



XAMARIN

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10 INCREDIBLE FACTS

ABOUT XAMARIN

A blue and white fishing boat is positioned in the lower right foreground, floating on a dark blue sea. In the background, a large, rocky island covered in dense green vegetation rises from the water. The sky is a pale, hazy grey. The overall scene is calm and scenic.

#1

NO HYBRID OR SILO SOLUTION

#1

NO HYBRID OR SILO SOLUTION

SILO APPROACH



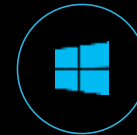
iOS

Objective-C / Swift
XCode



Android

Java
Android Studio



Windows

C#
Visual Studio

#1

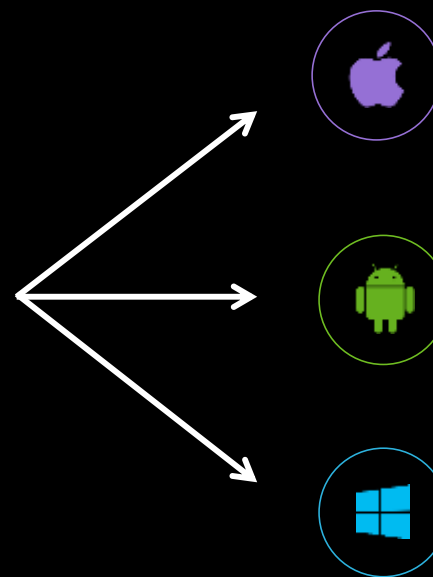
NO HYBRID OR SILO SOLUTION

HYBRID APPROACH

Lua
Javascript
Actionscript
HTML+CSS



App Generator



#1

NO HYBRID OR SILO SOLUTION

SILO APPROACH



iOS

Objective-C / Swift
XCode



Android

Java
Android Studio



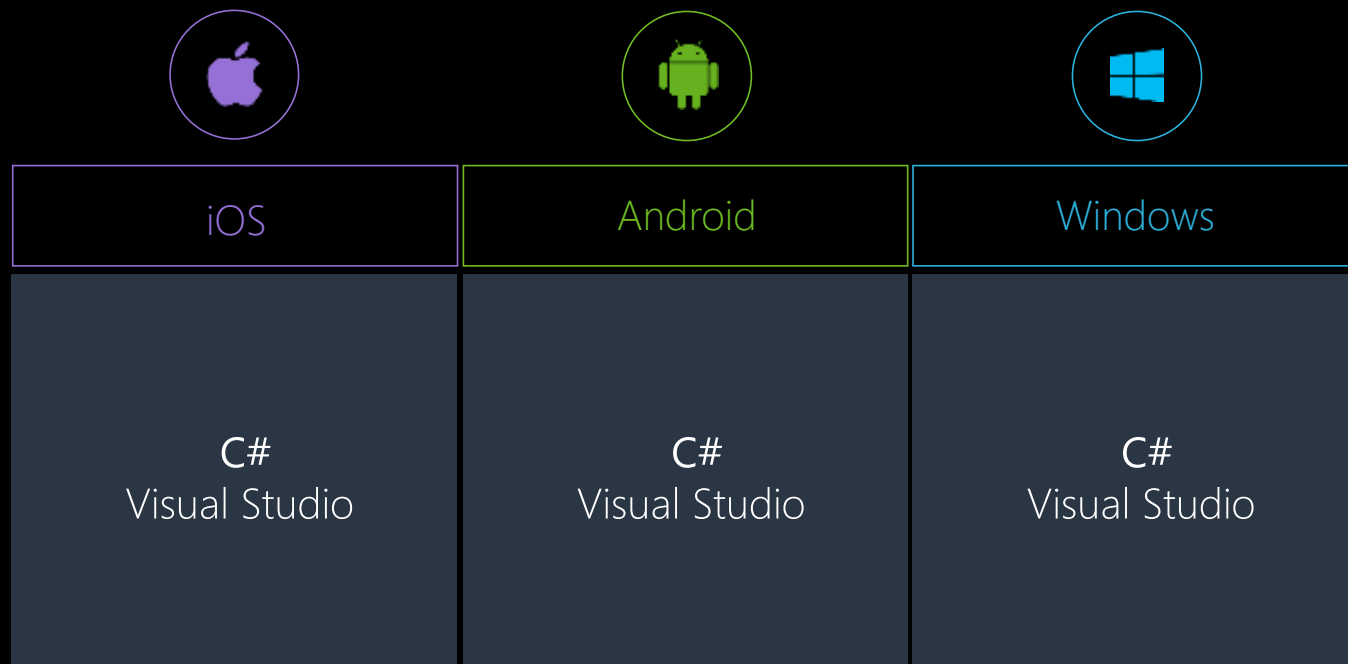
Windows

C#
Visual Studio

#1

NO HYBRID OR SILO SOLUTION

XAMARIN APPROACH



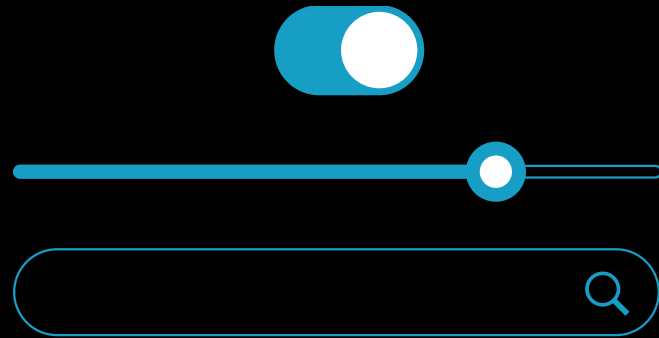
A photograph of a wooden desk with a laptop and a pen holder. A large white '#2' is overlaid on the laptop keyboard.

