CODE:

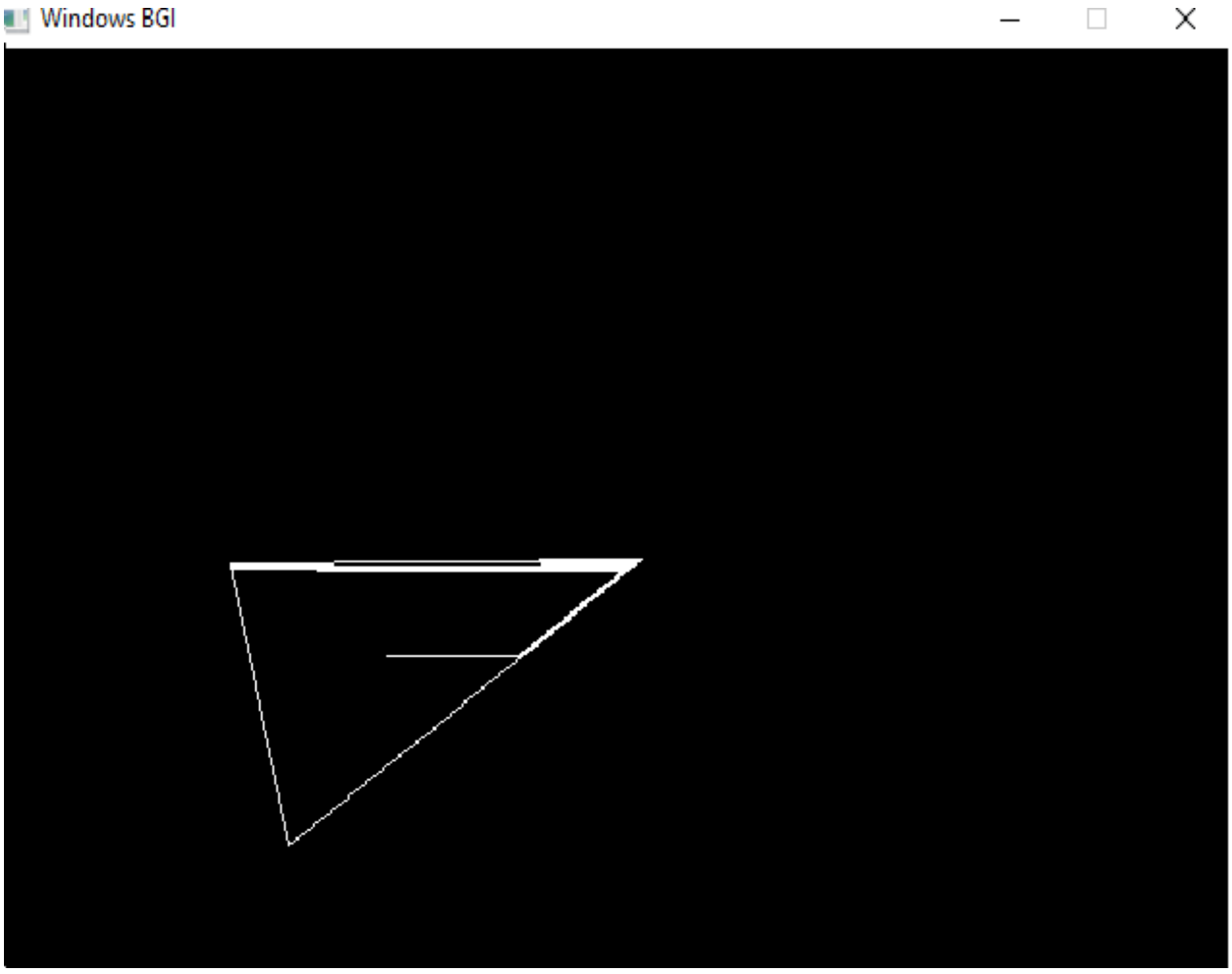
```
#include <graphics.h>
#include <iostream>
#include <cstdlib>
#include <conio.h>
using namespace std;

void scanfill(int x, int y, int o_col, int n_col)
{
   int current = getpixel(x, y);
   if (current == o_col)
  {
       delay(5);
       putpixel(x, y, n_col);
       scanfill(x + 1, y, o_col, n_col);
       scanfill(x - 1, y, o_col, n_col);
       scanfill(x, y + 1, o_col, n_col);
       scanfill(x, y - 1, o_col, n_col);
   }
}

int main()
 {
   int x1, y1, x2, y2, x3, y3, xaverage, yaverage;
   int gdriver = DETECT, gmode;
```

