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COMPUTER GRAPHICS

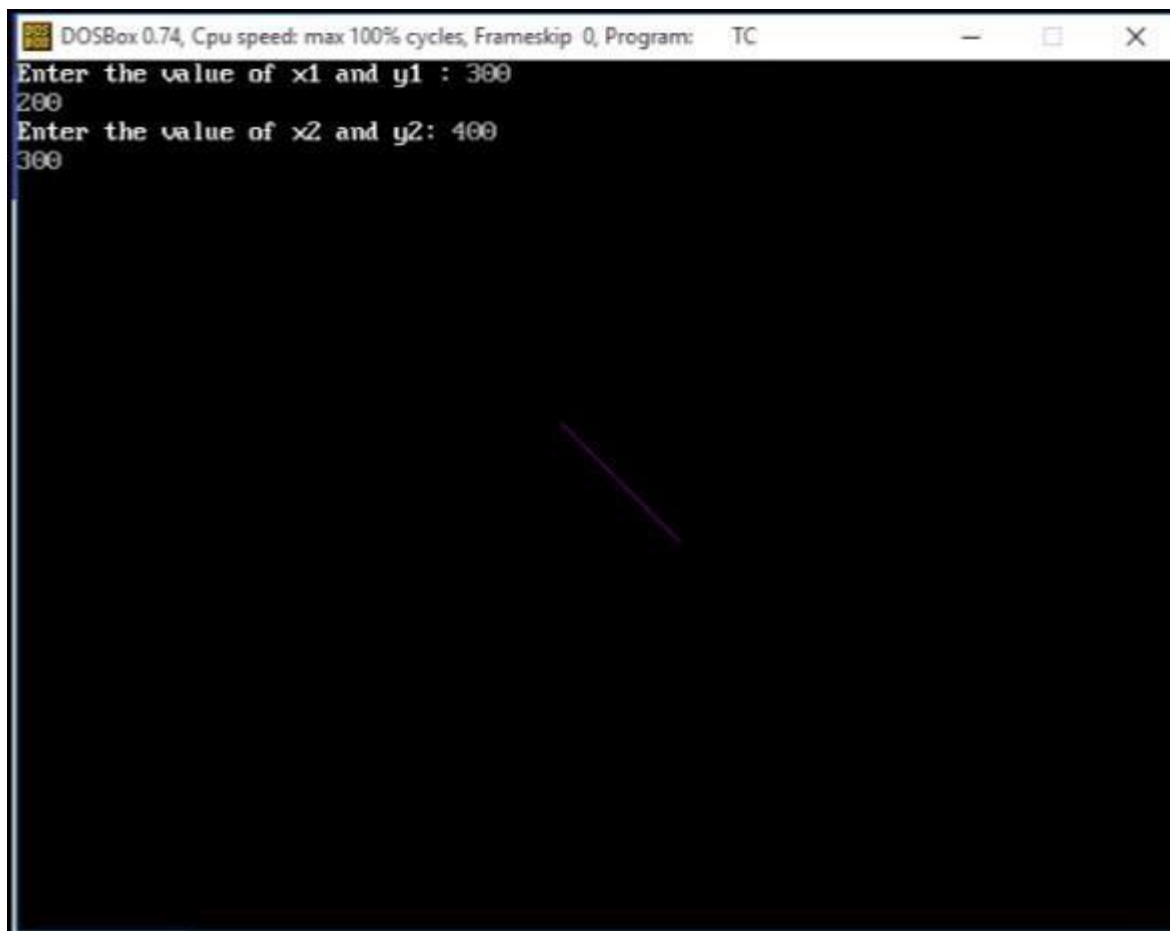
ALGORITHM:

Input to the function is two endpoints (x_1, y_1) and (x_2, y_2)

1. $\text{length} \leftarrow \text{abs}(x_2 - x_1);$
2. if $(\text{abs}(y_2 - y_1) > \text{length})$ then $\text{length} \leftarrow \text{abs}(y_2 - y_1);$
3. $\text{xincrement} \leftarrow (x_2 - x_1) / \text{length};$
4. $\text{yincrement} \leftarrow (y_2 - y_1) / \text{length};$
5. $x \leftarrow x + 0.5; y \leftarrow Y + 0.5;$
6. for $i \leftarrow 1$ to length follow steps 7 to 9
7. plot $(\text{trunc}(x), \text{trunc}(y));$
8. $x \leftarrow x + \text{xincrement};$
9. $y \leftarrow y + \text{yincrement};$
10. stop.

PROGRAM: DDA LINE

```
#include<stdio.h>
#include<graphics.h>
#include<math.h>
#include<dos.h> int
x1,x2,y1,y2,dx,dy,steps;
float xin,yin;
{    printf("enter x1 and y1
");    scanf("%d %d",x1,y1);
printf("enter x2 and y2 ");
scanf("%d %d",x2,y2);
if(abs(dx)>abs(dy))
{
steps=abs(dx);    }
else
steps=abs(dy);
xin=dx/steps;
yin=dy/steps;
for(i=1;1<=steps;i++)
{    put
pixel(x1,y1);
x1=x1+xin;
y1=y1+yin;
}
}
```



Conclusion:

Thus, we have successfully implemented DDA Line drawing algorithm.