

HACETTEPE UNIVERSITY

DEPARTMENT OF COMPUTER ENGINEERING



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Homework

PROGRAMMING ASSIGNMENT 4

Subject: : OpenGL model drawing and viewing

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Program language: C ++ and OpenGL library

PROBLEM

We have a obj file which one store vertex coordinate and indices .We have to read this file then create our model(Which one is dragon). The model also have to rotate about itself center. Also we have to add a camera and the camera must move in opengl window.

METHOD AND SOLUTION

First all thigs I read my .obj file then put all vertices in a vertex array same as for indices too. Then I draw my model center of screen. After that I have to add a camera so I create a class which one call as Camera.h in this class I have information about camera (yaw , picth , speed , sensitivy and more) .Then I create my camera in main file (Source.cpp) After that I create a function as `processInput(GLFWwindow *window);` which one take keybord input from user. Then when I get input from user I changed my camera coordinat about user input. From arrows I go about x and z axis. For pagedown and up I moved in y axis. After that I create another function which one will take input from mouse moving the function is `void mouse_callback(GLFWwindow* window, double xpos, double ypos);` the input from this function changed angle of camera so user can rotate camera as he/she wish. I try to add light source but when I work in it my model color changing all time in unexpected way so I removed the light. After all that i define a square and draw on window horizontal that's my plane.

In this assignment I learn how can I read vertex and indices a file and draw in on the window. Also how can use set up a camera and moving the camera in the screen.