

Code once, deploy everywhere with dotnet MAUI

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Developer | Microsoft MVP





CODE
SPACE

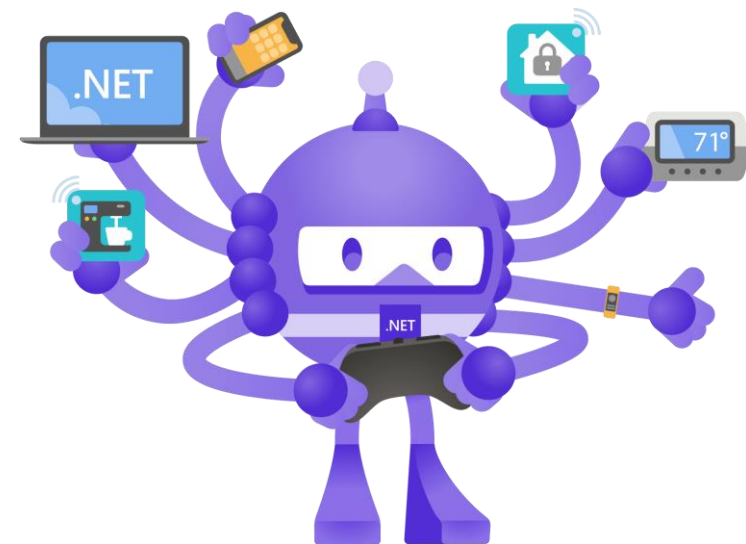


WARNING!

I'm no expert, just learning as everyone does

Any contribution is welcome

Xamarin.Forms, this starts with you!



An abstract graphic on a light purple background. It features a large purple square in the upper left containing the text ".NET" in white. To its right is a white rounded rectangle containing the text "MAUI" in purple. Below the square is a purple circle, and to its right is a purple horizontal bar. A thin white horizontal line runs across the middle of the image.

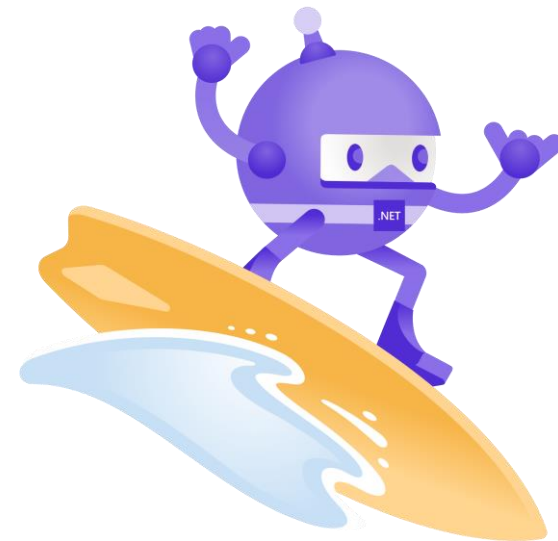
.NET

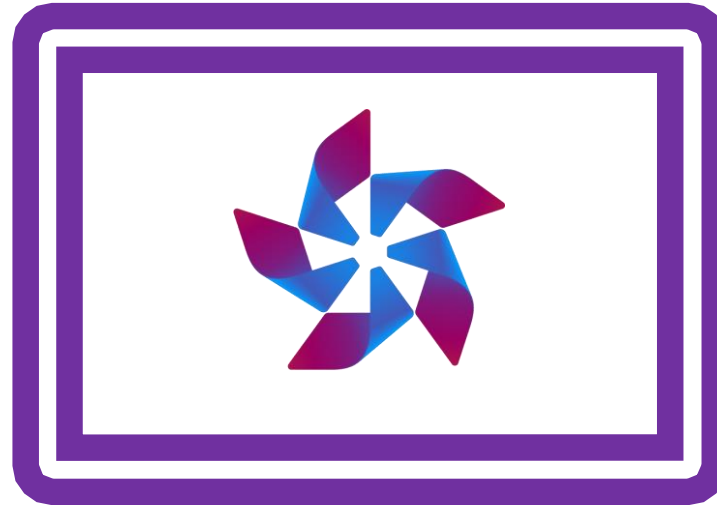
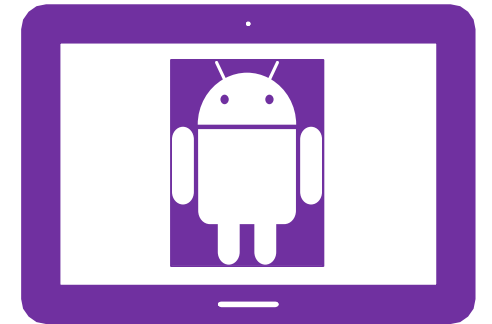
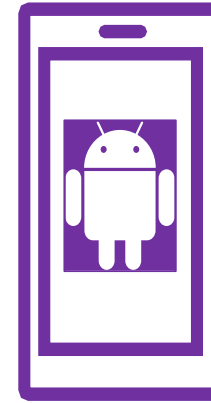
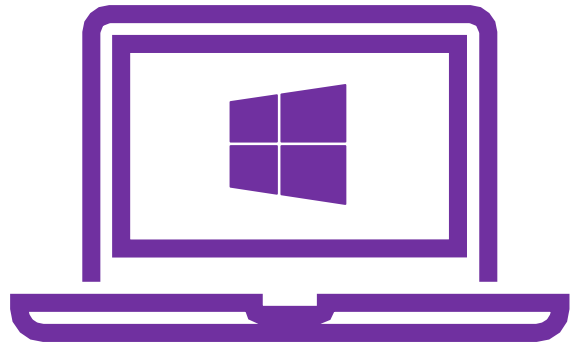
MAUI

