

Go Mobile with C#

# Who is this guy?



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mikecodes.net



# Who is this guy?



BeerDrinkin

iOS & Azure

C#



StepCounter

iOS & Android

C#



Dutch Spelling

iOS

C#



Hydrate

OS X

C#

# Cross platform developer





Red Bull Event @ The London Eye

# Xamarin – Your Complete Mobile Solution



# Architecting Mobile Apps

## Silo Approach

Build Apps  
Multiple Times



iOS App

Objective-C  
XCode



Android App

Java  
Eclipse



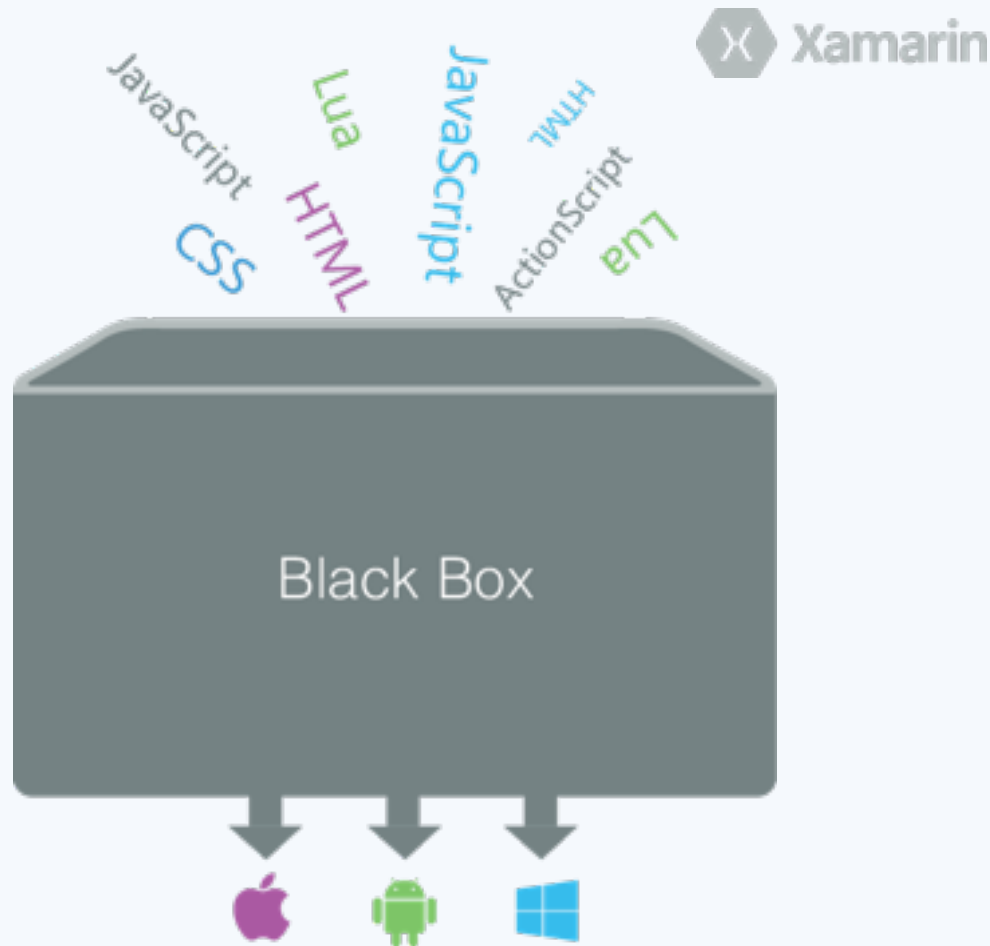
Windows App

C#  
Visual Studio

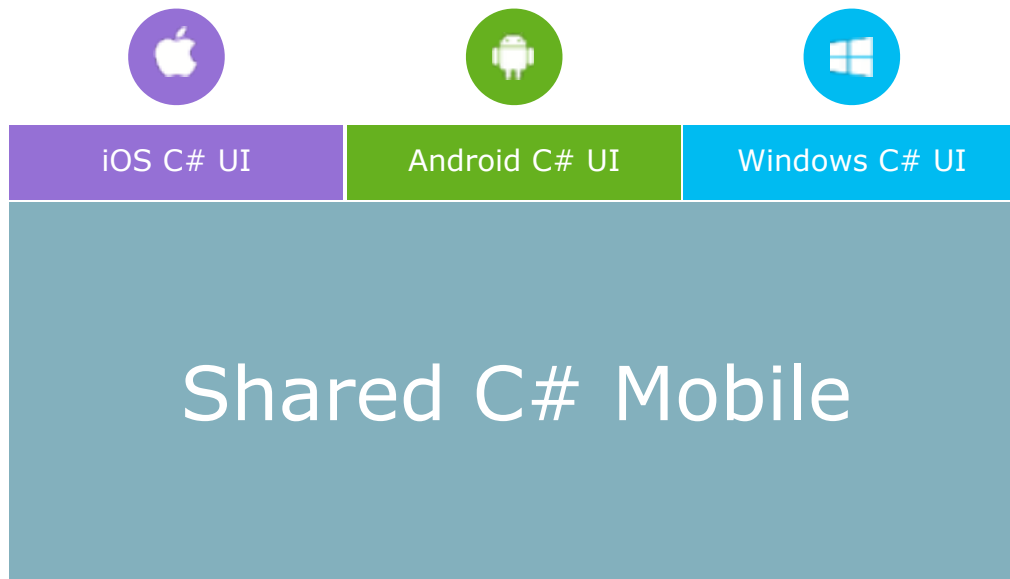


# Write Once, Run Anywhere Approach

Lowest  
Common  
Denominator



# Xamarin's Unique Approach



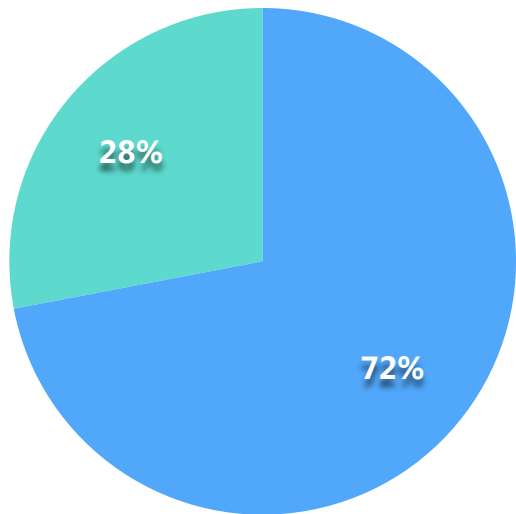
Shared C# codebase • 100% native API access • High performance

