**Program: Bresenham Line**

#include<stdio.h>

#include<conio.h>

#include<graphics.h>

#include<stdlib.h>

#include<math.h>

void bresenham(int x1,int x2,int y1,int y2)

{

int i,p,dx,dy,s1,s2,ex,ch;

printf("Enter 1Normal 2Dot 3Dash 4Thick \n");

scanf("%d",&ch);

dx=abs(x2-x1);

dy=abs(y2-y1);

if((x2-x1)<0)

s1=-1;

else if((x2-x1)>0)

s1=1;

else if((x2-x1)==0)

s1=0;

if((y2-y1)<0)

s2=-1;

else if((y2-y1)>0)

s2=1;

else if((y2-y1)==0)

s2=0;

if(dy>dx)

{

int temp;

temp=dx;

dx=dy;

dy=temp;

ex=1;

}

else

ex=0;

p=2\*dy-dx;

i=1;

while(x1<=x2)

{

switch(ch)

{

case 1:

putpixel(x1,y1,9);

break;

case 2:

if(i%2==0)

putpixel(x1,y1,9);

break;

case 3:

if(i%6!=0)

putpixel(x1,y1,9);

break;

case 4:

putpixel(x1+1,y1,9);

putpixel(x1,y1,9);

putpixel(x1-1,y1,9);

break;

default:

printf("Wrong Choice");

}

i++;

if(p>=0)

{

x1=x1+s1;

y1=y1+s2;

p=p+2\*dy-2\*dx;

}

else

{

if(ex==1)

y1=y1+s2;

else

x1=x1+s1;

p=p+2\*dy;

}

}

}

void main()

{

int gd=DETECT,gm;

int x1,x2,y1,y2;

initgraph(&gd,&gm,"C:\\TURBOC3\\BGI\\");

printf("Enter x1,y1 \n");

scanf("%d%d",&x1,&y1);

printf("Enter x2,y2 \n");

scanf("%d%d",&x2,&y2);

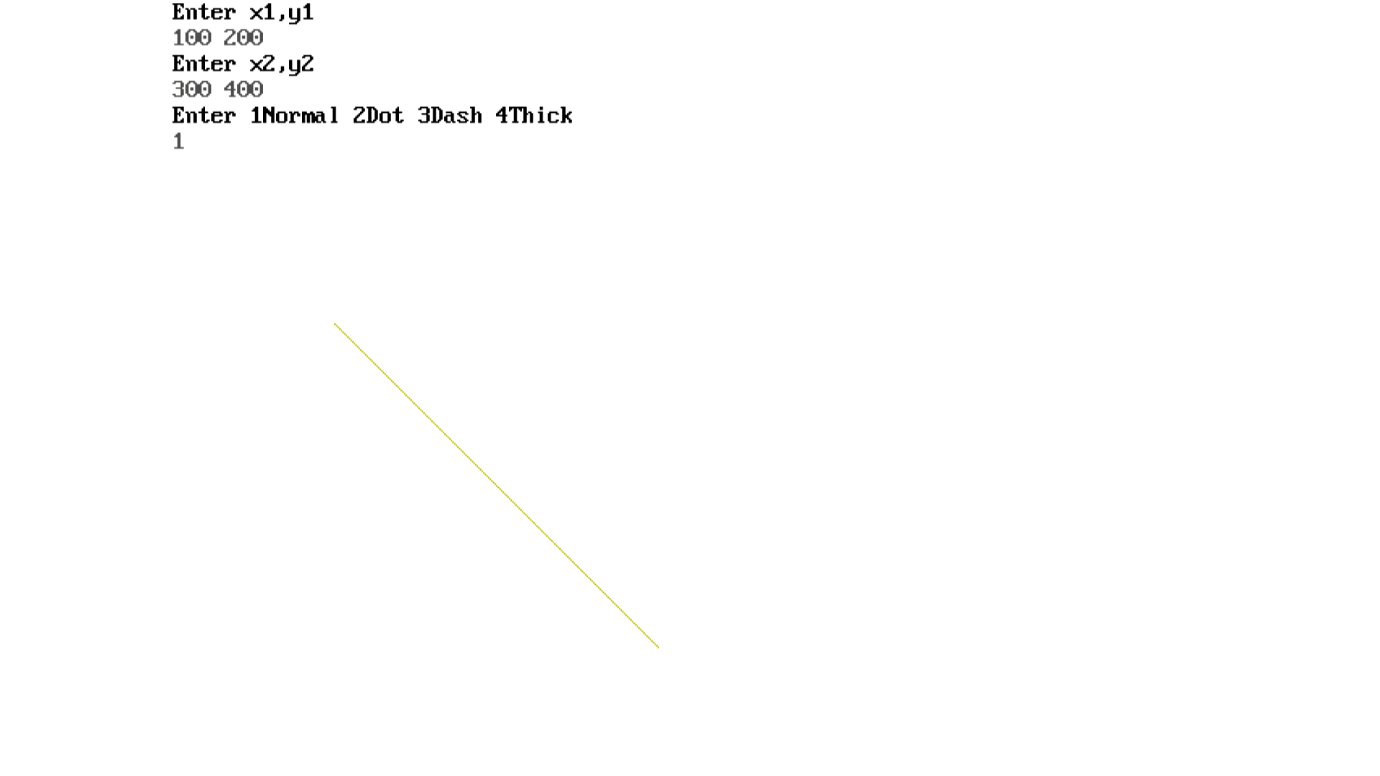
bresenham(x1,x2,y1,y2);

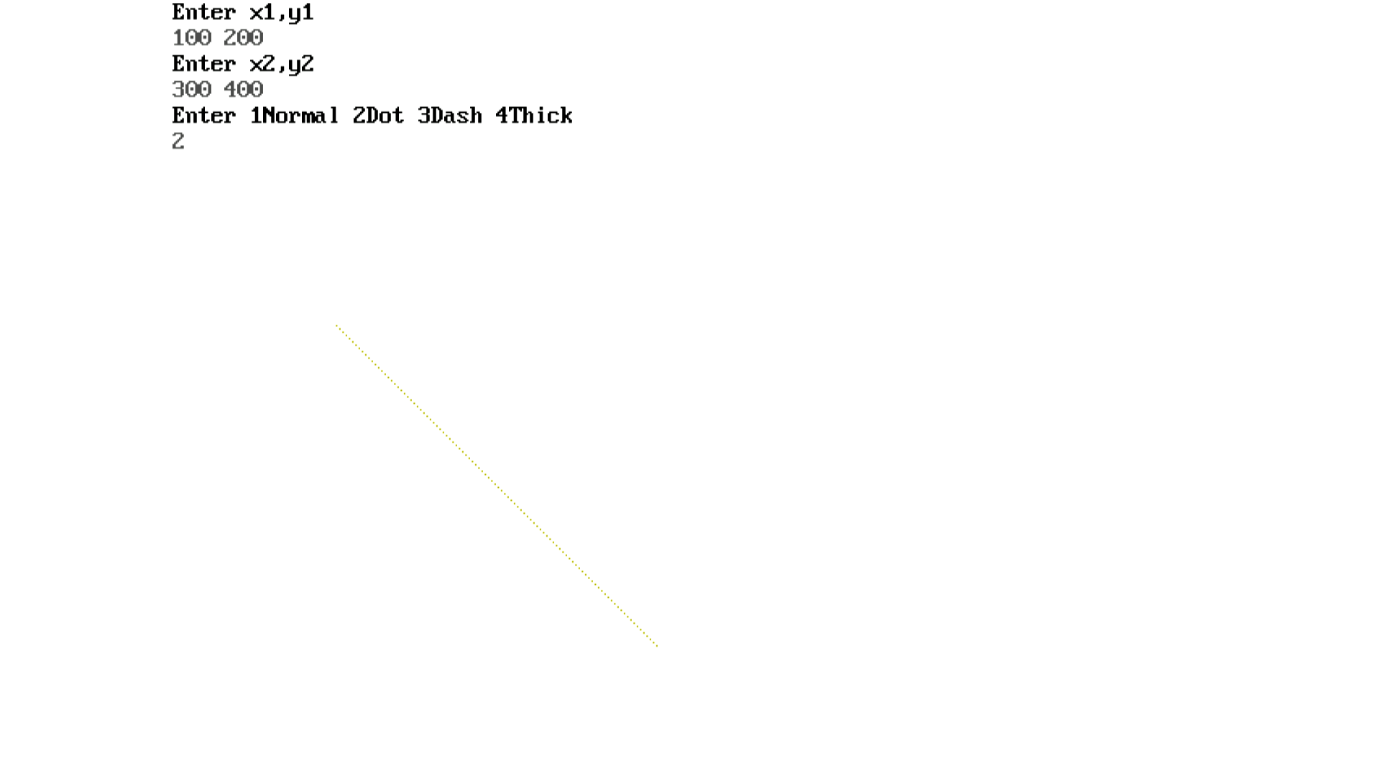
getch();