What is .NET MAUI?

Multiplatform **A**pp **UI**, a new framework to create native *cross-platform* apps, deploying to desktop and mobile in C# + XAML

- for iOS, Android, macOS & Windows
- ***open-source***
- *a single shared codebase*
- **hot reload!**
- access to native APIs for each platform





what about Linux?

Linux is no currently supported by .NET MAUI

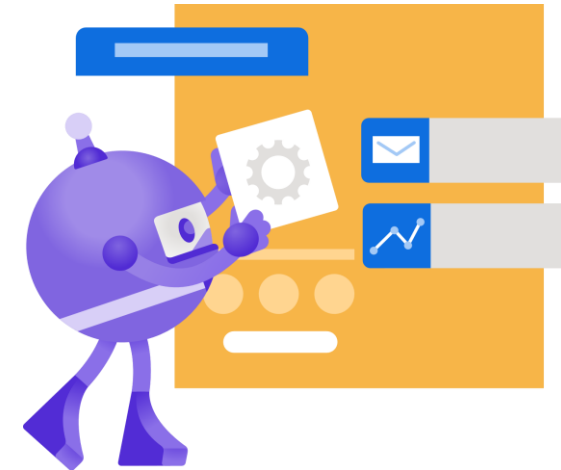
There's a unofficial proyect hosted on GitHub, community driven

features!

Accessibility

```
<Image Source="dotnet_bot.png"  
  SemanticProperties.Description="Cute dot net bot saying hi!"  
  SemanticProperties.Hint="dotnetbot says hi!" />
```

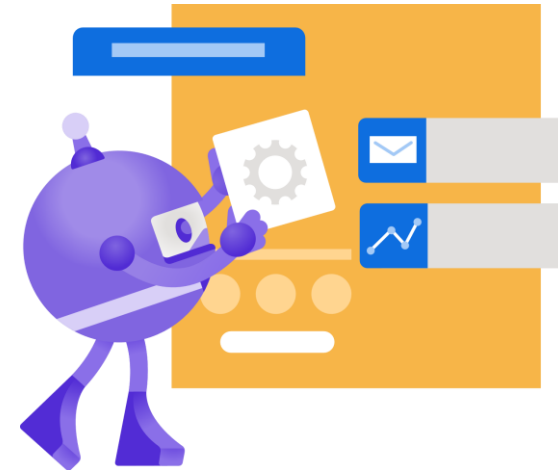
Hints and description for multiple controls, as images or text boxes



Accessibility

```
<Label Text="Get started with .NET MAUI"  
|     SemanticProperties.HeadingLevel="Level1" />  
<Label Text="Paragraphs of text go here." />  
  
<Label Text="Installation"  
|     SemanticProperties.HeadingLevel="Level2" />
```

