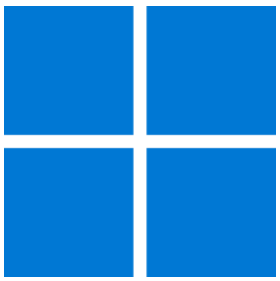
Windows App SDK



Parallax View

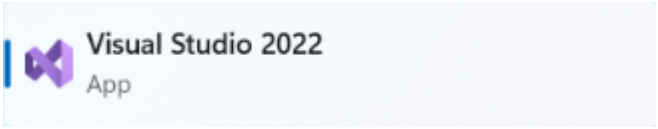
Parallax View

Parallax View shows how you can use **`ParallaxView`** which allows you to combine the scroll of a list to a background element so as the list scrolls it animates the background element with **Parallax** in an application using the **Windows App SDK**.

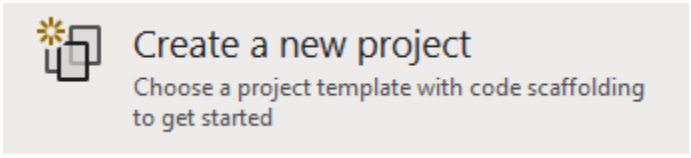
Step 1

Follow **Setup and Start** on how to get **Setup** and **Install** what you need for **Visual Studio 2022** and **Windows App SDK**.

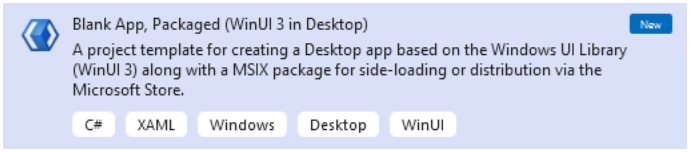
In **Windows 11** choose **Start** and then find or search for **Visual Studio 2022** and then select it.



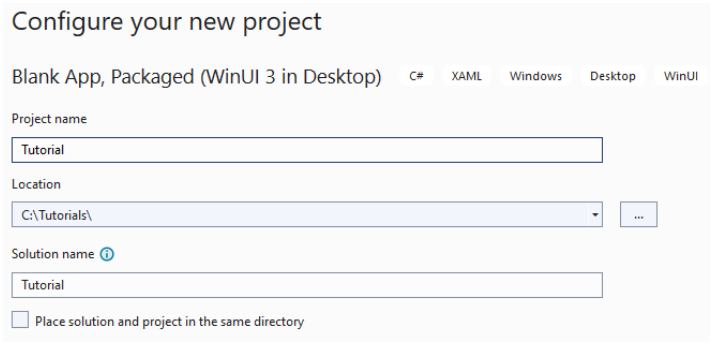
Once **Visual Studio 2022** has started select **Create a new project**.



Then choose the **Blank App, Packages (WinUI in Desktop)** and then select **Next**.

