# .NET MAUI Project Templates, Item Templates and Code Snippets

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#### Introduction

This VS extension is loaded with Project, Item Templates and Code Snippets for working with .NET MAUI in Visual Studio 2022.

### **Project Templates**

- .NET MAUI App All All-in-One App Project Template. For more details check out this blog post
- .NET MAUI App (C#)
- .NET MAUI Class Library
- Shared Class Library (targeting both Xamarin.Forms and .NET MAUI)

## **Item Templates**

Made available in the section titled MAUI in the Add New Item dialog.

ContentPage, in both XAML and C#, and has been named as:

- Content Page (.NET MAUI)
- Content Page (C#) (.NET MAUI)

ContentView, in both XAML and C#, and has been named as:

- Content View (.NET MAUI)
- Content View (C#) (.NET MAUI)

**Shell**, a page for defining app visual hierarchy along with navigation.

**ResourceDictionary**, a page for managing resources, in both the formats of with code-behind file and XAML only (as its the C# code-behind is used rarely).

#### New Item Templates for creating a Custom View definition:

- .NET MAUI Custom View and Handler (Regular)
- .NET MAUI Custom View and Handler (Cond.)
- .NET MAUI Custom View and Renderer (Regular)

- .NET MAUI Custom View and Renderer (Cond.)
- Regular type template generates the Handler / Renderer source files in the Platforms folder whereas Cond. type template houses all of them in a single folder.
- For conditional type format, ensure Conditional Compilation is configured in the project file for the build to succeed. An additional option is provided during project creation (in both VS IDE and CLI)(or manually thereafter). Check out this **readme** for further details.

## **Code Snippets**

#### For XAML

In the XAML page, type the short name and hit the Tab key twice to insert the snippet.

Snippets mentioned in bold-face also works as a SurroundWith snippet too (from Xaml section).

In the Output Format column, text highlighted in different colors infer the following:

- Yellow color are placeholders where user can modify the values
- Green color are derived values, can't be modified. For example, containing class name
- Turquoise color are reflected values, where the placeholder value is filled-in

| Snippet                 | Short<br>Name | Output Format   |
|-------------------------|---------------|---|
| Grid                    | grid          | <grid columndefinitions="" rowdefinitions=""> </grid> |
| Flex Layout             | flex          | <flexlayout></flexlayout>                             |
| Stack Layout            | stack         | <stacklayout></stacklayout>                           |
| Horizontal Stack Layout | hstack        | <horizontalstacklayout></horizontalstacklayout>       |
| Vertical Stack Layout   | vstack        |   |

| Snippet | Short<br>Name | Output Format   |
|---------|---------------|---|
| Style   | style         | <style targettype="Page"></td></tr><tr><td>Style</td><td><Style></td></tr><tr><td>Color</td><td>color</td><td><Color x:Key="<mark>Success</mark>"><mark>Green</mark></Color></td></tr><tr><td></td><td rowspan=4>res</td><td><<mark>ContentPage</mark>.Resources></td></tr><tr><td>Resources</td><td><ResourceDictionary></td></tr><tr><td>nesources</td><td></ResourceDictionary></td></tr><tr><td></td><td></<mark>ContentPage</mark>.Resources></td></tr><tr><td>Gestures</td><td>gesture</td><td><<u>Label</u>.GestureRecognizers></td></tr><tr><td>Gestares</td><td>gestare</td><td></<mark>Label</mark>.GestureRecognizers></td></tr><tr><td>Tap Gesture Recognizer</td><td>tap</td><td><TapGestureRecognizer /></td></tr><tr><td>Drag Gesture<br>Recognizer</td><td>drag</td><td><pre><DragGestureRecognizer /></pre></td></tr><tr><td>Drop Gesture<br>Recognizer</td><td>drop</td><td><pre><DropGestureRecognizer /></pre></td></tr><tr><td>Pan Gesture Recognizer</td><td>pan</td><td><PanGestureRecognizer /></td></tr><tr><td>Pinch Gesture<br>Recognizer</td><td>pinch</td><td><PinchGestureRecognizer /></td></tr><tr><td>Swipe Gesture<br>Recognizer</td><td>swipe</td><td><SwipeGestureRecognizer /></td></tr><tr><td></td><td rowspan=5>bwv</td><td><b:BlazorWebView HostPage="wwwroot/index.html"></td></tr><tr><td></td><td><br/><b:BlazorWebView.RootComponents></td></tr><tr><td rowspan=3>Blazor Web View</td><td><br/><b:RootComponent ComponentType="{x:Type }"<br/>Selector="#app" /></td></tr><tr><td></b:BlazorWebView.RootComponents></td></tr><tr><td></b:BlazorWebView></td></tr><tr><td>.NET MAUI Blazor</td><td></td><td>xmlns:b="clr-</td></tr><tr><td>Namespace</td><td>mb</td><td>namespace:Microsoft.AspNetCore.Components.WebView.Maui<br>;assembly=Microsoft.AspNetCore.Components.WebView.Maui"</td></tr></tbody></table></style> |

