

```

#include<GL/glut.h>

#include<stdio.h>

GLfloat mat_ambient[]={0.7,0.7,0.7,1.0};
GLfloat mat_diffuse[]={0.5,0.5,0.5,1.0};
GLfloat mat_specular[]={1.0,1.0,1.0,1.0};
const GLfloat mat_shininess[] = {50.0};
GLfloat light_intensity[] = {0.7,0.7,0.7,1.0};
GLfloat light_position[]={2.0,6.0,3.0,0.0};

void init()
{
    glMaterialfv(GL_FRONT,GL_AMBIENT, mat_ambient);
    glMaterialfv(GL_FRONT,GL_DIFFUSE, mat_diffuse);
    glMaterialfv(GL_FRONT,GL_SPECULAR, mat_specular);
    glMaterialfv(GL_FRONT,GL_SHININESS, mat_shininess);
    glLightfv(GL_LIGHT0,GL_POSITION,light_position);
    glLightfv(GL_LIGHT0,GL_DIFFUSE,light_intensity);
    glMatrixMode(GL_PROJECTION);
    glLoadIdentity();
    glOrtho(-2.0,2.0,-2.0,2.0,-10.0,10.0);
    glMatrixMode(GL_MODELVIEW);
    glLoadIdentity();
    gluLookAt(2.0,1.0,2.0,0.0,0.2,0.2,0.0,1.0,0.0);
    glClear(GL_COLOR_BUFFER_BIT|GL_DEPTH_BUFFER_BIT);
}

void teapot()
{
    glPushMatrix();
    glTranslated(0.4,0.0,0.4);
    glRotated(30,0,1,0);
    glutSolidTeapot(0.2);
    glPopMatrix();
}

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```
}  
  
void tabletop()  
{  
    glPushMatrix();  
    glTranslated(0.0,-0.3,0.0);  
    glScaled(7.0,0.5,7.0);  
    glutSolidCube(0.2);  
    glPopMatrix();  
}  
  
void frontleg() {  
    glPushMatrix();  
    glTranslated(0.5,-0.7,0.5);  
    glScaled(0.5,7.0,0.5);  
    glutSolidCube(0.1);  
    glPopMatrix();  
}  
  
void leftleg() {  
    glPushMatrix();  
    glTranslated(-0.5,-0.7,0.5);  
    glScaled(0.5,7.0,0.5);  
    glutSolidCube(0.1);  
    glPopMatrix();  
}  
  
void rightleg() {  
    glPushMatrix();  
    glTranslated(0.5,-0.7,-0.5);  
    glScaled(0.5,7.0,0.5);  
    glutSolidCube(0.1);  
    glPopMatrix();  
}  
  
void backleg() {
```

```
glPushMatrix();
glTranslated(-0.5,-0.7,-0.5);
glScaled(0.5,7.0,0.5);
glutSolidCube(0.1);
glPopMatrix();
}

void leftwall() {
glPushMatrix();
glTranslated(-1.0,-0.0,0.0);
glScaled(0.1,10.0,10.0);
glutSolidCube(0.2);
glPopMatrix();
}

void bottomfloor() {
glPushMatrix();
glTranslated(0.0,-1.0,0.0);
glScaled(10.1,0.1,10.0);
glutSolidCube(0.2);
glPopMatrix();
}

void rightwall()
{
glPushMatrix();
glTranslated(0.0,0.0,-1.0);
glScaled(10.0,10.0,0.1);
glutSolidCube(0.2);
glPopMatrix();
}

void display()
{
init();
```

```
teapot();
tabletop();
frontleg();
leftleg();
rightleg();
backleg();
bottomfloor();
rightwall();
leftwall();
glFlush();
}

void main(int argc, char **argv)
{
    glutInit(&argc,argv);
    glutInitDisplayMode(GLUT_SINGLE|GLUT_RGB|GLUT_DEPTH);
    glutInitWindowPosition(50,50);
    glutInitWindowSize(400,300);
    glutCreateWindow("shaded Scene");
    glutDisplayFunc(display);
    glEnable(GL_LIGHTING);
    glEnable(GL_LIGHT0);
    glShadeModel(GL_SMOOTH);
    glEnable(GL_DEPTH_TEST);
    glEnable(GL_NORMALIZE);
    glClearColor(0.1,0.1,0.1,0.0);
    glViewport(0,0,640,480);
    glutMainLoop();
}
```