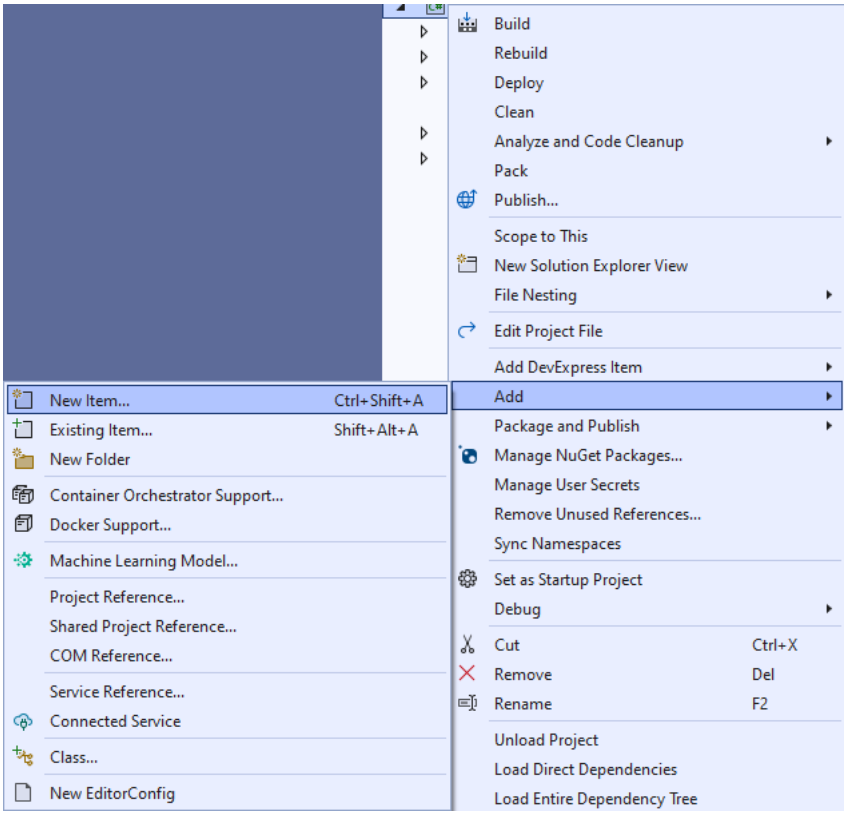


After that in **Configure your new project** type in the **Project name** as *ParallaxView*, then select a Location and then select **Create** to start a new **Solution**.



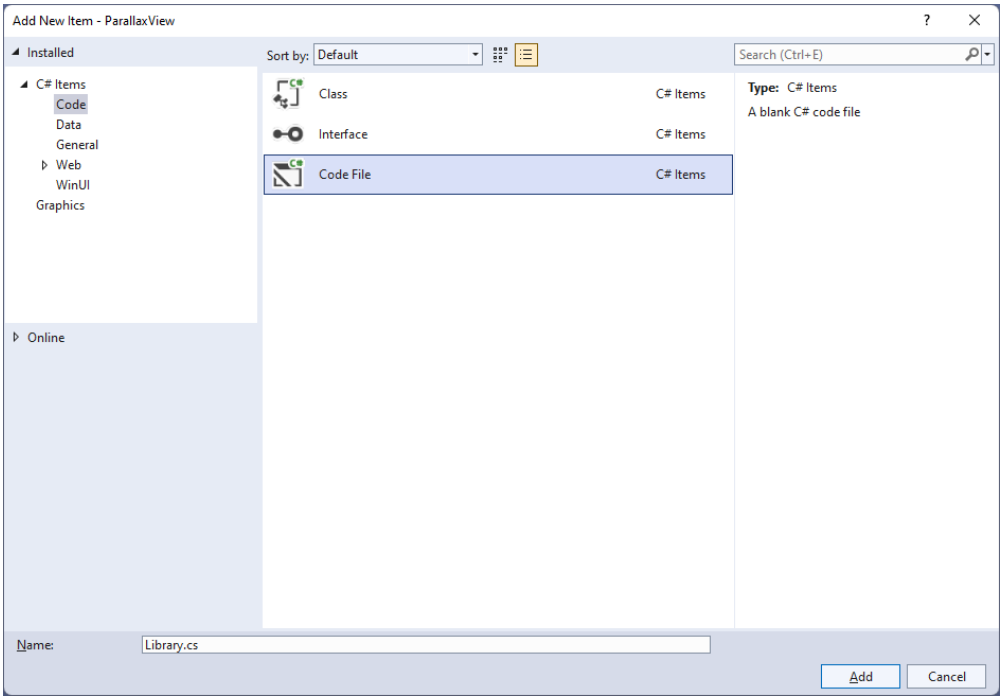
Step 2

Then in **Visual Studio** within **Solution Explorer** for the **Solution**, right click on the **Project** shown below the **Solution** and then select **Add** then **New Item...**



Step 3

Then in **Add New Item** from the **C# Items** list, select **Code** and then select **Code File** from the list next to this, then type in the name of *Library.cs* and then **Click** on **Add**.