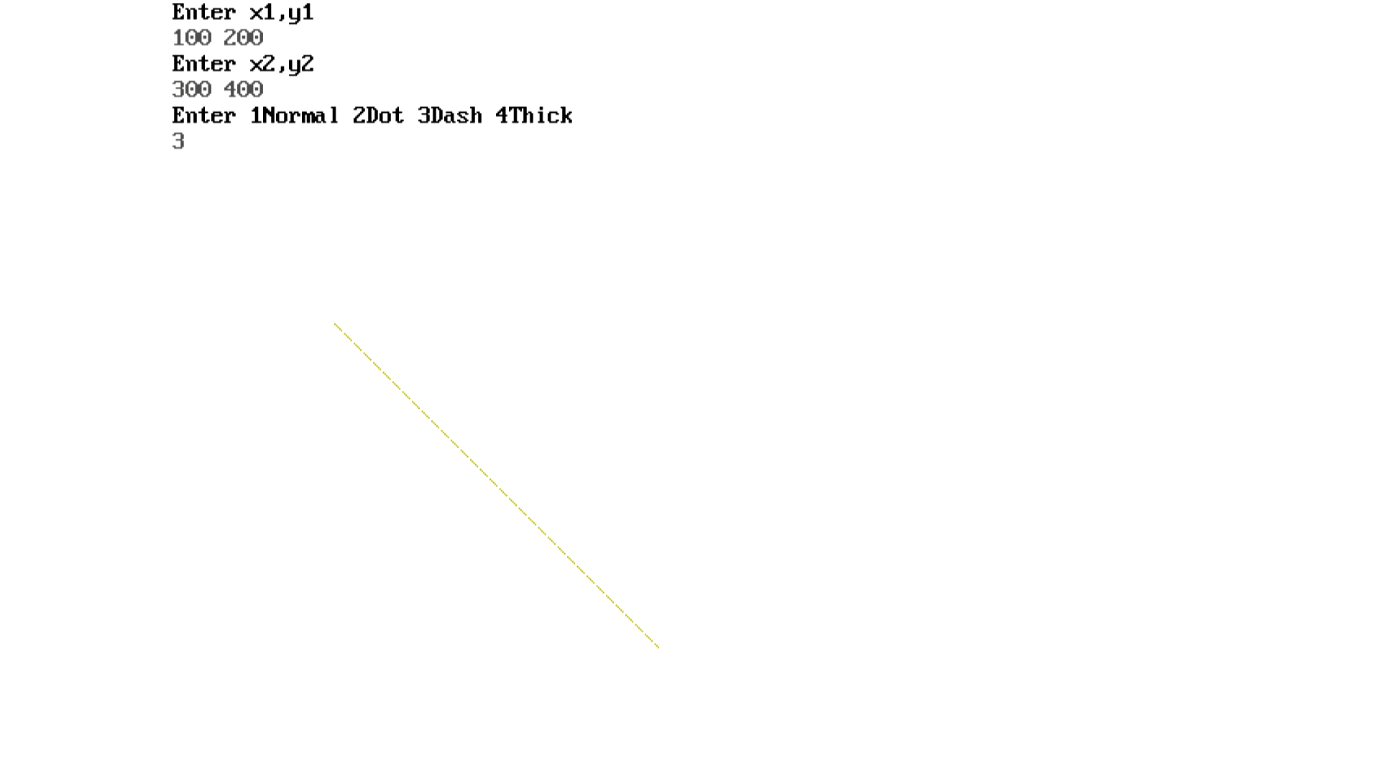
closegraph();

