

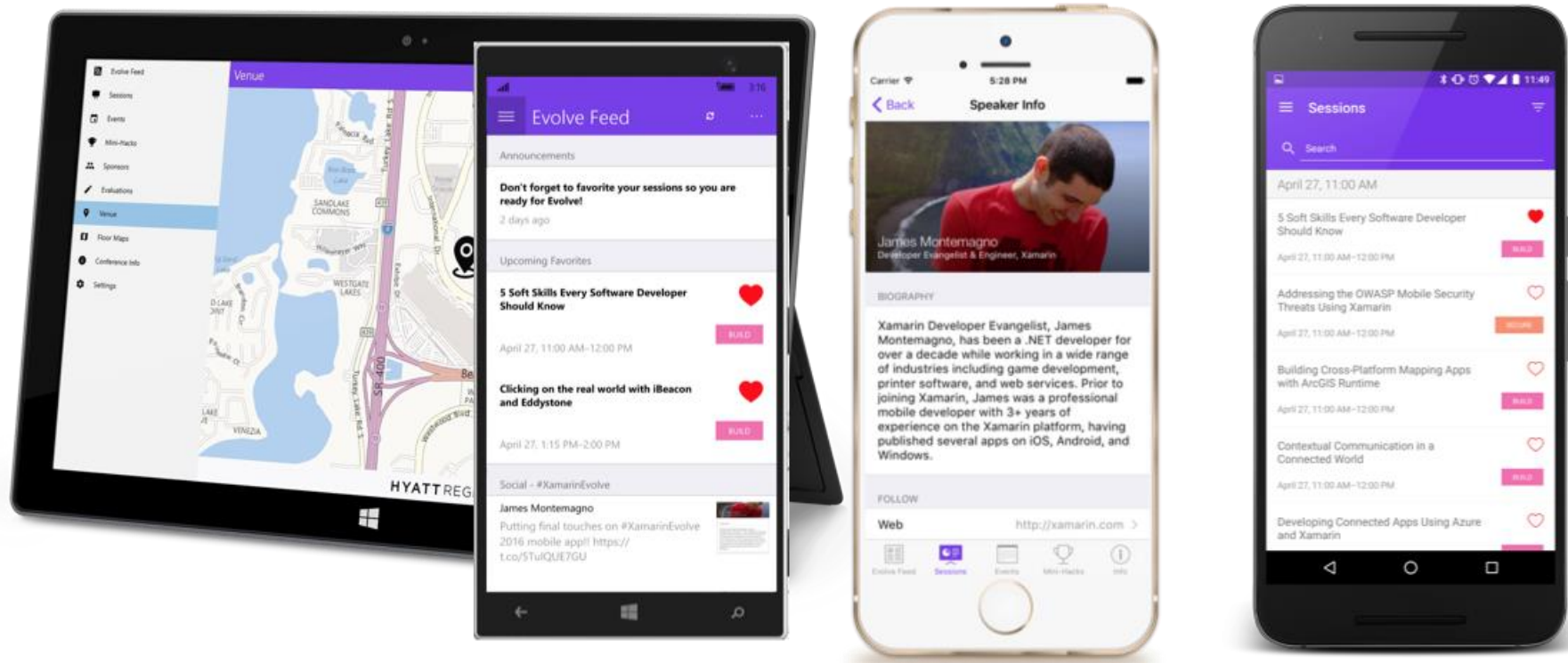


Xamarin DEV DAYS

Cross-Platform Native User Interfaces with Xamarin.Forms

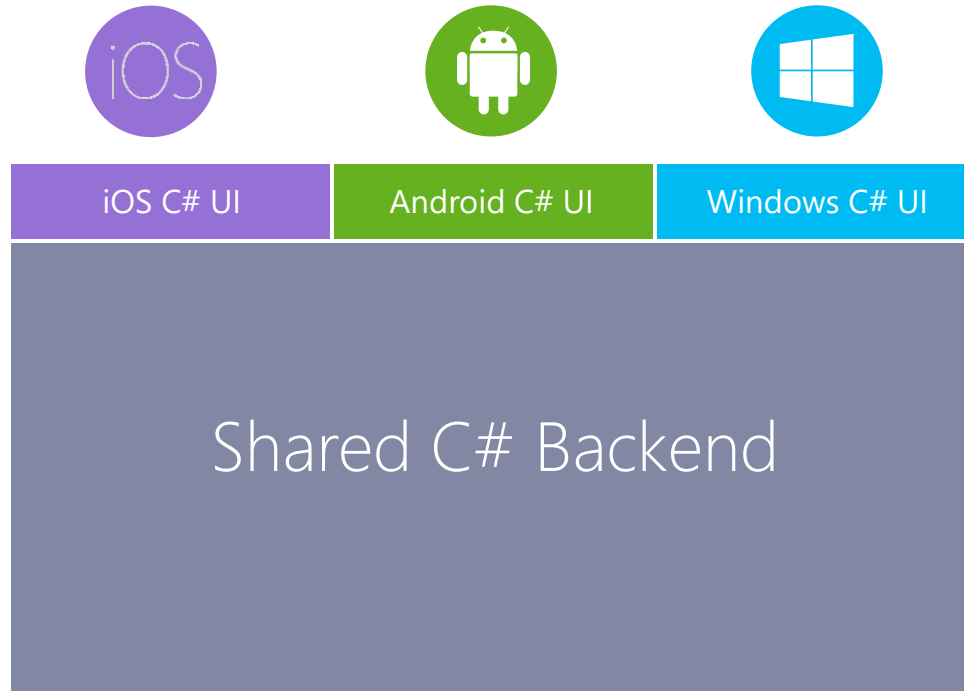
Presenter Name
Presenter Twitter
Presenter Title