Heading levels or headers in labels, for better reading

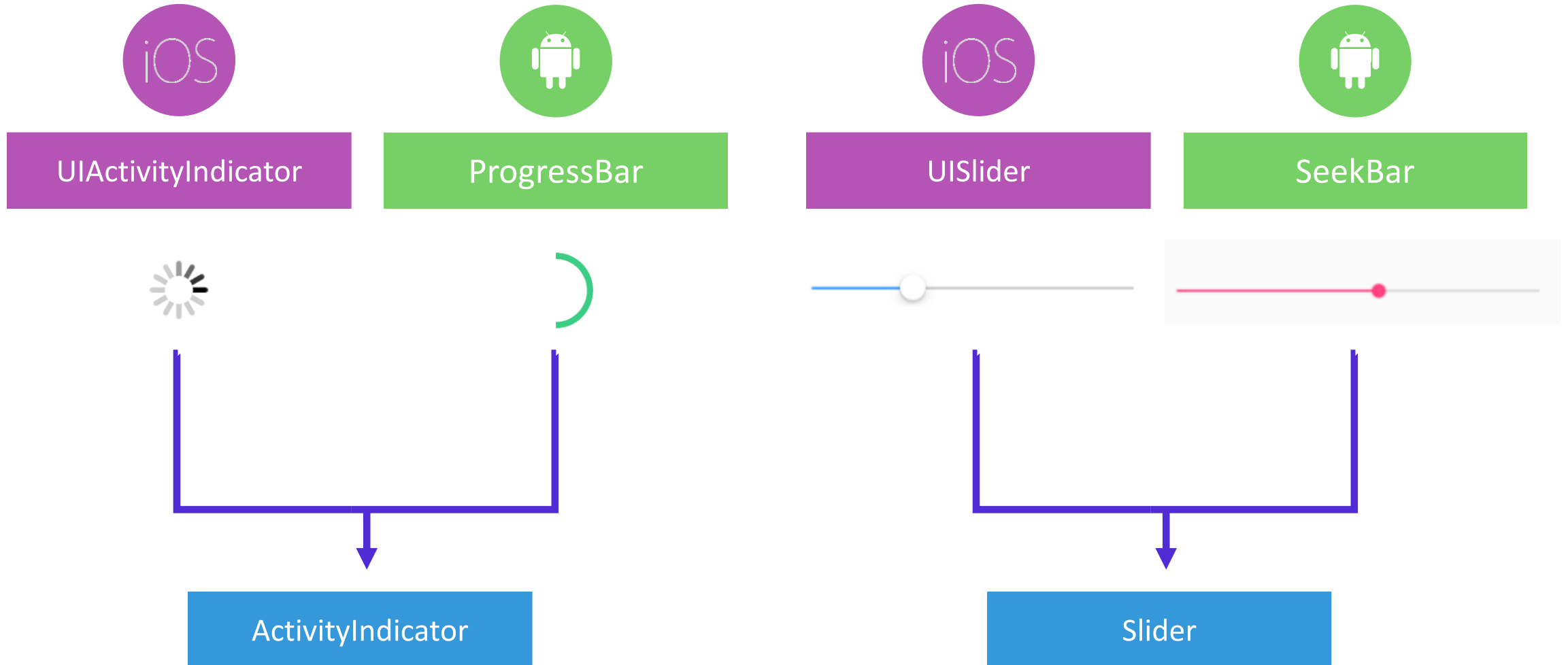


Requirements

Windows		macOS
IDE	Visual Studio 2022 17.2 Preview o superior	Visual Studio for macOS 2022 Preview
Para iOS	✓ *	✓
Para Android	✓	✓
Para Windows	✓	✗
Para macOS	✗	✓

* *Pair to Mac needed*

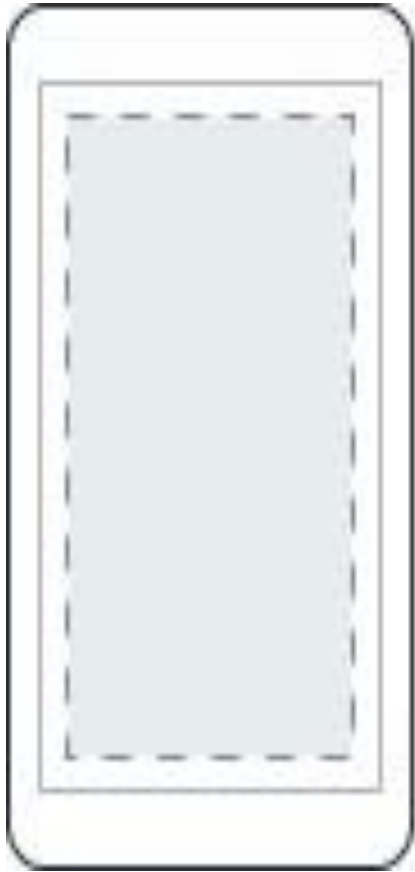
Rendering native controls



Controls

		CarouselView	CollectionView	RefreshView
IndicatorView	Checkbox	RadioButton	ImageButton	SwipeView
ActivityIndicator	BoxView	Button	DatePicker	Editor
Entry	Image	Label	ListView	Map
OpenGLView	Picker	ProgressBar	SearchBar	Slider
Stepper	TableView	TimePicker	WebView	EntryCell
ImageCell	SwitchCell	TextCell	ViewCell	Path
Ellipse	Polygon	Rectangle	Line	Polyline

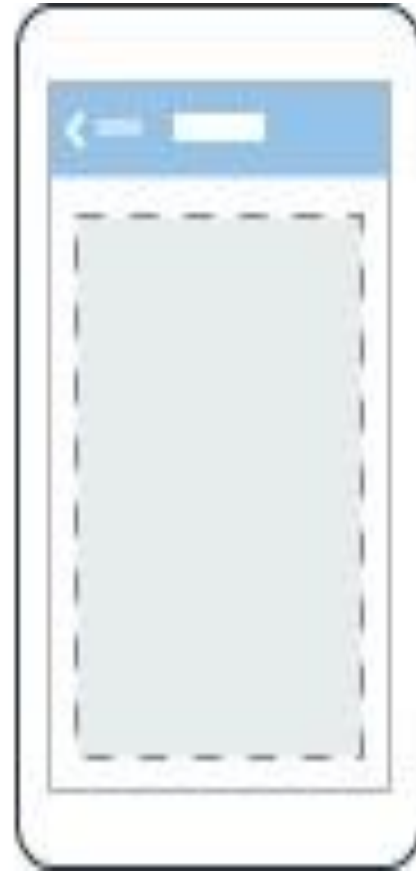
Navigation and so on



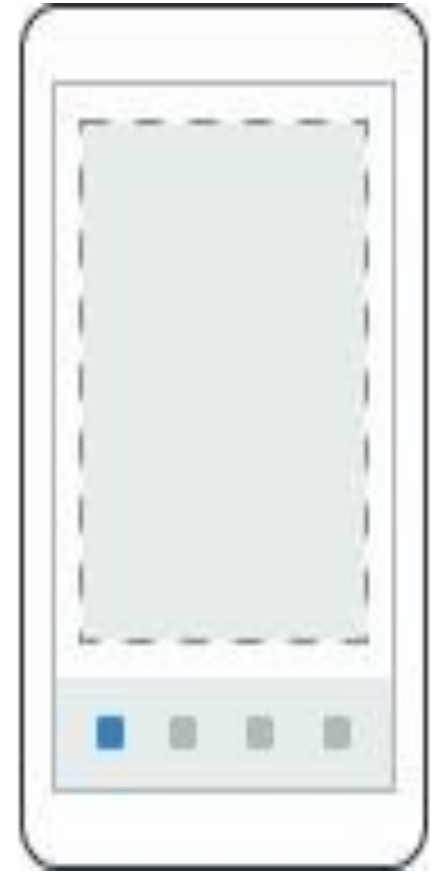
Content



Flyout



Navigation

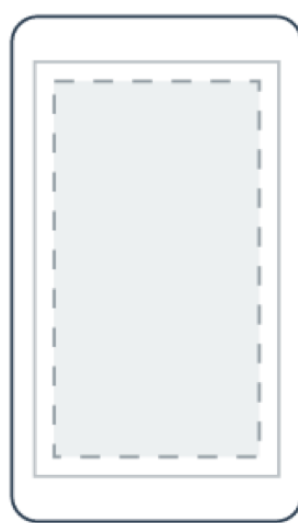


Tabbed

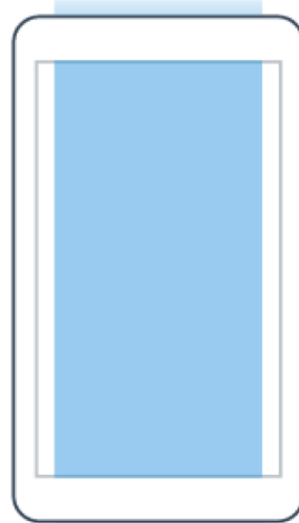
Layouts



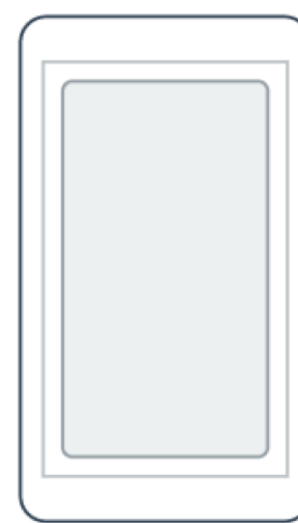
