4/29/2018

Manual Computer Graphics – 3D Rendering

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Week 1:

Open the index.html file that will show you 3 2D Renderings of an object (a house in this case) which have been designed keeping a 3D model in mind for future renderings.

Week 2:

Open the cube.html file that will show you a 3D rendering of a sphere in a cube made using WebGL and three.js . This week my main motive was to learn WebGL as I picked it out to be my library for my project.

Week 3:

Open the 3D_chirag.html file. Use the mouse to see the various transformations applied such as press mouse button to rotate. Use the mouse scroller to scale and also change the camera angle. This week my main motive was to create 3D object from given 2D coordinates which has successfully been implemented and also create multiple views and camera angles.
Note: Do not download to view the files as they require a server call for the same. If you wish to download please start a local server and then view the files.

Week 4:

Open the 3D_chirag.html file. Use the mouse to see everything from Week 3 and also Vanishing Points. Use the Interface at the top right corner of the screen to Translate in x,y,z dimensions, change the colors of the object,change the opacity of the object, change the texture material and visibility of the object. The Sun represents light source and Environmental mappings can be seen on the object in the form of shadows and how the different surfaces react in response to the light source, which is also Light transformation.

Week 5:

Open the ComputerGraphics.html . The menu will let you access the different portions of the website. This week I implemented the various projections on a cube and also applied shaders to the scene to give them "Instagram like filters". Everything from the previous weeks can also be found. For Final submission I will try to get it all done in a single scene.

Final Submission:

Open the ComputerGraphics.html . The menu of the website will lead you to the various features that have been implemented in the website. Thanks.

System Specifications:

The webpage and all its features were designed on the following system specifications and are the optimal settings for the code.

1. 3js 5.1.0
2. Chrome Version 66.0.3359.139 (Official Build) (64-bit)
3. Nvidia GE Force GTX 1070- 8GB Graphics Card
4. Visual Studio Code (Latest)