#2

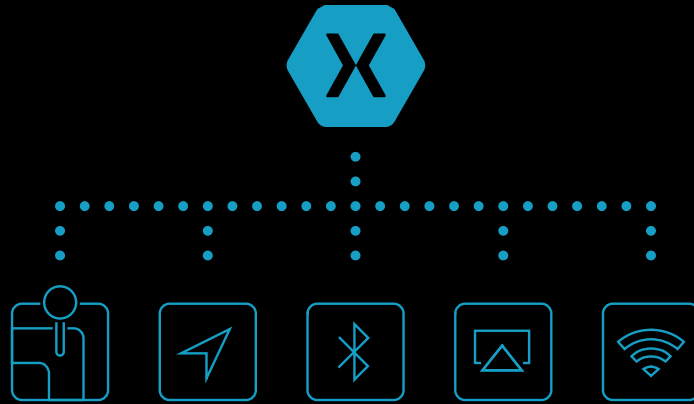
NATIVE APPS

#2

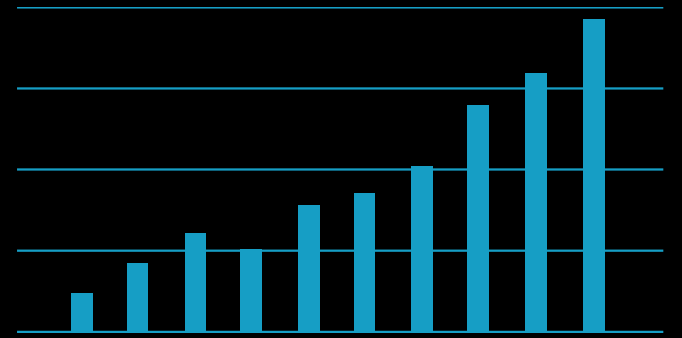
NATIVE APPS



Native User Interface



Native API Access



Native Performance



#2

NATIVE APPS

100% API COVERAGE

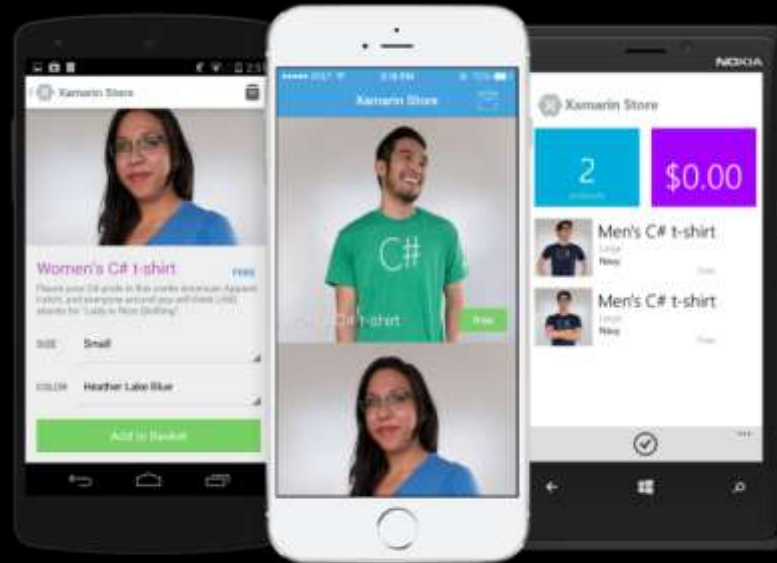
SAME DAY SUPPORT FOR iOS

PLATFORM SUPPORT

iOS, Android, Windows, Apple Watch, Google Glass, Android Wear, Amazon Fire OS, tvOS, macOS, ...

#2

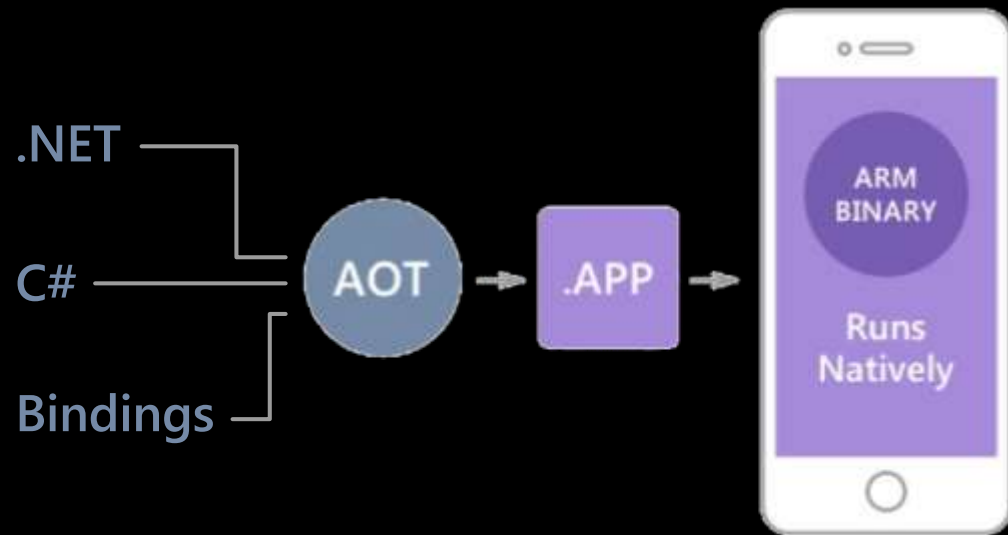
NATIVE APPS



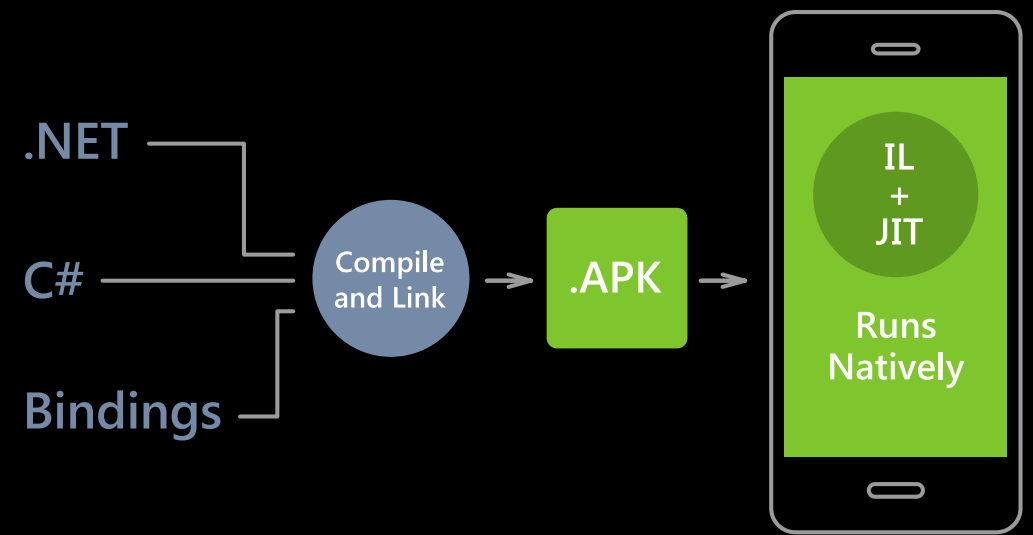
Everything you can do in Objective-C, Swift, or Java,
you can do in **C#** with Xamarin.

#2

NATIVE APPS



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.