## TouchDraw on OS X

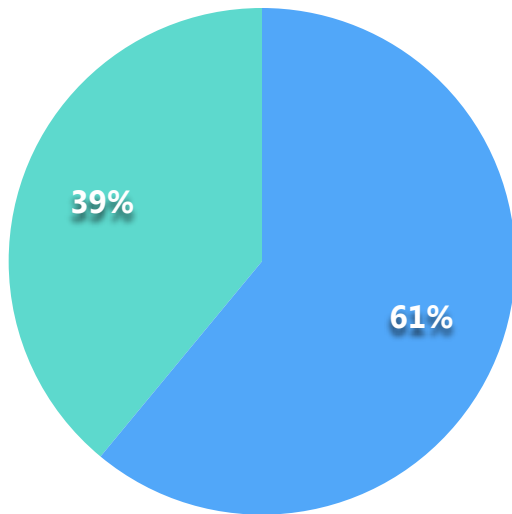


# Code sharing stats

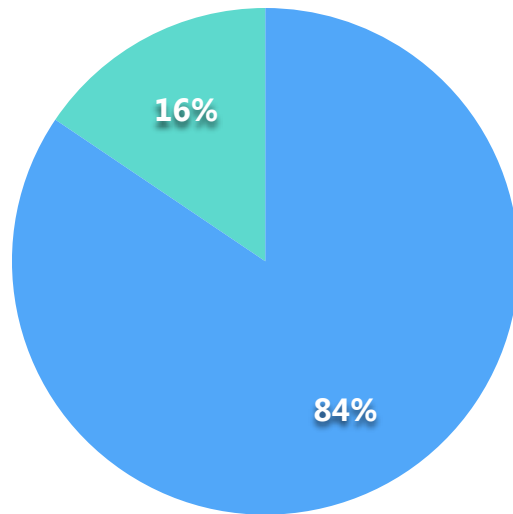
Touch Draw



Android

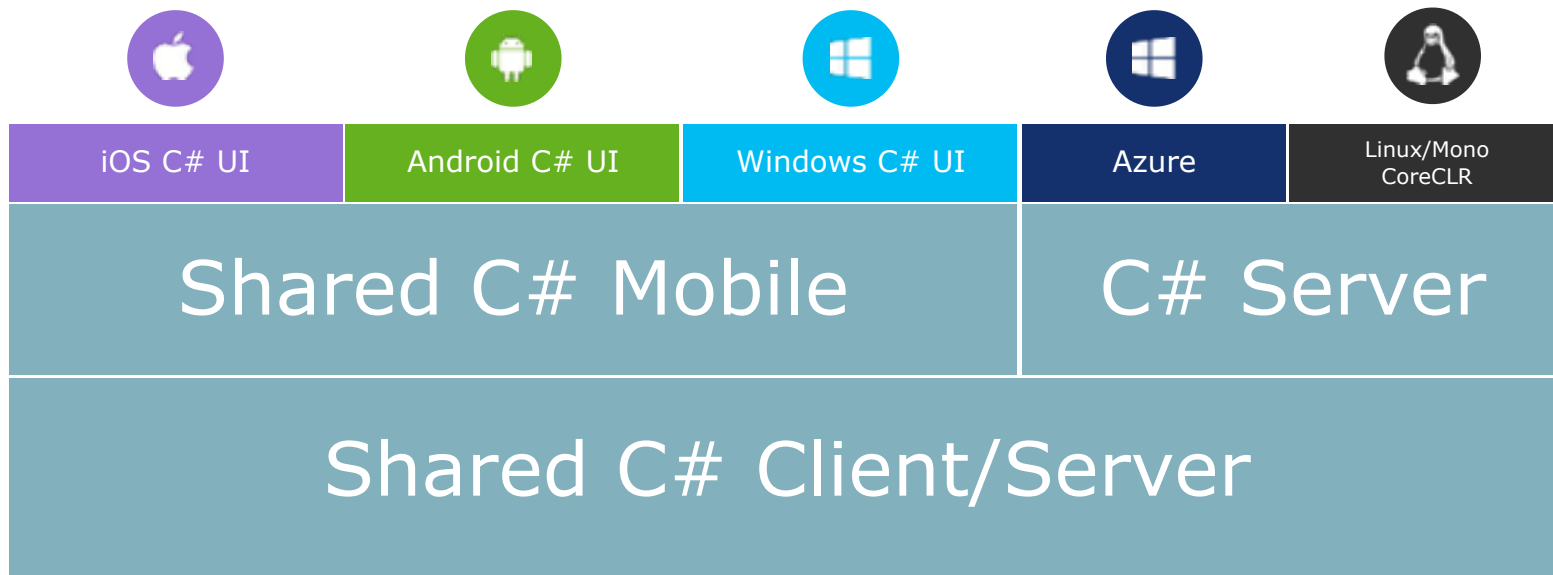


iOS



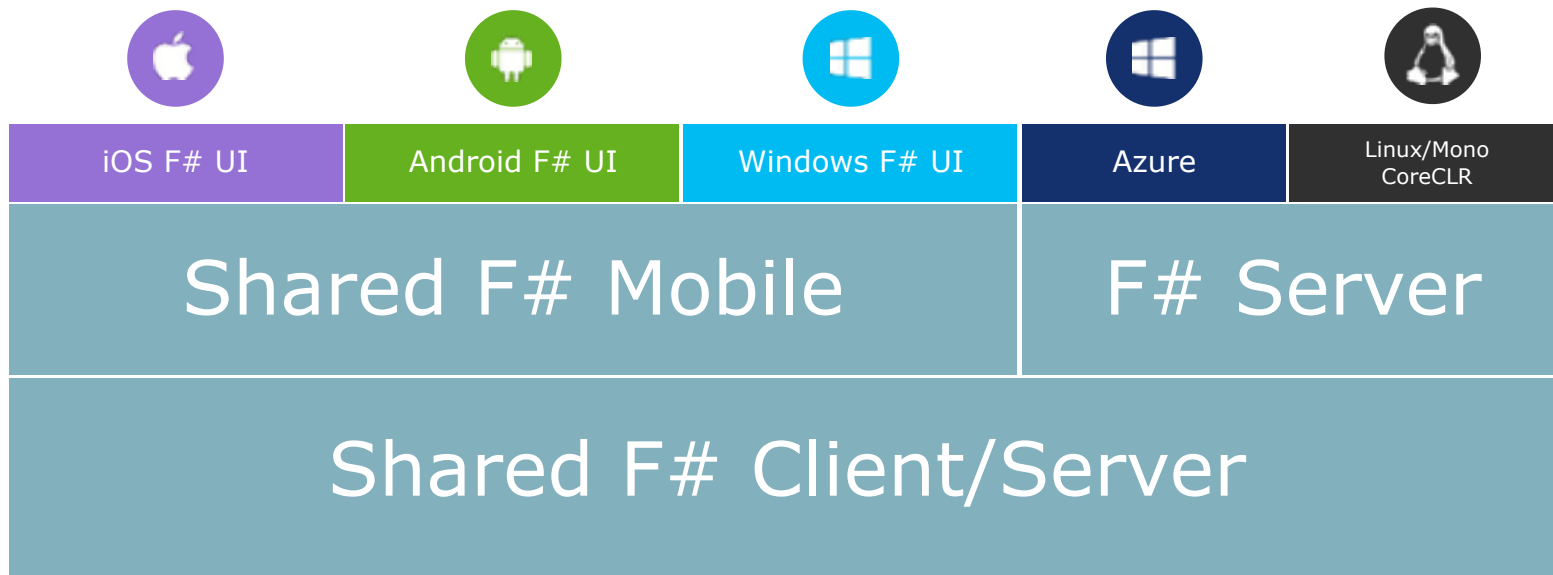
Mac

# Xamarin's Unique Approach



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