Step 4

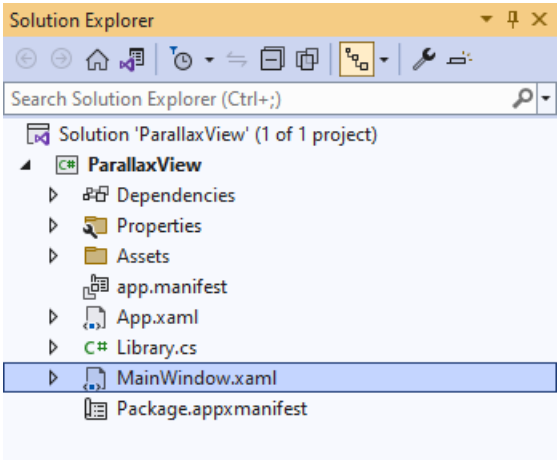
You will now be in the **View** for the **Code** of *Library.cs*, within this type the following **Code**:

```
using Microsoft.UI.Xaml.Controls;
using System;

internal class Library
{
    private class Item
    {
        public Guid Id { get; set; } = Guid.NewGuid();
        public string Text { get; set; } = string.Empty;
    }

    public static void Add(ListView listView, string value)
    {
        listView.Items.Add(new Item
        {
            Text = value
        });
    }

    public static void Remove(ListView listView, object sender)
    {
        Item item = (sender as AppBarButton).Tag as Item;
        listView.Items.Remove(item);
    }
}
```

The **`Class`** that has been defined in *Library.cs* has a **Class** within it of **`Item`** which is marked **`private`**, this is just for use with *Library.cs* which will represent what will be added or removed from the **`ListView`** which is performed in the **Methods** of **`Add`** and **`Remove`** which are declared as **`static`** so an **Instance** of the **`Class`** is not needed.

Step 5

Then from **Solution Explorer** for the **Solution** double-click on **MainWindow.xaml** to see the **XAML** for the **Main Window**.



Step 6

In the **XAML** for **MainWindow.xaml** there be some **XAML** for a **`StackPanel`**, this should be **Removed** by removing the following:

```
<StackPanel Orientation="Horizontal"
HorizontalAlignment="Center" VerticalAlignment="Center">
    <Button x:Name="myButton" Click="myButton_Click">Click Me</Button>
</StackPanel>
```

Step 7

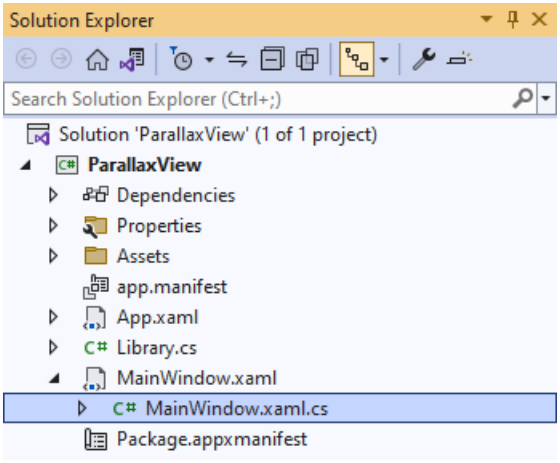
While still in the **XAML** for **MainWindow.xaml** above **`</Window>`**, type in the following **XAML**:

```
<Grid>
    <Grid.RowDefinitions>
        <RowDefinition Height="Auto"/>
        <RowDefinition Height="*"/>
    </Grid.RowDefinitions>
    <AutoSuggestBox Grid.Row="0" Margin="25" Name="Value" QueryIcon="Add"
        QuerySubmitted="Value_QuerySubmitted"/>
    <Grid Grid.Row="1">
        <ParallaxView Source="{x:Bind Display}" VerticalShift="100">
            <StackPanel Spacing="5" Orientation="Vertical"
                HorizontalAlignment="Center">
                <Rectangle Margin="10" Width="75" Height="75" Fill="Black"/>
                <Rectangle Margin="10" Width="75" Height="75" Fill="Gray"/>
                <Rectangle Margin="10" Width="75" Height="75" Fill="Red"/>
                <Rectangle Margin="10" Width="75" Height="75" Fill="Orange"/>
                <Rectangle Margin="10" Width="75" Height="75" Fill="Yellow"/>
                <Rectangle Margin="10" Width="75" Height="75" Fill="Green"/>
                <Rectangle Margin="10" Width="75" Height="75" Fill="Cyan"/>
                <Rectangle Margin="10" Width="75" Height="75" Fill="Blue"/>
                <Rectangle Margin="10" Width="75" Height="75" Fill="Magenta"/>
                <Rectangle Margin="10" Width="75" Height="75" Fill="Purple"/>
            </StackPanel>
        </ParallaxView>
        <ListView x:Name="Display">
            <ListView.ItemTemplate>
                <DataTemplate>
                    <Grid>
                        <Grid.ColumnDefinitions>
                            <ColumnDefinition Width="*"/>
                            <ColumnDefinition Width="Auto"/>
                        </Grid.ColumnDefinitions>
                        <TextBlock Grid.Column="0" Text="{Binding Text}"
                        VerticalAlignment="Center"/>
                        <AppBarButton Grid.Column="1" Icon="Remove" Label="Remove"
                        Tag="{Binding}" Click="Remove_Click"/>
                    </Grid>
                </DataTemplate>
            </ListView.ItemTemplate>
            <ListView.ItemContainerStyle>
                <Style TargetType="ListViewItem">
                    <Setter Property="HorizontalContentAlignment" Value="Stretch" />
                </Style>
            </ListView.ItemContainerStyle>
        </ListView>
    </Grid>
</Grid>
```

