#include <stdio.h>

#include <stdlib.h>

#include <GL/glut.h>

float X1,Y1,X2,Y2;

void init(void)

{

glClearColor(0.0,0.0,0.0,0.0);

glMatrixMode(GL\_PROJECTION);

gluOrtho2D(-100.0,100.0,-100.0,100.0);

}

void setPixel(GLint x, GLint y)

{

glBegin(GL\_POINTS);

glVertex2i(x,y);

glEnd();

}

void DDA(void)

{

float dx=(X2-X1);

float dy=(Y2-Y1);

float steps;

float xInc,yInc,x=X1,y=Y1;

/\* Find out whether to increment x or y \*/

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

xInc=dx/(float)steps;

yInc=dy/(float)steps;

/\* Clears buffers to preset values \*/

glClear(GL\_COLOR\_BUFFER\_BIT);

/\* Plot the points \*/

setPixel(x,y);

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

{

x+=xInc;

y+=yInc;

setPixel(x,y);

}

glFlush();

}

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

{

printf("Enter two end points of the line to be drawn:\n");

printf("\nEnter Point1(X1,Y1):\n");

scanf("%f%f",&X1,&Y1);

printf("\nEnter Point2(X2,Y2):\n");

scanf("%f%f",&X2,&Y2);

glutInit(&argc, argv);

glutInitDisplayMode(GLUT\_SINGLE|GLUT\_RGB);

glutInitWindowSize(500, 500);

glutInitWindowPosition(0, 0);

glutCreateWindow("DDA Line Drawing Algorithm");

init();

glutDisplayFunc(DDA); glutMainLoop();

return 0;

}