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#include<iostream>
#include<graphics.h>
using namespace std;
static int LEFT=1,RIGHT=2,BOTTOM=4,TOP=8,xl,yl, xh,yh;
int getcode (int x,int y)
{
int code=0;//Perform Bitwise OR to get outcode
if(x<xl) code|=LEFT;
if(x>xh)code|=RIGHT;
return code;
}
int main()
{
int gdriver=DETECT,gmode;
setcolor (BLUE);
cout<<"Enter bottom left and top right co-ordinates of window:";
cin>>xl>>yl>>xh>>yh;
rectangle(xl,yl, xh,yh);
cout<<"Enter the endpoints of the line:";
cin>>x1>>y1>>x2>>y2;
line(x1,y1,x2,y2);
getch();
int outcode1=getcode (x1,y1), outcode2=getcode(x2,y2);
int accept=0;//decides if line is to be drawn
while(1)
{ float m=(float)(y2-y1)/(x2-x1); //Both points inside. Accept line if (outcode1==0&&outcode2==0)
{
accopt=1;
break;
} //AND of both codes !=0.Line is outside. Reject line
else if((outcode1&outcode2)!=0)
{ break;
}
else
{
int x,y;
int temp;
//Decide if point1 is inside, if not, calculate intersection if (outcode1==0)
{ temp=outcode2;
}
else
{ temp=outcode1;
}
//Line clips top edge if(temp&TOP)
{ x=x1+(yh-yl)/m; y=yh;
}
else if(temp&BOTTOM)
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{ //Line clips bottom edge x=x1+(yl-yl)/m;
y=yl;
}
else if(temp&LEFT)
{
//Line clips left edge
x=xl;
y=y1+m*(xl-x1);
}
else if(temp&RIGHT)
{
//Line clips right edge
x=xh;
y=y1+m*(xh-x1);
//Check which point we had selected earlier as temp,
and replace its co-ordinates if(temp==outcode1)
{
x1=x;
y1=y;
outcode1=getcode (x1,y1);
}
else
{
x2=x;
y2=y;
outcode2=getcode(x2,y2);
}
setcolor (WHITE);
} } cout<<"After clipping:"; line(x1,y1,x2,y2);
if (accept)
return 0;
closegraph();
}
```