A group of people are sitting around a campfire at night in a forest. The scene is dimly lit, with the primary light source being the fire. The people are dressed in casual outdoor attire. The background shows the silhouettes of trees and a blue tarp or tent. The overall mood is serene and communal.

#3

UNIFIED PROGRAMMING LANGUAGE

#3

UNIFIED PROGRAMMING LANGUAGE

MapKit

UIKit

iBeacon

CoreGraphics

CoreMotion

Text-to-speech

ActionBar

Printing Framework

RenderScript

NFC

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#

#3

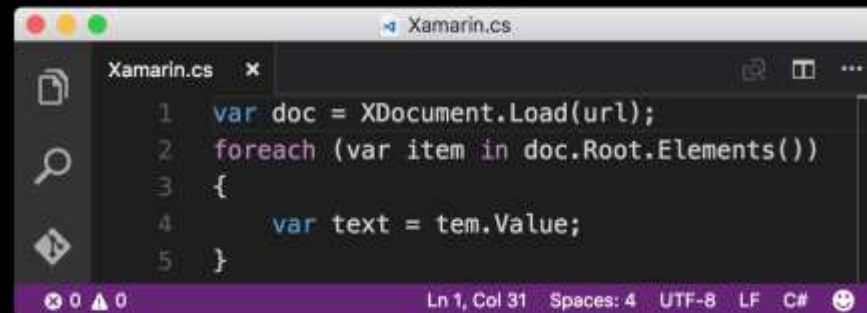
UNIFIED PROGRAMMING LANGUAGE



```
Xamarin.cs
1 from p in Table<Person>()
2   where p.Id == Id
3   select p;
```

Ln 3, Col 14 Spaces: 4 UTF-8 LF C#

LINQ Support



```
Xamarin.cs
1 var doc = XDocument.Load(url);
2 foreach (var item in doc.Root.Elements())
3 {
4     var text = tem.Value;
5 }
```

Ln 1, Col 31 Spaces: 4 UTF-8 LF C#

Work with XML easily



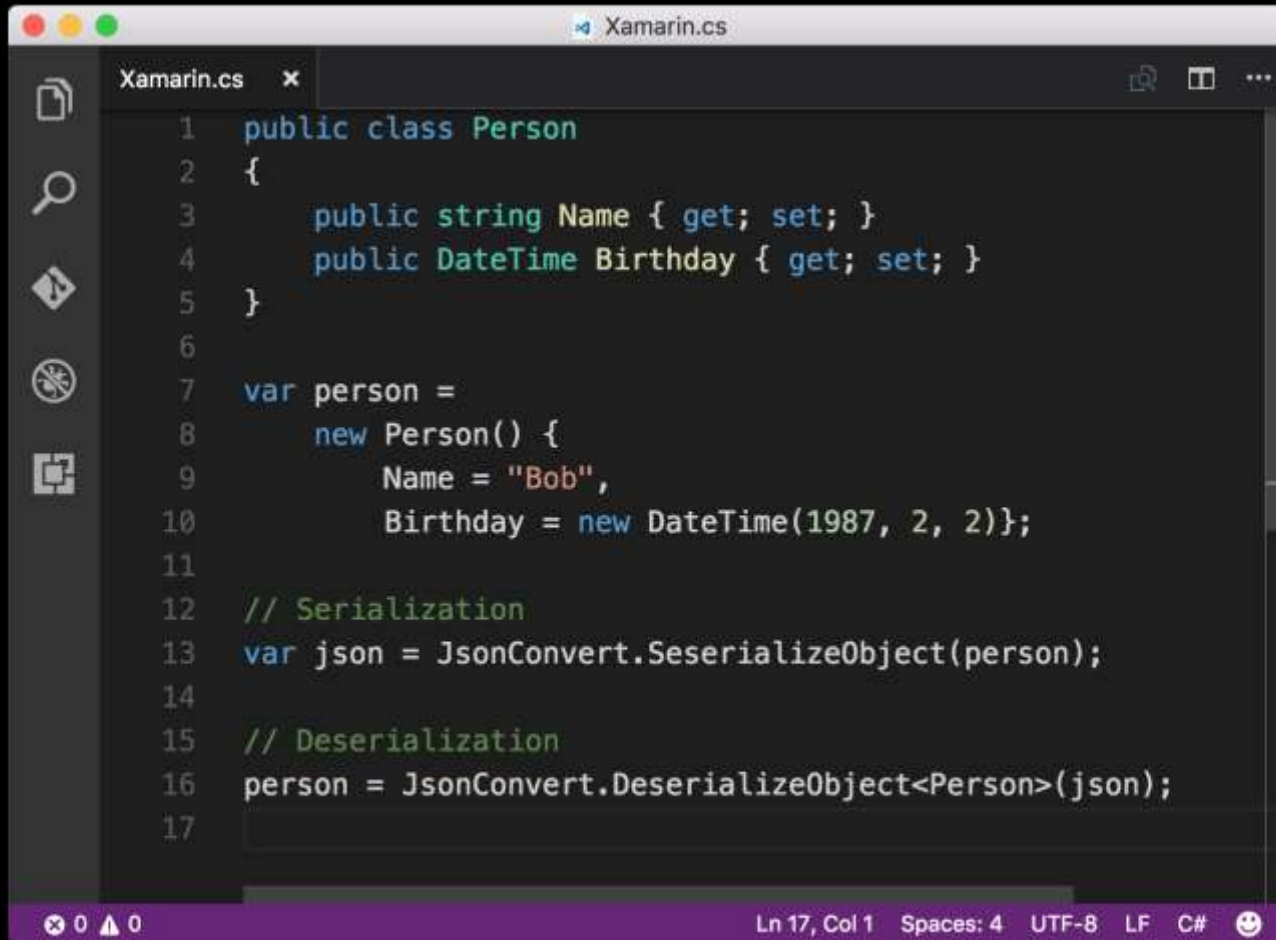
```
Xamarin.cs
1 button.TouchUpInside += (s, o) => {
2     message.Text = "Hello";
3 };
4
```

Ln 4, Col 1 Spaces: 4 UTF-8 LF C#

Event Handling & Delegates

#3

UNIFIED PROGRAMMING LANGUAGE



```
Xamarin.cs
1 public class Person
2 {
3     public string Name { get; set; }
4     public DateTime Birthday { get; set; }
5 }
6
7 var person =
8     new Person() {
9         Name = "Bob",
10        Birthday = new DateTime(1987, 2, 2)};
11
12 // Serialization
13 var json = JsonConvert.SerializeObject(person);
14
15 // Deserialization
16 person = JsonConvert.DeserializeObject<Person>(json);
17
```

Ln 17, Col 1 Spaces: 4 UTF-8 LF C#

JSON

Json.NET offers simple conversations to/from JSON strings and .NET objects

A group of people are walking on a modern, glass-enclosed staircase in a city setting. The staircase has a curved glass railing and metal handrails. The background shows tall city buildings. The overall tone is professional and modern.