# Xamarin's Unique Approach



Shared F# 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

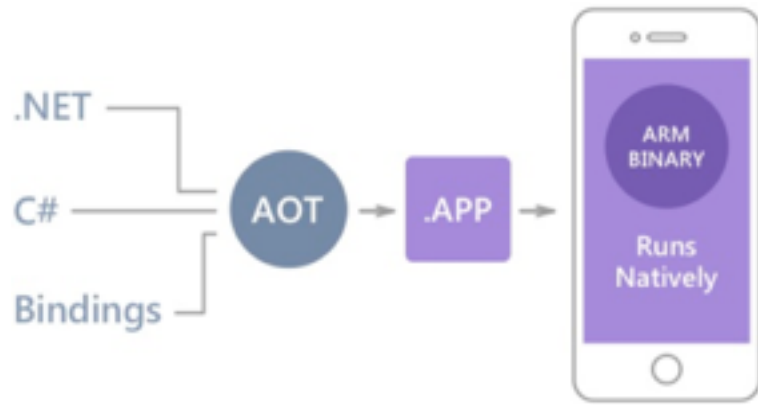
Text-to-speech	ActionBar	Printing Framework	RenderScript	NFC
System.Net	System	System.IO	System.Linq	System.Xml
System.Data	System.Windows	System.Numerics	System.Core	System.ServiceModel



