Exercise 19: Spawn and Explode

Although this exercise isn't worth any points, it gives you valuable programming experience. You're almost definitely going to have to complete the exercises to succeed in the course.

**Getting Started**

Download the zip file below and unzip the file somewhere on your computer.

**Exercise 19 Materials**ZIP File

Open the project in Unity.

**Problem 1 - Setting up the mouse button processer**

Drag the MouseButtonProcessor script from the scripts folder in the Project window onto the Main Camera in the Hierarchy window. Left click the Main Camera in the Hierarchy window to select it.

Expand the prefabs folder in the Project window and drag the Explosion prefab onto the Prefab Explosion field in the Mouse Button Processor (Script) component in the Inspector. Drag the TeddyBear prefab onto the Prefab Teddy Bear field in the Mouse Button Processor (Script) component in the Inspector.

**Problem 2 - Spawn teddy bear on left mouse button**

Open the Input Manager, expand the Axes area if necessary, and add 1 to the value next to Size. Expand the bottom input axis (the one you just added) and change the Name to SpawnTeddyBear. Change the Positive Button to mouse 0 and delete the Alt Positive Button.

Open the MouseButtonProcessor script in Visual Studio.

Add code to the **Update** method to instantiate the teddy bear prefab at the mouse location when there's input on the SpawnTeddyBear axis. The Mouse Button Processing Revisited lecture discusses how to only respond on the first frame of input on an axis; you should use that approach here to make sure you only spawn a single teddy bear when the player presses the left mouse button. The Mouse Location Processing lecture shows how to determine the location of the mouse in world coordinates.

Test your code to make sure it works properly and debug as necessary.

**Problem 3 - Explode a teddy bear on right mouse button**

Open the Input Manager, expand the Axes area if necessary, and add 1 to the value next to Size. Expand the bottom input axis (the one you just added) and change the Name to ExplodeTeddyBear. Change the Positive Button to mouse 1 and delete the Alt Positive Button.

Open the MouseButtonProcessor script in Visual Studio.

Add code to the **Update** method to explode one of the teddy bears in the game. The Mouse Button Processing Revisited lecture discusses how to only respond on the first frame of input on an axis; you should use that approach here to make sure you only explode a single teddy bear when the player presses the right mouse button. I already tagged the TeddyBear prefab with a TeddyBear tag, so you can get one of the teddy bears in the game using the **GameObject** **FindWithTag** method. Because that method can return null (if there are no teddy bears in the game), check for null before trying to blow up the teddy bear. If the teddy bear isn't null, instantiate the explosion prefab at the teddy bear's position and destroy the teddy bear.

Test your code to make sure it works properly and debug as necessary.