#4

SHARED BUSINESS LOGIC

#4

SHARED BUSINESS LOGIC



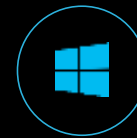
iOS

C#
iOS Code



Android

C#
Android Code

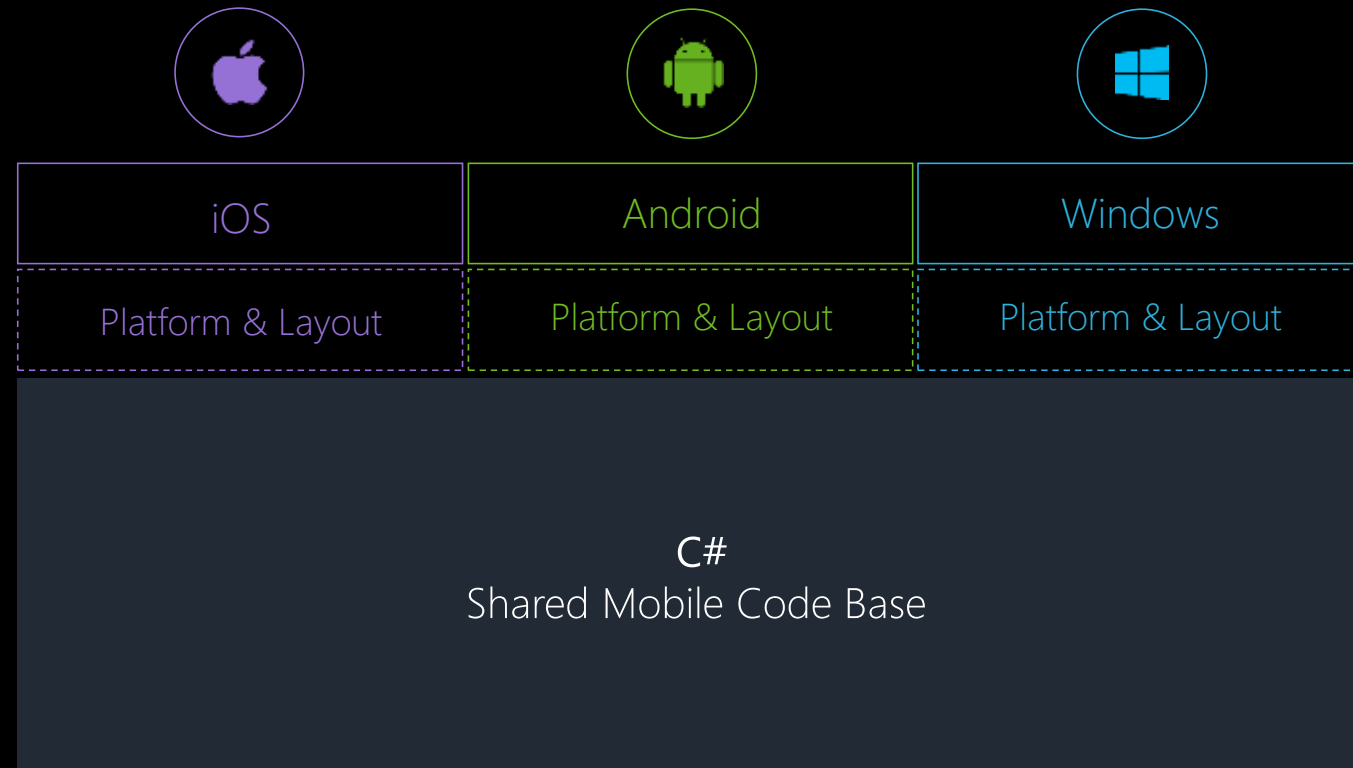


Windows

C#
Windows Code

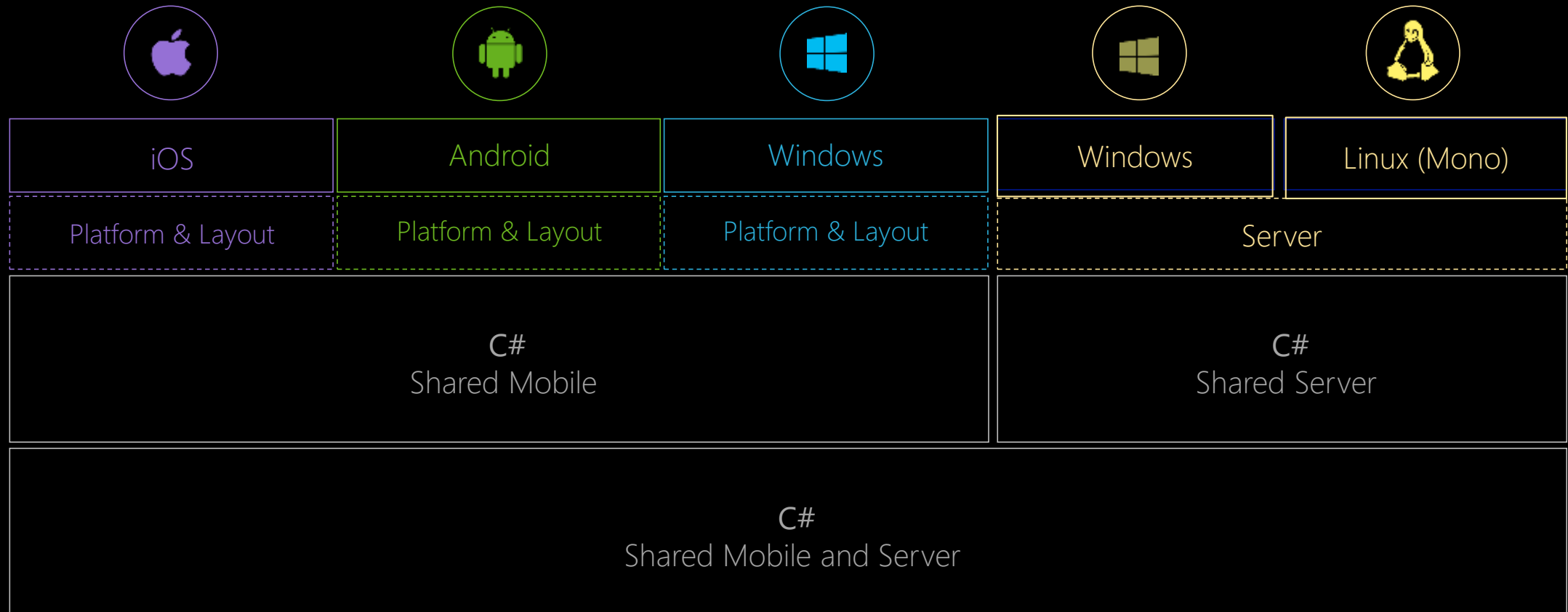
#4

SHARED BUSINESS LOGIC



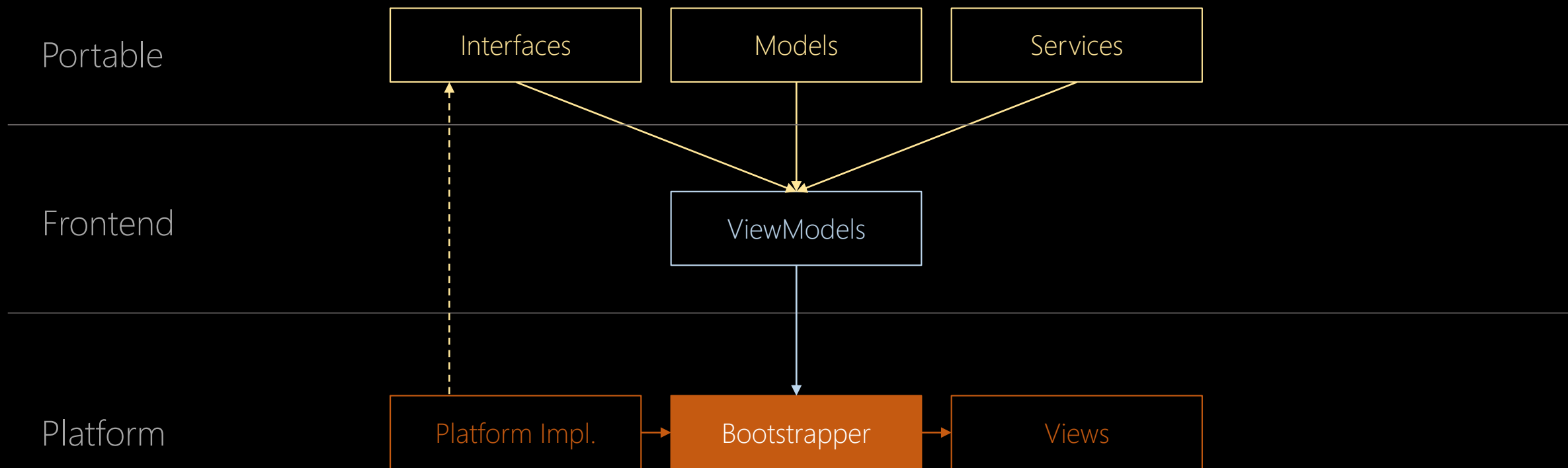
#4

SHARED BUSINESS LOGIC



#4

SHARED BUSINESS LOGIC





DEMO

SHARE CODE