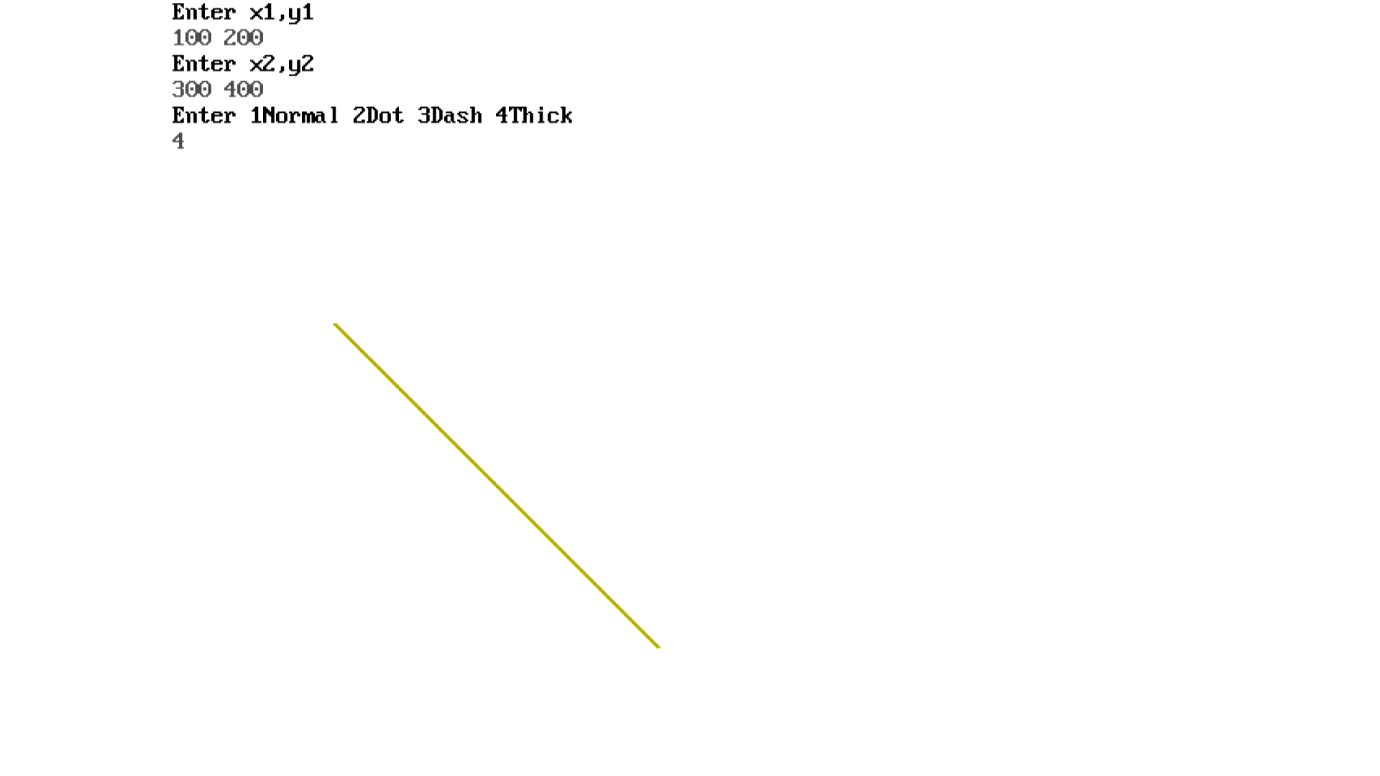
}

**Output:**

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