**Write a program to implement DDA’s line drawing algorithm.**

#include<iostream>

#include <conio.h>

#include <graphics.h>

#include<cmath>

#include <Windows.h>

using namespace std;

int main()

{

int h=720;

initwindow(1024,720,"DDA Algorithm");

int x1,y1; //initial point

int x2,y2; //final point

int xk,yk; //intermediate points

cout<<"Enter initial coordinates"<<endl;

cout<<"X1=";cin>>x1;

cout<<"Y1=";cin>>y1;

cout<<"Enter final coordinates"<<endl;

cout<<"X2=";cin>>x2;

cout<<"Y2=";cin>>y2;

putpixel(x1,y1,RED);

putpixel(x2,y2,RED);

int dx=x2-x1;

int dy=y2-y1;

if(dx==0)

{

for(yk=y1;yk!=y2;y1>y2?yk--:yk++)

{

putpixel(x1,yk,RED);

delay(30);

cout<<"("<<xk<<","<<yk<<")"<<endl;

}

}

else

{

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

float Xinc = dx / (float) steps;

float Yinc = dy / (float) steps;

float xk = x1;

float yk = y1;

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

{

putpixel (xk,yk,RED);

xk += Xinc;

yk += Yinc;

delay(30);

cout<<"("<<round(xk)<<","<<round(yk)<<")"<<endl;

}

}

getch();

}

**OUTPUT**