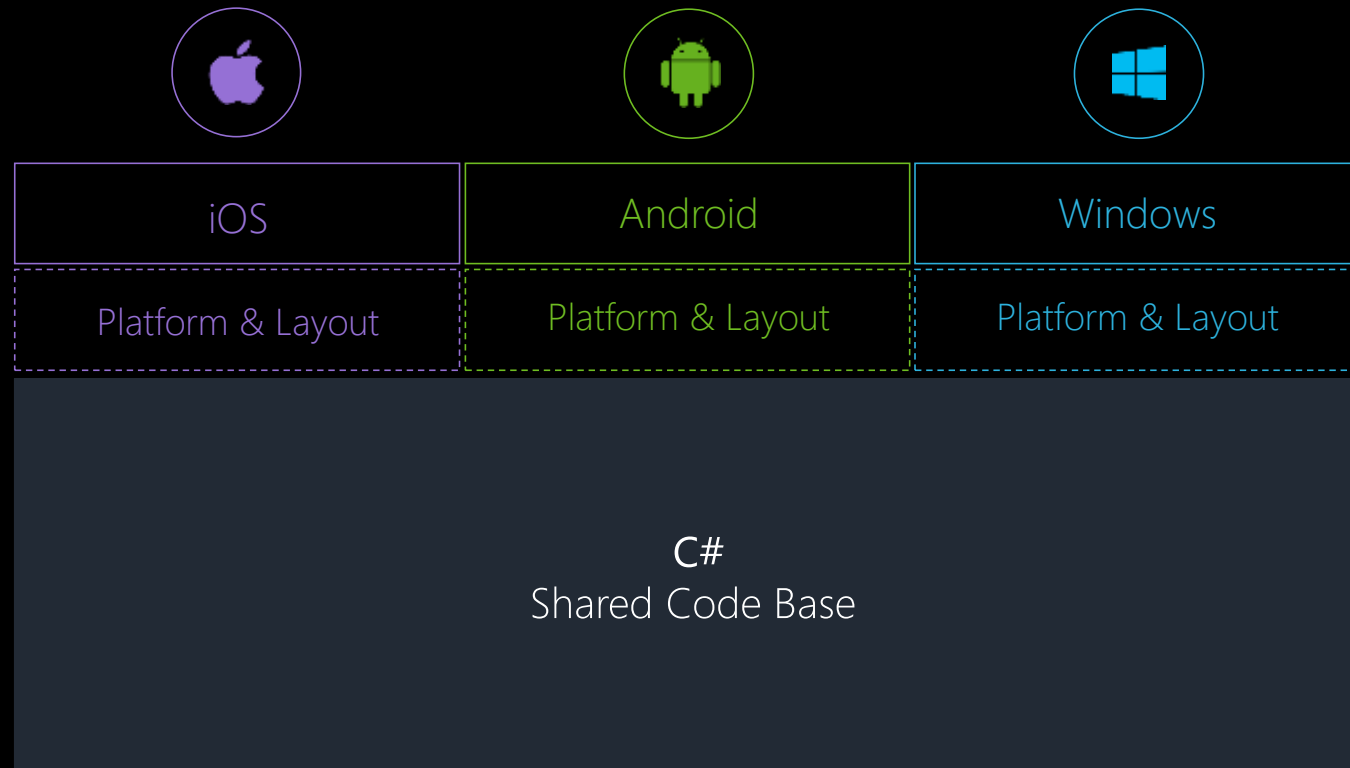
A person is seen from the side, sitting at a wooden desk and working on a laptop. The desk is cluttered with various items: a glass vase with white flowers, a small potted succulent, a metal pen holder with pens, and a glass of water. The background is a blurred indoor setting with a window and some furniture. The overall lighting is soft and natural.

