United Technical College, Bharatpur, Chitwan

Lab 6

setfillstyle() and floodfill() in C

Date Assigned: Dec 26, 2022	Date Due: Jan 06, 2023

Write a C-Program for performing the basic Flood fill in 2D.

Aim: To apply the basic 2D flood filling in 2D.

Description: The header file graphics.h contains **setfillstyle()** function which sets the current fill pattern and fill color. **floodfill()** function is used to fill an enclosed area. Current fill pattern and fill color is used to fill the area.

Syntax :

```
void setfillstyle(int pattern, int color)


void floodfill(int x, int y, int border_color)
```
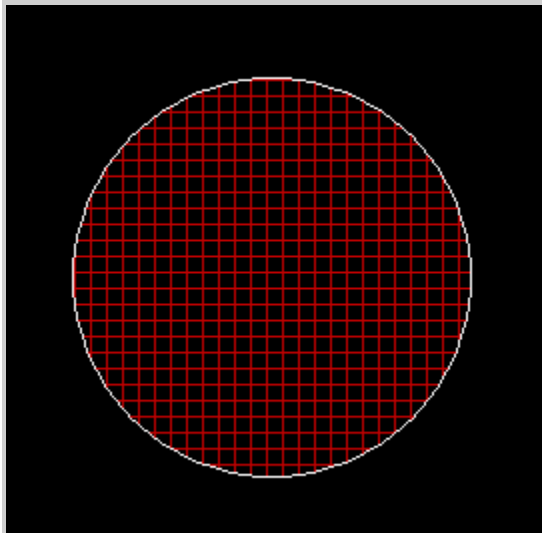
Examples :

```
Input : pattern = HATCH_FILL, Color = RED
        circle : x = 250, y = 250, radius = 100
        floodfill : x = 250, y = 250, border color =15
Output :
```
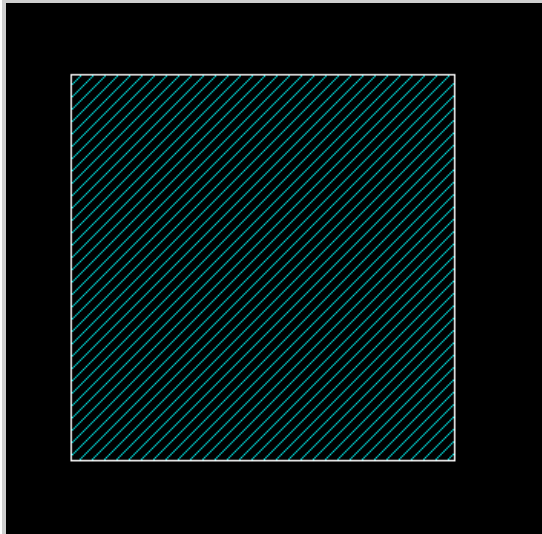


```
Input : pattern = LTSLASH_FILL, Color = RED
```

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```
        rectangle : left = 200, top = 200, right = 450, bottom = 450

        floodfill : x = 201, y = 201, border_color = 15
```

Output :

Below is the table showing INT VALUES corresponding to Colors :

COLOR	INT VALUES
BLACK	0
BLUE	1
GREEN	2
CYAN	3
RED	4
MAGENTA	5
BROWN	6
LIGHTGRAY	7
DARKGRAY	8
LIGHTBLUE	9
LIGHTGREEN	10
LIGHTCYAN	11
LIGHTRED	12
LIGHTMAGENTA	13
YELLOW	14
WHITE	15

Below is the table showing INT VALUES corresponding to Patterns :

PATTERN	INT VALUES
EMPTY_FILL	0
SOLID_FILL	1
LINE_FILL	2
LTSLASH_FILL	3

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```
SLASH_FILL              4
BKSLASH_FILL            5
LTBKSLASH_FILL          6
HATCH_FILL              7
XHATCH_FILL             8
INTERLEAVE_FILL         9
WIDE_DOT_FILL          10
CLOSE_DOT_FILL         11
USER_FILL             12
```

Below is the implementation for setfillstyle() and floodfill() function :

```c
// C Implementation for setfillstyle
// and floodfill function
#include <graphics.h>

// driver code
int main()
{
    // gm is Graphics mode which is
    // a computer display mode that
    // generates image using pixels.
    // DETECT is a macro defined in
    // "graphics.h" header file
    int gd = DETECT, gm;

    // initgraph initializes the
    // graphics system by loading
    // a graphics driver from disk
    initgraph(&gd, &gm, " ");

    // center and radius of circle
    int x_circle = 250;
    int y_circle = 250;
    int radius=100;

    // setting border color
    int border_color = WHITE;


    // set color and pattern
    setfillstyle(SOLID_FILL,RED);

    // x and y is a position and
    // radius is for radius of circle
    circle(x_circle,y_circle,radius);
```

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```
    // fill the color at location
    // (x, y) with in border color
    floodfill(x_circle,y_circle,border_color);

    getch();

    // closegraph function closes the
    // graphics mode and deallocates
    // all memory allocated by
    // graphics system
    closegraph();

    return 0;
}
```
/div>

Output: