



GUEST LECTURE DISTRIBUTED COMPUTING

Getting started with Xamarin mobile development

- WHO AM I?

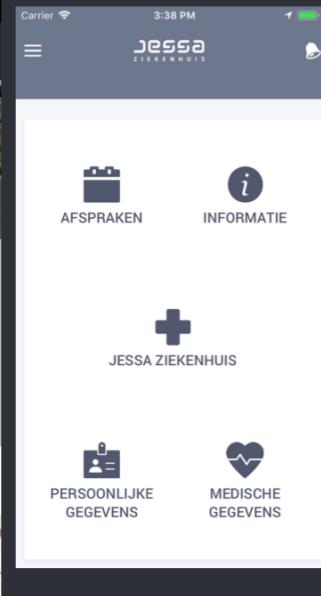
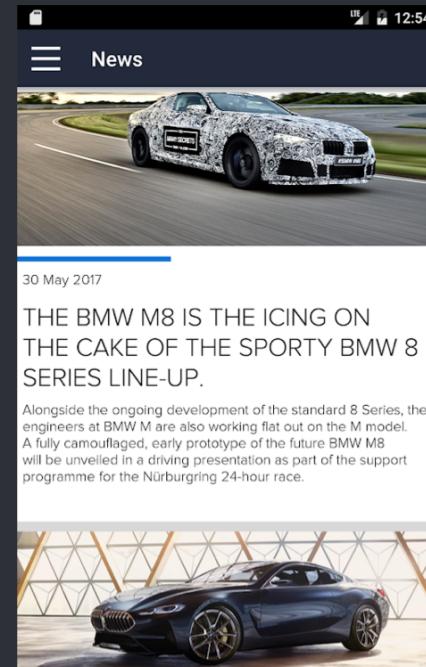
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- Technical lead 3factr Software Factory
- sam.debruyn@3factr.be
- www.3factr.be
- @SamuelDebruyn



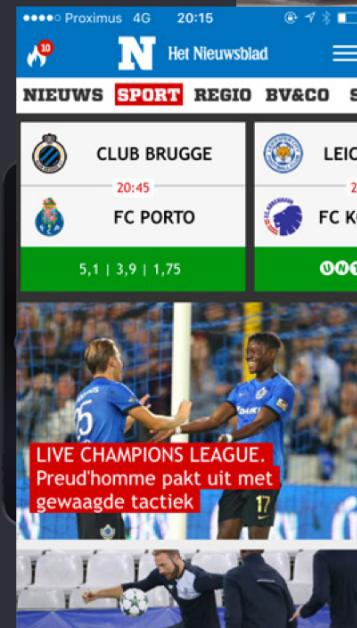
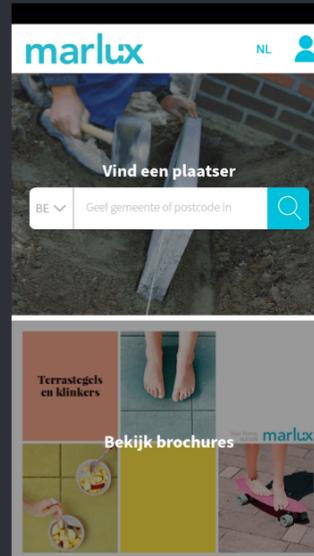
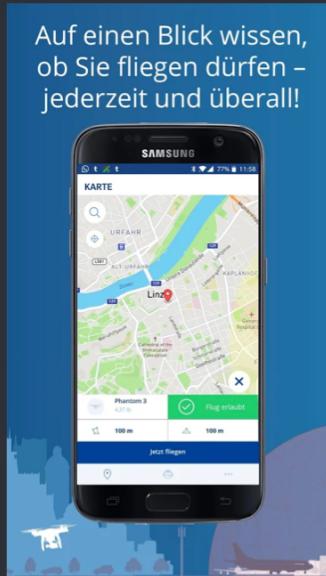
◦Mobilefactr



