```
#include<bits/stdc++.h>
#include<graphics.h>
using namespace std;

void Bresenhamline(int x1,int y1,int x2,int y2)
{
    int dx,dy,inc1,inc2,inc3,inc4,d;
    float m;
    initwindow(300,300,"Draw a Line");

    int X,Y;
    float x_new,y_new;
    X = getmaxx();
    Y = getmaxy();
    rectangle(0,0,X,Y);
    line(X/2,0,X/2,Y);
    line(0,Y/2,X,Y/2);
    x_new = X/2;
    y_new = Y/2;

    dx=x2-x1;
    dy= y2-y1;
    m = dy/dx;
    if(m<=1)
    {
        cout << "For m<=1" << endl;
        d = 2*dy-dx;
        inc1 = 2*dy;
        inc2 = 2*(dy-dx);
        while(x1<=x2)
        {
            putpixel(x_new+x1,y_new-y1,15);
//          cout << x1 << y1 << endl;
            if(d<=0)
            {
                d = d+inc1;
            }
            else{
                d =d+inc2;
                y1++;
            }
            x1++;
        }
    }
    else
    {
```

```
        cout << "For m>1" << endl;
        d = 2*dx-dy;
        inc3 = 2*dx;
        inc4 = 2*(dx-dy);
        while(y1<=y2)
        {
            putpixel(x_new+x1,y_new-y1,15);
            if(d<=0)
            {
                d = d+inc3;
            }
            else{
                d =d+inc4;
                x1++;
            }
            y1++;
        }
    }
}

int main()
{
    int x1, y1, x2, y2;
    cout << "Enter the value of x1 and y1: ";
    cin >> x1 >> y1;
    cout << "Enter the value of x2 and y2: ";
    cin >> x2 >> y2;
    if(x2<x1)
    {
        int temp;
        temp = x1;
        x1 = x2;
        x2 = temp;
    }
    if(y2<y1)
    {
        int temp;
        temp = y1;
        y1 = y2;
        y2 = temp;
    }
    Bresenhamline(x1,y1,x2,y2);
    getch();
    return 0;
}
```