BU VR Project Guide

Contents

Introduction

This guide will run through the steps required to edit, add, and build the project; this guide will mainly apply to the tour section.

Project File Layout

The project's files are setup into 4 categories:
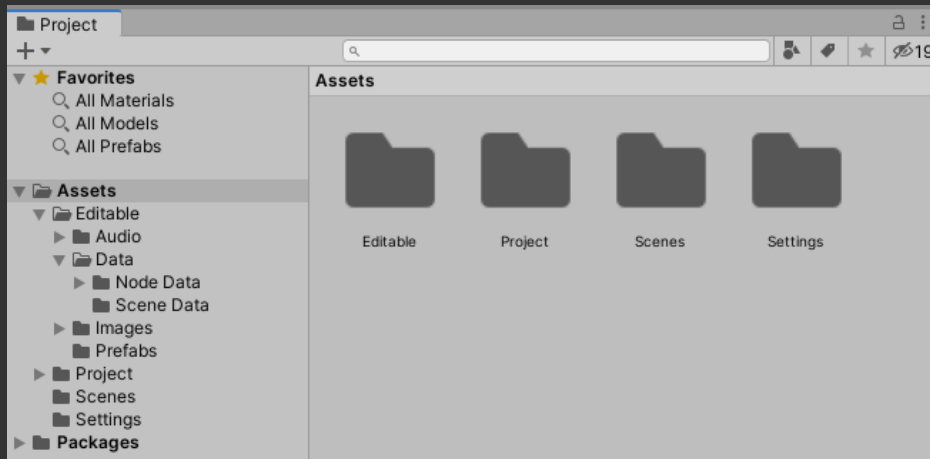

Figure 1: Project File Layout

Editable

The "Editable" file contains changeable aspects of the project for the user to alter. It is recommended that users only edit and use elements from this section to avoid project malfunction.
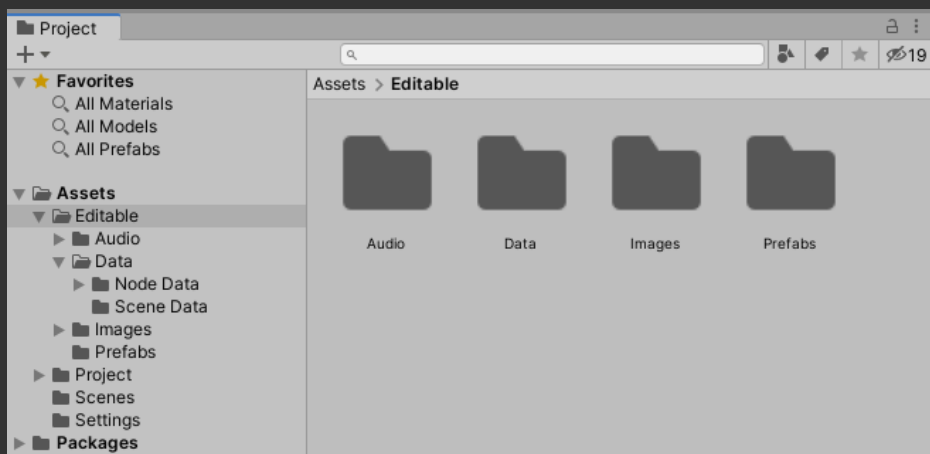
Project

The "Project" file contains the concrete functions for the project, these are aspects that are not editable for the user, it is recommended to avoid touching elements in this region unless the core system requires changing.
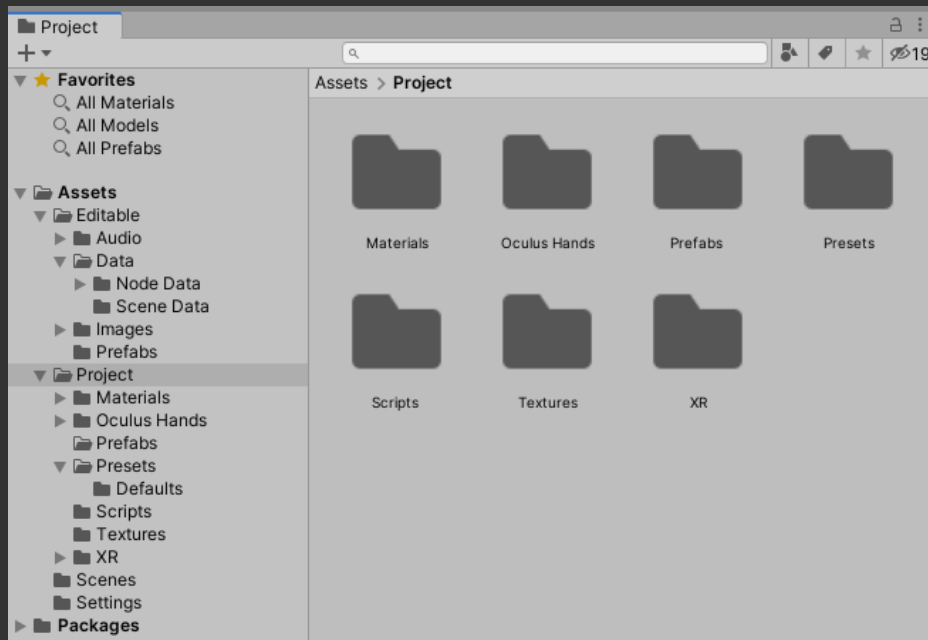