◦Xamarinfactr



◦Cofactr



• 3fäctr

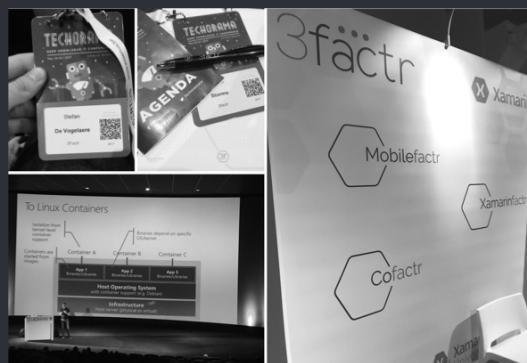
- Mobilefactr



- Xamarinfactr



- Cofactr



- 3factr
 - Mobilefactr
 - Xamarinfactr
 - Cofactr

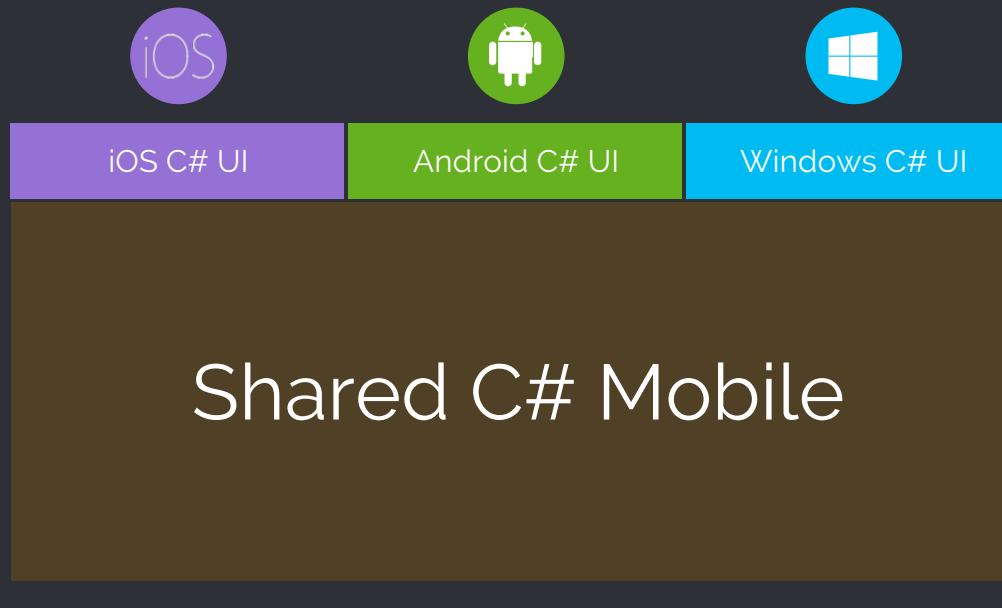




AGENDA

- Intro to Xamarin
- Xamarin.Forms
- Demo

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

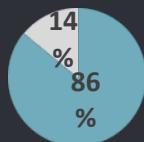


C#

Code Sharing Stats

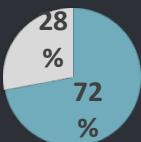
iCircuit

Android

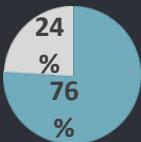


Touch
Draw

iOS



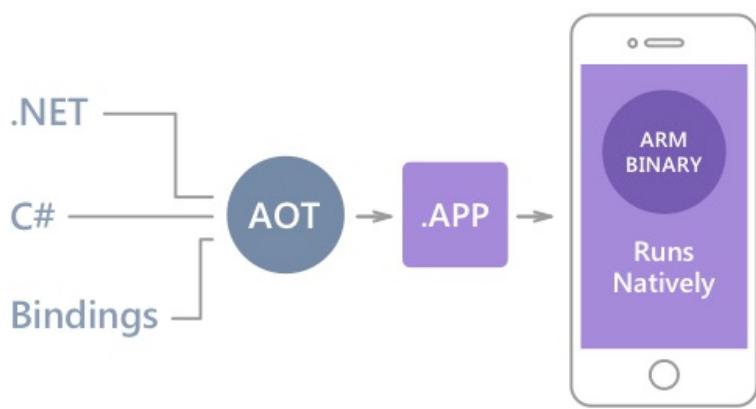
Mac



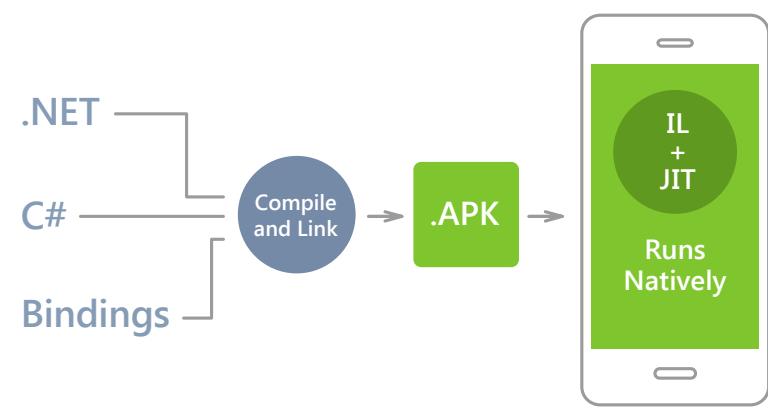
Windows Phone



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.

✓ Always Up-to- Date

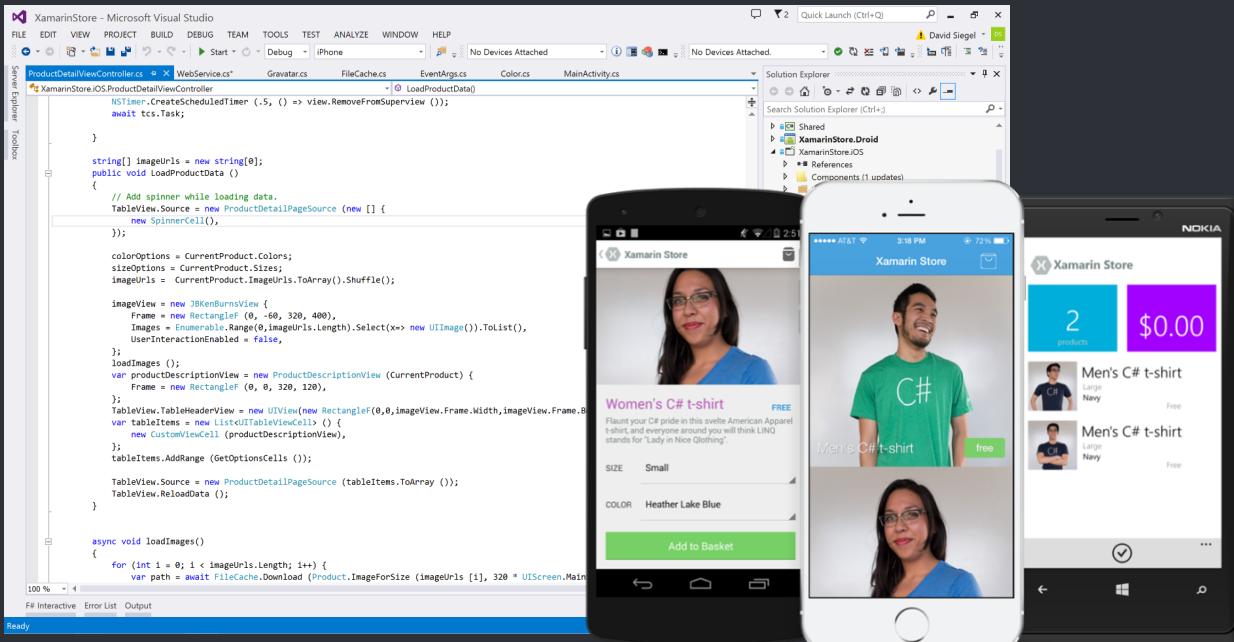
Same-day
support:

- iOS 5
- iOS 6
- iOS 7
- iOS 8
- iOS 9
- iOS 10
- iOS 11

Full support
for:

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

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

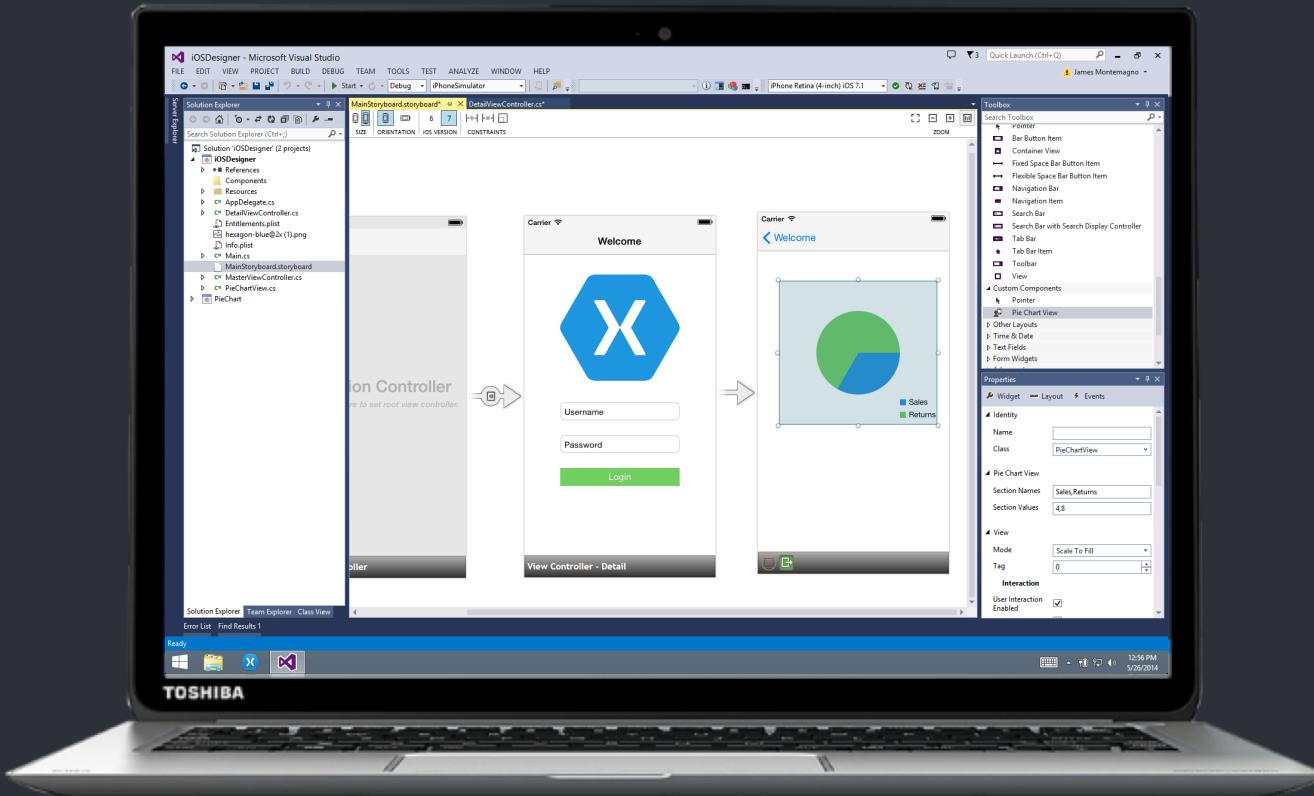




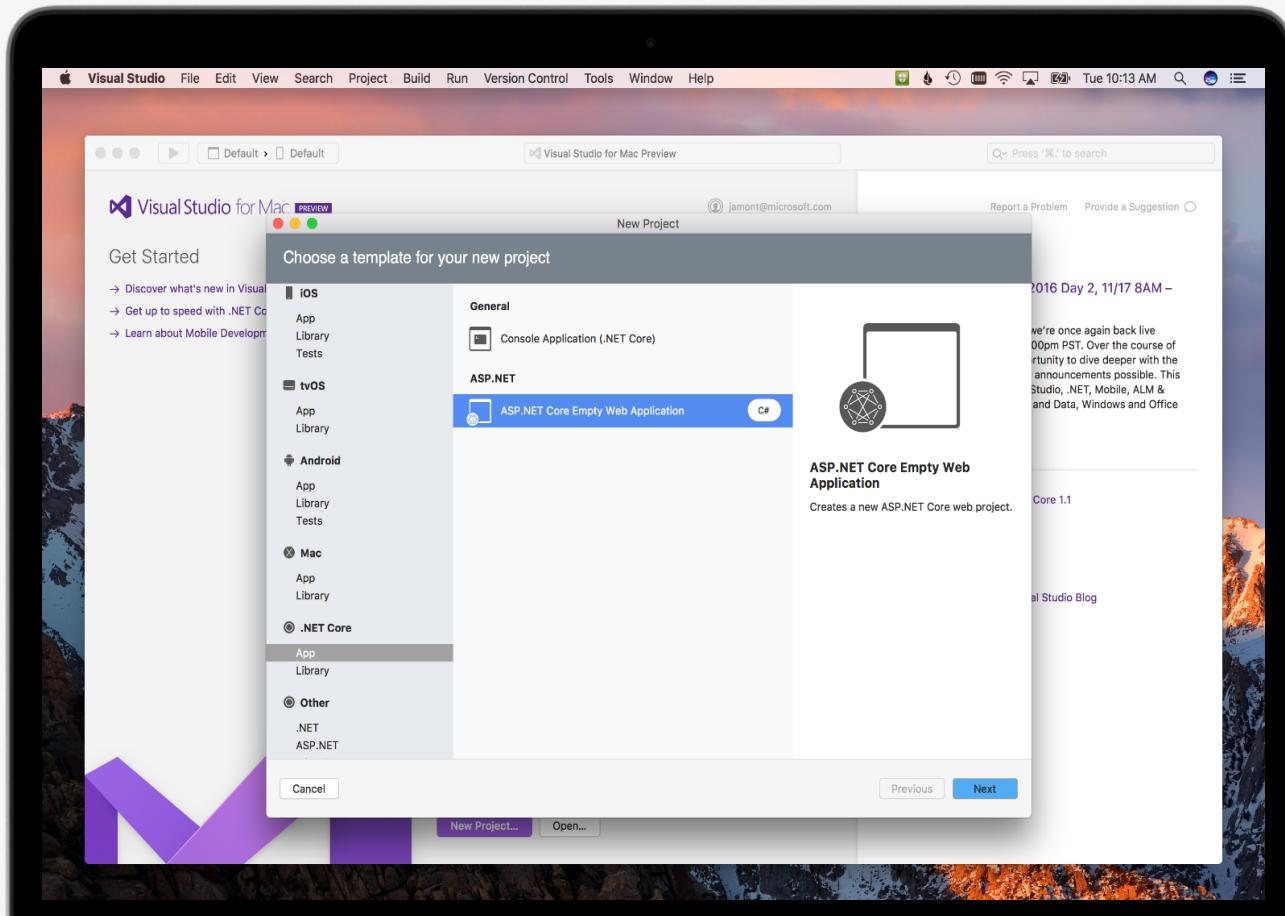
XAMARIN IS INCLUDED IN VISUAL STUDIO

