```
#include <iostream>
#include <stdlib.h>
#include <graphics.h>
#include <math.h>
using namespace std;

int xmax,ymax,xmid,ymid;
class Line
{
public:
int x1,x2,y1,y2,ch;
      void bss(int x1,int y1,int x2,int y2)
        {
          int dx,dy,x,y,s1,s2,ex,e,i,flag=0,temp;

          dx=abs(x2-x1);
          dy=abs(y2-y1);
          x=x1;
          y=y1;
          putpixel(x+xmid,ymid-y,15);

      if(x2>x1)
           {
s1=1;
          }
           if(x2==x1)
           {
s1=0;
    }
           if(x2<x1)
           {
s1=-1;
    }
           if(y2>y1)
           {
s2=1;
    }
           if(y2==y1)
           {
s2=0;
    }
           if(y2<y1)
           {
s2=-1;
    }
           if(dy>dx)
           {
temp=dx;
dx=dy;
dy=temp;
ex=1;
    }
           else
ex=0;

    e=2*dy-dx;
```

```
          i=1;

          do
            {
while(e>0)
          {
  if(ex==1)
     x=x+s1;
  else
     y=y+s2;

               e=e-2*dx;
             }
             while(e<0)
             {

  if(ex==1)
     y=y+s2;
  else
     x=x+s1;

               e=e+2*dy;

             }

           switch(ch)
              {

     case 1:
                        putpixel(x+xmid,ymid-y,15);
                        break;

     case 2:
                        if(flag==0)
                         {putpixel(x+xmid,ymid-y,15);
                          delay(1000);}
      if(i%5==0)
  {
        if(flag==1)
                              flag=0;
  else
    flag=1;
}
                        break;

     case 3:
                        if(flag==0)
                        {
                         putpixel(x+xmid,ymid-y,15);
                         delay(100);}

      if(i%5==0)
  {

        if(flag==1)
                              flag=0;
```

```
   else
     flag=1;
}
                          if(i%3==0)
                          {
                         putpixel(x+xmid,ymid-y,15);
                        delay(1000);}

                       break;
                  case 4:
                     if(flag==0)
                       {delay(1000);
                           }
                       else
                       {
                        if(i%3==0)
                          {
                        putpixel(x+xmid,ymid-y,15);
                        delay(1000);
                          }

          }
                       break;
        case 5:
                       putpixel(x+xmid,ymid-y,15);
                       break;

               }
               i=i+1;
               delay(50);
            }while(i<=dx);
}
};
int main()
{
int gd=DETECT,gm;
int x1,y1,x2,y2,thick,wx,wy,i;
Line B;
cout<<"Enter two end points of line\n";
cin>>x1>>y1;
cin>>x2>>y2;

while(1)
{
cout<<"\nEnter the Style\n";
cout<<"1.Simple\n";
cout<<"2.Dash\n";
cout<<"3.Dash Dot\n";
cout<<"4.Dot\n";
cout<<"5.Thick\n";
cout<<"6.Exit\n";
cout<<"Enter your Style\n";
cin>>B.ch;
if(B.ch==5)
{
```

```
cout<<"Enter The Thickness of line: ";
cin>>thick;
}
initgraph(&gd,&gm,NULL);
xmax=getmaxx();
ymax=getmaxy();
xmid=xmax/2;
ymid=ymax/2;

if(B.ch<=4)
{

B.bss(x1,y1,x2,y2);
delay(300);

}
else
{
B.bss(x1,y1,x2,y2);
delay(300);

if((y2-y1)/(x2-x1)<1)
{
   wy=(thick-1)*sqrt(pow((x2-x1),2)+pow((y2-y1),2))/(2*fabs(x2-x1));
   for(i=0;i<wy;i++)
      {
        B.bss(x1,y1-i,x2,y2-i);
        delay(300);
        B.bss(x1,y1+i,x2,y2+i);
        delay(300);
}
}
else
   wx=(thick-1)*sqrt(pow((x2-x1),2)+pow((y2-y1),2))/(2*fabs(y2-y1));
     for(i=0;i<wx;i++)
      {
        B.bss(x1-i,y1,x2-i,y2);
        delay(300);
        B.bss(x1+i,y1,x2+i,y2);
        delay(300);
}
}


if(B.ch==6)
{
cout<<"Exiting....";
exit(1);
}
closegraph();
}
return 0;
}
```