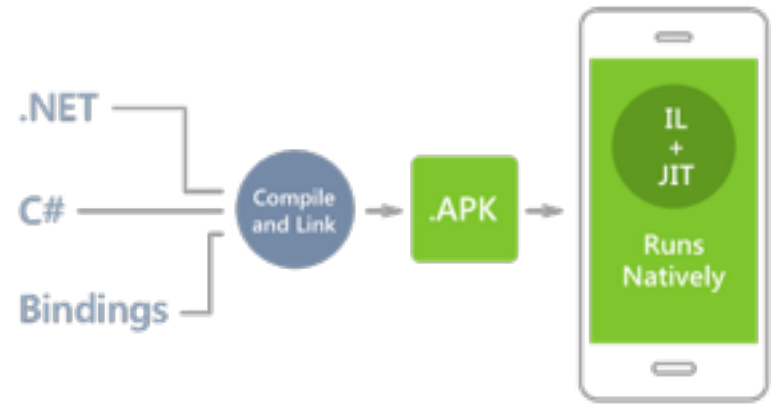
C#

Xamarin 'embraced and extended' .NET

# Native Performance

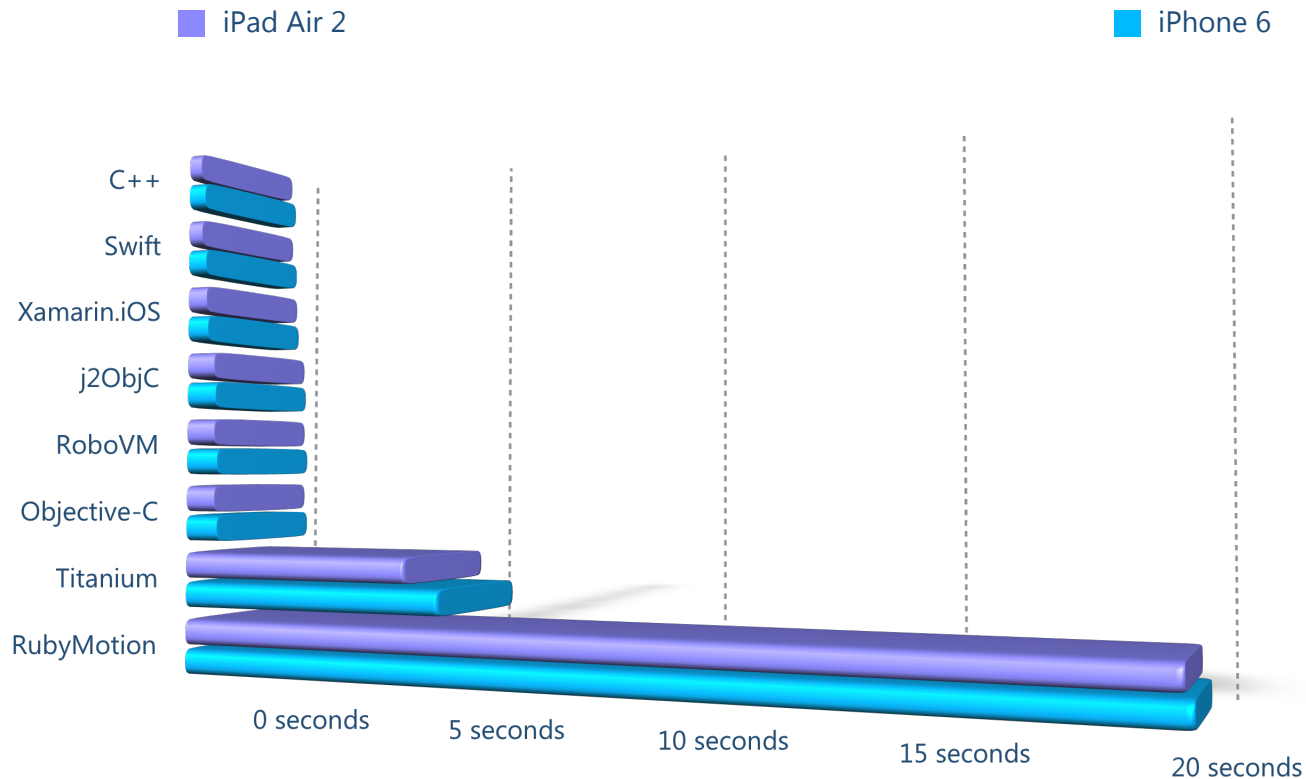


**Xamarin.iOS** does full Ahead Of Time (AOT) compilation to produce an ARM binary for Apple's App Store.

