**Computer Graphics CGD260S**

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**Test 1 Code Errors Report**

For the purpose of test 1 of Computer Graphics we were asked to create a box that is a solid black colour in the bottom left corner of the canvas, and upon that were asked to increase the box in colours, translate the box, as well as rotate the box in the Z axis. From all of that I was only able to do up till the translation because of time management. Now that I was able to fix my code and get it to work properly I realized that:

**1.** **To increase the box in ”rgba” colours** I first of all completed my colours points from 2 to 6, for each of the vertices. This is done from lines 28 to 34 and 47 to 53, respectively. Next I moved my colours and vertices into the same array, lines 41 to 75. I also used the same buffer for pos and colours. Because when trying to use different arrays for the black colour and the triangles vertices, I was getting an error that I could not fix. Following the steps done with the shift translation, I created a variable for each rgba colour and gave it a value, lines 135 to 138. After that, back in the vertexShader all I did was to assign these values by creating uniform floats for each one of them as well, lines 89 to 93. I then equate my “rgba vec4” to the varying as it was before, but this time by passing the rgba values, line 106. Back in the switch statement, I create 4 cases for each colour specifying the behaviour of each one of them as requested. From lines 202 to 205 I am passing the rgba values assigned in the vertexShader to my js code using the uniform1f.

**2. To get the manually rotation along the z-axis using**, I started by creating another array for the vertices and colours, lines 59 to 75. Because to get the rotation right I chose to draw my box in the centre of the canvas. To control the size of my box, this time I created a var called u, as my radius, line 59. Next, I created 3 variables. The first one I called angle and gave it a value. The second and the last one, I gave it values to increment and decrement, lines 137 to 139, respectively. Back in my vertexShader I added up another uniform float which I called it o, line 91. Inside of my main function, I coded the formula for the rotation along the z-axis, lines 100 to 103. Back to the switch statement, I added up the two cases for the clockwise and counterclockwise rotation, lines 178 to 184. I passed the value of the variable “o” to the js code using the uniform1f as before in line 200. Lastly I then created two if statements to control the rotation using the key “j and k”, respectively. And therefore draw the whole code, line 204, and got the final result on my browser.

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