ContentPresenter



ContentView



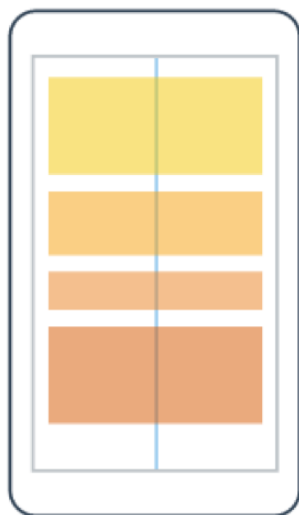
ScrollView



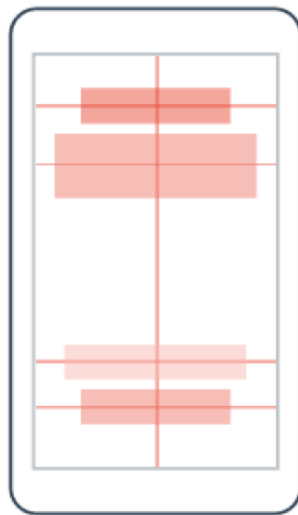
Frame



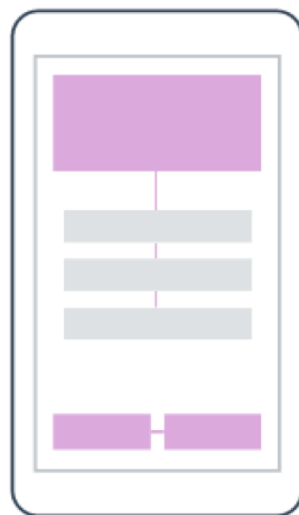
TemplatedView



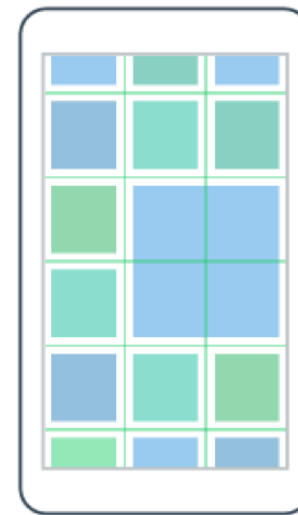
StackLayout



AbsoluteLayout



RelativeLayout