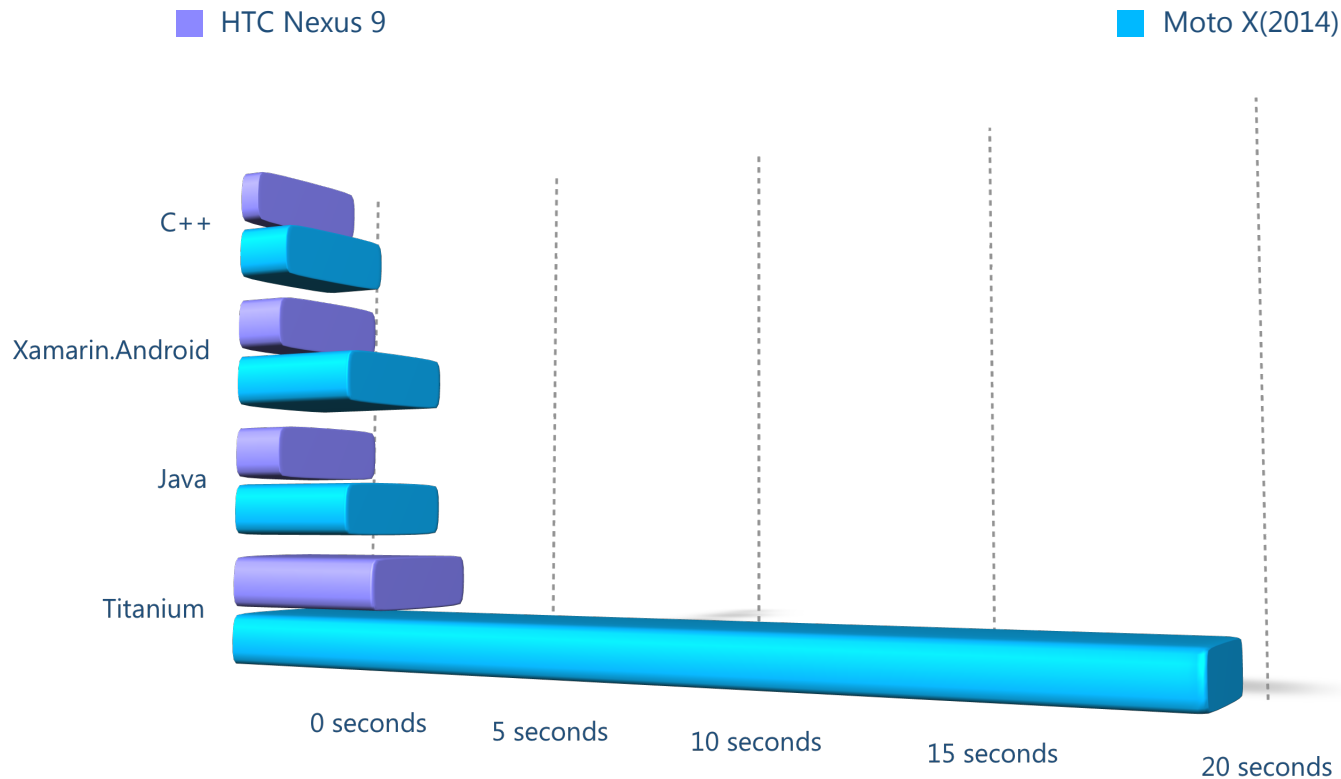


**Xamarin.Android** takes advantage of Just In Time (JIT) compilation on the Android device.

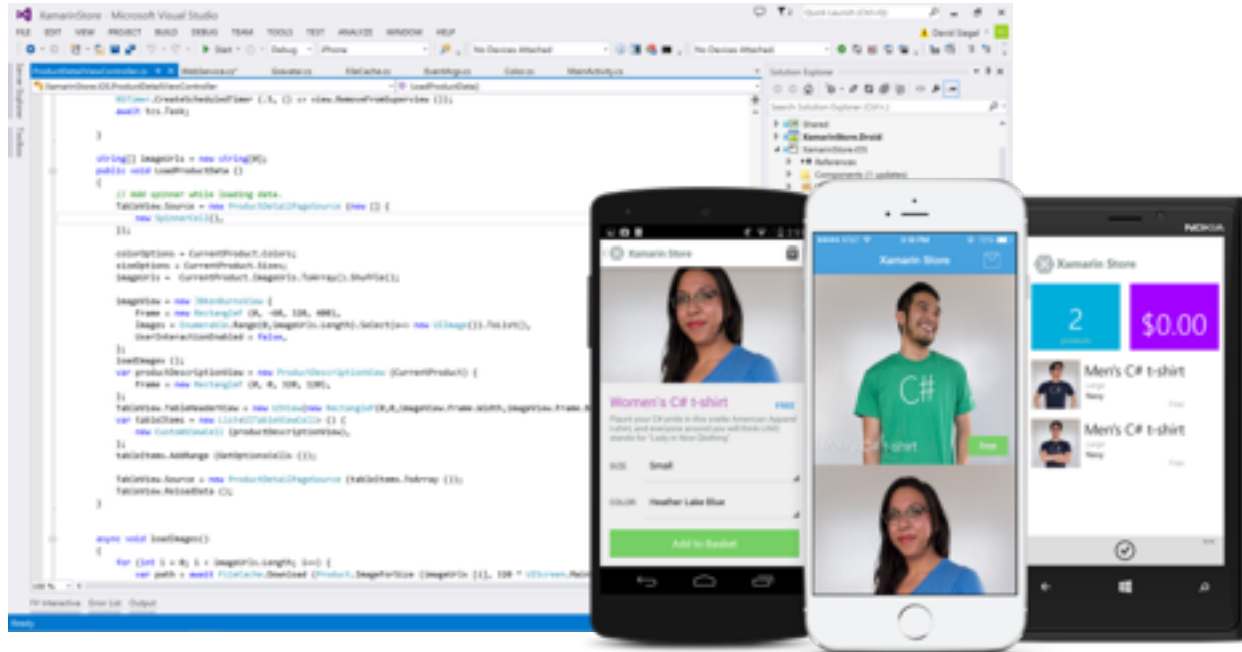
# iOS Performance



# Android Performance



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