#5

LAYOUT CAN BE SHARED

#5

LAYOUT CAN BE SHARED



#5

LAYOUT CAN BE SHARED



iOS



Android



Windows

Shared Layout with Xamarin.Forms

C#
Shared Code Base

#5 LAYOUT CAN BE SHARED





#5

LAYOUT CAN BE SHARED

RAPID PROTOTYPING

FAST RESULTS, ONLY SUITABLE FOR SIMPLE UI

PERFORMANCE ISSUES

RENDERING AT RUNTIME

PERFORMANCE ISSUES BY MORE COMPLEX APPS



DEMO

SHARED LAYOUT

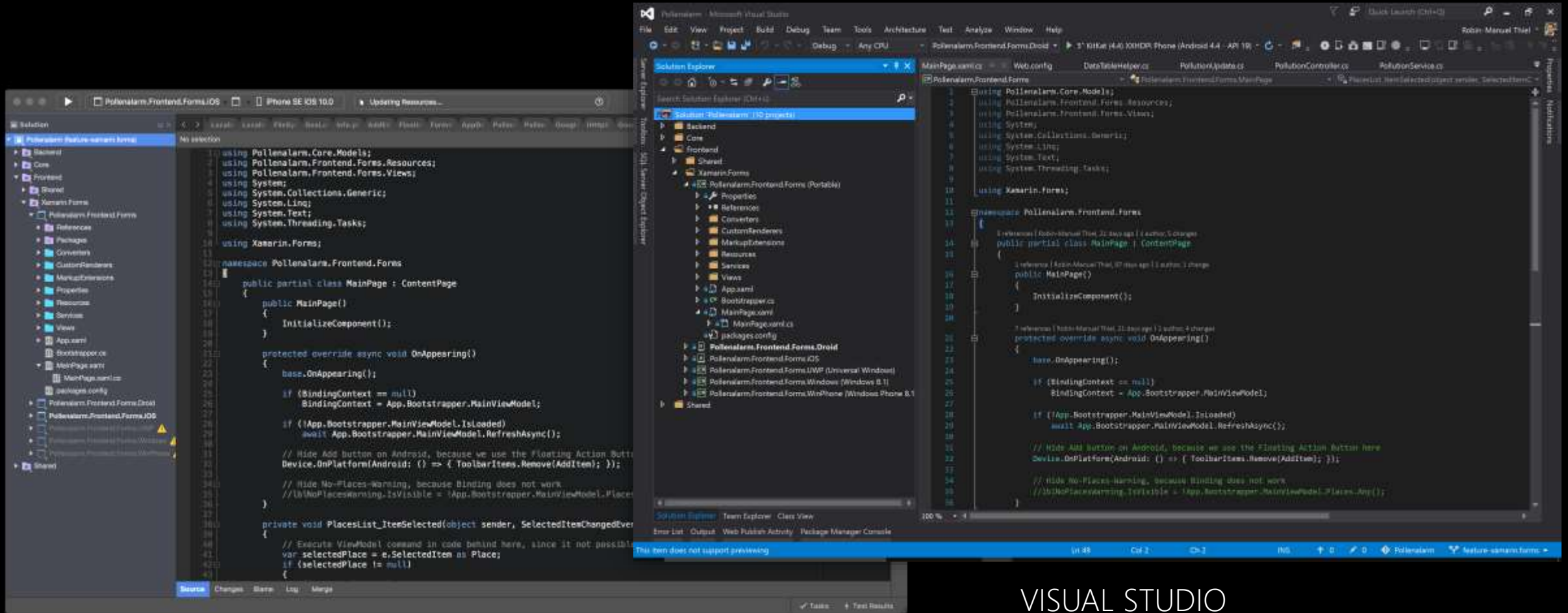


#6

UNIFIED DEVELOPMENT ENVIRONMENT

#6

UNIFIED DEVELOPMENT ENVIRONMENT



VISUAL STUDIO
For Mac

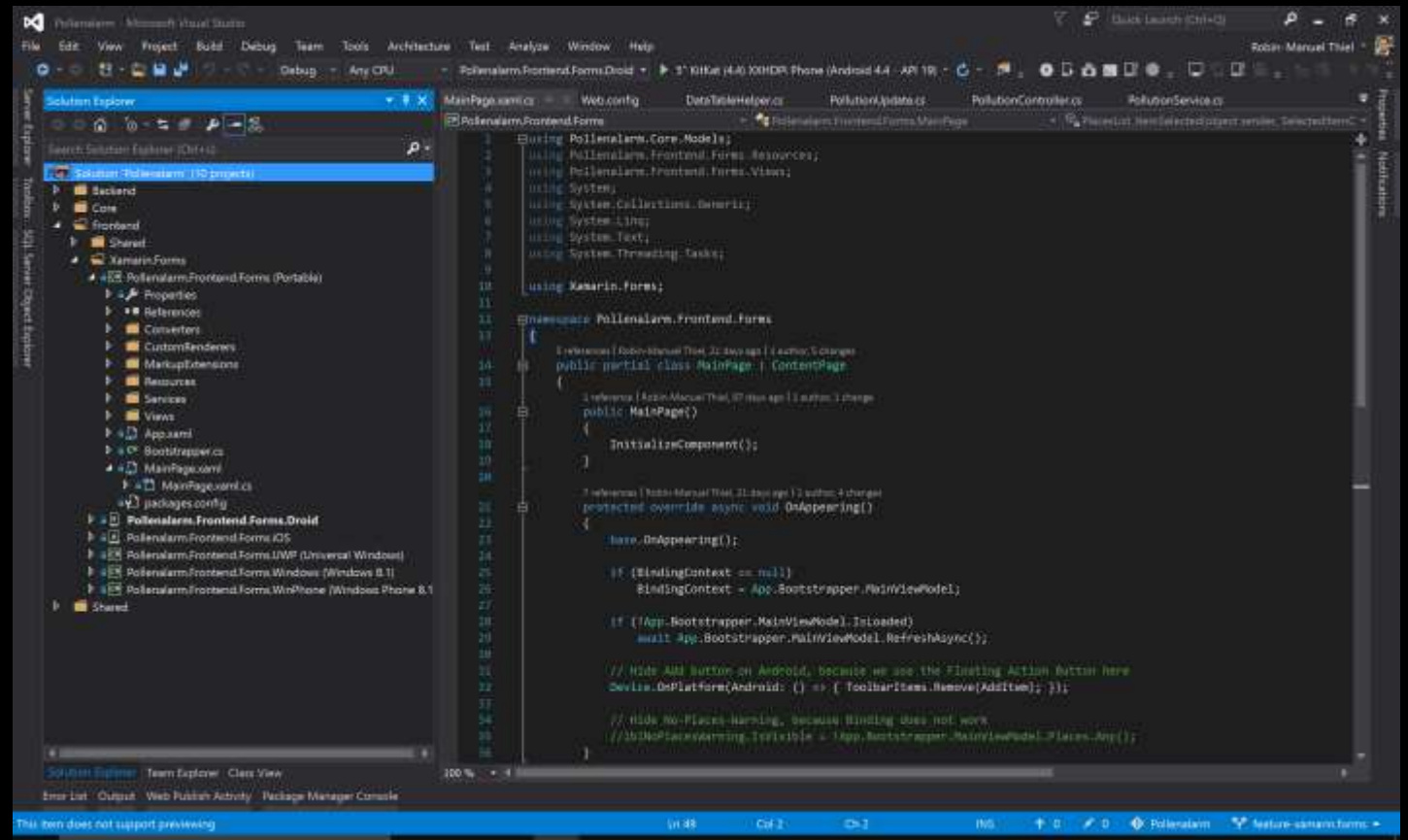
VISUAL STUDIO
For Windows

#5

UNIFIED DEVELOPMENT ENVIRONMENT



MAC BUILD HOST
in your network



A blurred background image of a crowd of people at a concert or event. The lighting is warm and orange, suggesting a sunset or stage lights. In the foreground, a person's arm is raised with their hand open, palm facing forward. The hand is positioned behind the large text '#7'.

