

Creating iOS & Android apps in .NET Using Xamarin

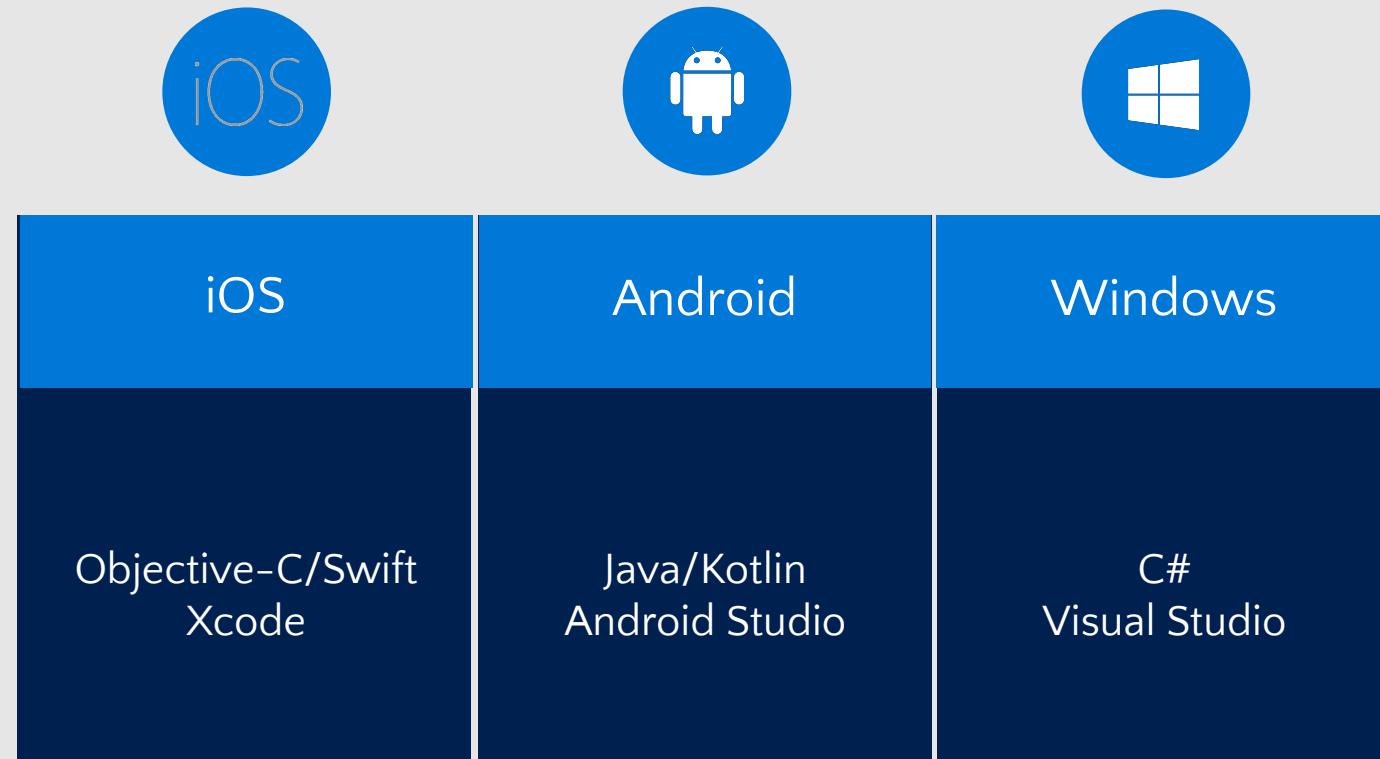
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The History of Architecting Mobile Apps