Figure 3: Project File Contents

Scenes

The "Scenes" file contains the project's scenes, the user can switch the loaded scene within the editor by double clicking their desired one. This will allow access to all the game objects associated with the scene, this is recommended if the user wishes to change a particular UI aspect or rearrange other objects within the scene.
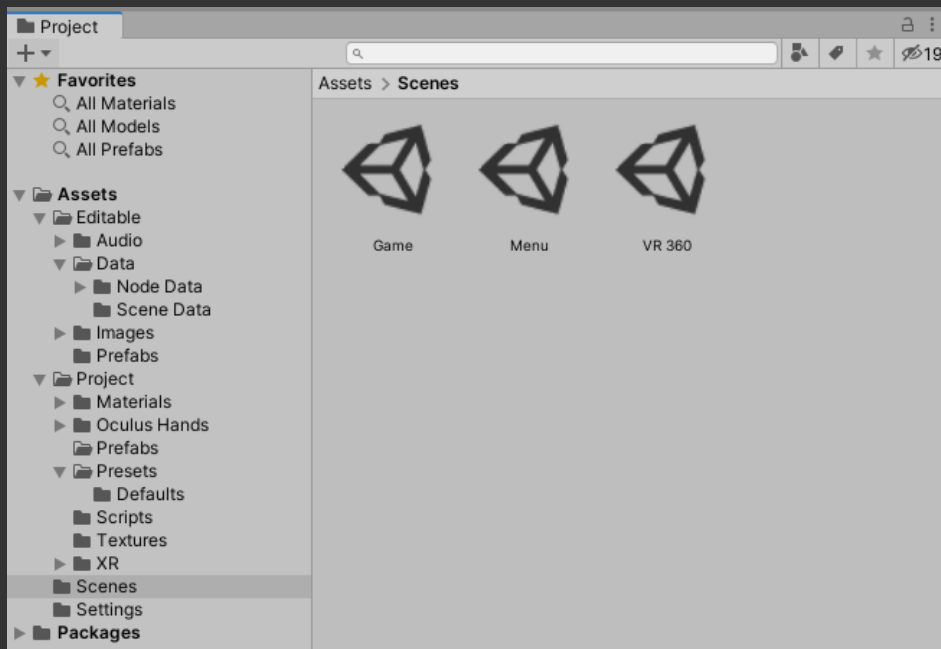
Figure 4: Scenes File Contents