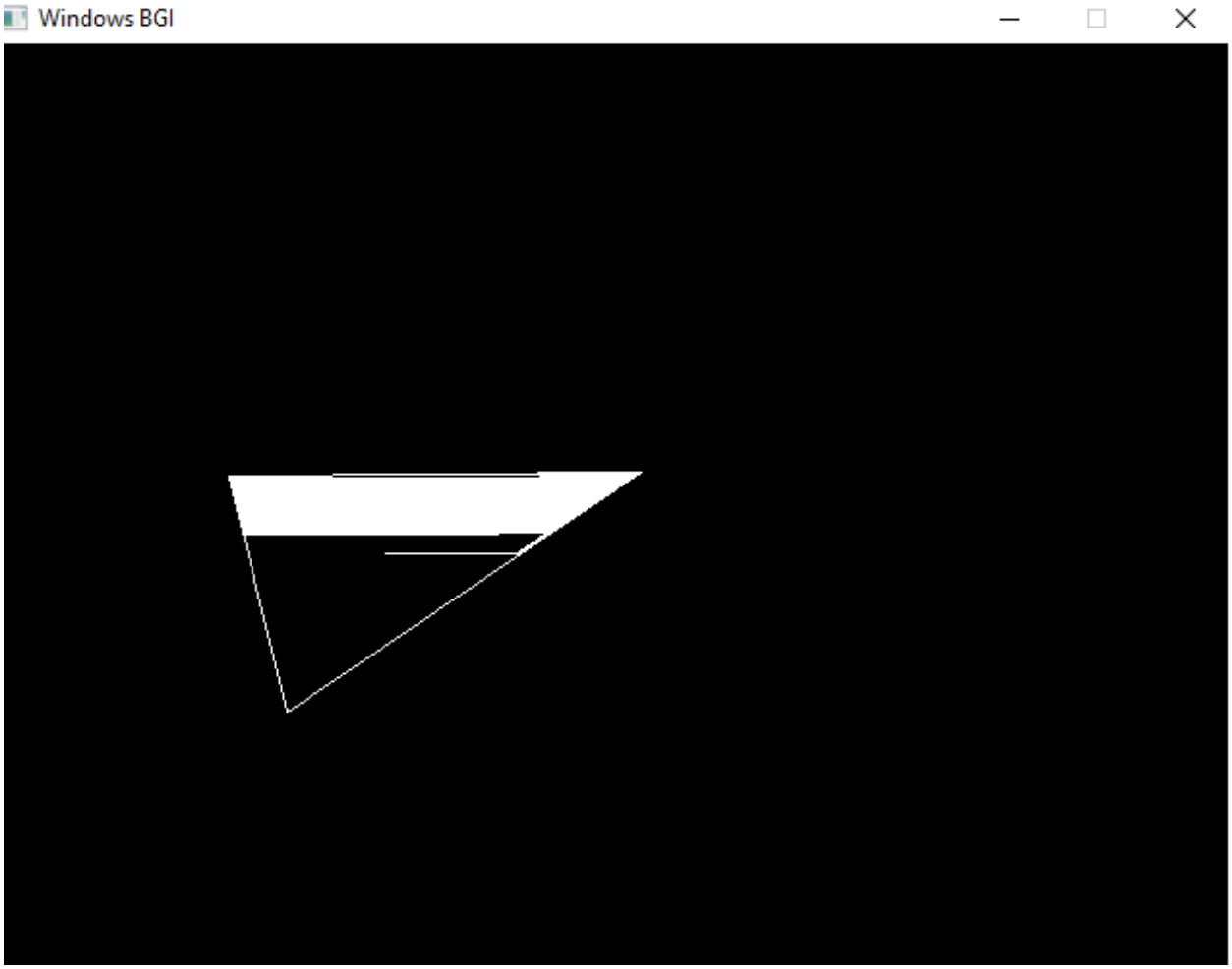
```
    cout << "Enter the points of the triangle (x1 y1 x2 y2 x3 y3): ";
    cin >> x1 >> y1 >> x2 >> y2 >> x3 >> y3;

    initgraph(&gdriver, &gmode, NULL);

    setcolor(WHITE); // Set color for the triangle outline
    line(x1, y1, x2, y2);
    line(x2, y2, x3, y3);
    line(x3, y3, x1, y1);

    // Calculate the average point
    xaverage = (x1 + x2 + x3) / 3;
    yaverage = (y1 + y2 + y3) / 3;

    // Fill color: make sure the background color is set correctly
    scanfill(xaverage, yaverage, getbkcolor(), WHITE);
    getch();
    closegraph();
    return 0;
}
```