| Snippet              | Short<br>Name | Output Format  |
|----------------------|---------------|--|
| WPF Blazor Namespace | wb            | xmlns:b="clr-<br>namespace:Microsoft.AspNetCore.Components.WebView.Wpf<br>;assembly=Microsoft.AspNetCore.Components.WebView.Wpf" |

#### For C#

In the C# code file, type the short name and hit the Tab key twice to insert the snippet.

Snippets mentioned in bold-face also works as a **SurroundWith** snippet too (from **CSharp** section).

In the Output Format column, text highlighted in different colors infer the following:

- Yellow color are placeholders where user can modify the values
- Green color are derived values, can't be modified. For example, containing class name
- Turquoise color are reflected values, where the placeholder value is filled-in

| Snippet             | Short Name | Output Format   |
|---------------------|------------|---|
| Async Event Handler | aeh        | private async void MyMethod(object sender, EventArgs e)   |
|                     |            | {   |
|                     |            | }   |
| Attached Property   | propap     | Here assuming MyClass is the containing type.  public static readonly BindableProperty NameProperty = BindableProperty.CreateAttached(nameof(NameProperty), typeof(string), typeof(MyClass), default(string));  public static string GetName(BindableObject bindable) => (string)bindable.GetValue(NameProperty);  public static void SetName(BindableObject bindable, string value) => bindable.SetValue(NameProperty, value); |

| Snippet              | Short Name            | Output Format  |
|----------------------|-----------------------|--|
| Bindable Property    | propbp                | Here assuming MyClass is the containing type.  |
|                      |                       | <pre>public static readonly BindableProperty NameProperty = BindableProperty.Create(nameof(Name), typeof(string), typeof(MyClass), default(string));</pre> |
|                      |                       | public string Name   |
|                      |                       | {  |
|                      |                       | get => (string)GetValue(NameProperty);   |
|                      |                       | set => SetValue(NameProperty, value);  |
|                      |                       | }  |
| Comet Property (MVU) | propc                 | public string Name   |
|                      | (This has             | {  |
|                      | been<br>shortened to  | get => GetProperty< <mark>string</mark> >();   |
|                      | propc from propcomet) | set => SetProperty(value);   |
|                      |                       | }  |
| Cross Platform       | ср                    | #if ANDROID  |
|                      | (This has been        | #elif IOS  |
|                      | updated to            | #elif MACCATALYST  |
|                      | cp from xplat)        | #elif TIZEN  |
|                      |                       | #elif WINDOWS  |
|                      |                       | #endif   |
| Event Handler        | eh                    | private void MyMethod(object sender, EventArgs e)  |
|                      |                       | {  |
|                      |                       | }  |
| Method               | method                | private <mark>void MyMethod</mark> ()  |
|                      |                       | {  |
|                      |                       | }  |

| Snippet                       | Short Name              | Output Format   |
|-------------------------------|-------------------------|---|
| Async Method                  | amethod                 | private async Task MyMethod()   |
|                               |                         | {   |
|                               |                         | }   |
| Record                        | record                  | record MyRecord   |
| (C# 9.0 or higher)            |                         | {   |
|                               |                         | }   |
| Record Struct                 | rstruct                 | record struct MyRecStruct   |
| (C# 10.0 or higher)           | (This has<br>been       | {   |
|                               | updated to              | }   |
|                               | rstruct from recstruct) |   |
| ViewModel Property            | propvm                  | private string name;  |
|                               |                         | public string Name  |
|                               |                         | {   |
|                               |                         | get => <mark>name</mark> ;  |
|                               |                         | set => SetProperty(ref <mark>name</mark> , value);  |
|                               |                         | }   |
| C# Markup Extension<br>Method | cmem                    | public static TBindable MyMethod TBindable (this TBindable bindable) where TBindable : BindableObject |
|                               |                         | {   |
|                               |                         | return <mark>bindable</mark> ;  |
|                               |                         | }   |

## Support

Currently, this extension can be installed on top of <u>VS2022 17.3 Preview 1.1 or higher with .NET MAUI workload as its prerequisite</u> (covers GA and SR1 releases) and to support further changes in newer .NET MAUI releases, an update to this VS extension will be made available accordingly. If you come across any issues or have suggestions to improve these templates, kindly log them as issues <u>here</u>.