

Assignment #1

Due January 29, 2024

Write a program for drawing a line, circle, or ellipse that allows a user to select what object to be drawn using any programming language of your choice. Once a user selects an object, your program should ask a user to enter necessary parameters for each object, for example, if a user wants to draw a line, your program should ask a user to enter 2 endpoint coordinates. The method to draw each object is as follows:

1. Implement the Bresenham's line algorithm to draw a line in any direction by accepting 2 endpoints. Modify your program so that it can maintain the geometric property of a line.
2. Implement the midpoint ellipse algorithm to draw a circle or an ellipse by accepting the center and the radius of a circle or the semi-major and the semi-minor axes of an ellipse. Modify your program so that it can maintain the geometric property of an object.