C# runs on 2.6 Billion Devices







Run C# in the cloud with Azure

# ✓ Always Up-to-Date

## Same-day support:

- iOS 5
- iOS 6
- iOS 7
- iOS 7.1
- iOS 8

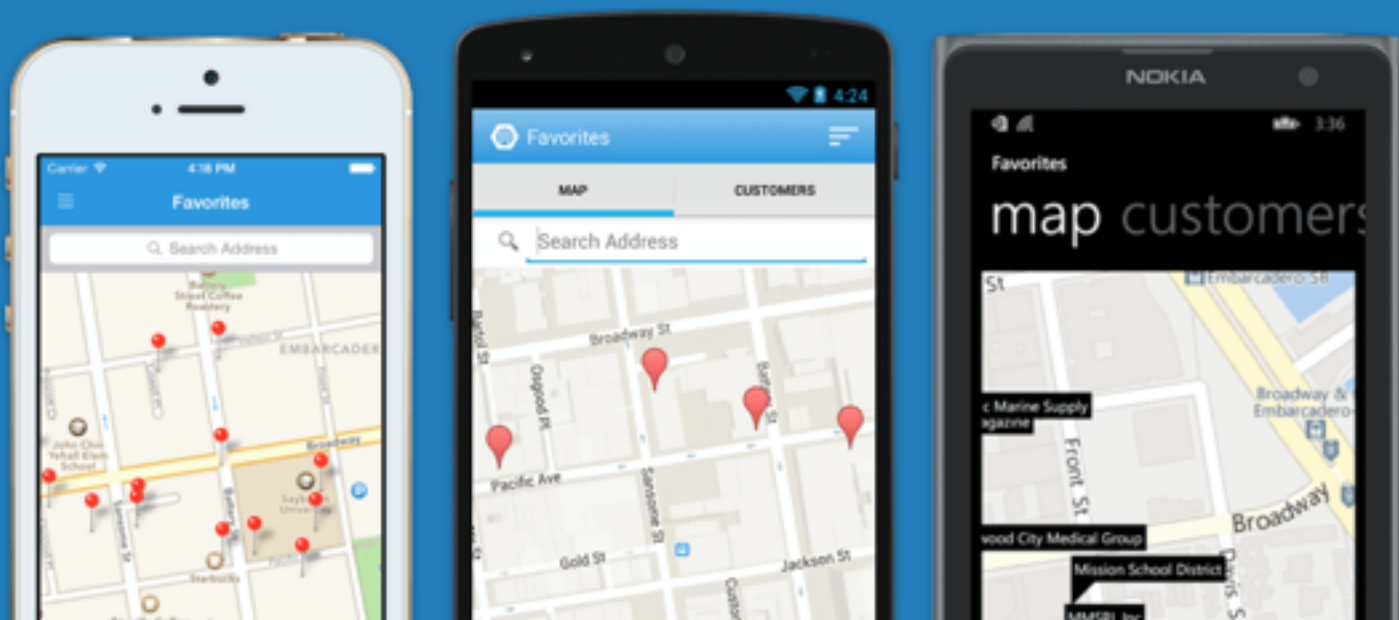
## Full support for:

