Expt No. C2

Assignment No. 12

Tille :- Simulation & animation.

problem statement :-

Write c++ program to stimulate any of the similar scene.

- simulate any data structure like stack using computer graphics.

Objective :-

i) To implent OpenGL functions generate 2D & 3D figures
ii) To implement animation of 2D objects the openGL.

Outcomes :-

i) To understand the opengl functions.
ii) To understand animation in opengl.

Theory :-

Opengl is standard specification defining a cross language, cross platform API for writing applic

that produce 2D & 3D computer graphics. It is also level, Procedural API requiring Programmer to detail exact steps.

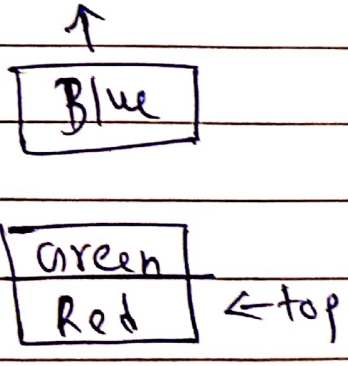
OpenGL:

```
void display()
  {
  glClear (GL.COLOR_BUFFER_BIT);
   glBegin (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)
    {
     glColor3f (0.0, 1.0, 0.0);
     glColor2f (2, y2);
      glVertex2f (-2, y2);
      glVertex2f (-2, y2+2);
      glVertex2f (2, y2+2);

  }
```

```
if (flag >= 2 && flag < 5)
    {
     glColor3f( 0.0, 0.0, 0.1);
      glVertex2f (2, y3);
      glVertex2f(-2, y3+2);
      glVertex2f (2, y3+2);
    }

if (flag >4)
   {
    glColor3f (1.0, 1.0, 0.0);
     glVertex2f (2, y4);
     glVertex2f (-2, y4);
      glVertex2f (-2, y4+2);
       glVertex2f ( 2, y4+2);
   }
glEND(); glutSwapBuffers();
}
```

Testcases:

push Red
push Green
push Blue
push Blue



Succes

Conclusion:

Thus stack simulation implemented through OpenGL.