Grid

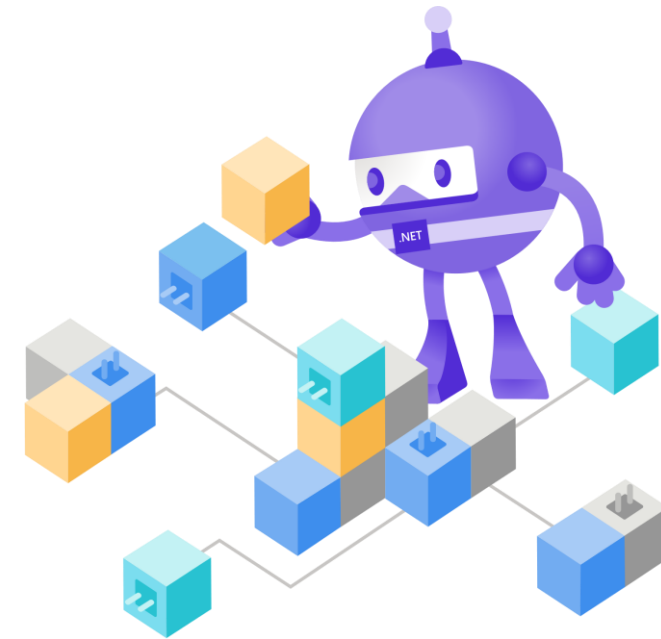


FlexLayout

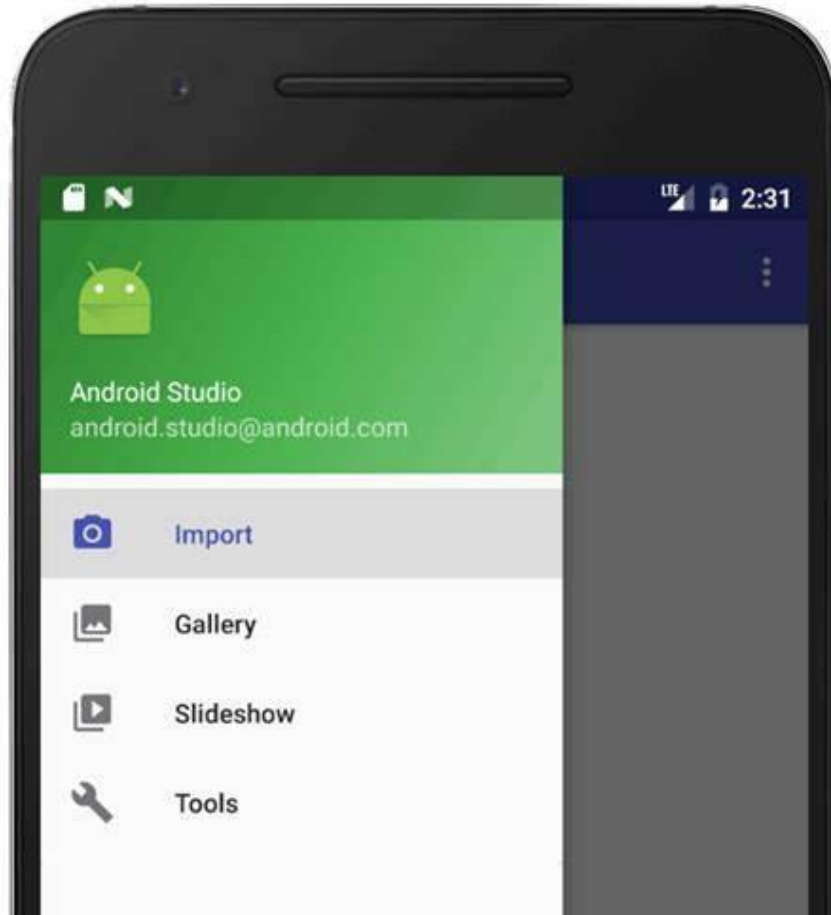
Shell

A container to manage the different views in the app

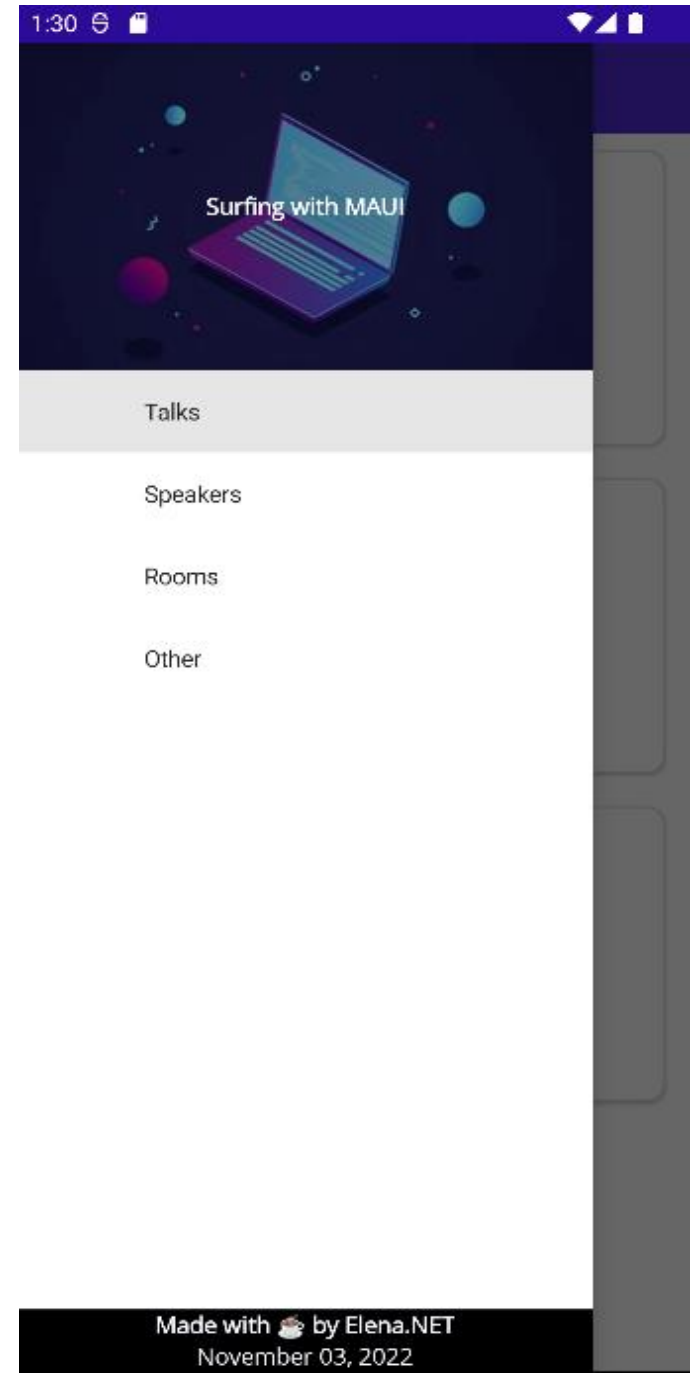
Manages navigation between Pages, also enabling flyout menu, tabs...