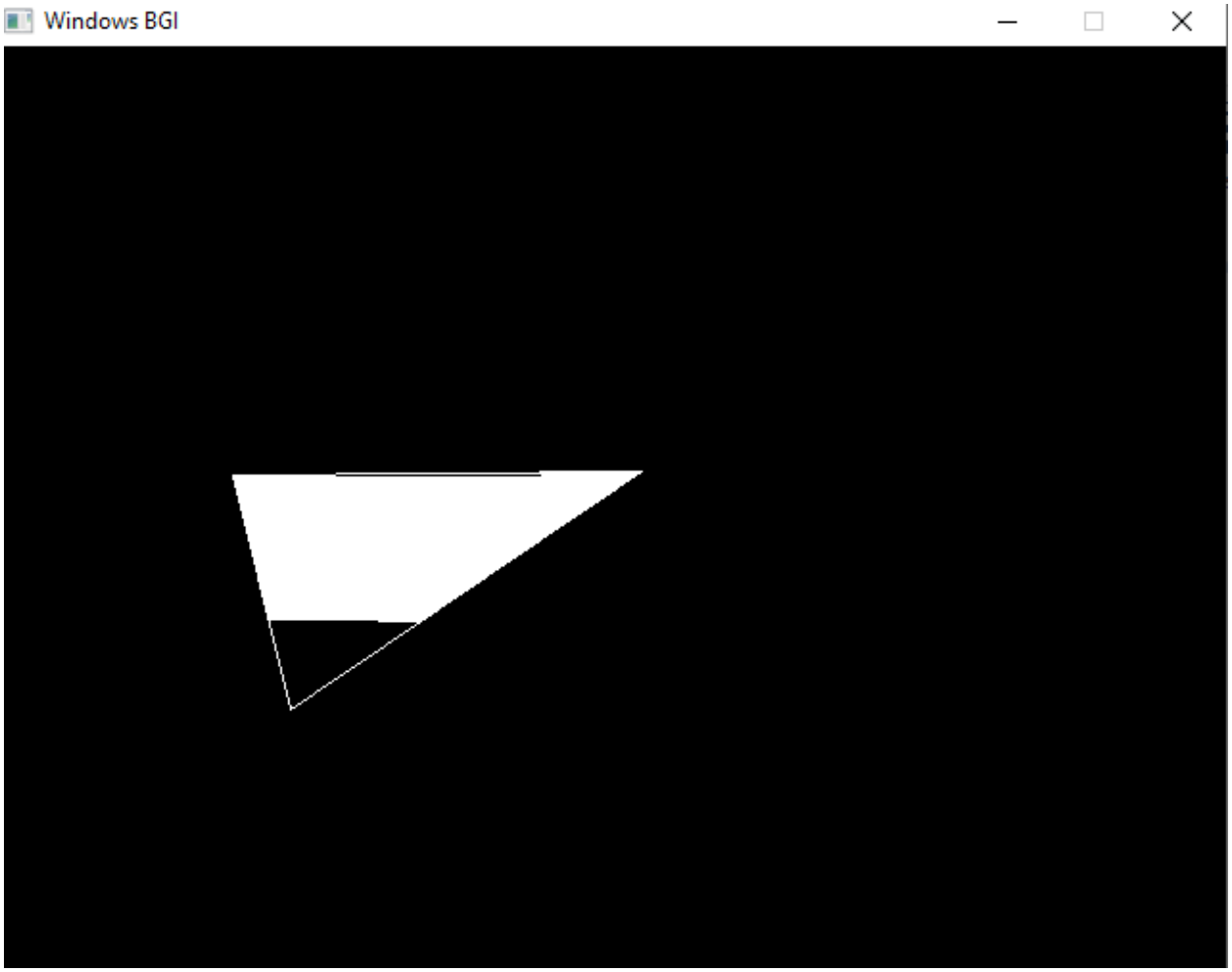
USER INPUT:

```
PS C:\Users\student\Documents\VSCode> & "c:\Users\student\Documents\VSCode\Computer Graphics Workspace\Home\src\cgr87.exe"
Enter the points of the triangle (x1 y1 x2 y2 x3 y3): 122 223 335 221 152 345
```

OUTPUT:




Windows BGI


Windows BGI