

```

1  //SHREYAS SAWANT D7A 55
2  //Implement DDA Line Drawing Algorithm (Thick/Dash/Dotted)
3
4  #include "graphics.h"
5  #include "conio.h"
6  #include <math.h>
7  int main()
8  {
9      int x0,y0,xn,yn;
10     printf("Enter initial coordinates ");
11     scanf("%d %d",&x0,&y0);
12     printf("Enter final coordinates ");
13     scanf("%d %d",&xn,&yn);
14     printf("\n1.Thick\n2.Dashed\n3.Dotted\n");
15     int a;
16     scanf("%d",&a);
17     int x_,y_,step;
18     x_=xn-x0;y_=yn-y0;
19
20     int gd=DETECT, gm;
21     initgraph(&gd,&gm, (char*) "");
22     if(abs(y_)>abs(x_))
23         step=abs(y_);
24     else
25         step=abs(x_);
26
27     float xinc=x_/ (float) step;
28     float yinc=y_/ (float) step;
29     float x=x0;
30     float y=y0;int k=0;
31     switch(a)
32     {
33         case 1:
34             for(int i=0;i<step;i++)
35             {
36                 putpixel(round(x),round(y),MAGENTA);
37                 x+=xinc;
38                 y+=yinc;
39                 break;
40             }
41         case 2:
42             for(int i=0;i<step;i++)
43             {
44                 if(k>20&&k<25)
45                 {
46                     k++;
47                     x+=xinc;
48                     y+=yinc;
49                     if(k==25)
50                         k=0;
51                 }
52                 else
53                 {
54                     putpixel(round(x),round(y),MAGENTA);
55                     x+=xinc;
56                     y+=yinc;
57                     k++;
58                 }
59             }
60             break;
61         case 3:
62             {
63                 for(int i=0;i<step;i++)
64                 {
65                     if(k==1)
66                     {
67                         k=0;
68                         x+=xinc;
69                         y+=yinc;
70                     }
71                     else
72                     {
73                         putpixel(round(x),round(y),MAGENTA);
74                         x+=xinc;
75                         y+=yinc;
76                         k++;
77                     }
78                 }
79                 break;
80             }
81         default:printf("INVALID");
82     }
83     getch();
84     closegraph();
85     restorecrtmode();
86 }

```

"C:\Users\user\Desktop\SHREYAS\SEM II\DDA.exe"

Enter initial coordinates 530 250

Enter final coordinates 150 300

1.Thick

2.Dashed

3.Dotted

1

█



"C:\Users\user\Desktop\SHREYAS\SEM II\DDA.exe"

Enter initial coordinates 400 200

Enter final coordinates 100 450

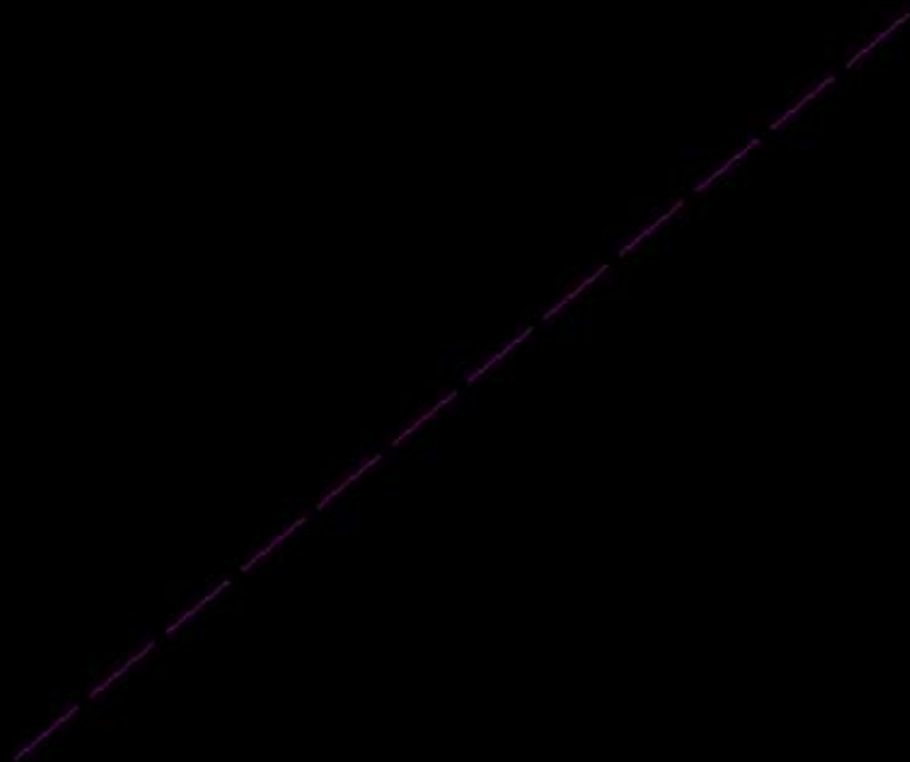
1.Thick

2.Dashed

3.Dotted

2

■



"C:\Users\user\Desktop\SHREYAS\SEM II\Line.exe"

Enter initial coordinates 200 150

Enter final coordinates 400 350

1.Thick

2.Dashed

3.Dotted

3