Settings

The "Settings" file contains scene rendering and shading data, this area is best to avoid entirely, as it is created automatically from the project scenes.
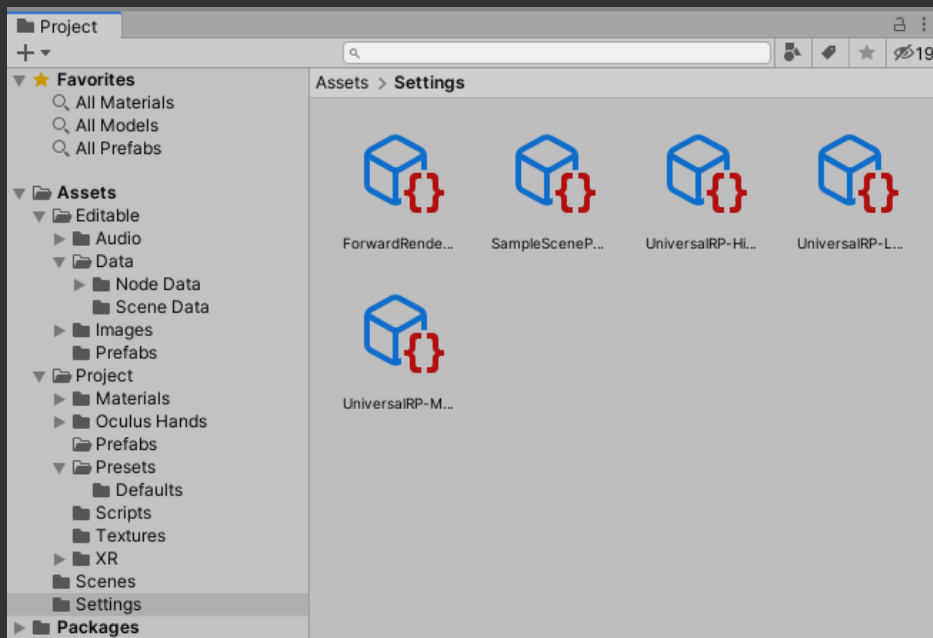

Figure 5: Settings File Contents

VR 360 Setup

The VR 360 system is constructed by three components:

- Tour Button(s)

- Scene Data
- Node Data

Most of the system is self-constructive, the only input required by the user is information for the "Scene" and "Node" data fields and the placement for "Tour Buttons". Its important to note "Tour Buttons" require "Scene Data" to function properly, while "Node Data" requires "Scene Data" to exist.

Tour Button

The "Tour Button" is responsible for loading its assigned scene ("Scene Data") when pressed.

The "Tour Button" is categorised as a "prefab" indicated by a blue cube icon, this infers it is universal in design and function.

It's important to never modify the prefab version of the "Tour Button" found under the "Prefabs" folder, only modify a "Tour Button" when it's within the scene, this is because all "Tour Buttons" within the scene are instances of the parent (the "Tour Button" under the "Prefabs" folder), by changing the parent you change all children causing all buttons to load the same scene, instead change the children (all scene "Tour Buttons") as they retain individuality.

Tour Button Location

Editable -> Prefabs
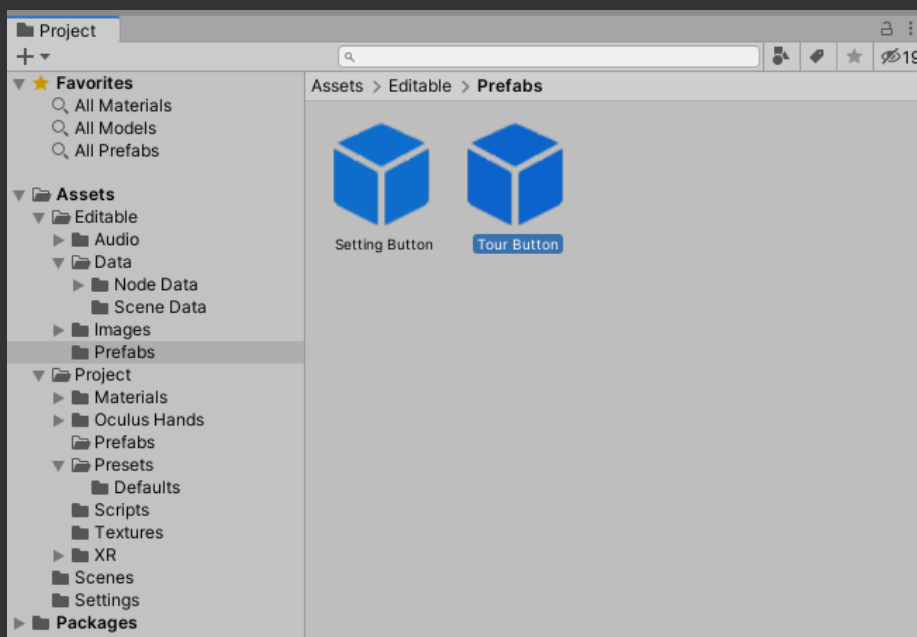

Figure 6: Tour Button Location

Tour Button Creation

a) Click and drag the "Tour Button" prefab from the "Prefabs" folder into the hierarchy of the scene under the game object named "[Tour UI]" (this is recommended as all UI elements

are interactable when under the "Canvas" game object, in this case the "[Tour UI]" is a child of the "Canvas", thus carries the same properties).

