

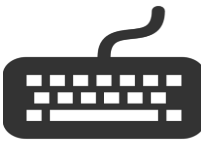
UWP alapok

Csorba Kristóf

Universal Windows Platform (UWP)

- WinRT
- UI leíró: XAML

XAML: példányosító nyelv



```
<Button x:Name="GoButton" Content="Go"  
    RelativePanel.AlignLeftWithPanel="True"  
    RelativePanel.AlignRightWithPanel="True"  
    RelativePanel.AlignTopWithPanel="True"  
    Click="Button_Click"/>
```

```
// EVIP: simple, good old event handler. No command pattern.  
private void Button_Click(object sender, RoutedEventArgs e)  
{
```

Mandelbrot\ShowFixedMandelbrot\MainPage.xaml

Mandelbrot\ShowFixedMandelbrot\MainPage.xaml.cs

Mandelbrot\ShowFixedMandelbrot\obj\x86\Debug\MainPage.g.i.cs

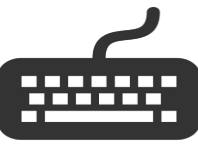
Mandelbrot\ShowFixedMandelbrot\obj\x86\Debug\MainPage.g.cs

(partial class!)

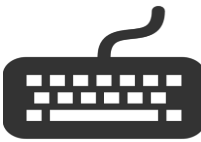
Layout: RelativePanel, StackPanel...

```
<RelativePanel>
  <Button x:Name="GoButton" Content="Go"
    RelativePanel.AlignLeftWithPanel="True"
    RelativePanel.AlignRightWithPanel="True"
    RelativePanel.AlignTopWithPanel="True"
    Click="Button_Click"/>
  <Image x:Name="Image"
    RelativePanel.AlignLeftWithPanel="True"
    RelativePanel.AlignRightWithPanel="True"
    RelativePanel.AlignBottomWithPanel="True"
    RelativePanel.Below="GoButton"/>
</RelativePanel>
```

Mandelbrot simple - UI



ShapeDataBinding példa...

