Assignment - C2

Problem statement - Write a C++/Java program to stimulate stack using open GL.

Objectives - To implement open GL functions to generate 2D and 3D figures. To implement animation of 2D objects in open GL.

Outcomes - ① To understand and implement open GL functions.
② To understand animation in Open GL

S/W and H/W requirements - Core i3 processor, open GL Fedora OS

Theory -

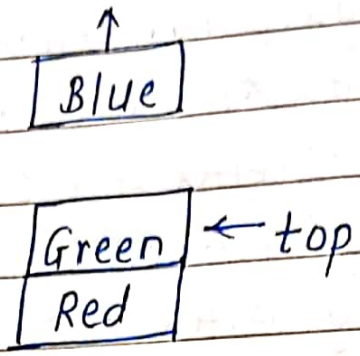
Open GL (open graphics library) is standard specification defining a cross language cross platform API for writing application that produce 2D and 3D computer graphics. It is a low level procedural API, requiring the programmer to dectate the exact steps

```
void display() {
    glclear(GL_COLOR_BUFFER_BIT);

        glBeger(GL_QUADS)
        glcolor3f(1.0, 0.0, 0.0);
        glvertex2f(2, y);
        glvertex2f(-2, y);
        glvertex2f(-2, y+2);
        glvertex2f(2, y+2);
```

```
if (flag>1) {
    glcolor 3f (0.0, 1.0, 0.0);
    glvertex 2f (2, y2);
    glvertex 2f (-2, y2);
    glvertex 2f (-2, y2+2);
    glvertex 2f (2, y2+2);
}
if (flag>2 && flag<5) {
    glcolor 3f (0.0, 0.0, 1.0);
    glvertex 2f (2, y3);
    glvertex 2f (-2, y3+2);
    glvertex 2f (2, y3+2);
}
if (flag>4) {
    glcolor 3f (1.0, 1.0, 0.0);
    glvertex 2f (2, y4);
    glvertex 2f (-2, y4);
    glvertex 2f (-2, y4+2);
    glvertex 2f (2, y4+2);
}

glEnd(); glutswapBuffers();
}
```

Test Case

Push red
Push Green
Push Blue
Push Blue



Success

Conclusion - Thus the stack stimulation was implemented using open GL.