Or

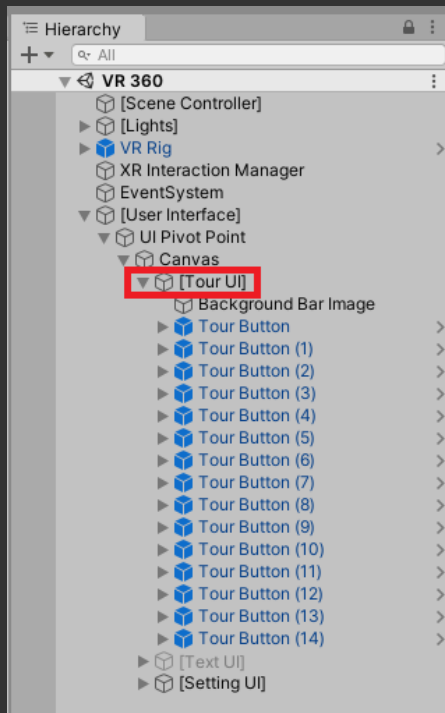b) Copy and paste an existing button within the scene.

Figure 7: [Tour UI] Location

Tour Button Adjustment

Button repositioning can be done by using the buttons located at the top left of the editor, it is recommended to only use the buttons highlighted in red, labelled "Move Tool", "Rotate Tool", "Scale Tool" and "Rect Tool" respectively. while the "Move Tool", "Rotate Tool" and "Scale Tool" allows the object to be changed within the scene using their associated handles, the "Rect Tool" is only accessible when in "2D" mode. It is worth noting the toggle labelled "Global" or "Local" as this will determine whether the object will move based on its coordinates or the worlds.

Figure 8: Displacement Buttons

Figure 9: 2D Mode

Tour Button Data Assignment

For the button to load the desired scene it requires the assignment of "Scene Data" found under the file:

- Editable -> Data -> Scene Data

Once the desired "Scene Data" is found click and drag it into the "Scene Data" field found in the inspector of the desired Tour Button found under:

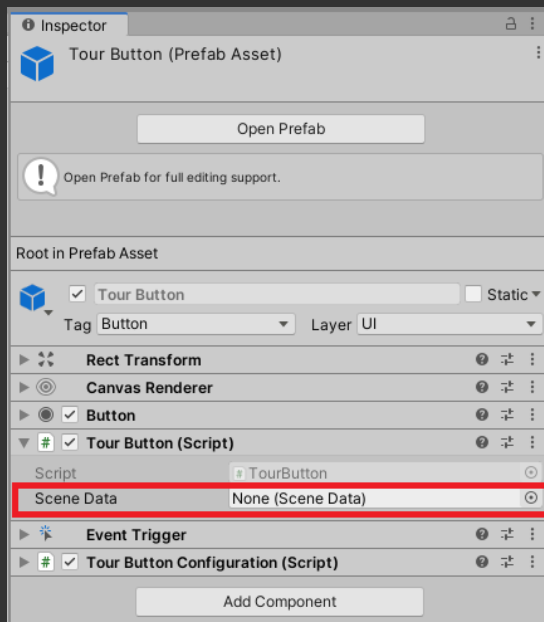- Tour Button -> Tour Button (Script) -> Scene Data

Figure 10: Tour Button Inspector

When the project is played the system will pull the data from the "Scene Data" assigned to the button to fill in its associated parameters, given the assigned "Scene Data" has values stated.

Potential Errors

Any "Tour Button" within the scene with no "Scene Data" assigned will prevent the project from loading correctly, to resolve this issue either assign "Scene Data" to the "Tour Button" or delete the "Tour Button" in question from the scene.

Any "Tour Buttons" that have the same "Scene Data" assigned may cause the audio to become amplified for that scene, ensure all "Tour Buttons" have their own "Scene Data" attached.

Scene Data

"Scene data" is a collection of information used to fill a scene when its associated button it pressed. "Scene Data" is editable, allowing the user to fill its contents with what they would like to see within the scene.

