

**Department of Computer Science  
University of Massachusetts Lowell  
COMP.4270/5460  
Spring 2021**

**Programming Assignment 4 [8 points]  
Handed out on 3/17/2021  
Due on 4/11/2021**

**WebGL**

Use the WebGL sample code to implement the following:

- change the cube to a house—coordinates given below
- - 0, 0, 30
  - 16, 0, 30
  - 16, 10, 30
  - 8, 16, 30
  - 0, 10, 30
  - 0, 0, 54
  - 16, 0, 54
  - 16, 10, 54
  - 8, 16, 54
  - 0, 10, 54
- change the colors for each surface of the house
- Add following options:
  - ability to define a line—3d coordinates via text box will be acceptable; accept (x1, y1, z1) and (x2, y2, z2); use parametric equation for a line to sample (x, y, z) points along the line
  - add a button to animate such that the camera moves along this defined line and projects the view of the house appropriately; use appropriate delay (eg. 1 sec) as the projection is drawn at each point

ortho2.html and ortho2.js (from Chapter 5) of the code supplied by the book may be used as sample code.

**Deliverables**

- Source files
- Sample Input/output
- 1 page report : Write about issues faced, lessons learned, any remaining bugs etc.

**Extra Credit**

- additional paths such as circle, curve etc to move the camera
- choice of projection types
- any other functionality .... – please document in report and code.

**Deadline and Late Submissions**

- The assignment is due on the date specified above at 11:59:59 PM
- Each day late will incur a penalty of 5% of the grade for the assignment; for example, if the assignment is 3 days late, the maximum grade will be 85 out of 100—15 will be subtracted from whatever grade is assigned.