

## CS335 Exercise Set 4

### Due Thursday October 25

**Dancing Curve.** Write a java program that draws a 4-point control polygon (four points, you choose a reasonable placement) and then allows the user to “grab” and drag any one of the four points. As the point gets dragged, repeatedly draw and erase the two edges of the control structure that are affected to make it look like the polygon is being reshaped.

Once the user releases the point, animate a drawing process between the starting position of the control points and the ending position (where the user released the point). Divide the starting and ending position into 30 even intervals. For each of the 30 positions of the control structure, animate the drawing of a B-Spline curve based on the control points at that time instant. Draw just the curve, not the control points or the control polygon during the animation. You may use the forward differencing curve code provided on the class webpage.

Implement a “reset” button to start over, and a “quit” button to quit.

Submit an electronic copy of your solutions by class time on the due date.