Shell in a nutshell



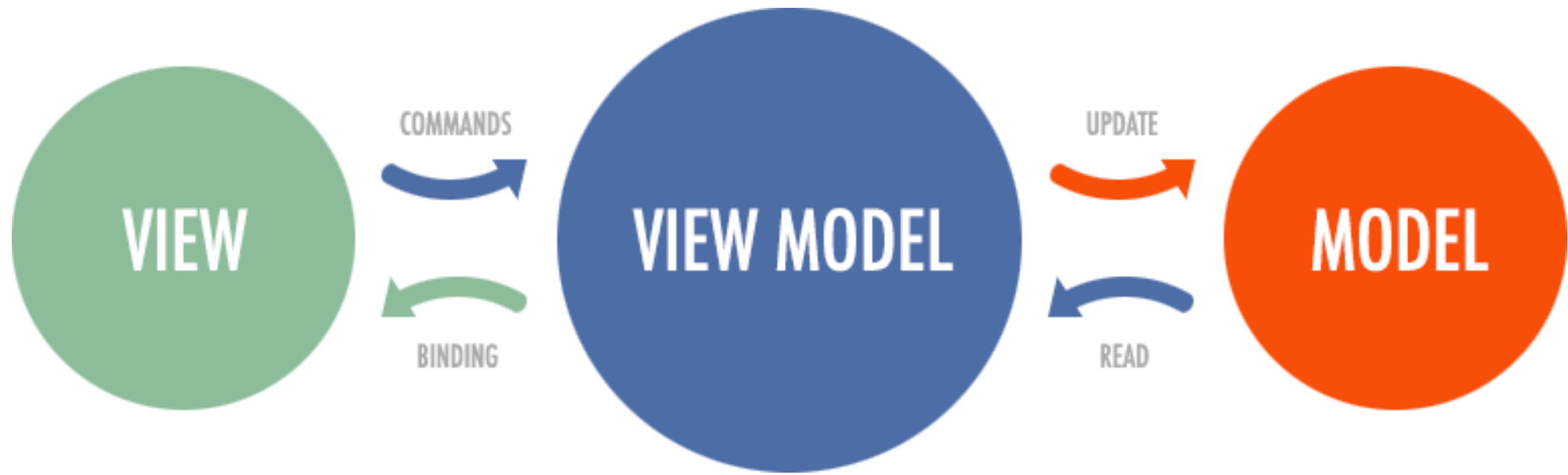
NavigationDrawer in Android



architecture!

MVVM

Just as WPF and Xamarin.Forms in the past



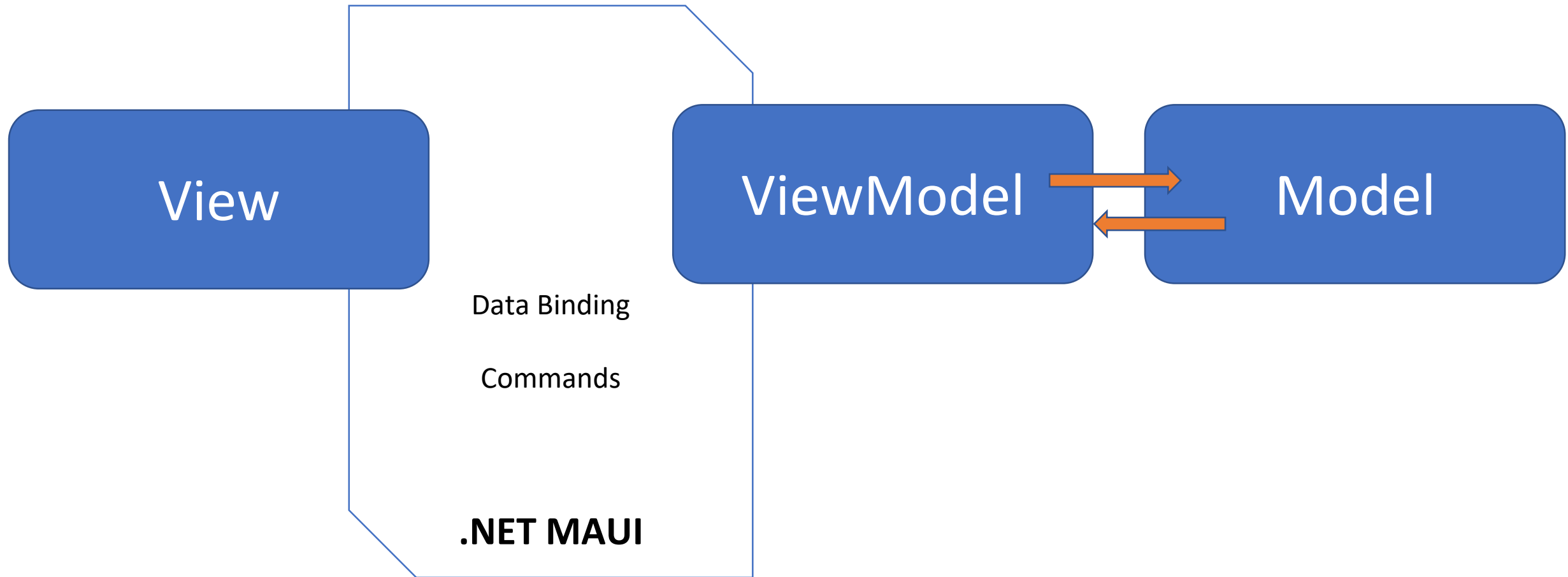
MVVM

Making our XAML UIs reactive and responsive

```
<Button Text="Get data"
        Style="{StaticResource ButtonOutline}"
        Command="{Binding GetTeamsCommand}"
        IsEnabled="{Binding IsNotBusy}"/>
```

```
<CollectionView
    Grid.ColumnSpan="2"
    ItemsSource="{Binding Teams}"
    SelectionMode="None">
    <CollectionView.ItemTemplate>
        <DataTemplate x:DataType="model:Team">
            <Grid Padding="10">
                <Frame HeightRequest="125"
                    Padding="0"
                    Style="{StaticResource CardView}">
                    <Grid Padding="0"
                        ColumnDefinitions="125, *"
                        <Image Aspect="AspectFill"
                            Source="{Binding Image}"
                            WidthRequest="125"
                            HeightRequest="125"/>
                        <VerticalStackLayout Grid.Column="1"
                            Padding="10"
                            VerticalOptions="Center">
                            <Label Text="{Binding Name}"
                                FontSize="25"/>
                            <Label Text="{Binding Location}"
                                FontSize="20"/>
                        </VerticalStackLayout>
                    </Grid>
                </Frame>
            </Grid>
        </DataTemplate>
    </CollectionView.ItemTemplate>
</CollectionView>
```

Responsibility segregation



Use CommunityToolkit!

