实验十三 三维对象实验

时间：2022年6月1日

地点：信息学院机房

1、实验内容

使用opengl，书写教材P300页代码，运行GLUT二次曲面程序。

2、实验目的

采用opengl生成二次曲面对象

3、实验代码

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| #include <windows.h>  #include <gl/glut.h>  GLsizei winWidth=500,winHeight=500;  void init (void){  glClearColor (1.0,1.0,1.0,0.0);  }  void displayWirePolyhedra (void){  glClear (GL\_COLOR\_BUFFER\_BIT);  glColor3f (0.0,0.0,1.0);  gluLookAt (5.0,5.0,5.0,0.0,0.0,0.0,0.0,1.0,0.0);  glScalef (1.5,2.0,1.0);  glutWireCube (1.0);  glScalef (0.8,0.5,0.8);  glTranslatef (-6.0,-5.0,0.0);  glutWireDodecahedron();  glTranslatef (8.6,8.6,2.0);  glutWireTetrahedron ();  glTranslatef (-3.0,-1.0,0.0);  glutWireOctahedron ();  glScalef (0.8,0.8,1.0);  glTranslatef (4.3,-2.0,0.5);  glutWireIcosahedron();  glFlush();  }  void winReshapeFcn (GLint newWidth,GLint newHeight){  glViewport (0,0,newWidth,newHeight);  glMatrixMode (GL\_PROJECTION);  glFrustum(-1.0,1.0,-1.0,1.0,2.0,20.0);  glMatrixMode (GL\_MODELVIEW);  glClear(GL\_COLOR\_BUFFER\_BIT);  }  int main (int argc,char\*\* argv){  glutInit (&argc,argv);  glutInitDisplayMode(GLUT\_SINGLE|GLUT\_RGB);  glutInitWindowPosition (100,100);  glutInitWindowSize(winWidth,winHeight);  glutCreateWindow ("Wire-Frame Po1yhedra");  init();  glutDisplayFunc (displayWirePolyhedra);  glutReshapeFunc (winReshapeFcn);  glutMainLoop();  } |

4、实验总结

本次实验主要尝试了使用OpenGL来产生二次曲面对象