#7

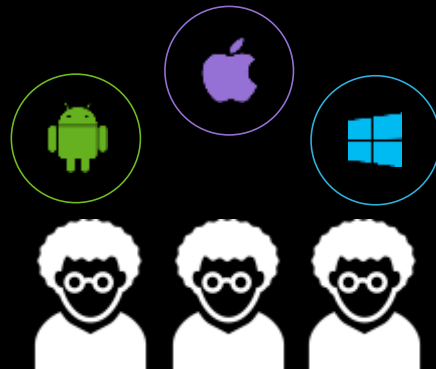
OPEN AND FOR EVERYONE

#7

OPEN AND FOR EVERYONE

\$999.00

Developer / Platform / Year
BEFORE MICROSOFT



3 DEVELOPERS
ALLE PLATFORMS

=

\$6K

PER YEAR

#7

OPEN AND FOR EVERYONE

VISUAL STUDIO LICENSE

WITH MICROSOFT



Visual Studio Community

free

Restricted Usage



Visual Studio Professional

from 45 \$ / Month

Team Features



Visual Studio Enterprise

from 250 \$ / month

DevOps

#7

OPEN AND FOR EVERYONE



HANDED OVER TO THE .NET FOUNDATION
SOURCE CODE AT GITHUB

ACTIVE COMMUNITY CONTRIBUTIONS
COMMUNITY GETS INTEGRATED
FUTURE-PROOF



#8

CLOUD CONNECTED

#8

CLOUD CONNECTED

Azure Mobile Apps

SQLite-net

Amazon Web Services

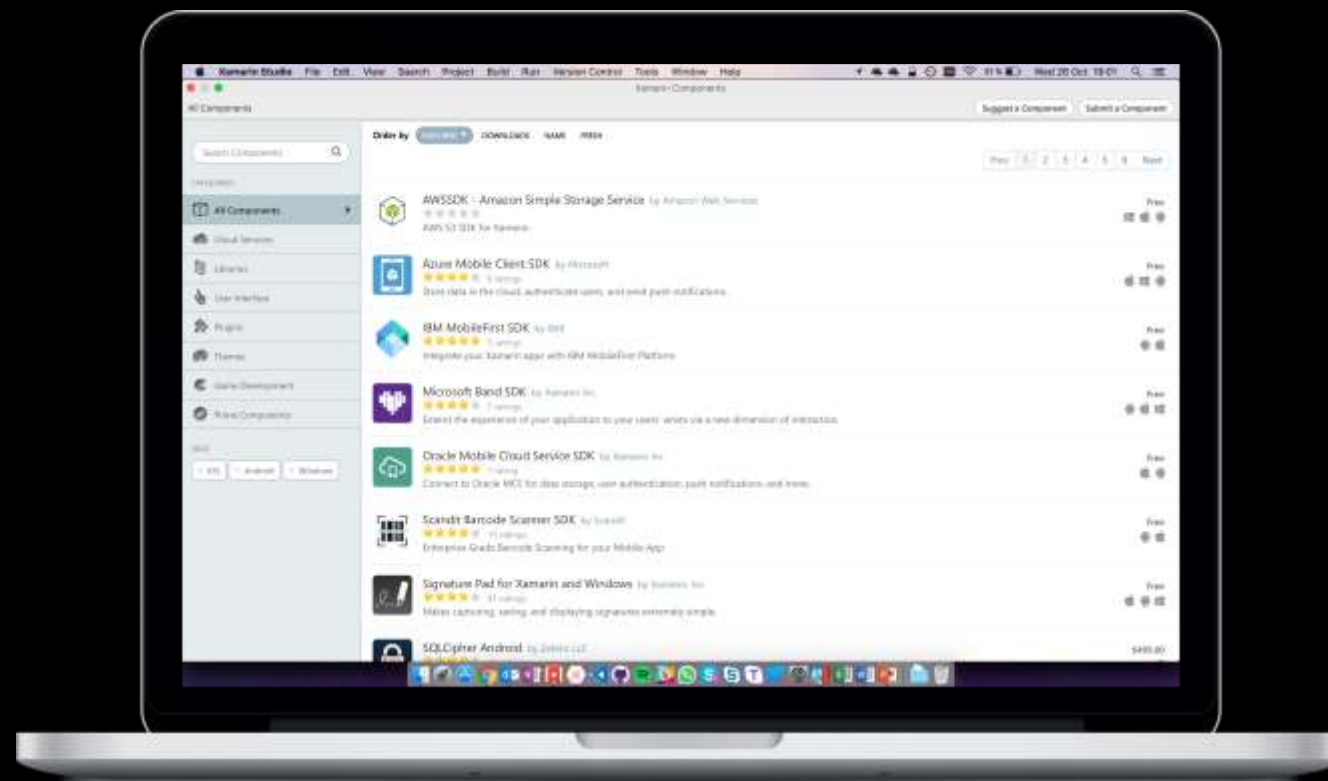
Realm

Couchbase

IBM Mobile First

Oracle Mobile App

SQLCipher



Xamarin Component Store

#8

CLOUD CONNECTED

38

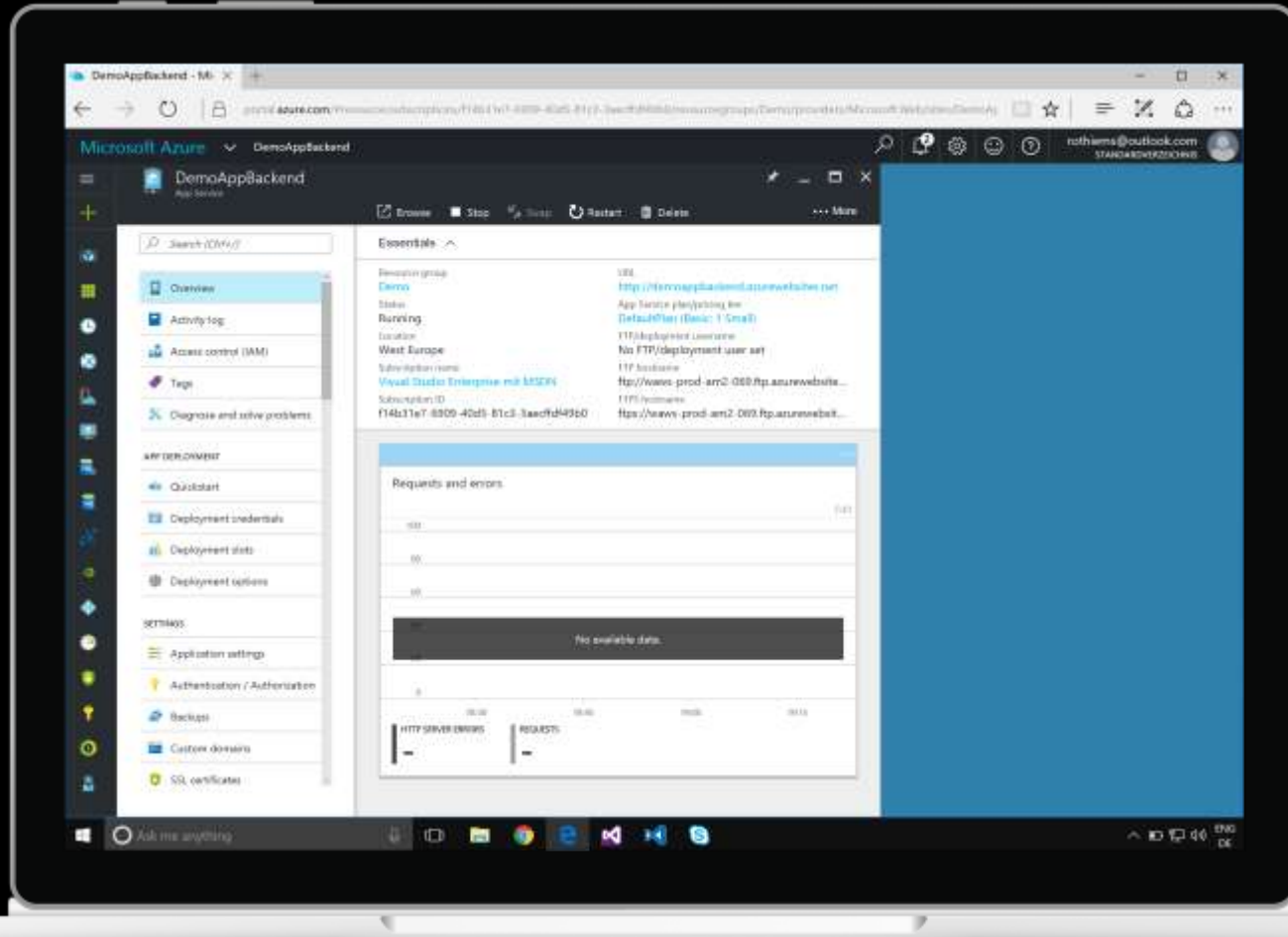
Azure regions
around the world

 AZURE REGIONS



#8

CLOUD CONNECTED



Offline Synchronization

Data Connection

Authentication

Push Notifications

Easy Tables and APIs



DEMO

AZURE BACKENDS

A photograph of a wooden bridge with a railing, leading into a forest. The bridge is made of weathered wood and has a simple railing. The forest is dense with green trees. The lighting is soft, suggesting a late afternoon or early morning setting. The bridge leads the eye into the distance, creating a sense of journey and exploration.

#9

NO MAGIC BULLET

#9

NO MAGIC BULLET



C#

PLATFORM KNOWLEDGE

LANGUAGE KNOWLEGDE

KNOWS ISSUES

Performance traps
Very clean architecture needed