This **XAML** features a **`Grid`** with two **Rows**, the first **Row** is for a **`AutoSuggestBox`** to add an **`Item`**, then the second **Row** is the **`ParallaxView`** containing **`Rectangle`** elements which has the **`Source`** set to the **`ListView`** which uses a **`DataTemplate`** which controls how each **`Item`** in the **`ListView`** will look like and contains the **`AppBarButton`** which will be used to remove an **`Item`**.

Step 8

Then, within **Solution Explorer** for the **Solution** select the arrow next to **MainWindow.xaml** then double-click on **MainWindow.xaml.cs** to see the **Code** for the **Main Window**.



Step 9

In the **Code** for **MainWindow.xaml.cs** there be a **Method** of **`myButton_Click(...)`** this should be **Removed** by removing the following:

```
private void myButton_Click(object sender, RoutedEventArgs e)
{
    myButton.Content = "Clicked";
}
```

Step 10

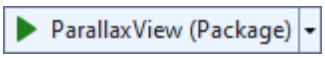
Once **`myButton_Click(...)`** has been removed, type in the following **Code** below the end of the **Constructor** of **`public MainWindow() { ... }`**:

```
private void Value_QuerySubmitted(AutoSuggestBox sender,
    AutoSuggestBoxQuerySubmittedEventArgs args)
{
    Library.Add(Display, Value.Text);
}

private void Remove_Click(object sender, RoutedEventArgs e)
{
    Library.Remove(Display, sender);
}
```

The **Method** of **`Value_QuerySubmitted`** will call the **Method** within *Library.cs* of **`Add`** from **`Library`** passing in the **`ListView`** and also passes in the **Property** for **`Text`**. The **Method** of **`Remove_Click`** will call the **Method** for **`Remove`** with the **`ListView`** and the **`object`** for **`sender`**.

Step 11

That completes the **Windows App SDK** application. In **Visual Studio 2022** from the **Toolbar** select **ParallaxView (Package)** to **Start** the application.



Step 12

Once running you should see a **`AutoSuggestBox`** and some **`Rectangle`** elements.

Step 13

You can type into the **`AutoSuggestBox`** any values and then press **Enter** or **Click** on the **+** option to add them, then when you add a few, you can try scrolling the **`ListView`** and you should see the **Parallax View** in action.

Step 14

To **Exit** the **Windows App SDK** application, select the **Close** button from the top right of the application as that concludes this **Tutorial** for **Windows App SDK** from tutorialr.com!