CISC 3620, Homework 4:
3D Model and Viewer

Prof Michael Mandel

1 Introduction

For this assignment, we will start from the cube viewer JSFiddle that we used in class.

1.1. Go to https://jsfiddle.net/ in your browser

1.2. Login to the account you created for homework 1

2 Fork my project

2.1. Go to https://jsfiddle.net/asterix77/v4ecdt9b/50/

2.2. Click on the "Fork" button to create your own copy of the fiddle

2.3. Click on the "Run" button to run it. You should see a 3D cube slightly askew shown in perspective.

3 Create a 3D model

Create a 3D model of whatever you would like. It must meet the following requirements

3.1. At least 15 vertices

3.2. At least 15 triangles

3.3. At least 2 different colors (color by vertex or by face).

I recommend using a data structure or abstraction like we did in lecture of a vertex list rendered by elements or rendered by arrays.

4 Add features to the viewer

The current viewer can be controlled by clicking on HTML buttons, update it to include keyboard bindings as well.

4.1. Pressing the left and right arrows should rotate the viewer side-to-side around the model.

4.2. Pressing the up and down arrows should rotate the viewer up and down around the model.

4.3. Pressing the plus (or equals) and minus keys should bring the viewer closer or farther from the model.

4.4. Make sure the displays of angles and distances are updated appropriately on each key-press.

5 Record your model and moving viewer

5.1. Record a video of your viewer navigating completely around the model that you have created. Use a screen-cast program like Quicktime or CamStudio.

6 Submit it

6.1. Click on the "Save" button to save your fiddle.

6.2. Log in to Blackboard and open the dropbox for Homework 4.

6.3. Add the video of your fiddle to the submission

6.4. Paste the URL of your fiddle as part of the comment for your submission.