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

Demo time!

# Meet Xamarin.Forms

Build native UIs for iOS, Android and Windows Phone from a single, shared C# codebase.

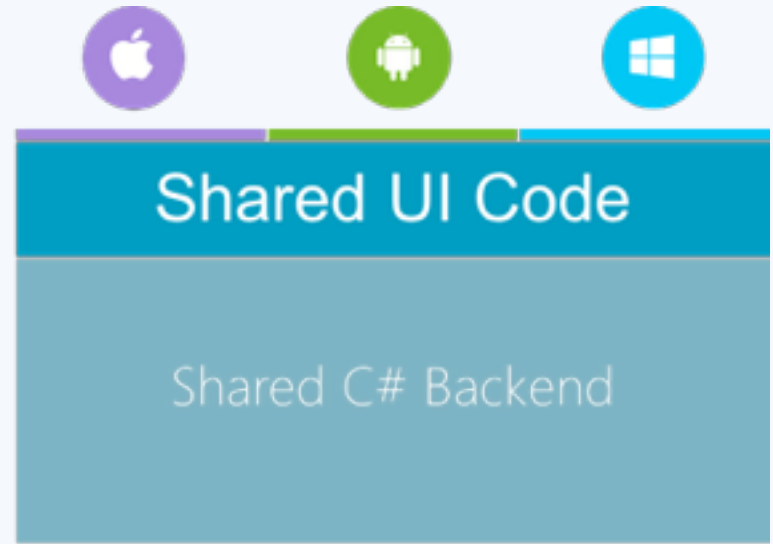


# Xamarin.Forms

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Traditional Xamarin  
Approach



With Xamarin.Forms:  
More code-sharing, all native

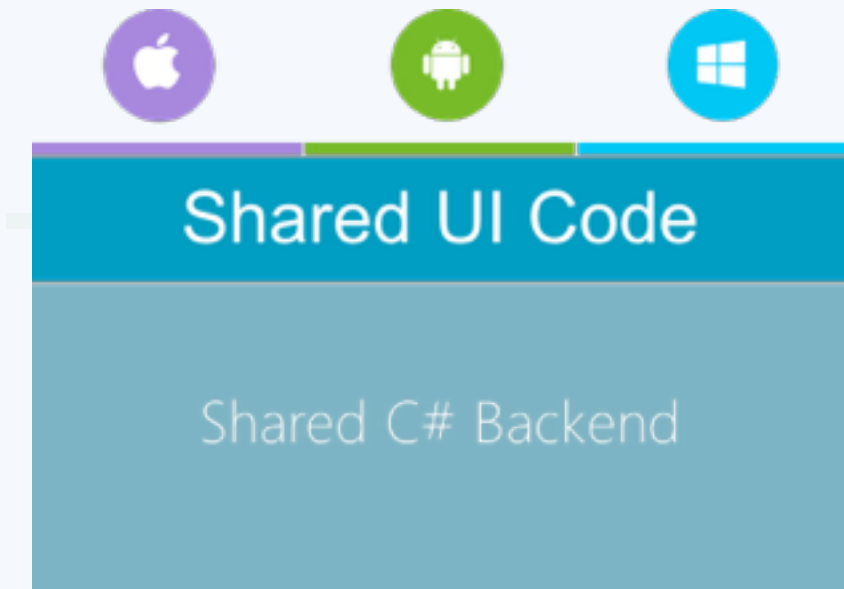
# Xamarin.Forms

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Quickly and easily build native user interfaces using shared code

