

BoxWrap2D AV Assignment

This piece is an extension of the physics lab work. I decided that seeing as my creative practice group work is using boxwrap2d that this was a great opportunity to familiarise myself more with the library to better my understanding of it. I decided that my sketch would be a sort of demo of boxwrap2d that would show of what the library could do and in turn show me what the library could do. I started off by creating the ability to spawn circles and squares with the mouse and reset the sketch. I then decided that I would add some variables into the mix to make it more exciting. I started by adding a size variable that the user could change making the shapes they spawned bigger and smaller, from there I added the option of turning the density of the objects to 0 (what I named drawing mode) and turning the bounce of the objects on or off. I finished off by implementing a method of drawing over the original box2d sketch so that it looks more presentable. This method is called custom rendering (something I had come across during creative practice) and will explain below. I finished off by giving the user the option to change the colour of the custom render, and drew a simply display that told the user what was on/off and what size the shapes were at.

How it works:

Shapes: The shapes are drawn when the mouse button is held down and are given a random velocity so they don't always fall straight.

Physics: The density of the objects is determined with a simple on/off Boolean, it either has a density (and as a result falls) or it doesn't and stays in place (drawing mode). The same can be said for the bounce function, it either sets the restitution of the objects about to be drawn to 0 (minimum bounce) or 1 (maximum bounce). It is important to note that the changes in these two physics occurs to shapes that have been drawn after they have been turned on and off and does not affect all shapes.

Custom rendering: I will admit now that I don't fully understand all the small details of this code (though I try to explain as best I can in the code itself) but I will try and summarise what I think the code does. What happens is that this function called custom rendering finds all shapes that have been drawn within the sketch and splits them up into circles and polygons, from there it gives the user the option to edit how circles and polygons are drawn (simple fill stroke commands etc) it then draws over every box2d object with these settings.

NOTE* All References are noted within the actual code (including links and credit) and a more in depth explanation of the code can be found alongside the code itself.

