```cpp
//*Header Inclusions */
#include <iostream>
#include <GL/glew.h>
#include <GL/freeglut.h> // Include the freeglut header file

using namespace std;

/* Set Title */
char title[] = "Voight Bench";

/* Initialize OpenGL Parameters */
void initGL() {
   glClearColor(0.0f, 0.0f, 0.0f, 1.0f); // Set background color to black and opaque
   glClearDepth(1.0f);                   // Set background depth to farthest
   glEnable(GL_DEPTH_TEST);   // Enable depth testing for z-culling
   glDepthFunc(GL_LEQUAL);    // Set the type of depth-test
   glShadeModel(GL_SMOOTH);   // Enable smooth shading
   glHint(GL_PERSPECTIVE_CORRECTION_HINT, GL_NICEST);  // Nice perspective corrections
}

void display() {
   glClear(GL_COLOR_BUFFER_BIT | GL_DEPTH_BUFFER_BIT); // Clear color and depth buffers
   glMatrixMode(GL_MODELVIEW);     // To operate on model-view matrix

   // pyramid consists of 4 triangles
   glLoadIdentity();                 // Reset the model-view matrix
   glTranslatef(1.5f, 0.0f, -7.0f);  // Move right and into the screen

   // pyramid consists of 4 triangles
   glLoadIdentity();                  // Reset the model-view matrix
   glTranslatef(-1.5f, 0.0f, -6.0f);  // Move left and into the screen

    /*Creates the Cushion*/
    glBegin(GL_QUADS);              // Starting delimiter for Triangle primitive

    // Set Front face color (black) and vertex coordinates
    glColor3f(0.0f, 0.0f, 0.0f);
    glVertex3f(-3.0f, 2.0f, 1.0f);
    glVertex3f(-3.0f, 1.75f, 1.0f);
    glVertex3f(3.0f, 1.75f, 1.0f);
    glVertex3f(3.0f, 2.0f, 1.0f);

    // Set Right face color (black) and vertex coordinates
    glColor3f(0.0f, 0.0f, 0.0f);
    glVertex3f(3.0f, 2.0f, -1.0f);
    glVertex3f(3.0f, 2.0f, 1.0f);
    glVertex3f(3.0f, 1.75f, 1.0f);
    glVertex3f(3.0f, 1.75f, -1.0f);

    // Set Left face color (black) and vertex coordinates
    glColor3f(0.0f, 0.0f, 0.0f);
    glVertex3f(-3.0f, 2.0f, 1.0f);
    glVertex3f(-3.0f, 2.0f, -1.0f);
    glVertex3f(-3.0f, 1.75f, -1.0f);
    glVertex3f(-3.0f, 1.75f, 1.0f);

    // Set Top face color (black) and vertex coordinates
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59      glVertex3f(-3.0f, 2.0f, -1.0f);
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62      glVertex3f(3.0f, 2.0f, -1.0f);
63
64      // Set back face color (black) and vertex coordinates
65      glColor3f(0.0f, 0.0f, 0.0f);
66      glVertex3f(3.0f, 2.0f, -1.0f);
67      glVertex3f(-3.0f, 2.0f, -1.0f);
68      glVertex3f(-3.0f, 1.75f, -1.0f);
69      glVertex3f(3.0f, 1.75f, -1.0f);
70
71      // Set bottom face color (black) and vertex coordinates
72      glColor3f(0.0, 0.0f, 0.0f);
73      glVertex3f(3.0f, 1.75f, 1.0f);
74      glVertex3f(3.0f, 1.75f, -1.0f);
75      glVertex3f(-3.0f, 1.75f, -1.0f);
76      glVertex3f(-3.0f, 1.75f, 1.0f);
77
78      /*Creates the Left Front leg*/
79      glBegin(GL_QUADS);              // Starting delimiter for Triangle primitive
80
81      // Set Front face color (brown) and vertex coordinates
82      glColor3f(0.1f, 0.0f, 0.0f);
83      glVertex3f(-3.0f, 1.75f, 1.0f);
84      glVertex3f(-2.8f, 1.75f, 1.0f);
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117     glColor3f(0.1, 0.0f, 0.0f);
118     glVertex3f(-2.8f, -.5f, 1.0f);
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255     glVertex3f(3.0f, -.5f, -.8f);
256     glVertex3f(3.0f, -.5f, -1.0f);
257
258     glEnd();                    // Ending the delimiter for triangle primitive
259
260     glutSwapBuffers();// Swap front and back frame buffers (similar to glFlush)
261 }
262 void reshape(GLsizei width, GLsizei height) {
263
264     if (height == 0)
265         height = 1;
266     GLfloat aspect = (GLfloat) width / (GLfloat) height;
267
268     glViewport(0, 0, width, height);
269
270     //Set the aspect ratio of the clipping volume to match the viewport
271     glMatrixMode(GL_PROJECTION);    // Create a Projection matrix
272     glLoadIdentity();               // Reset Projection Matrix
273     // Set perspective projection, fov, aspect, ZNear and zFar clipping
274     gluPerspective(75.0f, aspect, 0.8f, 100.0f);
275 }
276 /* Main function required for Immediate mode */
277 int main(int argc, char** argv) {
278     glutInit(&argc, argv);                      // Initializes the freeglut library
279     glutCreateWindow("Kyle Bench");     // Create a window and title
280     glutInitWindowSize(1280, 720);              // Specifies the window's width and height
281     glutInitWindowPosition(0,0);                // Specifies the position of the window's
    top-left corner
282     glutDisplayFunc(displayGraphics);           // Sets the display callback for the current
    windo
283     glutMainLoop();                             // Enters the GLUT event processing loop.
```

```
284     return 0;                                   // Exits main function
285 }
286
```