Even in the **free** Community Edition

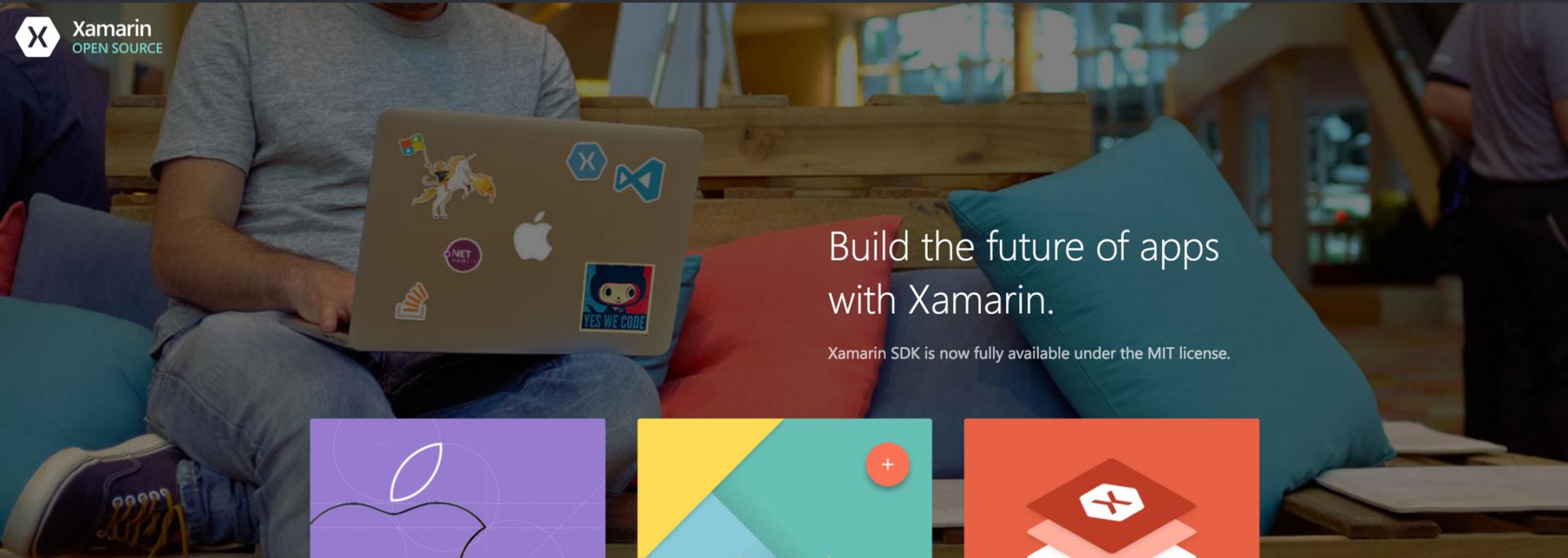
Xamarin for Visual Studio



Visual Studio for Mac



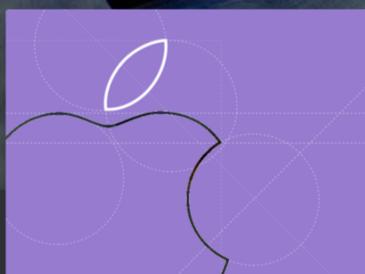
Open Source – open.xamarin.com



Xamarin
OPEN SOURCE

Build the future of apps with Xamarin.

Xamarin SDK is now fully available under the MIT license.

