

PROBLEM STATEMENT: Write a program to implement boundary fill algorithm.

DESCRIPTION: To implement color filling algorithm using eight connected or four connected approach to fill color in a closed area.

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/*
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// program to implement Boundary-fill algorithm.

*/

#include<graphics.h>
#include<stdio.h>
void boundary_fill(int x, int y, int fill_color, int bound_color)
{
    if(getpixel(x,y) != fill_color && getpixel(x,y) != bound_color)
    {
        putpixel(x,y,fill_color);
        boundary_fill(x+1,y,fill_color,bound_color);
        boundary_fill(x,y-1,fill_color,bound_color);
        boundary_fill(x-1,y,fill_color,bound_color);
        boundary_fill(x,y+1,fill_color,bound_color);
    }
}

int main( )
{
    int gd=DETECT,gm;
    int x,y,r;
    printf("Enter x and y position of circle :");
    scanf("%d %d",&x,&y);
    printf("Enter radius of circle :");
    scanf("%d",&r);
    initgraph(&gd,&gm,"");
    circle(x,y,r);
    boundary_fill(x,y,RED,WHITE);
    delay(200);
    getch( );
    closegraph( );
}
```