#include<stdio.h>

#include<math.h>

#include<GL/glut.h>

double xa,xb,yb,ya;

float round\_value(float v)

{

return floor(v+0.5);

}

void lineDDa(void)

{

double dx=(xb-xa);

double dy=(yb-ya);

double steps;

float xinc,yinc,x=xa,y=ya;

steps=(abs(dx)>abs(dy))?(abs(dx)):(abs(dy));

xinc= dx/(float)steps;

yinc=dy/(float)steps;

glClear(GL\_COLOR\_BUFFER\_BIT);

glBegin(GL\_POINTS);

glVertex2d(x,y);

int k;

for(k=0;k<steps;k++)

{

x=x+xinc;

y=y+yinc;

glVertex2d(round\_value(x),round\_value(y));

}

glEnd();

glFlush();

}

void Init()

{

glClearColor(1.0,1.0,1.0,0.0);

glColor3f(0.0,0.0,0.0);

gluOrtho2D(0,640,0,480);

}

int main(int argc,char \*\*argv)

{

printf("Enter the point x1,y1 \n");

scanf("%lf%lf",&xa,&ya);

printf("Enter the point x2,y2 \n");

scanf("%lf%lf",&xb,&yb);

glutInit(&argc,argv);

glutInitDisplayMode(GLUT\_SINGLE|GLUT\_RGB);

glutInitWindowPosition(0,0);

glutInitWindowSize(640,480);

glutCreateWindow("DDA\_LINE");

Init();

glutDisplayFunc(lineDDa);

glutMainLoop();

return 0;

}

