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4/14/2021

COMP 5460

Assignment Six Report

The purpose of this paper is to show the issues faced, lessons learned, and any remaining bugs in my assignment six, as well as list any extra effort that was put into the assignment past the requirements.

First, how my program functions from the user’s perspective. The user is given the sliders to control the rotation of each piece of the robot arm that is in the canvas. The parts of the robot arm are the base, lower arm, upper arm, finger one, finger two, and finger three. Each piece of the robot can rotate on any of the three axes independently. When the lower parts rotate, it effects the rotation of the parts above it, but when the upper parts rotate it does not affect the parts below.

Overall, this assignment was very easy, and getting started on this assignment was simple because of the starter code. The code that we were given displays the robot arm with three parts and allows for one degree of freedom for each part. The first thing I did on this assignment was getting the original code to work with three degrees of freedom. This was the main struggle I had with this program as I did not know how to organize the parameters for the rotation function call. Once I figured this out, it was simple to copy the code to work for each of the parts given to us.

After I added the degrees of freedom, I followed the format of the code to add the fingers, giving a rotation of 30 degrees for the first finger and -30 to the third to appear offset. Once I had that copying the code that I wrote for the first part to work for the second part was simple, the only thing left was making sure rotations of one finger did not affect the others. To do this I just undid the rotations when I was finished drawing one finger before modifying the matrix for the next one. Lastly, I changed the color of the top of the box from white to cyan to be more visible next to the white background.

That was all the work I did for this assignment; I attached an image of sample output to show my program working.