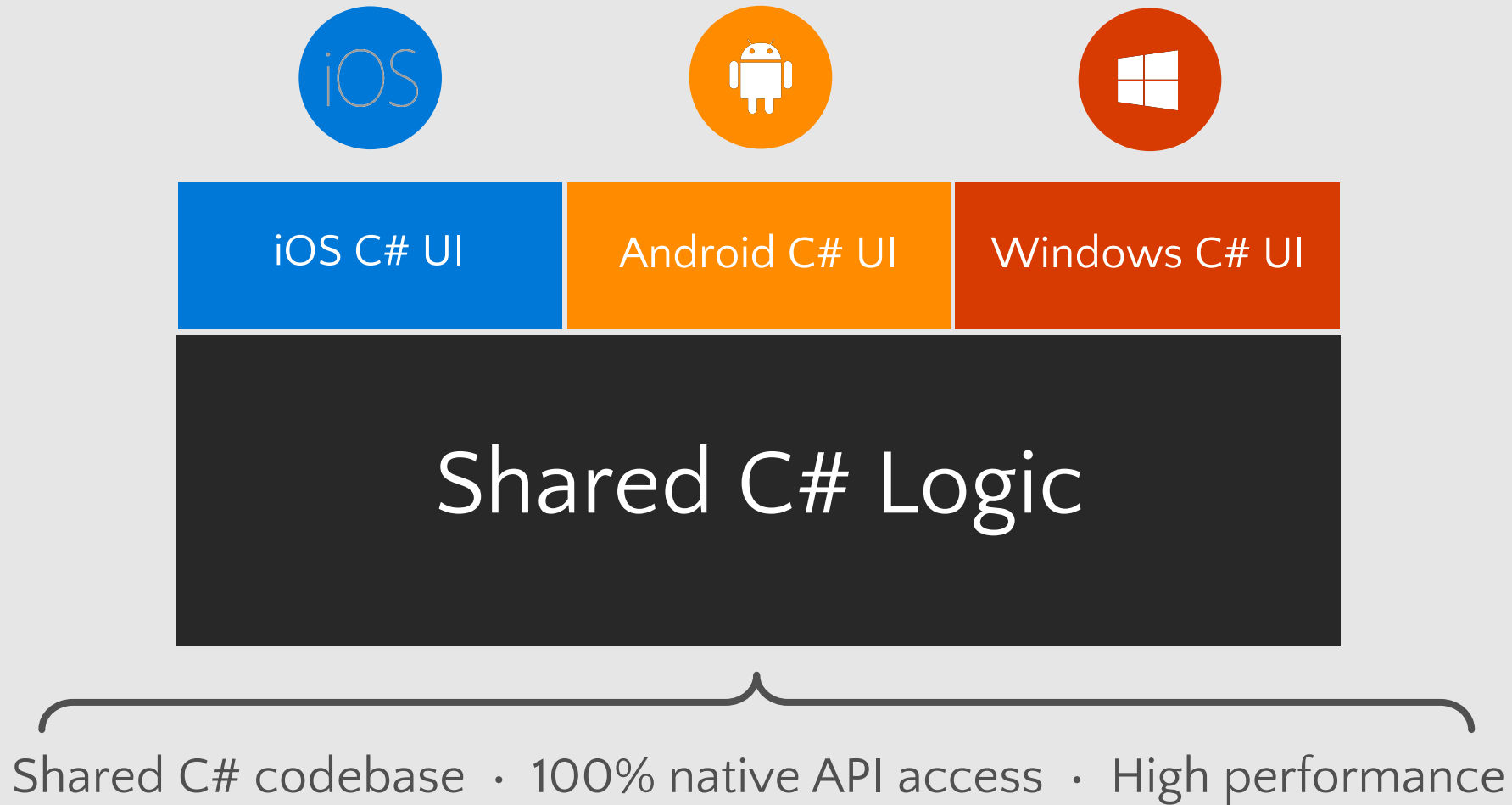
Silo approach



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



Xamarin's unique approach



Xamarin



iOS C#



Android C#



Windows C#

Shared C# Logic

3 Native User Interfaces
Shared App Logic

@dbonillanareia



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



Mono Runtime

Open Source .NET Runtime

- Allows .NET to run on Linux
- Founded in 2004
- Converging with .NET Core in .NET 5