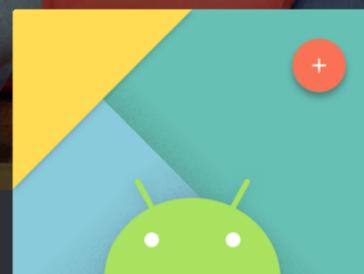


Xamarin.iOS

& Xamarin.Mac

Native mobile apps for iOS, watchOS, tvOS, and OS X with .NET

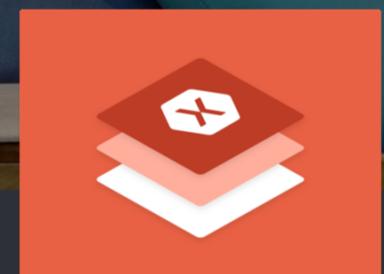
Explore source code



Xamarin.Android

Native mobile apps for Android, Android Wear, and Android TV with .NET

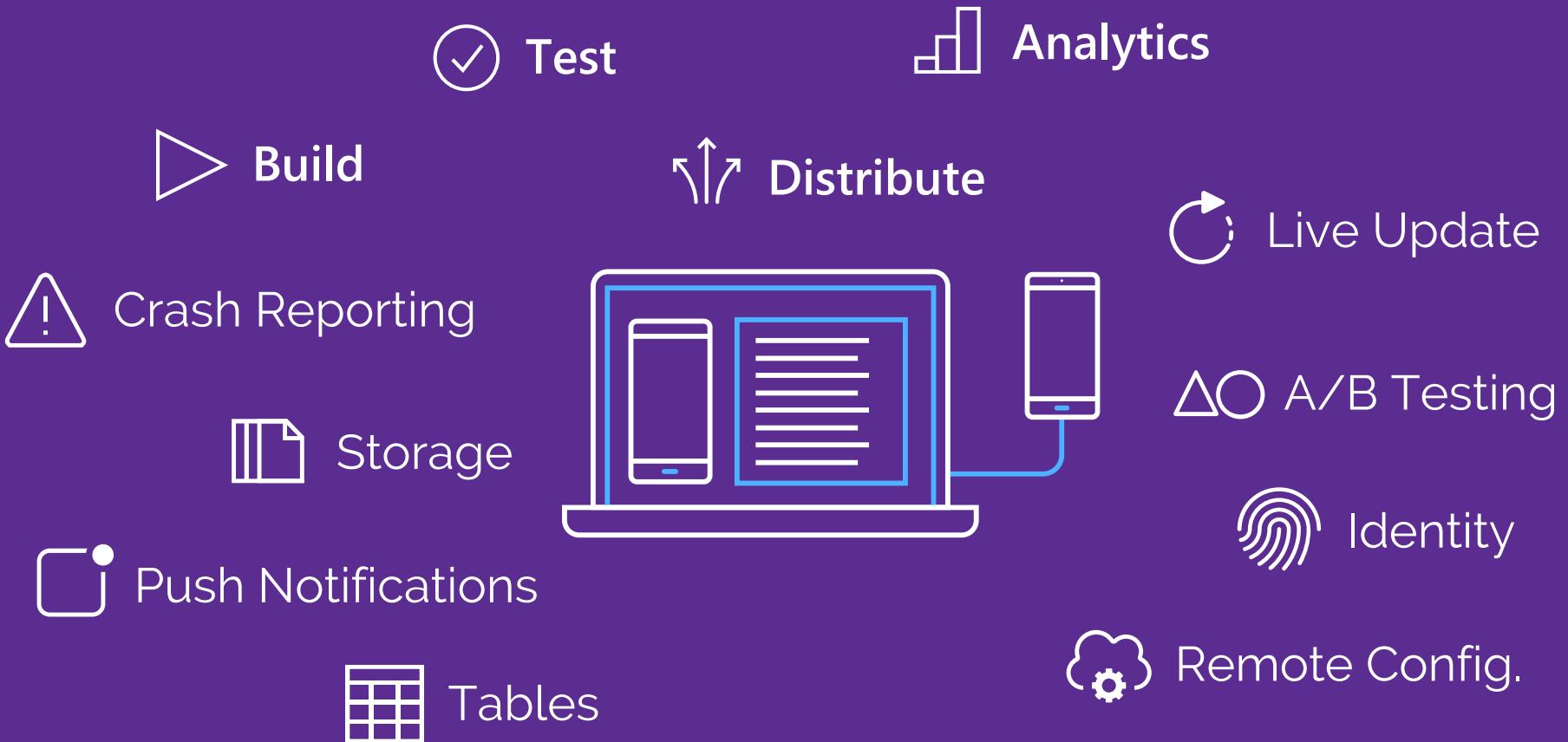
Explore source code



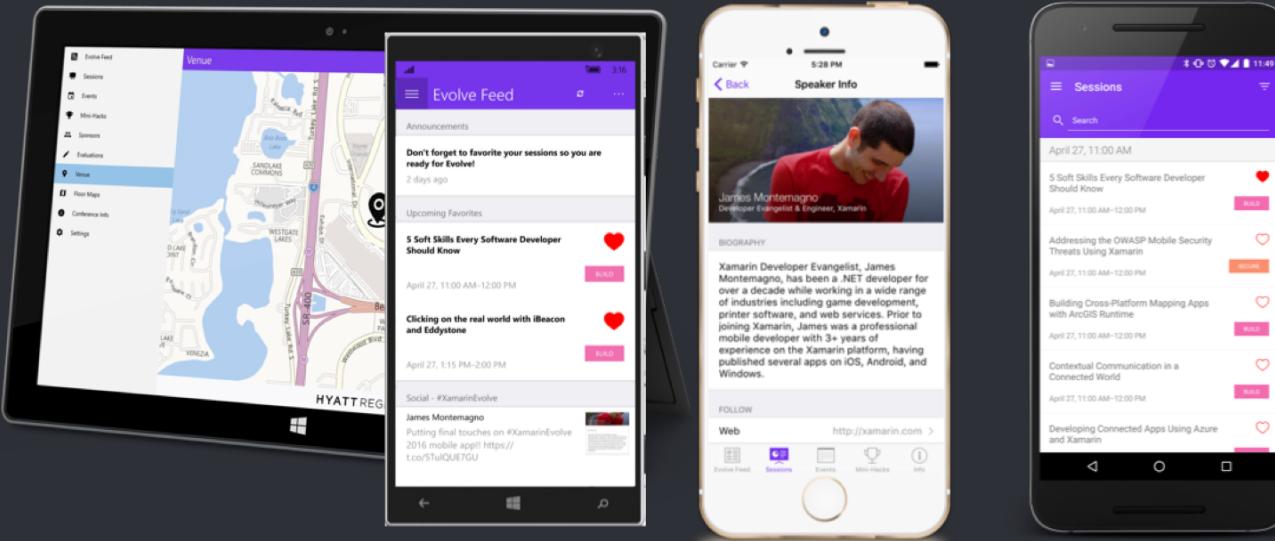
Xamarin.Forms