Your new favourite NuGet

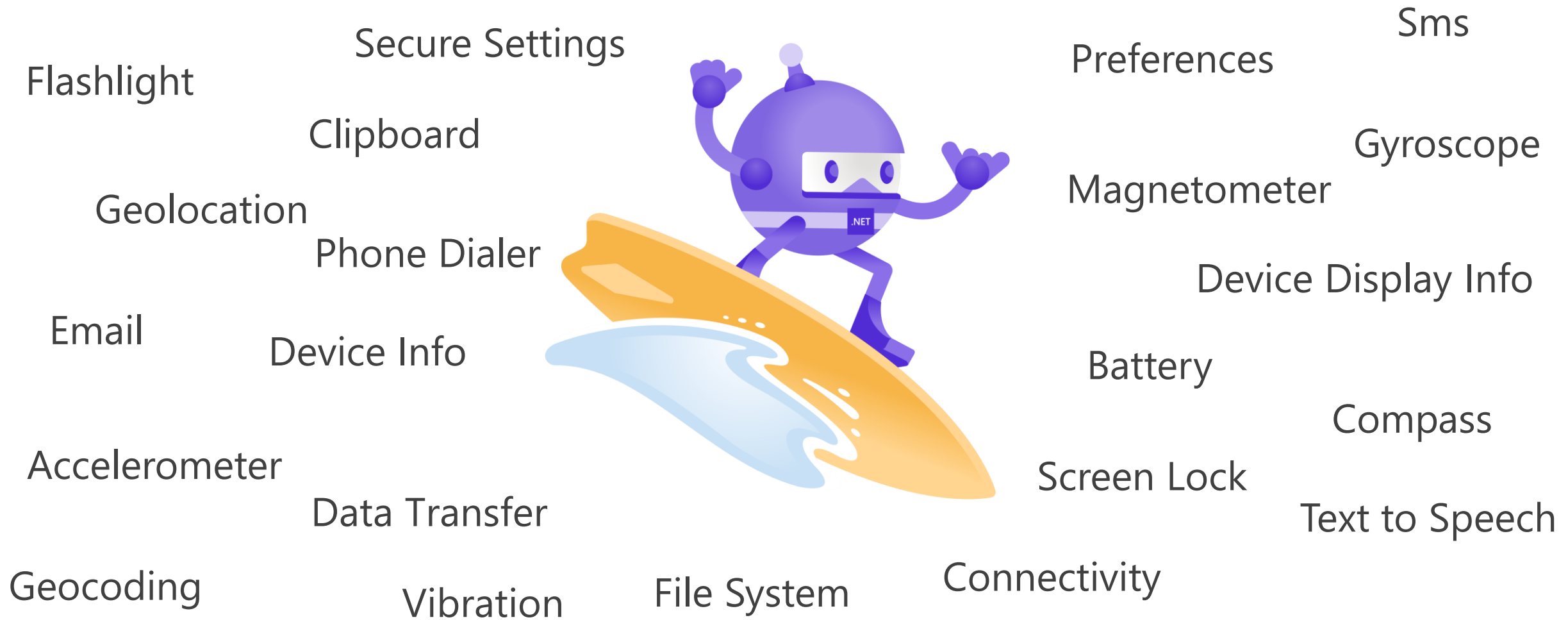
Wrapped tools to make your life easier with MVVM

Improving:

- MVVM (Commands, Observables...)
- Diagnostics
- Performance



Available native APIs



**“what about
Flutter/React Native/Uno
Platform/Kotlin Native?”**



Microsoft Learn



Build mobile and desktop apps with .NET MAUI

7400 XP

5 hr 28 min remaining • Learning Path • 0 of 7 modules completed

Beginner Developer .NET Visual Studio .NET MAUI

Learn how to use .NET MAUI to build apps that run on mobile devices and on the desktop using C# and Visual Studio. You'll learn the fundamentals of building an app with .NET MAUI and more advanced topics such as local data storage and invoking REST-based web services.

Prerequisites

- Visual Studio 2022 with the MAUI workload installed
- Familiarity with C# and .NET

Modules in this learning path



Create a cross-platform app with .NET MAUI

1000 XP

16 min remaining • Module • 4 of 7 units completed

★★★★★ 4.7 (102)

Learn how to use Visual Studio with .NET MAUI to create a cross-platform app

Continue >

Overview ▾

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Twitter: [/Beelzenef_](#)

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LinkedIn: [/in/elena-guzman-blanco](#)



demo time!