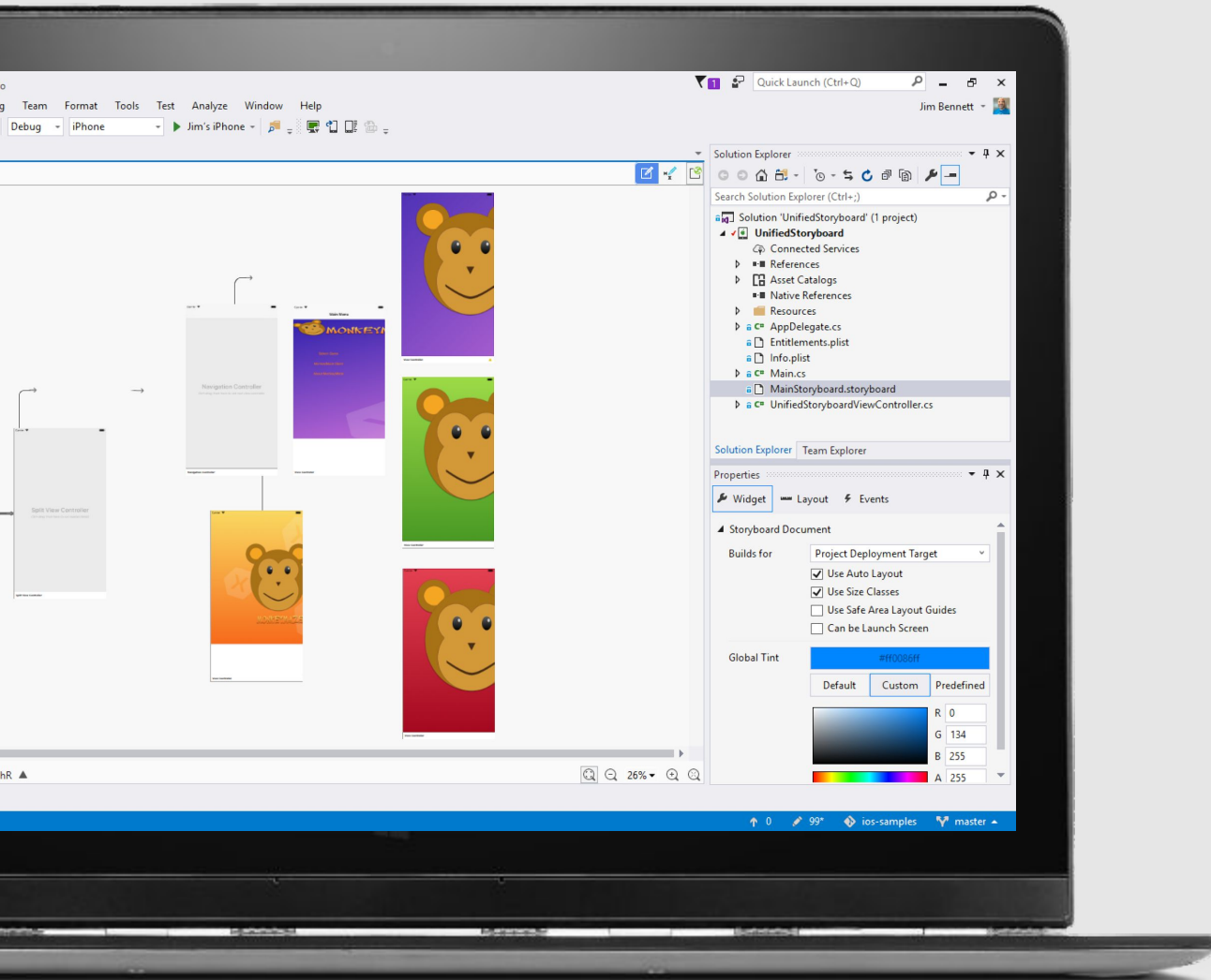
Open Source



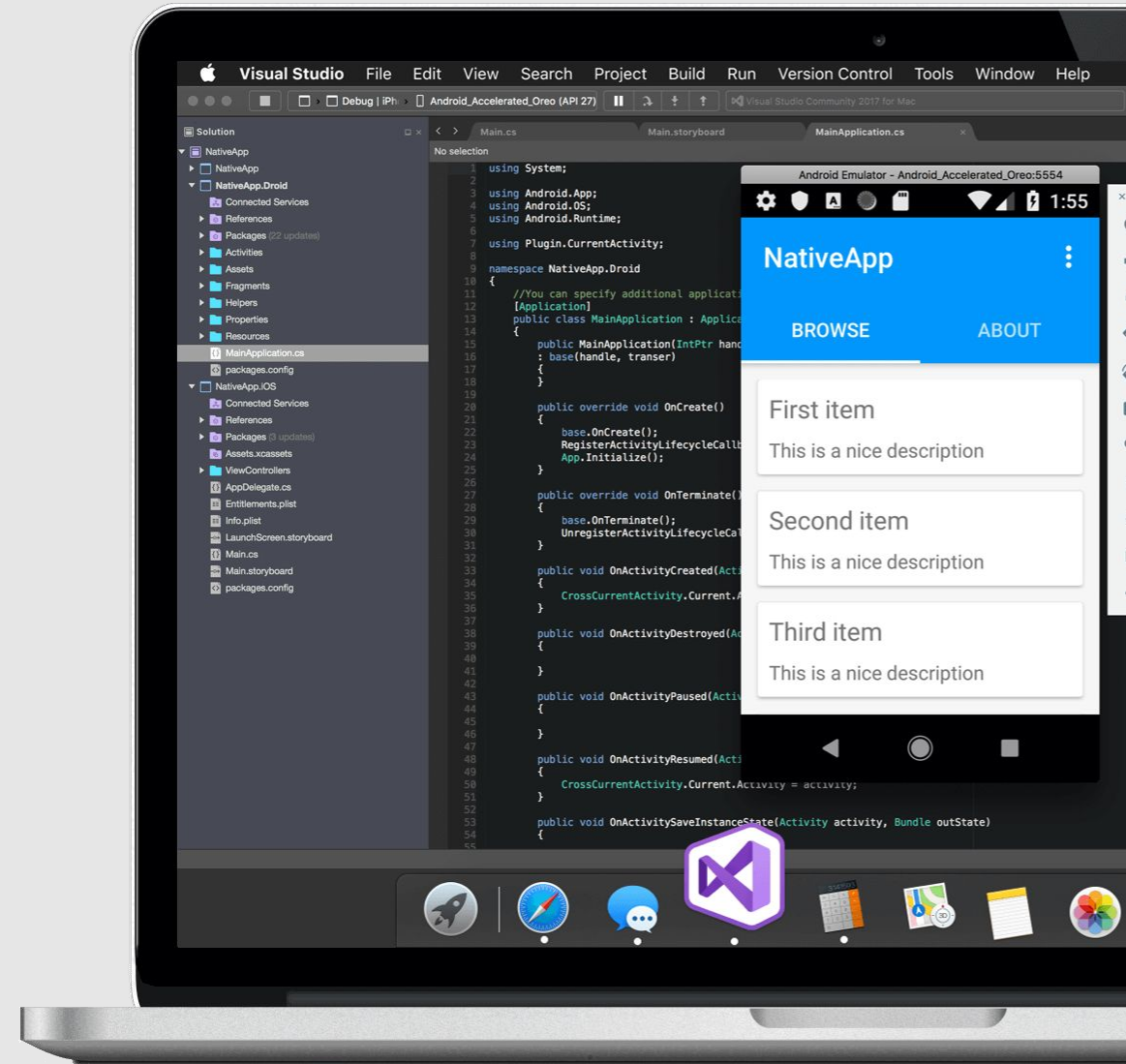
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Visual Studio (PC)