Scene Data Location
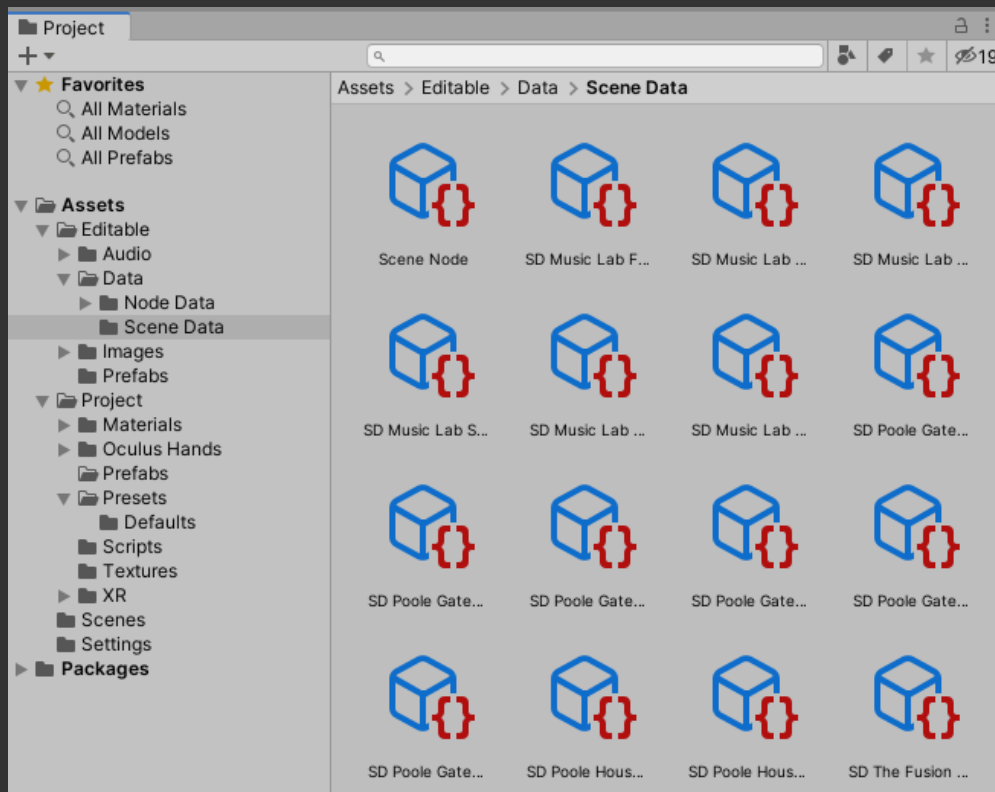
Editable -> Data -> Scene Data

Figure 11: Scene Data Location

Scene Data Creation

a) Right click within the "Scene Data" folder -> Create -> Scene Data

Or

b) Copy and paste an existing "Scene Data".

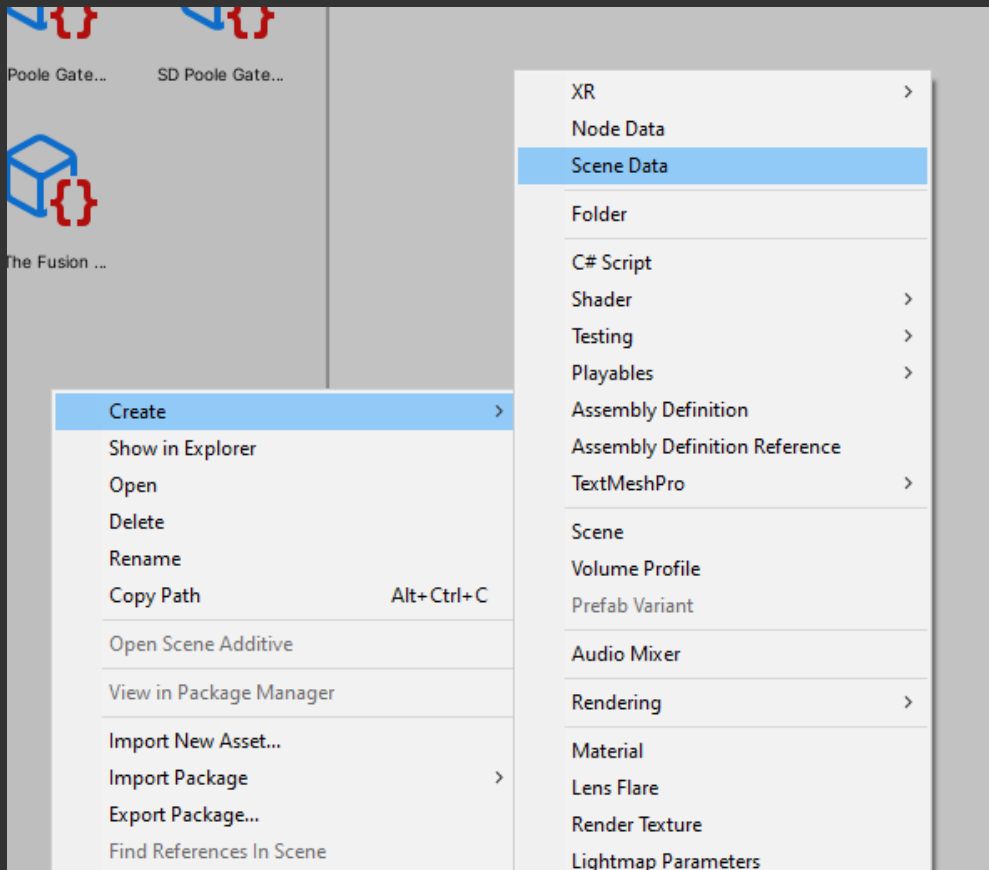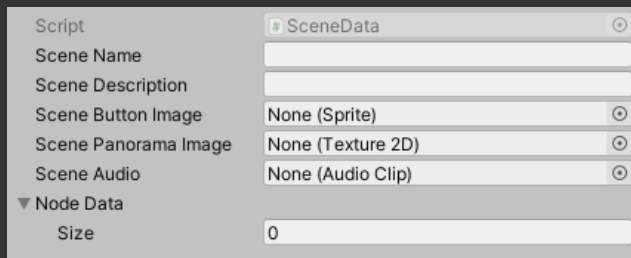*Figure 12: Scene Data Creation*

