#include<GL/glut.h>

#include<stdio.h>

int xc, yc, r;

void draw\_circle(int xc, int yc, int x, int y)

{

glBegin(GL\_POINTS);

glVertex2i(xc + x, yc + y);

glVertex2i(xc - x, yc + y);

glVertex2i(xc + x, yc - y);

glVertex2i(xc - x, yc - y);

glVertex2i(xc + y, yc + x);

glVertex2i(xc - y, yc + x);

glVertex2i(xc + y, yc - x);

glVertex2i(xc - y, yc - x);

glEnd();

}

void circlebres()

{

glClear(GL\_COLOR\_BUFFER\_BIT);

int x = 0, y = r;

int d = 3 - 2 \* r;

while (x <= y)

{

draw\_circle(xc, yc, x, y);

x++;

if (d < 0)

d = d + 4 \* x + 6;

else

{

y--;

d = d + 4 \* (x - y) + 10;

}

draw\_circle(xc, yc, 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 coordinates of the center:");

scanf\_s("%d%d", &xc, &yc);

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

scanf\_s("%d", &r);

glutInit(&argc, argv);

glutInitDisplayMode(GLUT\_SINGLE | GLUT\_RGB);

glutInitWindowSize(300, 300);

glutInitWindowPosition(5, 5);

glutCreateWindow("Bresenham's Circle");

glutDisplayFunc(circlebres);

minit();

glutMainLoop();

}