**6.TEA POT**

#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);

glOrtho(-2.0,2.0,-2.0,2.0,-10.0,10.0); glMatrixMode(GL\_MODELVIEW); glLoadIdentity();

glMatrixMode(GL\_PROJECTION);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(); }

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(); }