Meet Xamarin.Forms

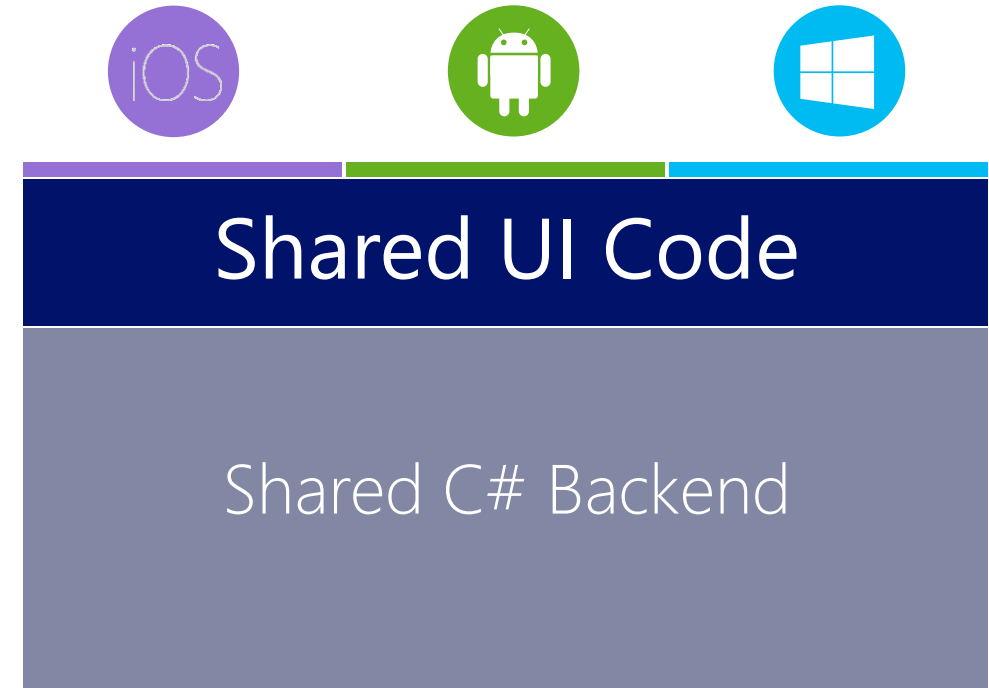


Build native UIs for iOS, Android, and Windows
from a single, shared C# codebase.