Scene Data Fields

Figure 13: Scene Data

Scene Name

The "Scene Name" field determines the "info" panel title.

Scene Name Edit

This field can be directly typed into.

Scene Description

The "Scene Description" field determines the "info" panel description.

Scene Description Edit

This field can be directly typed into.

Scene Button Image

The "Scene Button Image" determines the image on the "Tour Button", currently the button images are set to 2356px x 2518px (Ratio of 1.068 to 1).

Scene Button Image Location
Editable -> Images -> Tour Button Images

Scene Button Image Edit
To assign this field click and drag the desired image from the "Tour Button Images" folder into the "Scene Button Image" field.

To assign an outside image to the field first drag the desired image into the "Tour Button Images" folder, this will import the image into the editor, however the image will be using the texture type "Default", which doesn't fit the "Scene Data" field requirement of "Sprite", to change this click on the dropdown box and select "Sprite (2D and UI)" followed by the apply button to confirm change, once this is done the image is ready to be used.
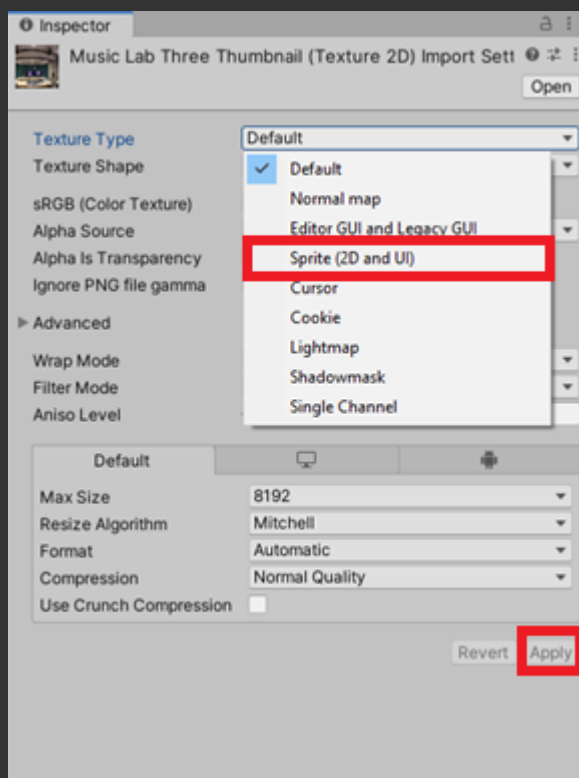

Figure 14: Scene Button Image Setup

Scene Panorama Image

The "Scene Panorama Image" determined the scene's 360 skybox image.

Scene Panorama Image Location
Editable -> Images -> Tour Panorama Images

Scene Panorama Image Edit
To assign this field click and drag the desired image from the "Tour Panorama Images" folder into the "Scene Panorama Image" field.

