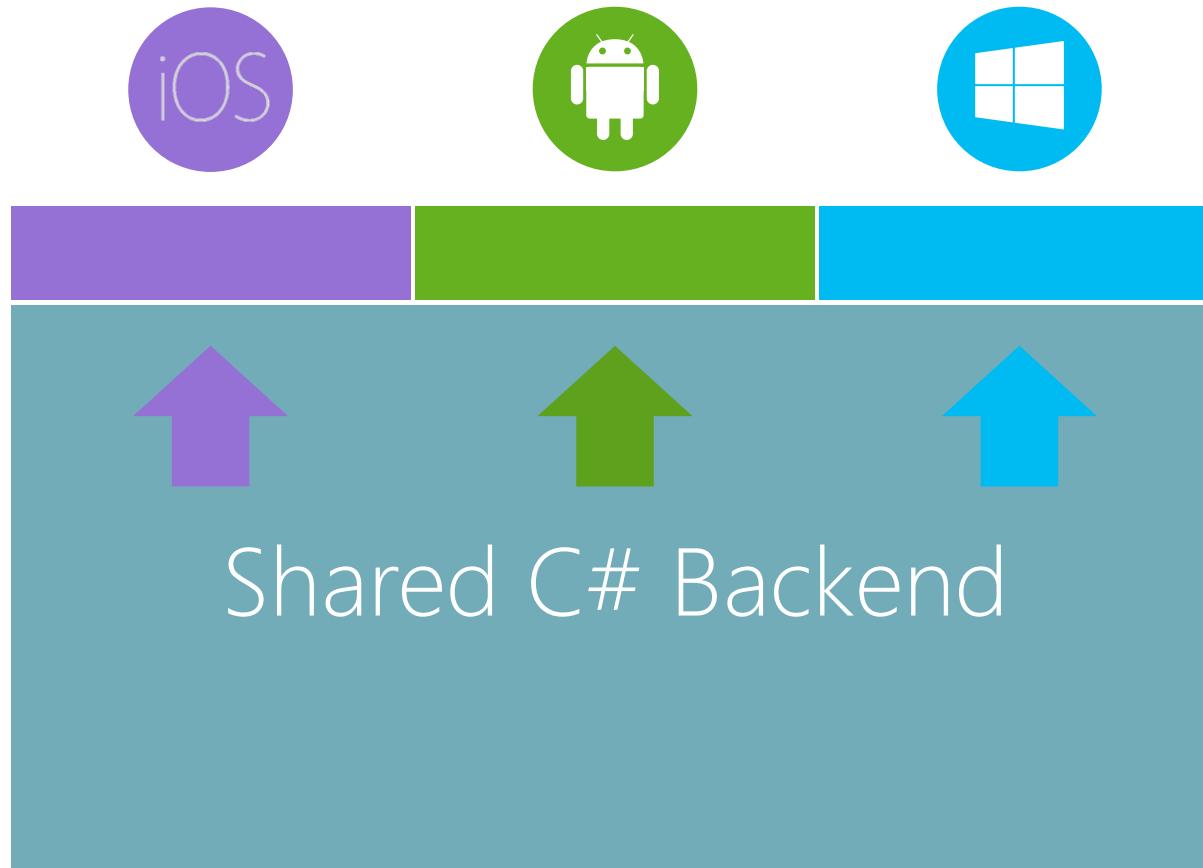
- Multi-Touch Enabled
- Pressure Sensitive
- Super Fast
- Rotate, screenshots, location changes
- Never leave VS



*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
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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?

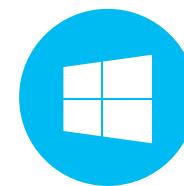
```
Speak("Hello World");
```



AVSpeechSynthesizer

TextToSpeech

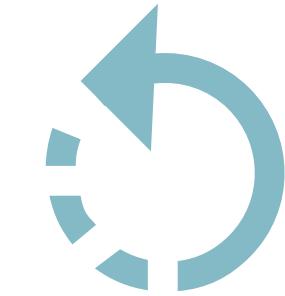
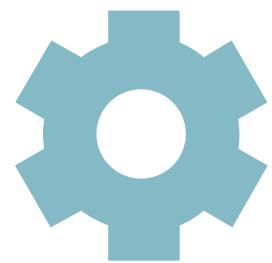
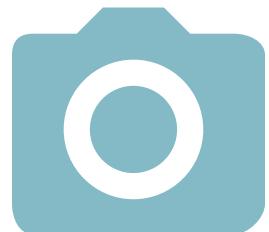
SpeechSynthesizer



Plugins for Xamarin & Windows

Xamarin.com/plugins

Common API



Let's build a native app

Lab01 – app-helloworld
pick Android or iOS (or both)