Xamarin + Xamarin.Forms

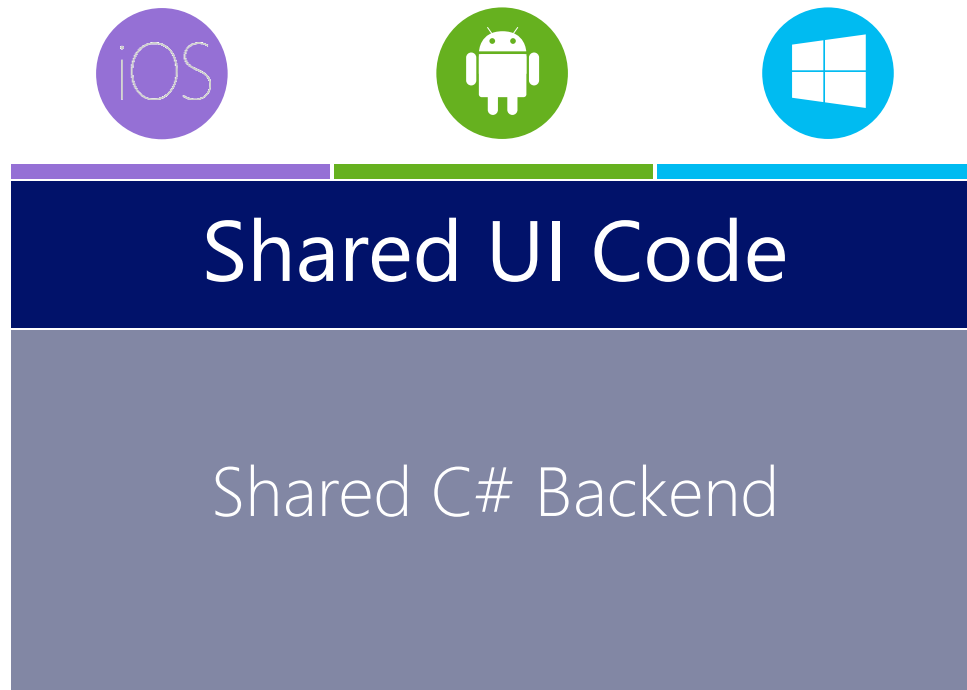


Traditional Xamarin
Approach



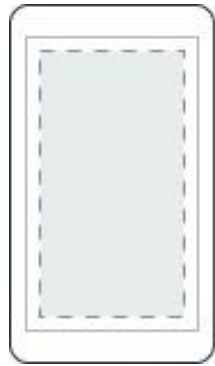
With Xamarin.Forms:
More code-sharing, all native

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

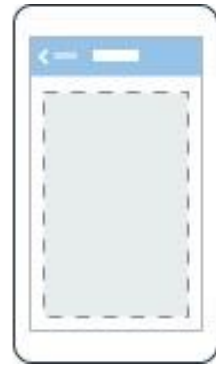
Pages



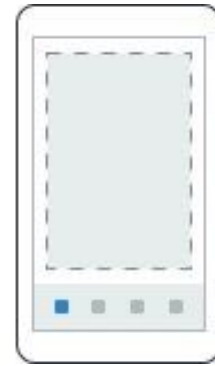
Content



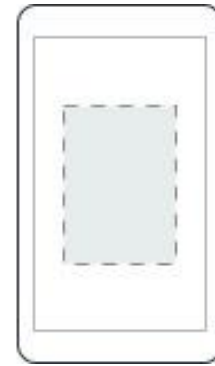
MasterDetail



Navigation

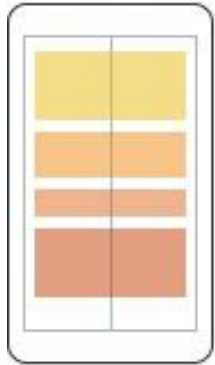


Tabbed

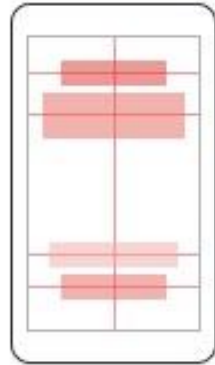


Carousel

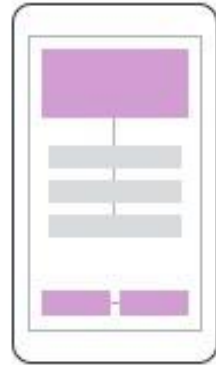
Layouts



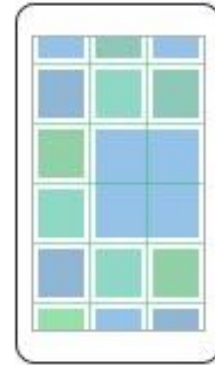
Stack



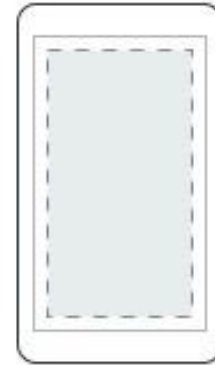
Absolute



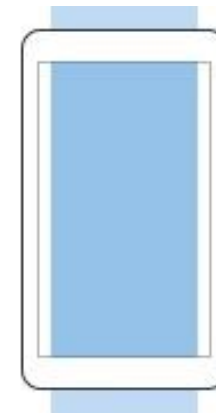
Relative



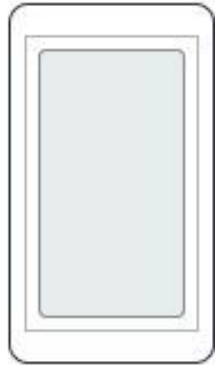
Grid



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

Xamarin.Forms Ecosystem



Windows	Xamarin.Forms
StackPanel	StackLayout
TextBox	Entry
ListBox	ListView
CheckBox	Switch
ProgressBar	ActivityIndicator
Grid	Grid
Label	Label
Button	Button
Image	Image
Date/TimePicker	Date/TimePicker

