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1  //SHREYAS SAWANT D7A 55
2  //Implement Area Filling Algorithm:Boundary Fill & Flood Fill
3
4  #include "graphics.h"
5  #include "conio.h"
6  void boundaryFill(int x, int y, int fcolor,int bcolor)
7  {
8      if((getpixel(x, y) != bcolor) && (getpixel(x, y) != fcolor))
9      {
10         putpixel(x, y, fcolor);
11         boundaryFill(x + 1, y, fcolor, bcolor);
12         boundaryFill(x, y + 1, fcolor, bcolor);
13         boundaryFill(x - 1, y, fcolor, bcolor);
14         boundaryFill(x, y - 1, fcolor, bcolor);
15         boundaryFill(x - 1, y - 1, fcolor, bcolor);
16         boundaryFill(x - 1, y + 1, fcolor, bcolor);
17         boundaryFill(x + 1, y - 1, fcolor, bcolor);
18         boundaryFill(x + 1, y + 1, fcolor, bcolor);
19     }
20 }
21
22 void floodfill(int x,int y,int old,int newcol)
23 {
24     int current;
25     current=getpixel(x,y);
26     if(current==old)
27     {
28         putpixel(x,y,newcol);
29         floodfill(x+1,y,old,newcol);
30         floodfill(x-1,y,old,newcol);
31         floodfill(x,y+1,old,newcol);
32         floodfill(x,y-1,old,newcol);
33         floodfill(x+1,y+1,old,newcol);
34         floodfill(x-1,y+1,old,newcol);
35         floodfill(x+1,y-1,old,newcol);
36         floodfill(x-1,y-1,old,newcol);
37     }
38 }
39
40
41 int main()
42 {
43     int c;
44     printf("1.Boundary Fill\n2.Flood Fill\nEnter Choice\n");
45     scanf("%d",&c);
46     int gd = DETECT, gm;
47     initgraph(&gd, &gm, (char*)"");
48
49     int x = 250, y = 200, radius = 50;
50
51     switch(c)
52     {
53         case 1:
54             {
55                 rectangle(x, y,450,300);
56                 outtextxy(300, 150,"BOUNDARY FILL");
57                 boundaryFill(350, 250, 9, 15);
58                 break;
59             }
60         case 2:
61             {
62                 rectangle(x, y,450,300);
63                 outtextxy(300, 150,"FLOOD FILL");
64                 floodfill(300,250,0,4);
65                 break;
66             }
67         default:
68             {
69                 printf("Wrong choice\n");
70                 exit(0);
71                 break;
72             }
73     }
74     getch();
75     closegraph();
76     restorecrtmode();
77
78     return 0;
79 }

```