演習課題 10 (6月14日）レポート

交換留学(文学部)　ES19-0013 ジョユンサン  
課題 10

発展課題10

*// Created by Jho on 06/14/2019. In "Xcode"*

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*// github*

#include <GLUT/GLUT.h>

#include <OpenGL/OpenGL.h>

#include <OpenGL/glu.h>

#include <math.h>

#include <stdio.h>

#include <stdlib.h> *// for exit(0)*

**void** KeyboardHandler(**unsigned** **char** key, **int** x, **int** y)

{

**if** (key == ' ')

exit(0);

}

**double** RotAngle = 0.0; *//グローバル(大域)変数*

**void** OctPyramid(**void**)

{

**int** N = 8;

**double** angle = 2 \* 3.1415 / N;

**int** i;

glBegin(GL\_LINE\_LOOP);

**for** (i = 0; i < N; i++)

glVertex3f(cos(i \* angle), -1.0, sin(i \* angle));

glEnd();

glBegin(GL\_LINES);

**for** (i = 0; i < N; i++)

{

glVertex3f(0.0, 1.0, 0.0);

glVertex3f(cos(i \* angle), -1.0, sin(i \* angle));

}

glEnd();

}

**void** display(**void**)

{

glClear(GL\_COLOR\_BUFFER\_BIT);

glColor3f(1.0, 1.0, 1.0);

glMatrixMode(GL\_MODELVIEW);

glLoadIdentity();

glTranslatef(0.0, 0.0, -6.0);

glRotatef(RotAngle, 0, 1, 0);

glTranslatef(2.0, 0.0, 0.0);

OctPyramid();

glTranslatef(-4.0, 0.0, 0.0);

OctPyramid();

glFlush();

}

*//===== アイドルハンドラ*

**void** IncAngle(**void**)

{

RotAngle = RotAngle + 1.0;

**if** (RotAngle > 360.0)

RotAngle = RotAngle - 360.0;

glutPostRedisplay();

}

**int** main(**int** argc, **char**\*\* argv)

{

glutInit(&argc, argv);

glutInitWindowPosition(0, 0);

glutInitWindowSize(400, 400);

glutInitDisplayMode(GLUT\_RGBA);

glutCreateWindow("ES19-0013 ジョユンサン");

glClearColor(0.0, 0.0, 0.0, 1.0);

glMatrixMode(GL\_PROJECTION);

glLoadIdentity();

gluPerspective(45, 1.0, 0.01,10.0);

glutDisplayFunc(display);

glutKeyboardFunc(KeyboardHandler);

glutIdleFunc(IncAngle);

glutMainLoop();

}