Control Comparison

Windows	Xamarin.Forms
DataContext	BindingContext
{Binding Property}	{Binding Property}
ItemsSource	ItemsSource
ItemTemplate	ItemTemplate
DataTemplate	DataTemplate

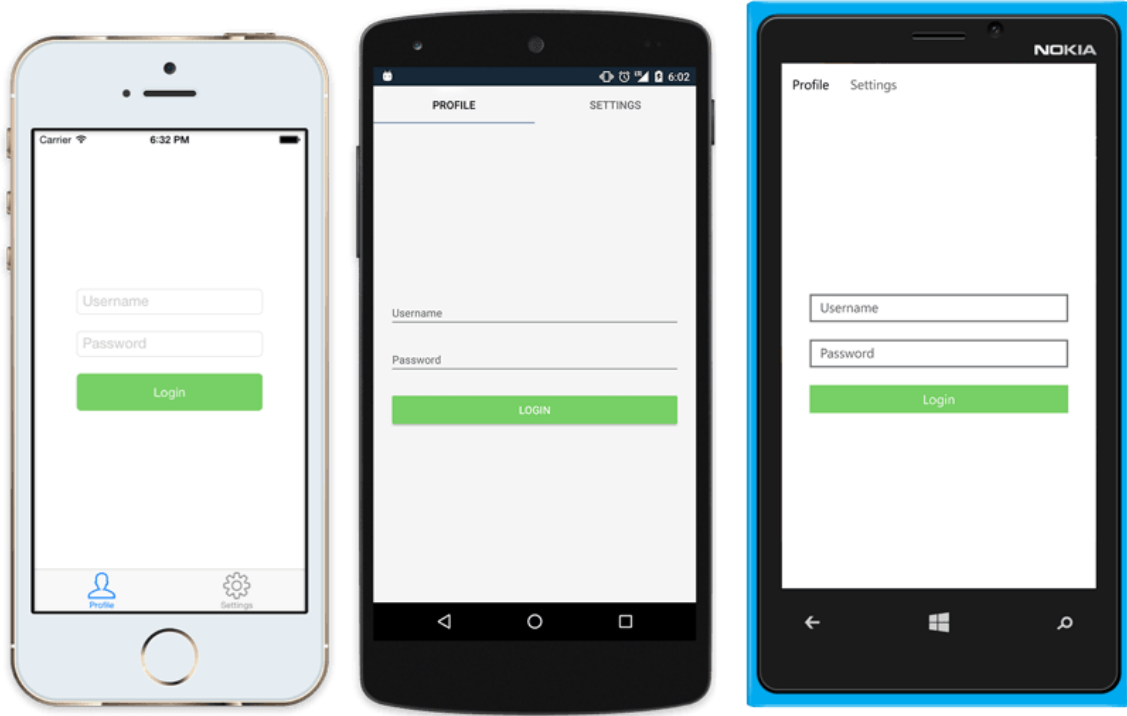
Binding Comparison

```
<Label Text="{Binding Color.R,
    Converter={StaticResource intConverter},
    ConverterParameter=255,
    StringFormat='R={0:X2}'}" />
```

```
<ContentPage.Padding>
  <OnPlatform x:TypeArguments="Thickness">
    <OnPlatform.iOS>
      0, 20, 0, 0
    </OnPlatform.iOS>
    <OnPlatform.Android>
      0, 0, 0, 0
    </OnPlatform.Android>
    <OnPlatform.WinPhone>
      0, 0, 0, 0
    </OnPlatform.WinPhone>
  </OnPlatform>
</ContentPage.Padding>
```

