COSC 4370 - Homework 1
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February 2021

1 Problem

The assignment requires the rasterizing of the eclipse. The eclipse is defined as (x/12)^2 + (y/6)^2 = 64^2 where y >= 0. However, the standard form for eclipse is (x/a)^2 + (y/b)^2 = 1. This makes a^2 = 768, and B^2 = 384.

2 Method

The Midpoint ellipse algorithm is a method for drawing ellipses in computer graphics. This will lead to a simple, efficient and fast implementation in app processors. The ellipse center is always assumed to be at the origin, but in some cases it does not. To obtain the pixels in the quarters can be used by symmetric characteristics of the shape. The general idea is only getting the first two quarters for creating the ellipse.

3 Implementation

Within the int main() create an integer with a variable that includes the equation, then loop through the width and graph the pixels. For example: int y = sqrt((x*(-x+1536))/2)+384 and setting up the pixels (x,y). You should end up having an ellipse.

4 result

I do not have a screenshot of the results