To assign an outside image to the field first drag the desired image into the "Tour Panorama Images" folder, this will import the image into the editor, however the image will be using the texture type "Default", which doesn't fit the "Scene Data" field requirement of "Texture 2D", to change this click on the dropdown box and select "Sprite (2D and UI)" and change the "Max Size" value to the highest possible, this is to allow the image to fully utilise its high resolution reducing the pixelated appearance of the image, follow this with the apply button to confirm change, once this is done the image is ready to be used.
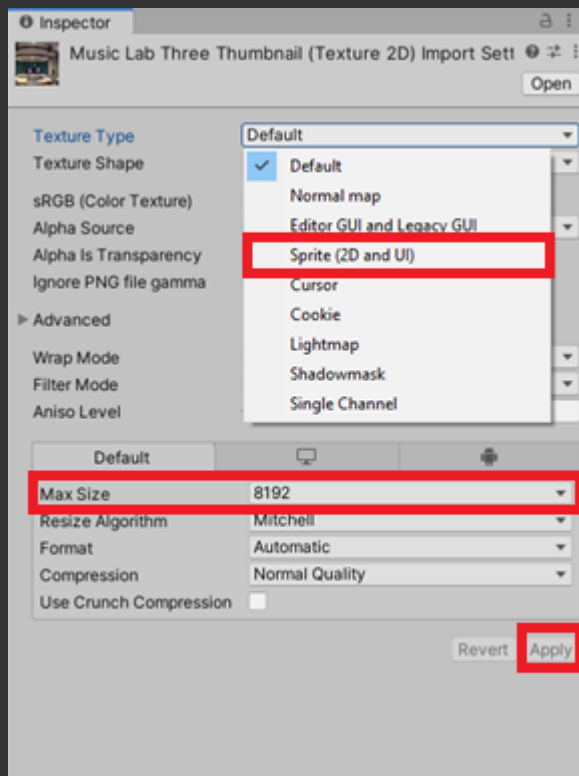

Figure 15: Scene Panorama Image Setup

Scene Audio
The "Scene Audio" determines the audio played when the scene is loaded.

Scene Audio Location
Editable -> Audio -> Scene Audio

Scene Audio Edit
To assign this field click and drag the desired audio clip from the "Scene Audio" folder into the "Scene Audio" field.

To assign an outside audio clip to the field first drag the desired audio clip into the "Scene Audio" folder, this will import the audio clip into the editor, once this is done the audio clip is ready to be used.

Node Data
The "Node Data" determines the existence and context of any present "Node Data" within the scene.

Node Data Location

Editable -> Data -> Node Data

Node Data Edit

The "Node Data" field is constructed as an array, essentially by typing a number in the "size" parameter allows the user to assign the equivalent amount of "Node Data" to the field. However, for each element created by the number stated in the "size" parameter, must have a "Node Data" assigned, otherwise the project will malfunction.

To assign a "Node Data" to the field click and drag the desired "Node Data" from the "Node Data" folder into one of the elements created in the "Node Data" field.

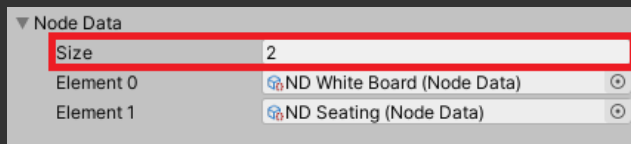| ▼ Node Data		
Size	2	
Element 0	ND White Board (Node Data)	⊙
Element 1	ND Seating (Node Data)	⊙

Figure 16: Node Data Array

Node Data

"Node data" is a collection of information used to fill a node within a scene. "Node Data" is editable, allowing the user to fill its contents with what they would like to see on the node.