Platform Customization

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="#77D065"
        Command="{Binding LoginCommand}"/>
    </StackLayout>
  </ContentPage>
  <ContentPage Title="Settings" Icon="Settings.png">
    <!-- Settings -->
  </ContentPage>
  </TabbedPage.Children>
</TabbedPage>
```

Xamarin.Forms

Demo

Latest and Greatest
in Xamarin.Forms

Xamarin.Forms
is Open Source!

open.xamarin.com

XAML Previewer

The screenshot displays the Xamarin Studio XAML Previewer interface. The top bar shows the application is in Debug mode on an iPhone 6s simulator (iOS 9.3). The active file is CoffeesPage.xaml. The interface is split into two main sections: the XAML code editor on the left and the visual preview on the right.

XAML Code (CoffeesPage.xaml):

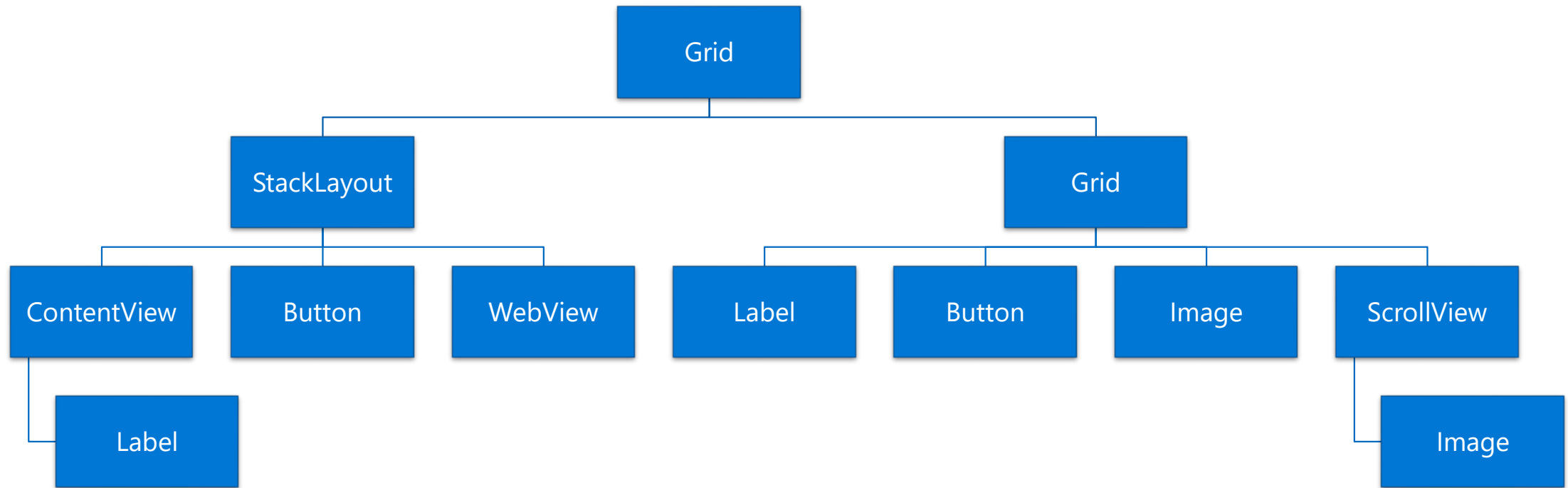
```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <ContentPage
3     xmlns="http://xamarin.com/schemas/2014/forms"
4     xmlns:x="http://schemas.microsoft.com/winfx/2009/xaml"
5     xmlns:local="clr-namespace:CoffeeCups;assembly=CoffeeCups"