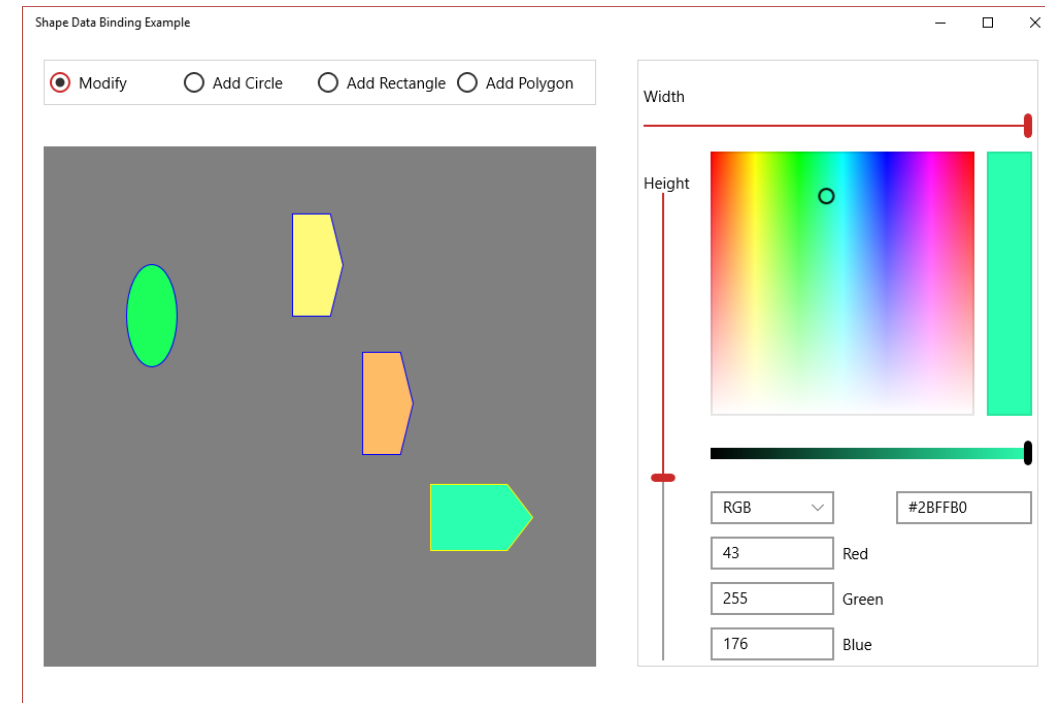


UwpShapeDataBinding\ShapeDataBinding\View\

FirstPage.xaml

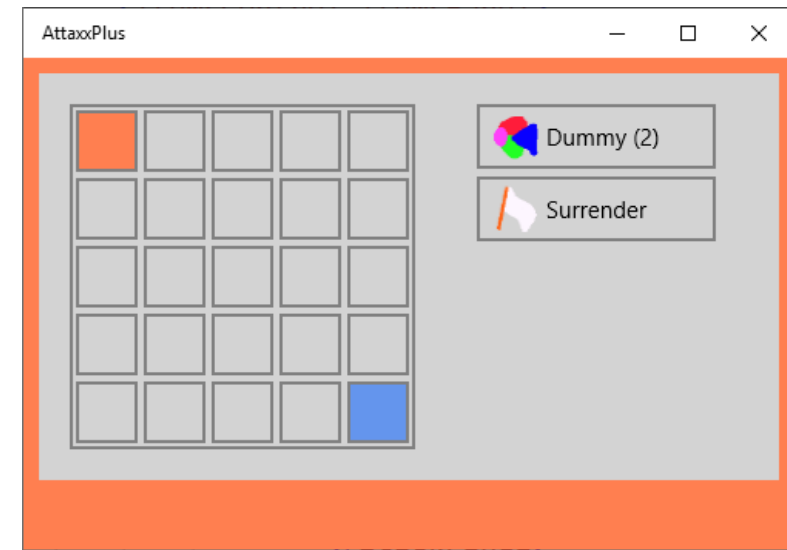
FirstPage.xaml.cs

- > Canvas_PointerPressed
- > CreateShape factory method



xaml komponálhatóság

- AttaxPlus boosterek (Button)



```
<Button Command="{x:Bind }" BorderBrush="Gray" BorderThickness="2"
    Background="LightGray">
    <!--EVIP: StackPabel inside Button -->
    <StackPanel Orientation="Horizontal" Spacing="5">
        <Image Width="30" Height="30" Source="{x:Bind Image, Mode=OneWay}"/>
        <TextBlock Width="100" VerticalAlignment="Center"
            Text="{x:Bind Title, Mode=OneWay}" Foreground="Black"/>
    </StackPanel>
</Button>
```

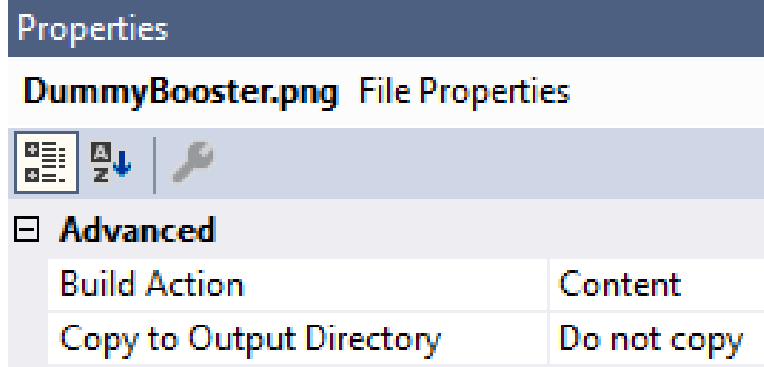
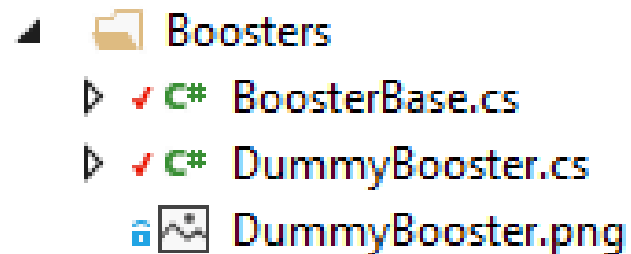
MessageDialog

```
// EVIP: MessageDialog and ShowAsync, using async-await pattern
// EVIP: string interpolation
MessageDialog m = new MessageDialog(
    $"Game over. Winner is player {Model.Winner}");
await m.ShowAsync();
```

AttaxxPlus\AttaxxPlus\ViewModel\GameViewModel.cs

Képek, mint erőforrások

```
// EVIP: referencing content resource with Uri.  
// The image is added to the project as "Content" build action  
// See also for embedded resources:  
// https://docs.microsoft.com/en-us/windows/uwp/app-resources/  
LoadImage(new Uri(@"ms-appx:///Boosters/DummyBooster.png"));
```

