

**Chan Dat Thai**  
**COSC 4328 Programming Assignment 1**  
**Time: 15 hours**

**A. PART 1**



My picture is titled the TAMUCC Logo, because it's literally the official logo of TAMUCC (except for the different shades of color). I don't think I need to explain how this relates to TAMUCC 😊

**B. PART 2**

In this part, I completed the main requirement: drawing a curve with at least 100 line segments (can control this variable using slider). I also implemented mouse interaction to move the control points and applied Chaikin's algorithm for curve fitting, as well as generated trees and bushes using L-system.

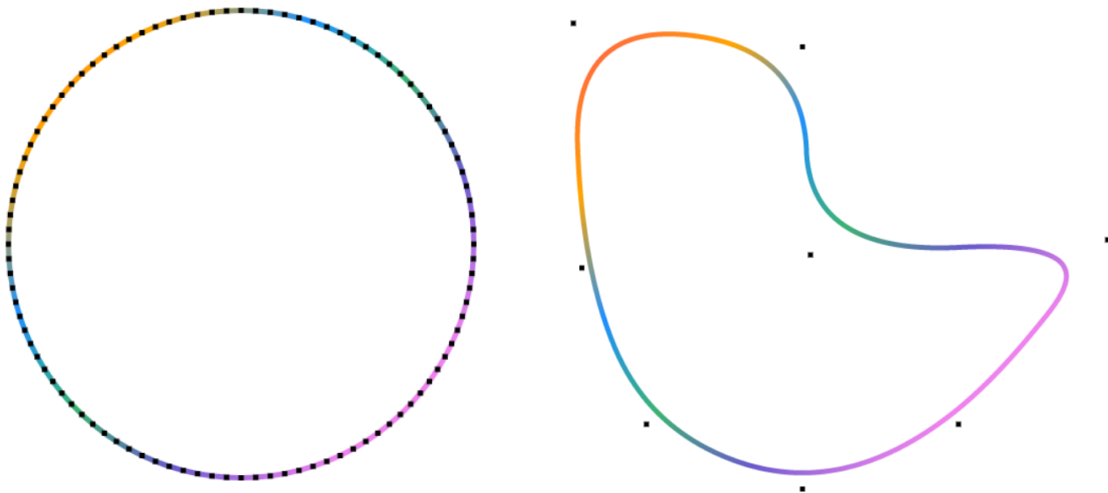


Figure 1 A circle with 100 line segments and a curve with 8 control points and 5 subdivisions (256 line segments)



Figure 2 L-system trees and bushes

### C. SOURCES

- The lecture book
- [https://www.w3schools.com/html/html5\\_canvas.asp](https://www.w3schools.com/html/html5_canvas.asp) (canvas, line, curve, slider, mouse event, linearGradient,...)
- <http://www.ece.ubc.ca/~saifz/eece478/course/chaikin.pdf> (Chaikin's Algorithm)
- [http://www.sccg.sk/~smolenova/elearning/ks\\_fmfiuk06.pdf](http://www.sccg.sk/~smolenova/elearning/ks_fmfiuk06.pdf)
- <https://p5js.org/examples/simulate-l-systems.html>
- <https://www.youtube.com/watch?v=f6ra024-ASY>