6     xmlns:controls="clr-namespace:ImageCircle.Forms.Plugin.Abstractions;assembly=ImageCircle.Forms.Plugin.Abstractions"
7     x:Class="CoffeeCups.CoffeesPage"
8     Title="Cups Of Coffee">
9     <AbsoluteLayout HorizontalOptions="FillAndExpand" VerticalOptions="FillAndExpand">
10         <Grid AbsoluteLayout.LayoutFlags="All"
11             AbsoluteLayout.LayoutBounds="0,0,1,1"
12             RowSpacing="0">
13             <Grid.RowDefinitions>
14                 <RowDefinition Height="Auto"/>
15                 <RowDefinition Height="*" />
16                 <RowDefinition Height="Auto"/>
17             </Grid.RowDefinitions>
18             <StackLayout Orientation="Horizontal" Padding="16" Spacing="16" BackgroundColor="Teal">
19                 <Label Text="Made at Home?"
20                     TextColor="White"
21                     VerticalOptions="Center"
22                     HorizontalOptions="Start"
23                     FontSize="16">
24                     <Label Text="ADD COFFEE" />

```

Visual Preview:

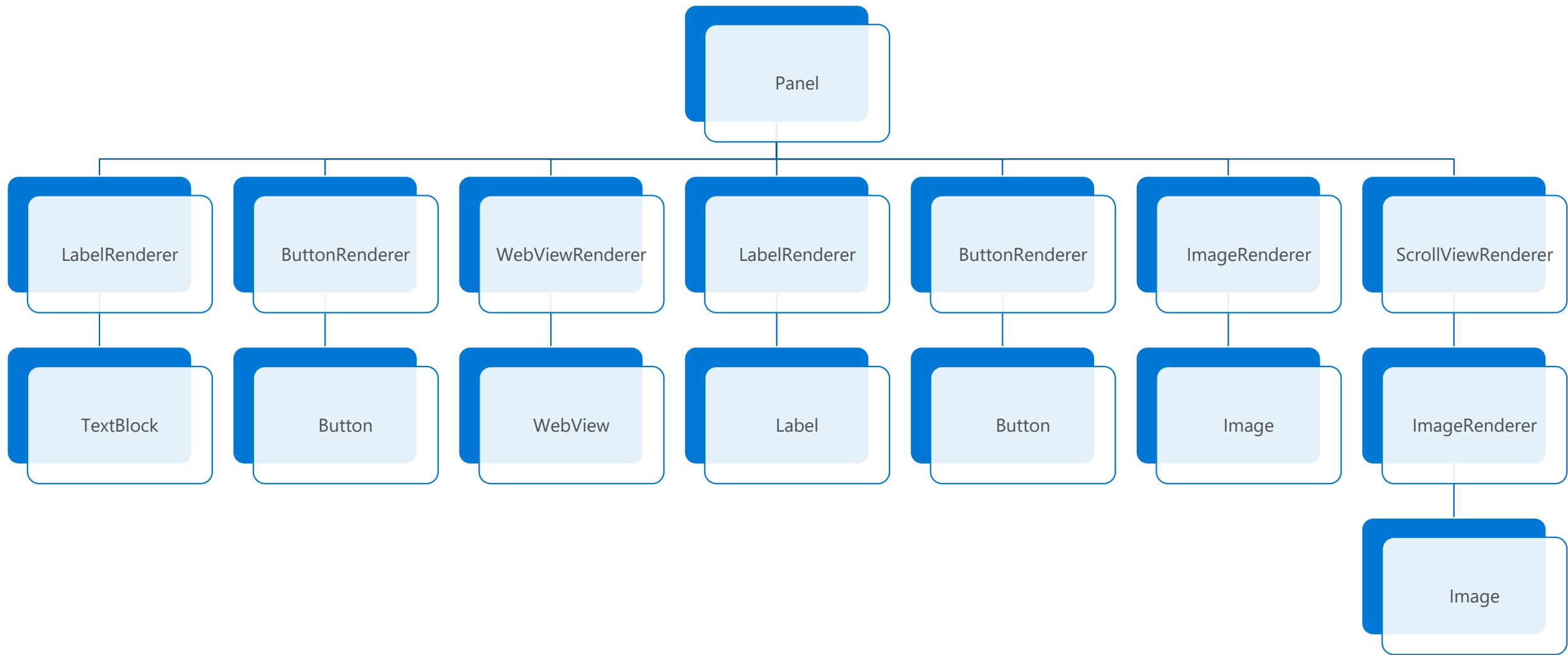
The preview shows a mobile application interface on a "Phone" device. The top bar is teal and contains a toggle switch for "Made at Home?" and a button labeled "ADD COFFEE". Below this is a list of coffee entries. Each entry consists of a timestamp (e.g., "4/26/2016 10:17:53 AM"), a time (e.g., "10:17 AM"), the text "Made At Home", and a circular image of a coffee cup.

Fast Renderers



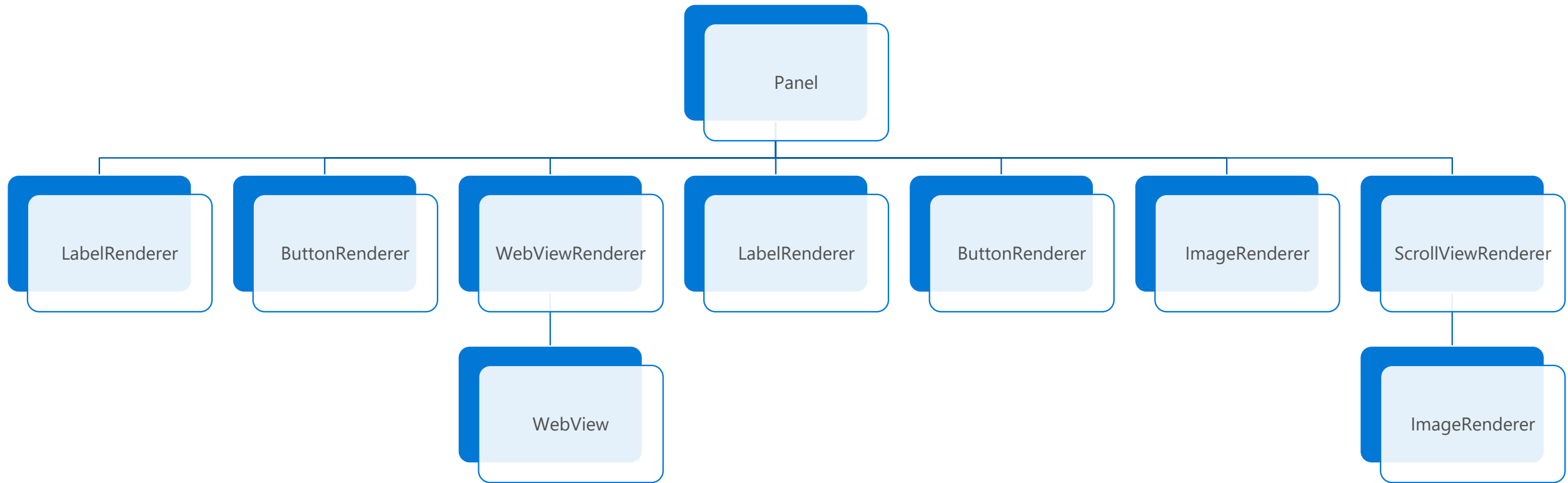
FORMS STRUCTURE

Fast Renderers



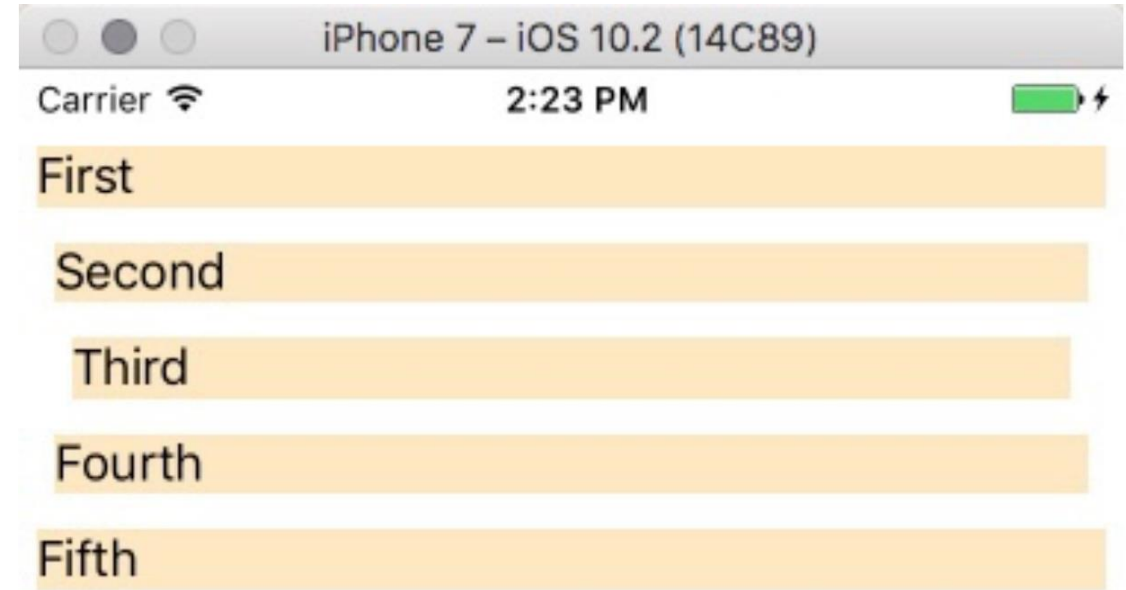
WHAT IS PRODUCED NOW

Fast Renderers



AFTER FAST RENDERERS + COMPRESSION

Layout Compression



Native View Declarations

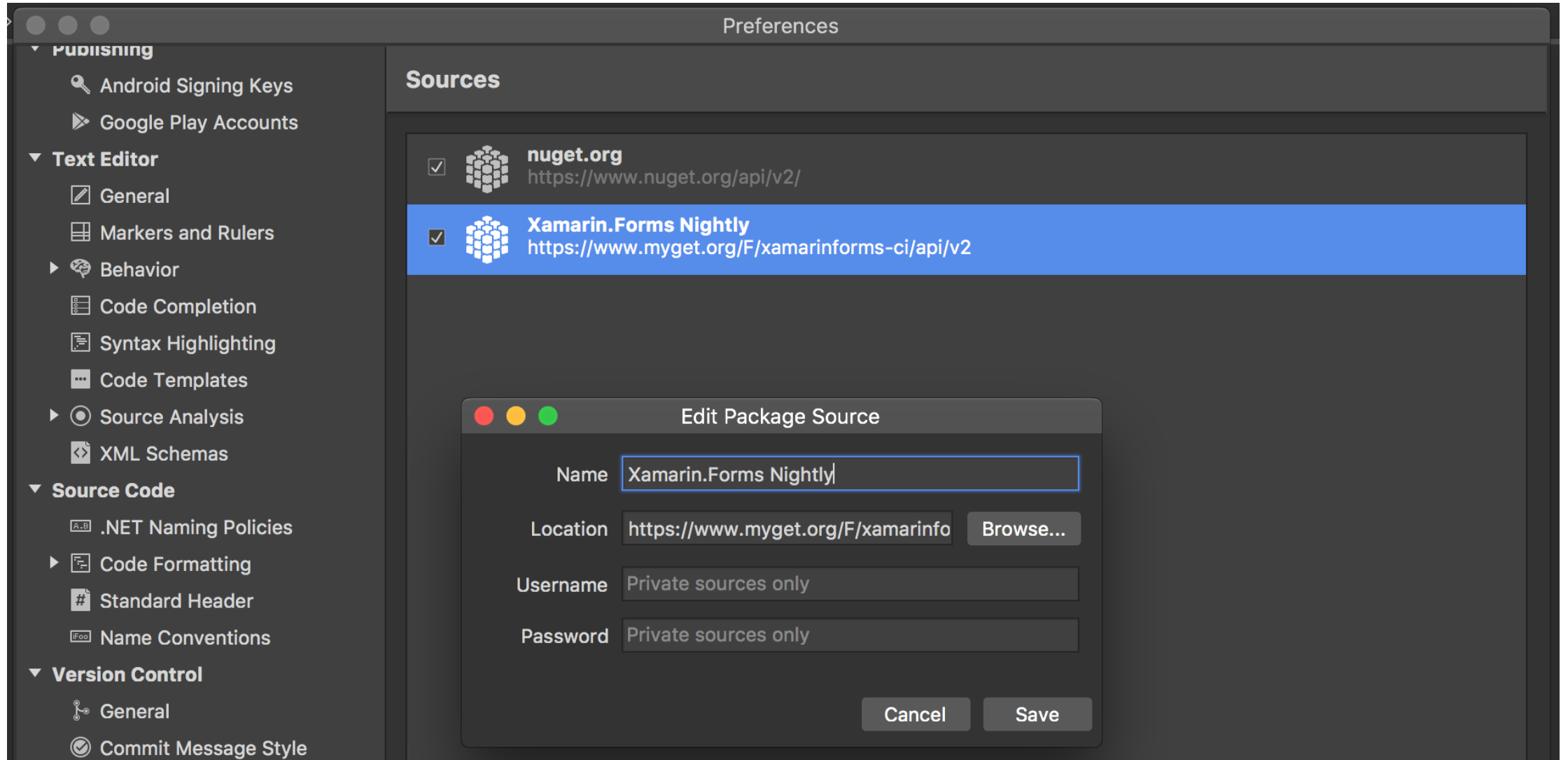
The screenshot displays the Visual Studio IDE with the Xamarin Studio Enterprise interface. The top menu bar includes File, Edit, View, Window, and Help. The toolbar shows various icons for debugging and development. The main editor window displays the XAML file `MyPage.xaml` with the following code:

