University of Science

FACULTY OF INFORMATION TECHNOLOGY

CS411 - Computer Graphics

Lab 02

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1 Line

Execution time:

- DDA algorithm: 2.9475ms
- Bresenham algorithm: 0.4646ms
- OpenGL function GL_LINES: 0.5705ms

To calculate the execution time of three algorithms, I get the average running time of 10 times running. We can see that Bresenham algorithm is faster than DDA algorithm. Moreover, the running time of Bresenham algorithm is approximately less than that of OpenGL's primitive GL_LINES.

2 Circle

Execution time:

- Midpoint algorithm: 0.558ms
- OpenGL function GL_LINES: 0.711ms

From the average time obtained from 10 times running, we can see that midpoint algorithm is faster than OpenGL's primitive GL_LINES.

3 Ellipse

Execution time by self-implementation with Midpoint algorithm: 0.510ms

I have not implemented function for drawing ellipse by OpenGL's function yet.

4 Parabola

Execution time by self-implementation algorithm with Midpoint algorithm: 0.4913ms

I have not implemented function for drawing parabola by OpenGL's function yet.

References

[1] Drawing cirle by OpenGL