Native UIs for iOS, Android, and Windows from a single, shared codebase

Explore source code

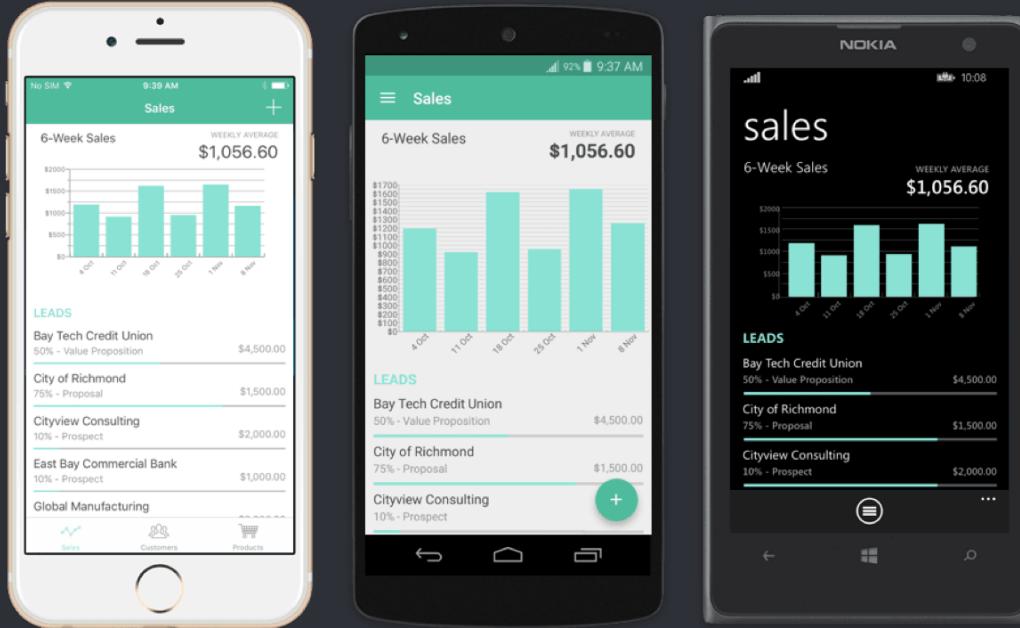


Meet Xamarin.Forms



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

Meet Xamarin.Forms



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

Meet Xamarin.Forms



Build native UIs for iOS, Android, and Windows
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What's included

