Getting Started Guide

Introduction

This tutorial serves as a brief introduction to the framework by going over its main features and showing you how to create a simple main menu. Be sure to also check out tutorials on the website to get a complete overview of the framework.

What is Delight?

Delight is a component-oriented framework for building well-structured and easily maintainable UI views in Unity and integrate them with your game model.

Think of views as pieces of your game UI, like buttons, combo-boxes, windows, data grids, that like LEGO blocks can be combined into more advanced views like main menus, highscore lists, chat windows, etc.

Features

- **Declarative Design Language** Build, share and collaborate on your views with XML.
- **LIVE editing** Edit your UI during runtime and see the changes immediately for a very fast workflow.
- **Data Binding** Bind your game model to your UI with a intuitive binding mechanism. The framework supports multi-binding.
- **Styling** Change the appearance and behavior of your views using styles (similar to CSS).
- **Data Modeling** Schema files allows you to automatically generate data models and data.
- **On-demand Loading** Individual views can be loaded on-demand and created during run-time with a simple setting.
- **Asset Management** Transparent handling of asset loading. Asset bundles can be generated and loaded automatically when the view containing the assets is loaded/unloaded, with no line of code needed.

- **Dynamic Lists** Easy to bind to collections in your data model and define how the items should be presented. The lists are updated automatically as the collection changes. The framework supports virtualized lists with dynamically sized list items and having multiple item templates for displaying different types of items in your collection.
- **Localization** Localize labels etc. in your views easily using the localization dictionary.
- **Scalable and Performant** On-demand loading and code-generation makes the framework perform well even as the size of the UI grows.
- **Animations**

  Create basic animations for view state changes like button highlight and presses.

Creating the MainMenu scene

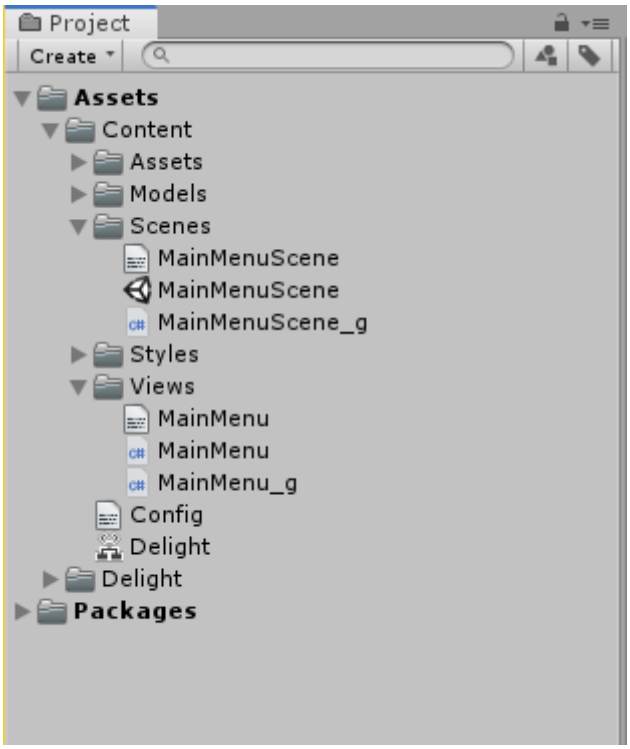
We'll start by creating a Main Menu scene. Right-click in your project hierarchy and choose `Create -> Delight Scene`. Give it the name `MainMenuScene` and press enter.

Open the scene `MainMenuScene.xml` and add a `MainMenu` view to it:

MainMenuScene.xml

```
<MainMenuScene xmlns="Delight" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xsi:schemaLocation="Delight ../Delight.xsd">
    <MainMenu />
</MainMenuScene>
```

You've now created a scene that is set up to display a single view, the `MainMenu`. The framework sees that the view `MainMenu` doesn't exist and will automatically generate it for you. You now should have the following files in your project:



Note you can also manually create new views by choosing `Create -> Delight View`

You can now open `MainMenuScene.unity` which you can run throughout the tutorial to see the main menu taking shape.

All content files, like the XML files MainMenuScene.xml and MainMenu.xml are automatically processed by the framework as they are changed (if the editor is open). To manually tell the framework to process all content, press the "Reload All" button in the Delight window (Window -> Delight). Also note that files with the "_g" postfix are generated (and overwritten) when the XML files are processed.

Creating the Main Menu view

Open the `MainMenu` view and edit it so it contains the following:

MainMenu.xml

```
<MainMenu xmlns="Delight" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
          xsi:schemaLocation="Delight ../Delight.xsd">
  <Group Spacing="10">
    <Button Text="Play" />
    <Button Text="Options" />
    <Button Text="Quit" />
  </Group>
</MainMenu>
```

The name of the root tag `<MainMenu>` is the name we've given the view. The view contains three Button views that are arranged vertically by a Group view. The API contains detailed information about all the 40+ views included in the framework.

`Spacing="10"` and `Text="Play"` are dependency properties that changes the layout and behavior of the view. E.g. `Spacing="10"` tells the `Group` view to insert a spacing of 10 pixels between the buttons.

Different views have different properties but most views are based on the `UIView` which has the following properties that are used to do layout:

Dependency Property	Description
Width	Width of the view that can be specified in pixels "10" or percentage "100%". Some views are 100% by default (which means they take up the extent of their parent).
Height	Height of the view.
Alignment	Alignment of the view: TopLeft, Top, TopRight, Left, Center, Right, BottomLeft, Bottom, BottomRight.
Margin	Specifies the view's margin from left, top, right and bottom.
Offset	Specifies the view's offset from left, top, right, bottom.
BackgroundColor	Background color of the view. Color values can be specified by name (Red, Blue, Coral, etc), hexcode (#aarrggbb or #rrggbb) or rgb/rgba value ("1.0,0.0,0.5").
BackgroundSprite	The background sprite of the view. The value is the name of the sprite asset file without extension, e.g. "mysprite".

