

## UWP-015 - Laborious Layout Challenge

The "Laborious Layout Challenge" is a little trickier because you'll need to use both multiple Grids and multiple StackPanels. Furthermore, there are probably a number of different ways to solve this, not just one way.

You'll be building the following User Interface:



There are three distinct sections. Each section starts with a title. The title is offset vertically from the text that it's associated with.

Below each section of text, there are a little flag-like area with three rectangles of different colors.

Note that there is some margin space on the left and between each of the titled areas.

Please review the rules for this challenge as outlined in the file inside of the zipped folder associated with this lesson called UWP-015-Challenge.txt.

First, you must use both Grids and StackPanels. Even if you think you could just use StackPanels or Grids to accomplish this, the requirement is to use both.

Second, I've set the designer at the Desktop, not the phone size, just so I get more horizontal space.

Third, the width of the entire layout should be 500 pixels. Notice that this gives creates a lot of extra space over on the right-hand side, that's okay. Again, this is just a challenge. This is not real life.

Fourth, use the text from the LoremIpsum.txt file. I think all you need is that very first paragraph of Lorem Ipsum.

Next, most of the margins are either 10 or 20 pixels.

The Title TextBlocks have a font size of 24 points.

The Rectangles should be 100 wide by 30 tall.

The color of the rectangles should be:

- Green, Black, Red
- Red, Black, Blue,
- Blue, Black, Yellow

Use the UWP-015-Screenshot.png image as your guide as you're working on this.

## UWP-016 - Laborious Layout Challenge: Solution

There is no one correct way to complete this challenge since there are many possible combinations of Grids and StackPanels that could be employed. I offer only my solution.

As an overall strategy, I will focus on building one of the three sections. After it looks good, I'll copy and paste twice, then replace the variable information as needed.

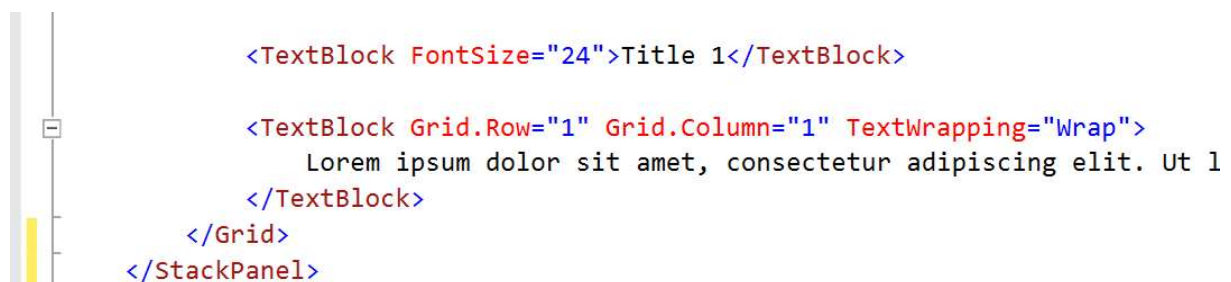
Step 1: Create a new project named "LaboriousLayout".

Step 2: Create a Grid for the first section with RowDefinitions and ColumnDefinitions.

A screenshot of a code editor showing XAML code. On the left is a vertical toolbar with icons for undo, redo, and other editing functions. The code is as follows:

```
<StackPanel Width="500" HorizontalAlignment="Left">
    <Grid>
        <Grid.RowDefinitions>
            <RowDefinition />
            <RowDefinition />
            <RowDefinition />
        </Grid.RowDefinitions>
        <Grid.ColumnDefinitions>
            <ColumnDefinition Width="1*" />
            <ColumnDefinition Width="2*" />
        </Grid.ColumnDefinitions>
    </Grid>
</StackPanel>
</Page>
```

Step 3: Add the TextBlocks for the Title and Lorem Ipsum paragraph using the supplied file.

A screenshot of a code editor showing XAML code. On the left is a vertical toolbar with icons for undo, redo, and other editing functions. The code is as follows:

```
    <TextBlock FontSize="24">Title 1</TextBlock>

    <TextBlock Grid.Row="1" Grid.Column="1" TextWrapping="Wrap">
        Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut 1
    </TextBlock>
</Grid>
</StackPanel>
```

Step 4: Create the "flag" using a StackPanel and Rectangles.

```

<StackPanel Orientation="Horizontal" Grid.Row="2" Grid.Column="1">
  <Rectangle Fill="Green" Width="100" Height="30" />
  <Rectangle Fill="Black" Width="100" Height="30" />
  <Rectangle Fill="Red" Width="100" Height="30" />
</StackPanel>
</Grid>

```

Step 5: Add margins.

```

<StackPanel Width="500" Margin="20,0,0,0" HorizontalAlignment="Left">
  <Grid Margin="0,0,0,20">
    <Grid.RowDefinitions>
      <RowDefinition />
      <RowDefinition />
      <RowDefinition />
    </Grid.RowDefinitions>
    <Grid.ColumnDefinitions>

```

Step 6: Copy the first section and paste twice below the first section.

Step 7: Replace required markup for section 2.

```

<Grid Margin="0,0,0,20">
  <Grid.RowDefinitions>
    <RowDefinition />
    <RowDefinition />
    <RowDefinition />
  </Grid.RowDefinitions>
  <Grid.ColumnDefinitions>
    <ColumnDefinition Width="1*" />
    <ColumnDefinition Width="2*" />
  </Grid.ColumnDefinitions>

  <TextBlock FontSize="24">Title 2</TextBlock>

  <TextBlock Grid.Row="1" Grid.Column="1" TextWrapping="Wrap">
    Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut luctus,
  </TextBlock>

  <StackPanel Orientation="Horizontal" Grid.Row="2" Grid.Column="1">
    <Rectangle Fill="Red" Width="100" Height="30" />
    <Rectangle Fill="Black" Width="100" Height="30" />
    <Rectangle Fill="Blue" Width="100" Height="30" />
  </StackPanel>
</Grid>

</StackPanel>
</Page>

```

Step 8: Replace required markup for section 3.



The image shows a snippet of XAML code with a vertical scrollbar on the left. Two red arrows are pointing to specific parts of the code: one points to the `<TextBlock FontSize="24">Title 3</TextBlock>` line, and the other points to the `<StackPanel Orientation="Horizontal" Grid.Row="2" Grid.Column="1">` line. The code is as follows:

```
<Grid Margin="0,0,0,20">
  <Grid.RowDefinitions>
    <RowDefinition />
    <RowDefinition />
    <RowDefinition />
  </Grid.RowDefinitions>
  <Grid.ColumnDefinitions>
    <ColumnDefinition Width="1*" />
    <ColumnDefinition Width="2*" />
  </Grid.ColumnDefinitions>

  <TextBlock FontSize="24">Title 3</TextBlock>

  <TextBlock Grid.Row="1" Grid.Column="1" TextWrapping="Wrap">
    Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut luctus,
  </TextBlock>

  <StackPanel Orientation="Horizontal" Grid.Row="2" Grid.Column="1">
    <Rectangle Fill="Blue" Width="100" Height="30" />
    <Rectangle Fill="Black" Width="100" Height="30" />
    <Rectangle Fill="Yellow" Width="100" Height="30" />
  </StackPanel>
</Grid>

</StackPanel>

</Page>
```