Style Your UI to Improve the User Experience in .NET MAUI Labs

Perform these labs on your own computer using Visual Studio 2022 or later to ensure you understand the lessons presented in the corresponding videos and lectures.

Lab 1: ContentPage.Resources

Open the **MainPage.xaml** file and just before the <Grid> element, add the following code.

```xml
<ContentPage.Resources>
  <Style TargetType="Grid">
    <Setter Property="ColumnSpacing"
            Value="10" />
    <Setter Property="RowSpacing"
            Value="10" />
    <Setter Property="Margin"
            Value="10" />
    <Setter Property="Padding"
            Value="10" />
  </Style>
  <Style TargetType="Label">
    <Setter Property="VerticalTextAlignment"
            Value="Center" />
  </Style>
  <Style TargetType="HorizontalStackLayout">
    <Setter Property="Spacing"
            Value="5" />
  </Style>
</ContentPage.Resources>
```

Remove the **ColumnSpacing**, **RowSpacing**, **Margin**, and **Padding** from the **<Grid>** on this page.

Remove the **Spacing="5"** from **all** <HorizontalStackLayout> elements on this page.

Try It Out

Run the application and notice the spacing is still on the Grid and stack layouts.

Notice the **Label**s are now aligned to each **Entry** control appropriately.

Lab 2: Move to Application.Resources

Cut the <Style> elements from the <ContentPage.Resources> on the **MainView** page. Don't remove the <ContentPage.Resources> element.

Open the **App.xaml** file and paste the <Style> elements you copied **after** the </ResourceDictionary.MergedDictionaries> closing element and **before** the </ResourceDictionary> closing element.

Try It Out

NOTE: When you change <Style> elements in the App.xaml file, you must **restart the application** for the changes to take effect.

Run the application and all the spacing should still be applied.

Lab 3: Closest Style Wins

Open the **MainPage.xaml** file and add the following code within the <ContentPage.Resources> element.

```
<Style TargetType="Label">
  <Setter Property="VerticalTextAlignment"
          Value="End" />
</Style>
```

Try It Out

Run the application and notice where the Labels are positioned in relation to the Entry controls.

Remove the <ContentPage.Resources> element from the MainPage.xaml.

Lab 4: Using Keyed Styles

Open the **App.xaml** file and change the <Style TargetType="Grid" …> to add an x:Key attribute.

```
<Style TargetType="Grid" x:Key="Grid.Page">
```

Try It Out

Stop the application to get the global styles to take affect.

Run the application and you will notice that the margins are all missing.

Associate the Key with a Grid

Open the **MainPage.xaml** file and to the <Grid> element add a Style attribute.

```
<Grid RowDefinitions="Auto,Auto,Auto, ..."
      ColumnDefinitions="Auto,*"
      Style="{StaticResource Grid.Page}">
```

Try It Out

Run the application and you should see the spacing is back on the grid.

Lab 5: Add an AppStyles.xaml

Stop the application.

Open the **App.xaml** file and remove the styles you placed within there.

Right mouse-click on the **Resources\Styles** folder and select Add | New Item… | .NET MAUI | **.NET MAUI ResourceDictionary (XAML)** and set the name to **AppStyles.xaml**.

Within the <ResourceDictionary> element, place the following.

```
<!-- ***************** -->
<!-- ** My Keyed Styles -->
<!-- ***************** -->
<Style TargetType="Grid"
        x:Key="Grid.Page">
  <Setter Property="ColumnSpacing"
          Value="10" />
  <Setter Property="RowSpacing"
          Value="10" />
  <Setter Property="Margin"
          Value="10" />
  <Setter Property="Padding"
          Value="10" />
</Style>

<!-- ************* -->
<!-- Global Styles -->
<!-- ************* -->
<Style TargetType="Label">
  <Setter Property="VerticalTextAlignment"
          Value="Center" />
</Style>
<Style TargetType="HorizontalStackLayout">
  <Setter Property="Spacing"
          Value="5" />
</Style>
```

Open the **App.xaml** file and just after the Styles.xaml resource dictionary element, add the following:

```
<ResourceDictionary
Source="Resources/Styles/AppStyles.xaml" />
```

Try It Out

Run the application to ensure everything is still the same as it was before.

Lab 5: Numeric and String Resources

Open the **Resources\Styles\AppStyles.xaml** file and before all other styles, add the following resource.

```
<!-- ************** -->
<!-- Other Resources -->
<!-- ************** -->
<x:String x:Key="ApplicationTitle">
  Adventure Works
</x:String>
```

Open the **AppShell.xaml** file and modify the Title property.

```
Title="{StaticResource ApplicationTitle}"
```

Open the **MainPage.xaml** file and modify the Title property.

```
Title="{StaticResource ApplicationTitle}"
```

Add a Double Resource

Instead of hard-coding the number 10 on all of the setters in the x:Key="Grid.Page" element, create a double resource.

```
<x:Double x:Key="DefaultSpacingForGrid">10</x:Double>
```

Then, modify the **x:Key="Grid.Page"** style to use this key.

```
<Style TargetType="Grid"
       x:Key="Grid.Page">
  <Setter Property="ColumnSpacing"
          Value="{StaticResource DefaultSpacingForGrid}"
/>
  <Setter Property="RowSpacing"
          Value="{StaticResource DefaultSpacingForGrid}"
/>
  <Setter Property="Margin"
          Value="{StaticResource DefaultSpacingForGrid}"
/>
  <Setter Property="Padding"
          Value="{StaticResource DefaultSpacingForGrid}"
/>
</Style>
```

Try It Out

Stop the application.

Run the application and you should see **Adventure Works** where you did before and the spacing on the Grid should still be the same.