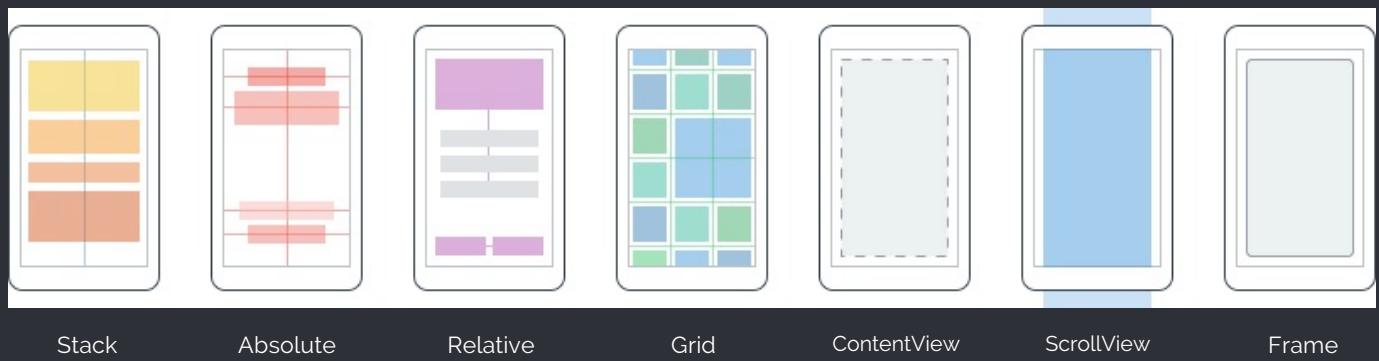


- ✓ 40+ Pages, layouts, and controls
(Build from code behind or XAML)
- ✓ Two-way data binding
- ✓ Navigation
- ✓ Animation API
- ✓ Dependency Service
- ✓ Messaging Center

