6.4400 Final Project Check-In

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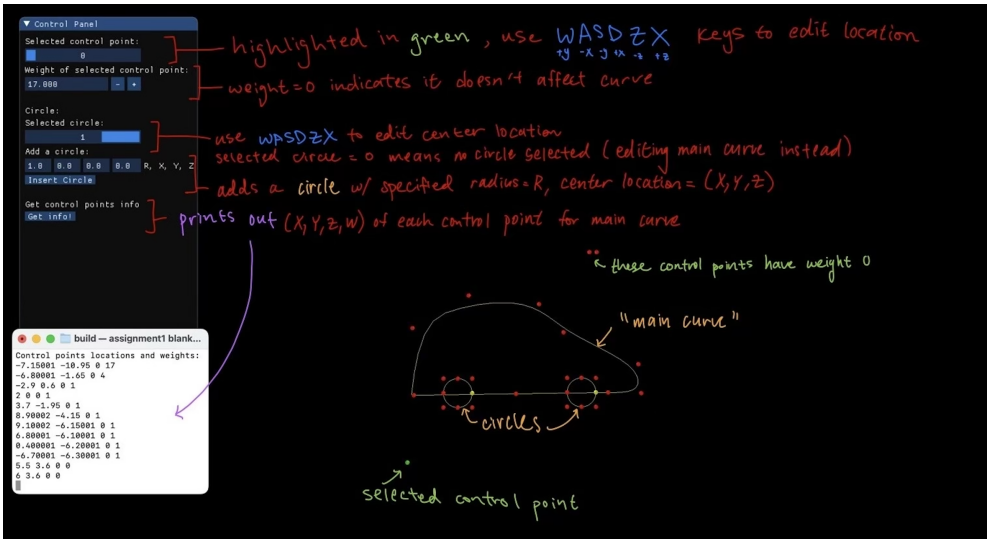
1 Progress

Our project is to implement **Non-Uniform Rational B-Splines (NURBS)** curves and surfaces, as well as interactive manipulation of the control points. What we have implemented so far includes:

1. **Plot NURBS curve**: Take in a spline file that specifies control points, weights, knots, and degree, and output the corresponding curve on the screen;
2. **Control panel with sliders that modify weights** on every control point: Similar to the control panel in the SSD assignment;
3. **Let user edit locations of control points**: First select a specific control point using the control panel, and then use keys to edit the selected point's location;
4. **Draw circle with NURBS curve**: Take in values of the circle's center and radius, and generate the corresponding control points, weights, knots, and degree that are passed into the NURBS curve class, which then draws the circle.



2 Next Steps

Next, we will work on the following:

1. Play how the curve "sounds," similar to Desmos' audio visualizer;
2. Draw interesting scenes using our shape functions and curve-editing capabilities;
3. Implement NURBS surfaces (if have time).