#include<GL/glut.h>

#include<stdio.h>

void display(int x, int y)

{

glBegin(GL\_POINTS);

glVertex2i(x, y);

glEnd();

}

int x1, y1, x2, y2;

void draw\_line()

{

glClear(GL\_COLOR\_BUFFER\_BIT);

int dx, dy, i, e;

int incx, incy, inc1, inc2;

int x, y;

dx = x2 - x1;

dy = y2 - y1;

if (dx < 0)

dx = -dx;

if (dy < 0)

dy = -dy;

incx = 1;

if (x2 < x1)

incx = -1;

incy = 1;

if (y2 < y1)

incy = -1;

x = x1;

y = y1;

if (dx > dy)

{

display(x, y);

e = 2 \* dy - dx;

inc1 = 2 \* (dy - dx);

inc2 = 2 \* dy;

for (i = 0; i < dx; i++)

{

if (e >= 0)

{

y += incy;

e += inc1;

}

else

e += inc2;

x += incx;

display(x, y);

}

}

else

{

display(x, y);

e = 2 \* dy - dx;

inc1 = 2 \* (dy - dx);

inc2 = 2 \* dx;

for (i = 0; i < dy; i++)

{

if (e >= 0)

{

x += incx;

e += inc1;

}

else

e += inc2;

y += incy;

display(x, y);

}

}

glFlush();

}

void minit()

{

glClearColor(1, 1, 1, 1);

glColor3f(1.0, 0.0, 0.0);

glPointSize(3.0);

gluOrtho2D(10, 500, 10, 500);

}

void main(int argc, char\* argv[])

{

printf\_s("Enter the points:");

scanf\_s("%d%d%d%d", &x1, &y1, &x2, &y2);

glutInit(&argc, argv);

glutInitDisplayMode(GLUT\_SINGLE | GLUT\_RGB);

glutInitWindowSize(300, 300);

glutInitWindowPosition(5, 5);

glutCreateWindow("Bresenham's Algorithm");

glutDisplayFunc(draw\_line);

minit();

glutMainLoop();

}