Xamarin.Forms elements map to native controls and behaviours

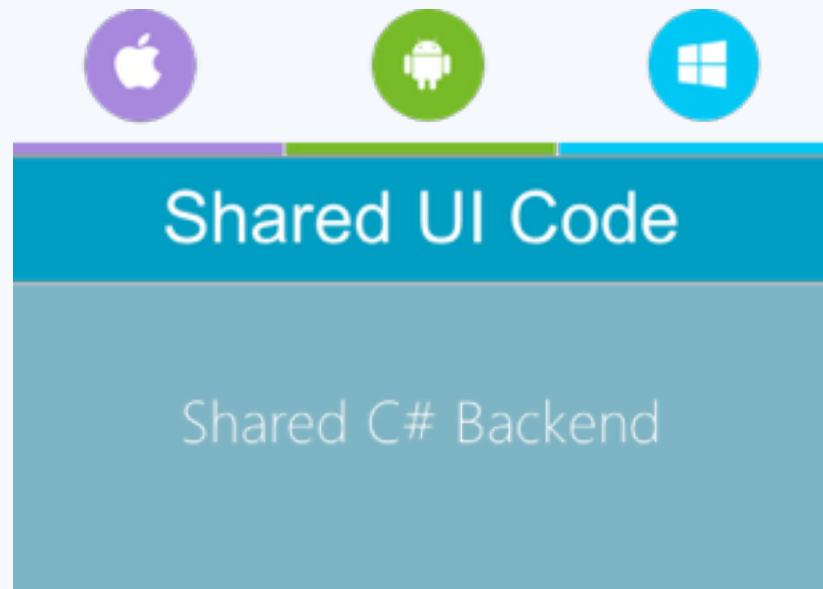
Mix-and-match Xamarin.Forms with native APIs



## What's Included

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- ✓ 40+ Pages, layouts, and controls  
(Build from code behind or XAML)
- ✓ Two-way data binding
- ✓ Navigation
- ✓ Animation API
- ✓ Dependency Service
- ✓ Messaging Center



# Microsoft XAML vs Xamarin.Forms

- Xamarin.Forms conforms to the XAML 2009 specification; the different are really in the controls and layout containers you use

```
<Page x:Class="App2.MainPage"
      xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
      xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml">

    <StackPanel Margin="50" VerticalAlignment="Center">
        <TextBox PlaceholderText="User name" />
        <PasswordBox PlaceholderText="Password" />
        <Button Background="#FF720055"
                Contents="login"
                Foreground="White" />
    </StackPanel>

</Page>
```

Microsoft XAML (WinRT)

```
<?xml version="1.0" encoding="utf-8"?>
<ContentPage xmlns="http://xamarin.com/schemas/2014/forms"
             xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
             x:Class="Test.MyPage">

    <StackLayout Spacing="20"
                 Padding="50" VerticalOptions="Center">
        <Entry Placeholder="User Name" />
        <Entry Placeholder="Password"
                IsPassword="True" />
        <Button Text="Login" TextColor="White"
                BackgroundColor="#FF720055" />
    </StackLayout>

</ContentPage>
```

Xamarin.Forms

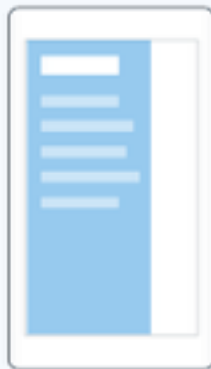


# Pages

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Content



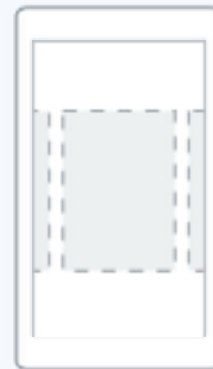
MasterDetail



Navigation



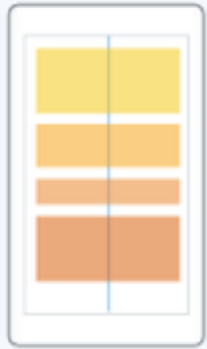
Tabbed



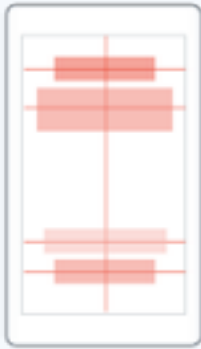
Carousel

# Layouts

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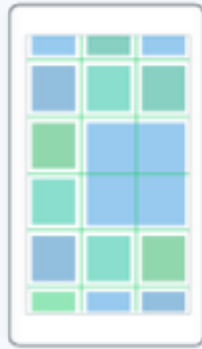
Stack



Absolute



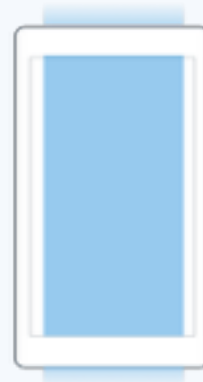
Relative



Grid



ContentView



ScrollView



Frame

# Controls

ActivityIndicator

BoxView

Button

DatePicker

Editor

Entry

Image

Label

ListView

Map

OpenGLView

Picker

ProgressBar

SearchBar

Slider

Stepper

TableView

TimePicker

WebView

EntryCell

ImageCell

SwitchCell

TextCell

ViewCell

Demo time!

# Thank you. Questions?

**Mike James**

Developer Evangelist, Xamarin

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