```
<?xml version="1.0" encoding="UTF-8"?>
<ContentPage Title="Xaml Native Views" xmlns="http://xamarin.com/schemas/2014/forms" xmlns:ios="clr-namespace:UIKit;assembly=Xamarin.iOS;targetFramework=iOS9.0" >
  <ContentPage.Resources>
    <ResourceDictionary>
      <iosControls:UIColorConverter x:Key="colorConverterIOS" />
    </ResourceDictionary>
  </ContentPage.Resources>
  <ContentPage.Content>
    <StackLayout BackgroundColor="#eeeeee">
      <Label Text="This text color is Bound to the picker" FontSize="22" FontAttributes="Bold" HorizontalTextAlignment="Center"
        TextColor="{Binding FormsSelectedColor}" />
      <Button Text="Change Text From Forms" Command="{Binding ChangeTextCommand}" />
      <ios:UILabel BackgroundColor="{x:Static ios:UIColor.LightGray}" Text="{Binding LabelName,}" />
      <ios:UITextView Text="{Binding LabelName, Mode=TwoWay, UpdateSourceEventName=Ended}" />
      <ios:ColorPicker>
        SelectedColor="{Binding Path=FormsSelectedColor,
          Mode=TwoWay,
          Converter={StaticResource colorConverterIOS},
          UpdateSourceEventName=ColorPicked}" />
      <x:Arguments>
        <iosCoreGraphics:CGRect>
          <x:Arguments>
            <x:Double>0</x:Double>
            <x:Double>0</x:Double>
          </x:Arguments>
        </iosCoreGraphics:CGRect>
      </x:Arguments>
    </StackLayout>
  </ContentPage.Content>
</ContentPage>
```

On the right side, a mobile emulator is shown, displaying the application's output. The emulator's status bar at the top indicates "iPhone SE - iOS 10.0 (14A345)" and the time "7:22 PM". The application's title bar reads "Xaml Native Views". The main content area shows the text "This text color is Bound to the picker" in a bold, magenta font. Below this text is a blue button labeled "Change Text From Forms". At the bottom of the screen, the text "Hello from Forms" is visible.

Nightly Builds

<https://github.com/xamarin/Xamarin.Forms/wiki/Nightly-Builds>



More Performance Enhancements

- Android Startup
- Reduce Android GPU Overdraw
- Single DLL

15 Minute Break

Presenter First Name

Presenter Last Name

Presenter Title

Presenter e-mail

blogs

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