Final Practical

Name **:** Prasad Arun Dhobale

Roll No **:** 239

PRN **:** 202202040016

Problem Statement :

Develop a program for polygon filling using the boundary fill and flood fill algorithm.

Input :

```
#include<iostream>
#include <graphics.h>

using namespace std;
void boundaryFill4(int x, int y, int fill_color,int boundary_color)
{
	if((getpixel(x, y) != boundary_color) && (getpixel(x, y) != fill_color))
	{
		putpixel(x, y, fill_color);
		boundaryFill4(x + 1, y, fill_color, boundary_color);
		boundaryFill4(x, y + 1, fill_color, boundary_color);
		boundaryFill4(x - 1, y, fill_color, boundary_color);
		boundaryFill4(x, y - 1, fill_color, boundary_color);
	}
}
```

```
FloodFill4(int x,int y,int n_cl, int o_cl)
{
	if(getpixel(x,y)==o_cl)
	{
		putpixel(x,y,o_cl);
		FloodFill4(x+1,y,n_cl,o_cl);
		FloodFill4(x-1,y,n_cl,o_cl);
		FloodFill4(x,y+1,n_cl,o_cl);
		FloodFill4(x,y-1,n_cl,o_cl);
	}
}
int main()
{
	initwindow(1000, 1000);
	cout<<"Boundary Fill : "<<endl;
	int x = 200, y = 220, radius = 50;
	circle(300, 200, 200);
	circle(x, y, radius);
	boundaryFill4(x, y, 6, 15);
	cout<<"Flood Fill : "<<endl;
	x = 400, y = 200, radius = 50;
	circle(x, y, radius);
	FloodFill4(x, y, 9, 0);
	getch();
	closegraph();
	return 0;
}
```

Output :