Visual Studio for Mac



Demo

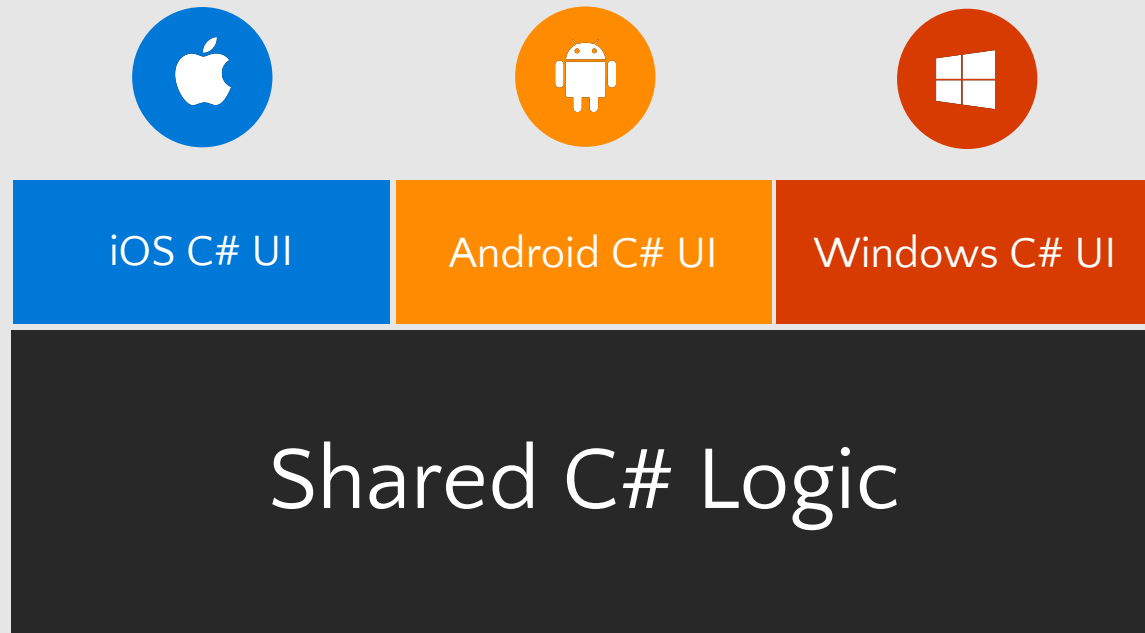
Xamarin.iOS
Xamarin.Android



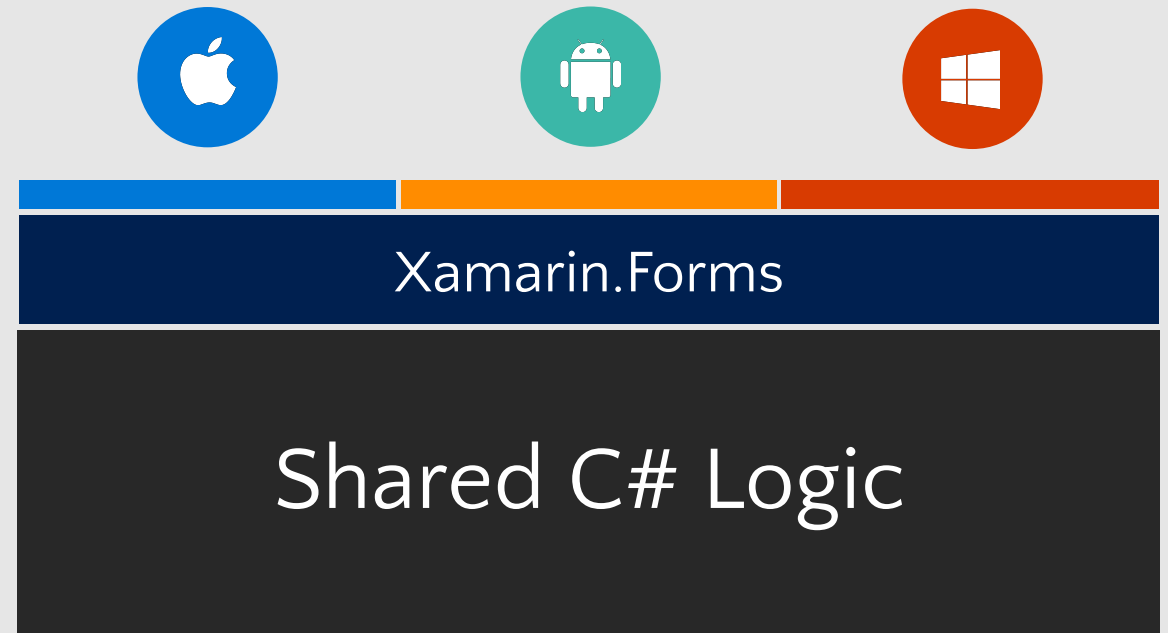
Sharing User Interface



Xamarin + Xamarin.Forms



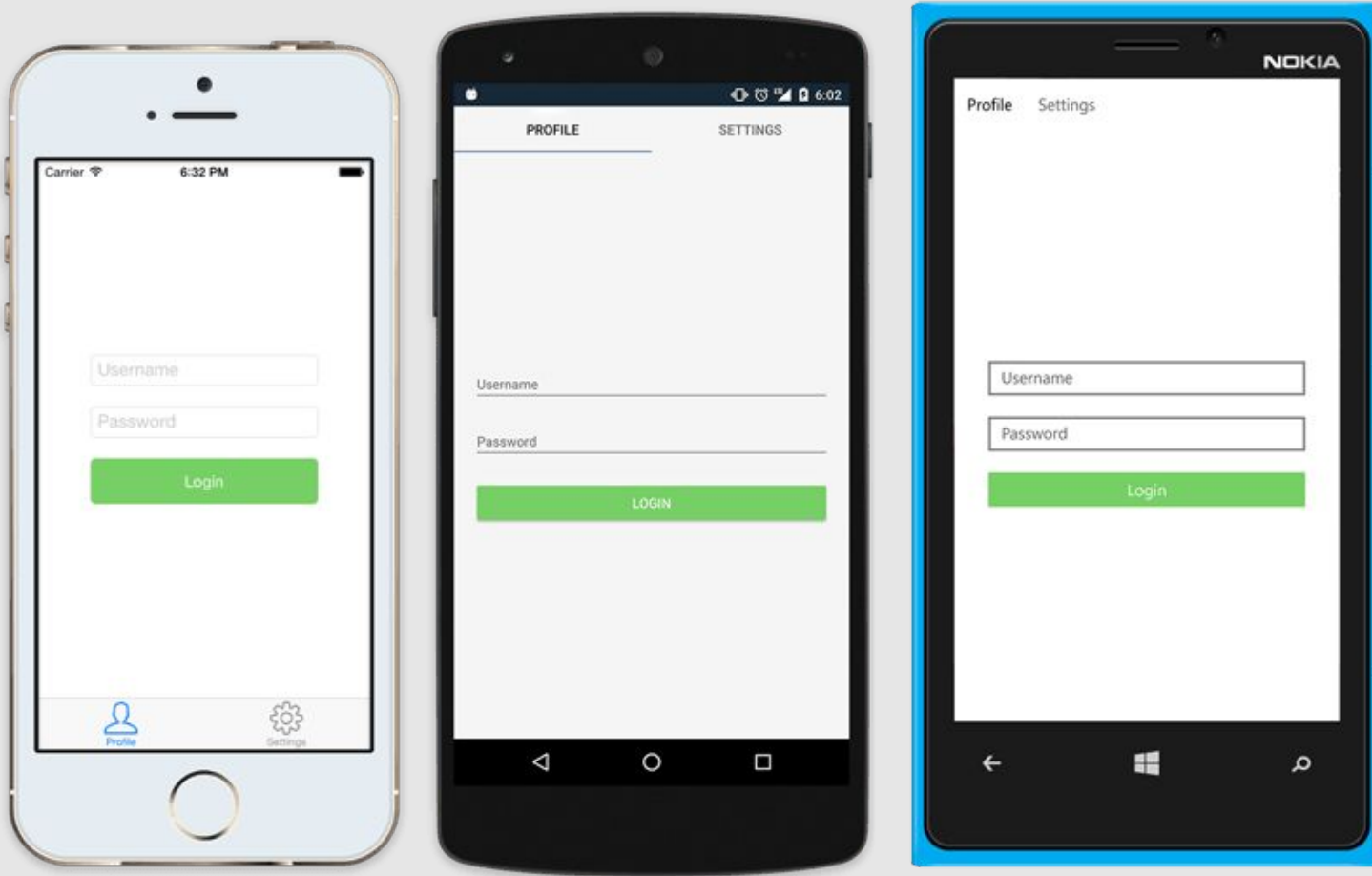
Traditional Xamarin approach



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



Native UI from shared code



```
public class App : Application
{
    public App()
    {
        var usernameEntry = new Entry
        {
            Placeholder = "Username"
        };
        var passwordEntry = new Entry
        {
            Placeholder = "Password"
        };
        var loginButton = new Button
        {
            Text = "Login",
            BackgroundColor = Color.FromHex("77D065")
        };

        var stackLayout = new StackLayout
        {
            Spacing = 20,
            Padding = 20,
            VerticalOptions = LayoutOptions.Center
        };
        stackLayout.Children.Add(usernameEntry);
        stackLayout.Children.Add(passwordEntry);
        stackLayout.Children.Add(loginButton);

        var profilePage = new ContentPage
        {
            Title = "Profile",
            IconImageSource = "Profile.png",
            Content = stackLayout
        };

        var settingsPage = new ContentPage
        {
            Title = "Settings",
            IconImageSource = "Settings.png"
        };

        var tabbedPage = new TabbedPage();
        tabbedPage.Children.Add(profilePage);
        tabbedPage.Children.Add(settingsPage);

        MainPage = tabbedPage;
    }
}
```



Demo

Xamarin.Forms



Quick Review



Xamarin

Native Mobile Development in .NET

- Wraps 100% of iOS and Android APIs
- Powered by the Mono Runtime



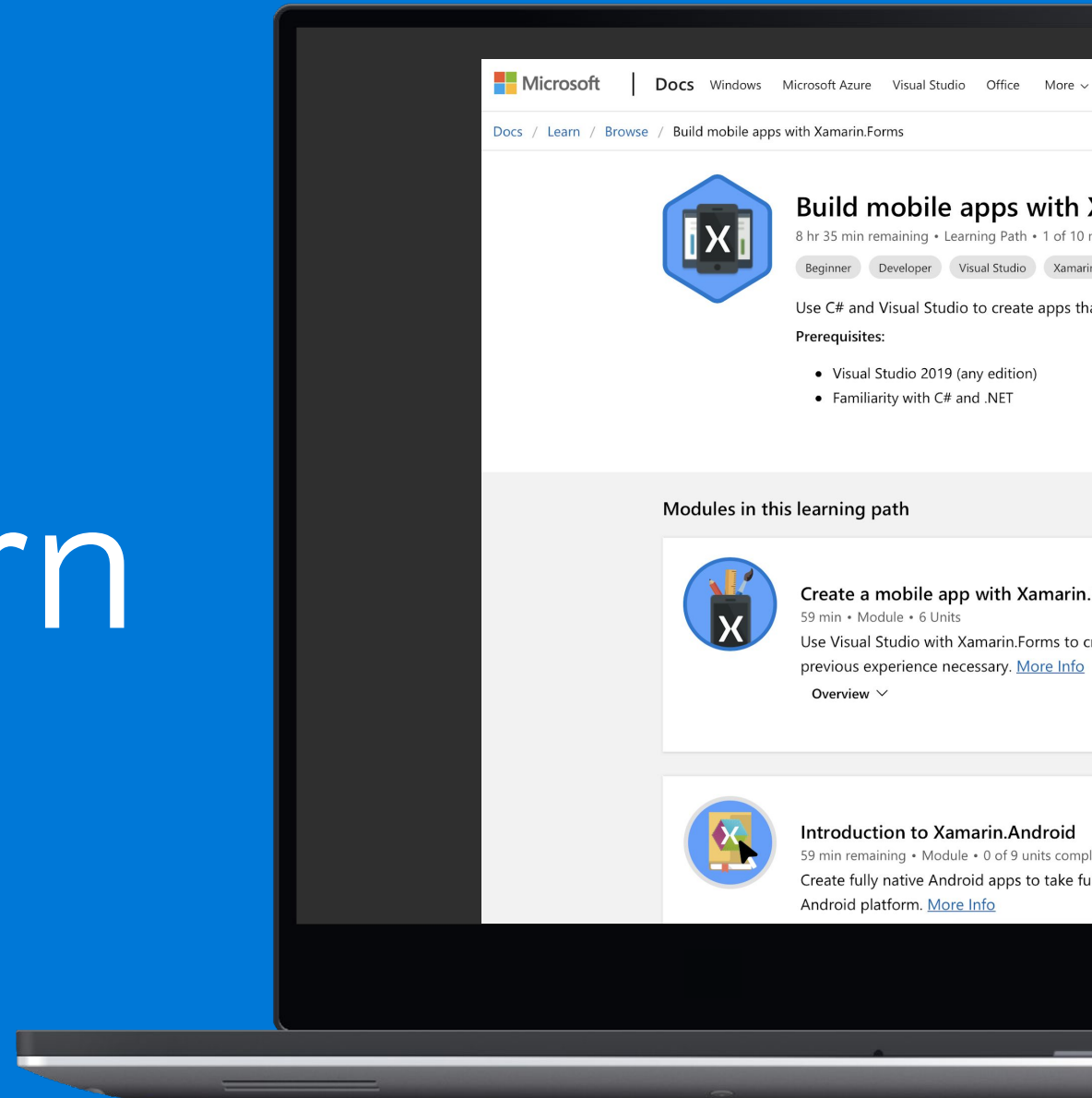
Xamarin.Forms

Shared UI Code

- Runs on top of Xamarin



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Demo

<https://microsoft.com/learn>



Thank You

