Exercise 20: Finally, A Driving Game

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.

**Problem 1 - Create a project and add a sprite**

Create a new 2D Unity project named Exercise20. Rename the SampleScene as Scene0. Add a new Sprites folder and use your Operating System to copy a sprite of your choosing into that folder. Drag the sprite into the Hierarchy window to create a game object in the scene. Run the game and watch nothing happen.

**Problem 2 - Drive horizontally**

Create a new Scripts folder and create a new C# script in that folder called Driver. Open the new script in Visual Studio and add a documentation comment for the class. The Driver class (script) drives the game object based on keyboard input.

Add a constant called **MoveUnitsPerSecond** to store how many units your game object moves per second below the line that starts **public class**. Delete the **Start** method from the script. Add code to the body of the **Update** method to save the value on the Horizontal input axis (already provided in the default Unity project) into a variable called **horizontalInput** and to check if that value is non-zero. If there is input on that axis, change the x position of the game object (using a local variable as usual). The appropriate amount to change the x position is **horizontalInput \* MoveUnitsPerSecond \* Time.deltaTime**. The Keyboard Processing lecture covers keyboard input processing in detail.

Attach the Driver script to your game object in the Hierarchy window and run the game to drive horizontally.

**Problem 3 - Drive vertically**

Add code to the body of the **Update** method to handle input on the Vertical input axis (already provided in the default Unity project) to change the y position of the game object.

Run the game to drive vertically (and horizontally if you'd like).