A first-person perspective from inside a green inflatable boat on a calm lake. The boat's bow is in the foreground, and a person's bare feet are visible at the bottom. The water is dark with gentle ripples. In the background, a dense forest of evergreen trees lines the shore, and beyond that, a range of mountains with patches of snow is visible under a soft, overcast sky.

#10

MORE THAN JUST APP DEVELOPMENT

#10

MORE THAN JUST APP DEVELOPMENT



Xamarin
University

CERTIFIED XAMARIN DEVELOPER

High-class learning content for Cloud- and App Development
Live courses from certified experts

#10

MORE THAN JUST APP DEVELOPMENT



AUTOMATED TESTING

Test your apps on thousands of physical devices at once
and detect bugs earlier

#10

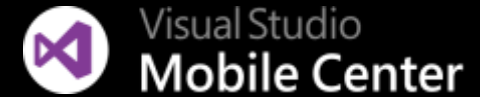
MORE THAN JUST APP DEVELOPMENT

Branches
bikesharing360/ride360

- master
- release-1.3.0
- release-1.3.1
- development
- push-sdk-support
- feature-twitter-share
- release-1.1.10

Builds

	Status	Build	Date
New specs for locate bikes nearby Patricia Hart	BUILDING	55	Just now
New welcome flow about to land Christina Young	BUILT	54	10min ago
Fix misaligned button on KitKat 4.4.3 Jessica Steger	BUILT	53	2h ago
Typo Jessica Steger	FAILED	52	6h ago
Fix missing dependency, adding md5 for assets James Montemagno	BUILT	51	Yesterday
Release 1.1.10 Carl Henderson	BUILT	51	Yesterday
Change ButtonGroup and Button imports to rent history Lawrence Collins	BUILT	51	Yesterday
API changes on locate nearby bikes callbacks Bruce Curtis	FAILED	51	Yesterday
Prevent errors and warnings in tests. Jessica Steger	BUILT	51	Yesterday
Fix styles Christina Young	BUILT	51	Yesterday
Release 1.1.7 James Montemagno	BUILT	51	Yesterday



Build

Test

Distribute

Crashes

Analytics



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THANK YOU