```cpp
1    #include<bits/stdc++.h>
2    #include<graphics.h>
3    using namespace std;
4    const int LEFT = 0;
5    const int BOTTOM = 2;
6    const int RIGHT = 4;
7    const int TOP = 8;
8    const int xw_min = 100;
9    const int yw_min = 10;
10   const int xw_max = 260;
11   const int yw_max = 90;
12   int genCode(double x, double y)
13   {
14       int code = 0;
15       if(x<xw_min){
16           code = code|LEFT;
17       }
18       if(y<yw_min){
19           code = code|BOTTOM;
20       }
21       if(x>xw_max){
22           code = code|RIGHT;
23       }
24       if(y>yw_max){
25           code = code|TOP;
26       }
27       return code;
28   }
29   void drawRectangle()
30   {
31       line(xw_min,yw_min,xw_max,yw_min);
32       line(xw_max,yw_min,xw_max,yw_max);
33       line(xw_max,yw_max,xw_min,yw_max);
34       line(xw_min,yw_max,xw_min,yw_min);
35   }
36   void clipLine(int x1,int y1, int x2, int y2)
37   {
38       int code1 = genCode(x1,y1);
39       int code2 = genCode(x2,y2);
40       bool accept = false;
41
42       while (true)
43       {
44           if ((code1 == 0) && (code2 == 0))
45           {
46               accept = true;
47               break;
48           }
49           else if (code1 & code2)
50           {
51               break;
52           }
53           else
54           {
55               int code_out;
56               double x, y;
57               if (code1 != 0)
58                   code_out = code1;
59               else
60                   code_out = code2;
61               if (code_out & TOP)
62               {
63                   x = x1 + (x2 - x1) * (yw_max - y1) / (y2 - y1);
64                   y = yw_max;
65               }
66               else if (code_out & BOTTOM)
67               {
68                   x = x1 + (x2 - x1) * (yw_min - y1) / (y2 - y1);
69                   y = yw_min;
70               }
71               else if (code_out & RIGHT)
72               {
73                   y = y1 + (y2 - y1) * (xw_max - x1) / (x2 - x1);
74                   x = xw_max;
75               }
76               else if (code_out & LEFT)
77               {
78                   y = y1 + (y2 - y1) * (xw_min - x1) / (x2 - x1);
79                   x = xw_min;
80               }
81               if (code_out == code1)
82               {
83                   x1 = x;
84                   y1 = y;
```

```c
85                     code1 = genCode(x1, y1);
86                 }
87                 else
88                 {
89                     x2 = x;
90                     y2 = y;
91                     code2 = genCode(x2, y2);
92                 }
93             }
94         }
95         if (accept){
96             line(x1,y1,x2,y2);
97         }
98     }
99     int main()
100    {
101        int gd=DETECT, gm;
102        initgraph(&gd,&gm,NULL);
103        drawRectangle();
104        int x1 = 200,y1=5,x2=300,y2=70;
105        clipLine(x1,y1,x2,y2);
106        getch();
107        closegraph();
108    }
109
```