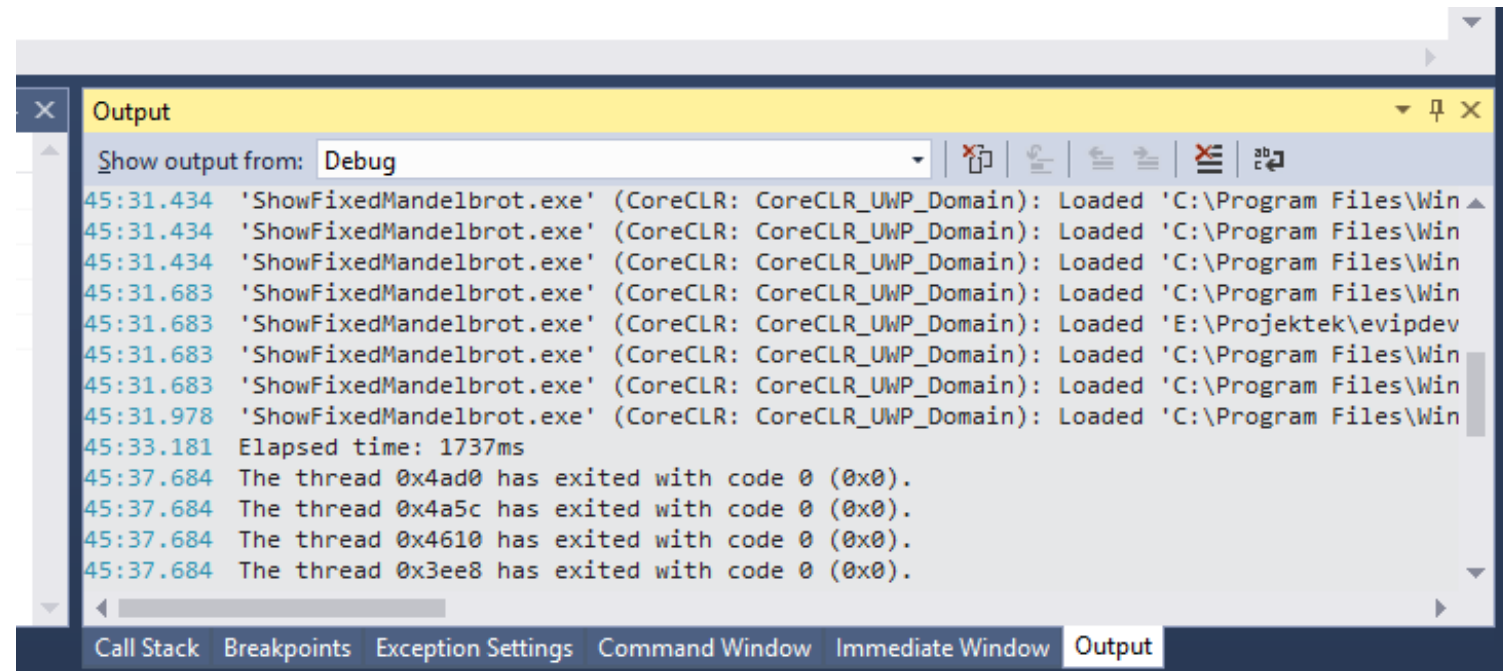


```
protected void LoadImage(Uri imageFileUri)  
{  
    // EVIP: loading an image from Uri  
    Image = new BitmapImage  
    {  
        UriSource = imageFileUri  
    };  
}
```

AttaxxPlus\AttaxxPlus\Boosters\DummyBooster.cs

Konzol helyett: Debug.WriteLine

```
// EVIP: Stopwatch for performance evaluation
Stopwatch sw = new Stopwatch();
sw.Start();
Render(image); // This is implemented in subclasses.
// EVIP: Debug.WriteLine: writing to the Output window from UWP apps.
Debug.WriteLine($"Elapsed time: {sw.ElapsedMilliseconds}ms");
```



The screenshot shows the Visual Studio Output window with the following content:

```
Output
Show output from: Debug
45:31.434 'ShowFixedMandelbrot.exe' (CoreCLR: CoreCLR_UWP_Domain): Loaded 'C:\Program Files\Win
45:31.434 'ShowFixedMandelbrot.exe' (CoreCLR: CoreCLR_UWP_Domain): Loaded 'C:\Program Files\Win
45:31.434 'ShowFixedMandelbrot.exe' (CoreCLR: CoreCLR_UWP_Domain): Loaded 'C:\Program Files\Win
45:31.683 'ShowFixedMandelbrot.exe' (CoreCLR: CoreCLR_UWP_Domain): Loaded 'C:\Program Files\Win
45:31.683 'ShowFixedMandelbrot.exe' (CoreCLR: CoreCLR_UWP_Domain): Loaded 'E:\Projektek\evipdev
45:31.683 'ShowFixedMandelbrot.exe' (CoreCLR: CoreCLR_UWP_Domain): Loaded 'C:\Program Files\Win
45:31.683 'ShowFixedMandelbrot.exe' (CoreCLR: CoreCLR_UWP_Domain): Loaded 'C:\Program Files\Win
45:31.978 'ShowFixedMandelbrot.exe' (CoreCLR: CoreCLR_UWP_Domain): Loaded 'C:\Program Files\Win
45:33.181 Elapsed time: 1737ms
45:37.684 The thread 0x4ad0 has exited with code 0 (0x0).
45:37.684 The thread 0x4a5c has exited with code 0 (0x0).
45:37.684 The thread 0x4610 has exited with code 0 (0x0).
45:37.684 The thread 0x3ee8 has exited with code 0 (0x0).
```

Mandelbrot\MandelbrotCommon\
ImageRendererBase.cs

További anyagok...

- Példányosítás XAML-lel (videó)

<https://www.youtube.com/watch?v=4P9B0lfXULc>

- UWP alkalmazás első lépések (videó)

<https://www.youtube.com/watch?v=2cm8FaQCnRg>