

LAB #4

BUILDING A USER INTERFACE IN UNITY

By the end of this lab, you will be able to:

- Describe the different components of a user interface.
- Create a user interface using Unity's GUI system to display UI components to the user.
- Adjust UI settings in an application to work in a virtual reality headset
- Customize your user interface to create different styled experiences.

PART 1: USER INTERFACES

How users learn to interact with and understand your application is a critical component for creating virtual reality experiences. We have learned, over the past several decades, design patterns for traditional software applications, but with virtual and augmented reality, the user interface needs to be reconsidered from the ground up.

Today, we will practice what we covered in Lab #3 by learning how user interfaces are built in Unity to understand how we can begin building out interactive menus. Participants will create an environment using Unity's 3D editor and go hands-on with the implementation of a simple UI starting scene in our Space project.

PART 2: HANDS-ON EXERCISES

These exercises are designed to provide you with the following:

1. A baseline understanding the way the Unity GUI system works, and how to implement it in a Google VR project
2. An opportunity to experiment with and explore different design options when building a starting scene for your VR Space application

EXERCISE 1: OBSERVE & TAKE NOTES

The instructor will go through the process of making a new scene and how to build a basic user interface for a VR experience. While the instructor demonstrates this in front of the group, use this time to observe and take notes about the process. The instructor will demonstrate how to make a main menu, and how to add a title and description to game objects.

EXERCISE 2: BUILD YOUR OWN USER INTERFACE

Using the notes and steps outlined in the provided Lab 4 – Project Notes document, begin working on your own implementation of a user interface that will serve as the first scene in your VR Space application.

PART 3: TAKE-HOME EXERCISES

These take-home exercises will help you practice what we've learned in today's lab by continuing to add user interface elements to your project.

TAKE-HOME EXERCISE #1: FINISH YOUR OPENING SCENE

Finish what you've started in today's lab by completing your opening scene. Your scene should have at least two (2) buttons and a title. The rest of the design is entirely up to you! We will be using this scene to launch our main scene in the next lab.

EXERCISE #2: ADD TEXT TO YOUR PLANETS

Add a text title and description to each of the planets in your main scene. You can make these as simple or as complex as you'd like, or add placeholder values. We will be writing code in the next lab to show and hide these descriptions when the player uses the magnet to "click" on a planet.

SUMMARY

In today's lab, we went through the process of creating a basic user interface in Unity and customizing it to fit the style of our application. We also learned about the different types of interfaces that can be built in VR, and when different types of interactions make the most sense. Finally, we covered how to add text to existing objects in our scene, and gained an understand of Event Systems in Unity.

FOR NEXT TIME

Bring your completed take-home exercises and be prepared to discuss the process you went through to complete them. If you are unable to complete the exercises, come to the next lab with the Lab 5 Project saved on your computer.