Task 02: Drawing House

from OpenGL.GL import \*

from OpenGL.GLUT import \*

from OpenGL.GLU import \*

from random import randint

from math import sqrt

def drawtriangles(x1, x2, y1, y2, z1, z2):

glBegin(GL\_TRIANGLES)

glVertex2f(x1, x2)

glVertex2f(y1, y2)

glVertex2f(z1, z2)

glEnd()

def drawbox(x1, y1, x2, y2):

glBegin(GL\_LINES)

glVertex2f(x1, y1)

glVertex2f(x1, y2)

glEnd()

glBegin(GL\_LINES)

glVertex2f(x1, y1)

glVertex2f(x2, y1)

glEnd()

glBegin(GL\_LINES)

glVertex2f(x2, y2)

glVertex2f(x2, y1)

glEnd()

glBegin(GL\_LINES)

glVertex2f(x2, y2)

glVertex2f(x1, y2)

glEnd()

def drawpoints(x, y):

glPointSize(5.0)

glBegin(GL\_POINTS)

glVertex2f(x, y)

glEnd()

def drawhouse():

drawtriangles(10, 350, 100, 490, 490, 350) #roof

drawbox(10,10, 490, 350) # main house

drawbox(20, 10, 100, 300) # door

drawbox(120, 100, 250, 250) # window 1

drawbox(280, 100, 450, 250) # window 2

drawpoints(85, 120) # doorknob

glFlush()

def iterate():

glViewport(0, 0, 500, 500)

glMatrixMode(GL\_PROJECTION)

glLoadIdentity()

glOrtho(0.0, 500, 0.0, 500, 0.0, 1.0)

glMatrixMode(GL\_MODELVIEW)

glLoadIdentity()

def showScreen():

glClear(GL\_COLOR\_BUFFER\_BIT | GL\_DEPTH\_BUFFER\_BIT)

glLoadIdentity()

iterate()

glColor3f(1.0, 0.0, 0.0)

# call the draw methods here

drawhouse()

glutSwapBuffers()

glutInit()

glutInitDisplayMode(GLUT\_RGBA)

glutInitWindowSize(500, 500)

glutInitWindowPosition(0, 0)

wind = glutCreateWindow(b"Lab 01 Task 02: Building House")

glutDisplayFunc(showScreen)

glutIdleFunc(showScreen)

glutMainLoop()