You can also add your own custom dependency properties to your view which we'll go over later in this tutorial.

Responding to button clicks

Open the `MainMenu` view and add the following click-handlers to the XML:

MainMenu.xml

```
<MainMenu xmlns="Delight" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
          xsi:schemaLocation="Delight ../Delight.xsd">
  <Group Spacing="10">
    <Button Text="Play" Click="Play" />
    <Button Text="Options" Click="ShowOptions" />
    <Button Text="Quit" Click="Quit" />
  </Group>
</MainMenu>
```

`Click` is one of the standard view actions that can be set on all views (others include `Drag`, `MouseEnter`, `MouseUp`, `Scroll`, etc.).

This will generate the click handlers in the code-behind. Modify the handlers so they log messages:

MainMenu.cs

```
namespace Delight
{
    public partial class MainMenu
    {
        public void Play()
        {
            Debug.Log("Play clicked");
        }

        public void ShowOptions()
        {
            Debug.Log("Options clicked");
        }

        public void Quit()
        {
            Debug.Log("Quit clicked");
        }
    }
}
```

If you run the scene and click on the buttons you'll see the text being logged in the console:

Styling

To make the buttons look more interesting we're going to change their style. Open up the `Content/Styles/Styles.xml` file and add the following content:

Styles.xml

```
<Styles>
  <Button Style="StoneButton" BackgroundSprite="MainMenuDemoButton"
          Pressed-BackgroundSprite="MainMenuDemoButtonPressed"
          BackgroundColor="White" Highlighted-BackgroundColor="White"
          Pressed-BackgroundColor="White" Width="218" Height="117"
          FontSize="40" Font="AveriaSansLibre-Bold SDF" TextOffset="0,0,0,6"
          StateAnimations="" FontColor="White" Highlighted-FontColor="White"
          Pressed-FontColor="#cccccc" />
</Styles>
```

We've declared one button style `StoneButton` with some values that will be set whenever the style is applied. We set the BackgroundSprite to a sprite that comes with the framework. See the Styles tutorial for more information about styling views. Next step is to apply our new style to our buttons:

MainMenu.xml

```
<MainMenu xmlns="Delight" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
          xsi:schemaLocation="Delight ../Delight.xsd">
  <Group Spacing="10">
    <Button Style="StoneButton" Text="Play" Click="Play" />
    <Button Style="StoneButton" Text="Options" Click="ShowOptions" />
    <Button Style="StoneButton" Text="Quit" Click="Quit" />
  </Group>
</MainMenu>
```

Next we modify the main menu to add a background image and title:

MainMenu.xml

```
<MainMenu xmlns="Delight" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
          xsi:schemaLocation="Delight ../Delight.xsd">
  <Image Sprite="MainMenuDemoBg" Height="480" PreserveAspect="True" />
  <Label Style="MainMenuDemoTitle" Text="Main Menu" Offset="0,0,0,210" />
  <Group Spacing="10" Offset="0,25,0,0">
    <Button Style="StoneButton" Text="Play" Click="Play" />
    <Button Style="StoneButton" Text="Options" Click="ShowOptions" />
    <Button Style="StoneButton" Text="Quit" Click="Quit" />
  </Group>
</MainMenu>
```

The sprite *MainMenuDemoBg* is another asset that comes with the framework examples. We should now see the following:

Showing a Level Select Menu

We want to show a LevelSelect view when the user clicks on the Play button. To do this we can add a ViewSwitcher view and add various views as children:

MainMenu.xml

```
<MainMenu xmlns="Delight" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
          xsi:schemaLocation="Delight ../Delight.xsd">
  <ViewSwitcher Id="SubmenuSwitcher">

    <!-- first view, our main menu buttons, are shown by default -->
    <Region Id="MainMenuWindow">
      <Image Sprite="MainMenuDemoBg" Height="480" PreserveAspect="True" />
      <Label Style="MainMenuDemoTitle" Text="Main Menu" Offset="0,0,0,210" />
      <Group Spacing="10" Offset="0,25,0,0">
        <Button Style="StoneButton" Text="Play" Click="Play" />
        <Button Style="StoneButton" Text="Options" Click="ShowOptions" />
        <Button Style="StoneButton" Text="Quit" Click="Quit" />
      </Group>
    </Region>

    <!-- second view, level select, is shown when we switch to it -->
    <LevelSelectExample Id="LevelSelectWindow"
NavigateBack="LevelSelectNavigateBack" />

  </ViewSwitcher>
</MainMenu>
```

The level select view already exists so now all we need to do is to implement some logic in code-behind to switch back and forth between our main menu buttons and the level select view.

MainMenu.cs

```
namespace Delight
{
    public partial class MainMenu
    {
        public void Play()
        {
            SubmenuSwitcher.SwitchTo(LevelSelectWindow);
        }

        public void ShowOptions()
        {
            Debug.Log("Options clicked");
        }

        public void Quit()
        {
            Debug.Log("Quit clicked");
        }

        public void LevelSelectNavigateBack()
        {
            SubmenuSwitcher.SwitchTo(MainMenuWindow);
        }
    }
}
```

There you have it, a simple main menu.

Delight Designer

I recommend playing around in the delight designer to explore the different example views and edit them to get real-time feedback as you make changes in the XML. To enable the delight designer you need to Enable TextMeshPro, and then press "Rebuild All" in the delight window, to update the designer, and then you can open the Delight Designer scene and play it to start the designer.

Good luck and if you have any questions be sure to check the website for documentation and pop into the Delight chat room for support.