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program

```c
# include <stdio.h>
# include <graphics.h>
int main()
{
    int rou(float num)
    {
        return num<0 ? num-0.5 : num +0.5;
    }
    int x1=100, x2=250, y1=100, y2=250, step;
    int gd = DETECT, gm;
    float x, y, m;
    int dx = x2 - x1;
    int dy = y2-y1;
    m = dy/dx;
    if (dx>dy)
        step = dx;
    else
        step = dy;
    initgraph (&gd &gm,"");
    outtextxy (x1,y1,"A");
    outtextxy (x2,y2,"B");
    put pixel (x1,y1, RED);
    x = x1, y=y1;
    while (step >0)
    {
        if (m<1)
        {
            x= x+1;
            y = y+m;
        }
        if (m>=1)
```

```
        {
    x= x+1/m;
    y= y+1;
        }
        putpixel(rou(x), rou(y), RED);
            step--;
        }
        getch();
        return 0;
    }
```

DDA algorithm;

step 1: start Algorithm

step 2: Declare $x_1, y_1, x_2, y_2, dx, dy, x, y$ as integer variables.

step 3 : Enter value of x_1, y_1, x_2, y_2

step 4 : calculate $dx = x_2 - x_1$

step 5 : calculate $dy = y_2 - y_1$

step 6 : If ABS (dx) > ABS (dy)
                then step = abs (dx)
            else

step 7   Xinc = dx/step
         Yinc = dy/step
         assign x = x_1
         assign y = y_1

step 8 : set pixel (x, y)

step 9 x = x + Xinc
         y = y + Yinc
         set pixels (Round(x), Round (y))

step 10 : Repeat step 9
          until x = x_2