Node Data Location

Editable -> Data -> Node Data

Node Data Creation

a) Right click within the "Scene Data" folder -> Create -> Node Data

Or
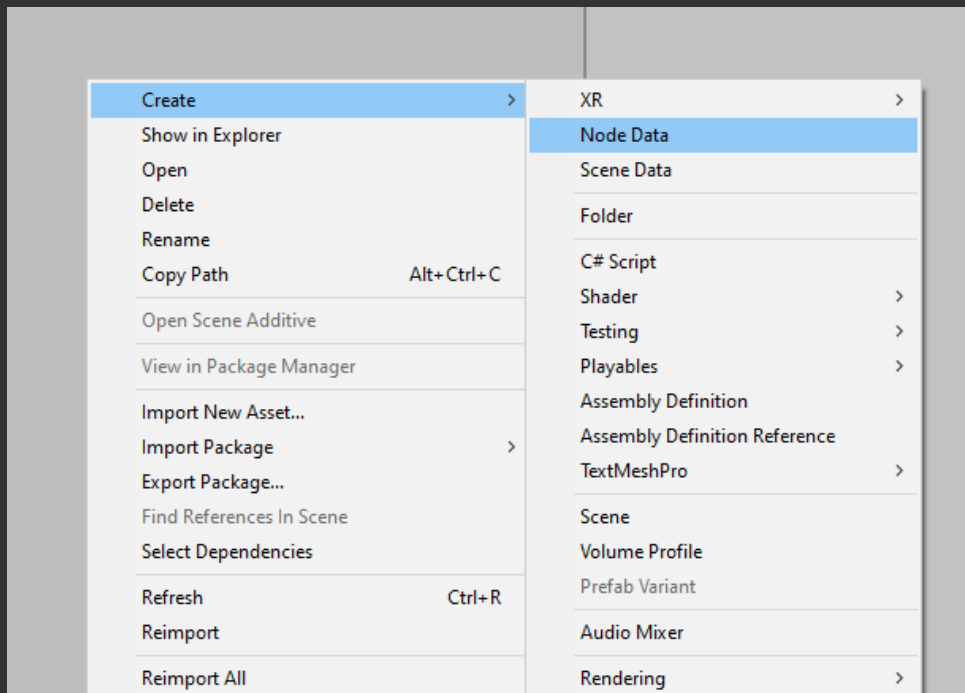
b) Copy and paste an existing "Node Data".
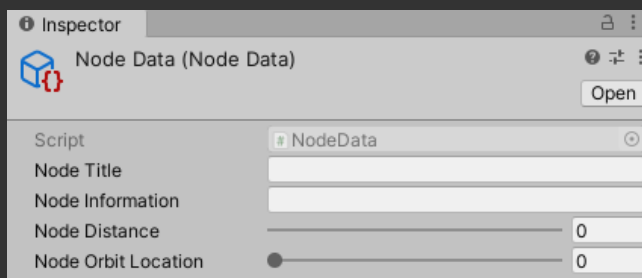
Figure 17: Node Data Creation

Node Data Fields

Figure 18: Node Data

Node Title

The "Node Title" field determines the title of the node.

Node Title Edit

This field can be directly typed into.

Node Information

The "Node Information" field determines what is shown for the node's information.

Node Information Edit

This field can be directly typed into.

Node Distance

The "Node Distance" field determines how far away the node is from the user.

Node Distance Edit

This field can be directly typed into or by using the slider. It is advised to keep the value within the slider's boundaries.

Node Orbit Location

The "Node Orbit Location" field determines the angle the node exists around the user.

Node Orbit Location Edit

This field can be directly typed into or by using the slider. It is advised to keep the value within the slider's boundaries.

Build Project

Once all the changes that the user desired have been made the final step it to create an executable version of the project.
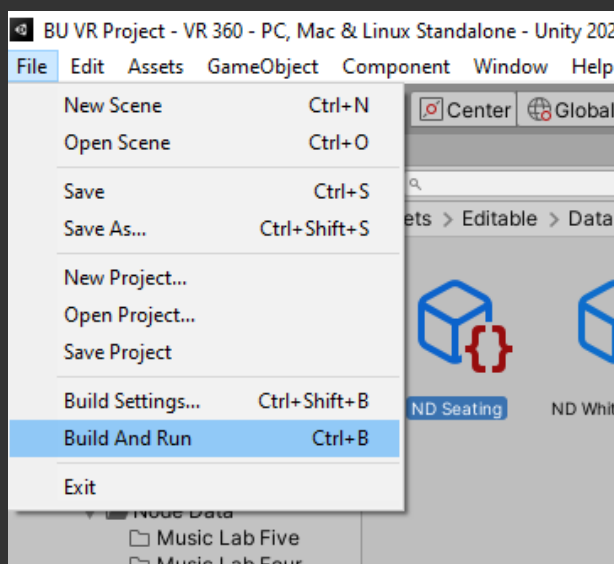
This can be achieved through:

- File -> Build And Run

Figure 19: Build Project