Pages



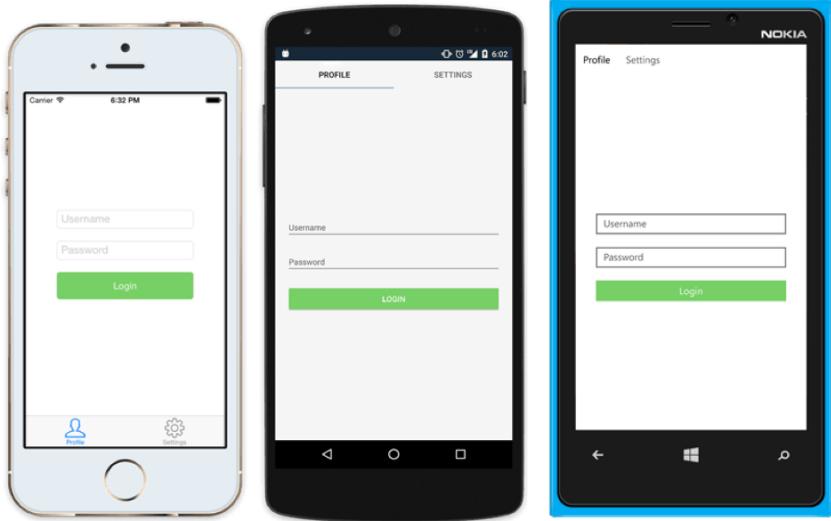
Layouts



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	

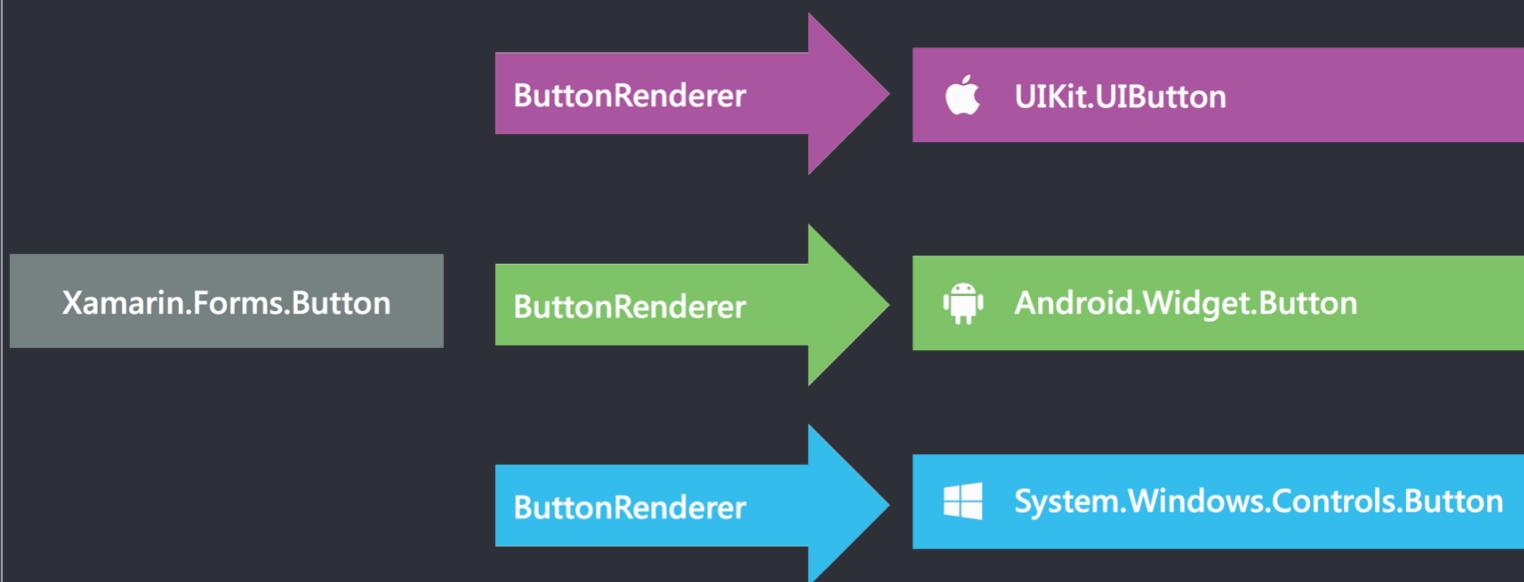
Native UI from shared code



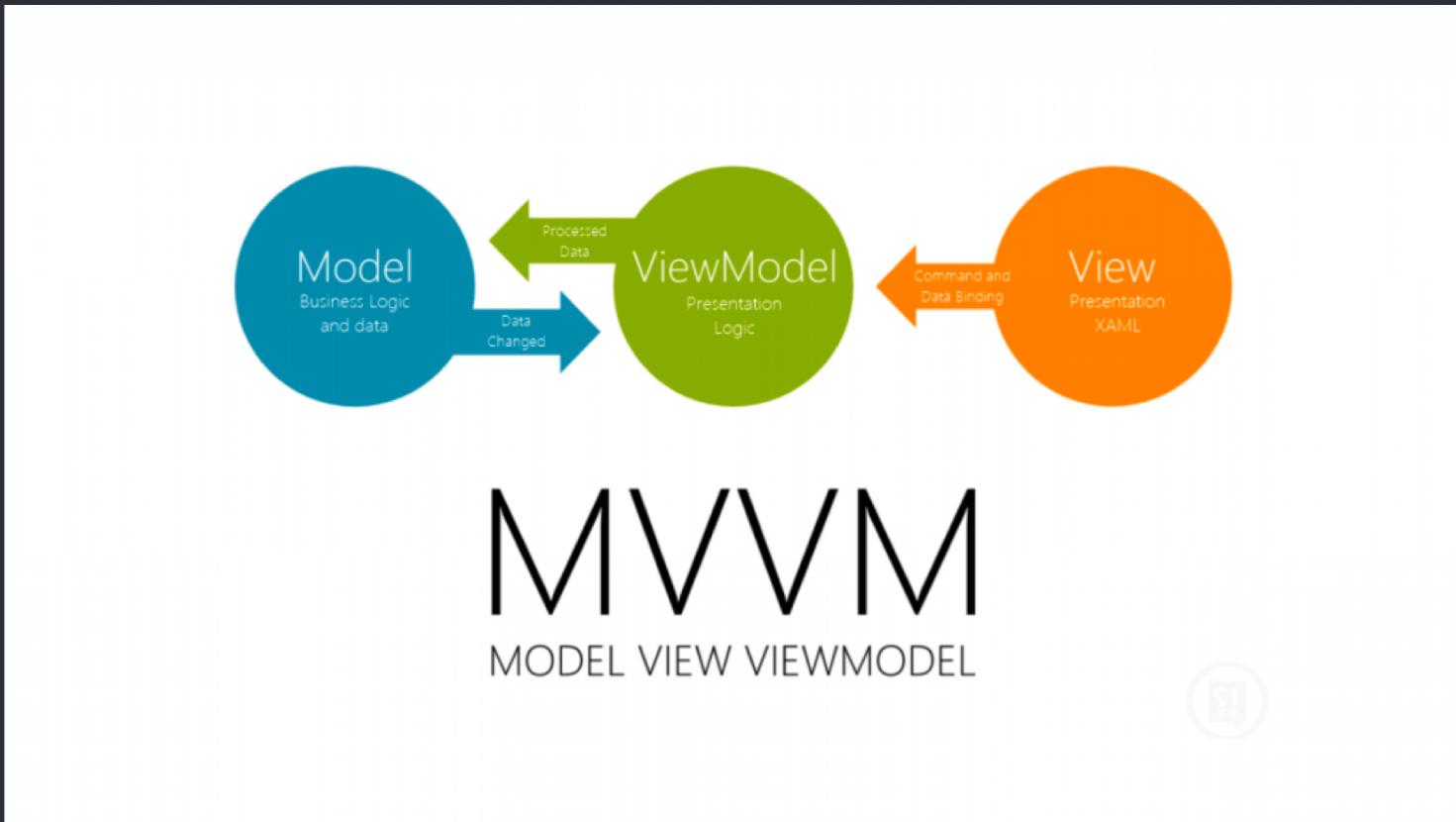
```
<?xml version="1.0" encoding="UTF-8"?>
<TabbedPage xmlns="http://xamarin.com/schemas/2014/forms"
             xmlns:x="http://schemas.microsoft.com/winfx/2009/xaml"
             x:Class="MyApp.MainPage">

    <TabbedPage.Children>
        <ContentPage Title="Profile" Icon="Profile.png">
            <StackLayout Spacing="20" Padding="20"
                        VerticalOptions="Center">
                <Entry Placeholder="Username"
                      Text="{Binding Username}"/>
                <Entry Placeholder="Password"
                      Text="{Binding Password}"
                      IsPassword="true"/>
                <Button Text="Login" TextColor="White"
                       BackgroundColor="#77D0E5"
                       Command="{Binding LoginCommand}"/>
            </StackLayout>
        </ContentPage>
        <ContentPage Title="Settings" Icon="Settings.png">
            <!-- Settings -->
        </ContentPage>
    </TabbedPage.Children>
</TabbedPage>
```

- How does it work?



- Design patterns: MVVM



- RESTful API access

