COMPUTER GRAPHICS

Project Report: 3D objects and implementation

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Introduction:

This project aims to implement the 3D objects with the transformations and the projections. In this project I would initially implement the 2D transformations of the objects with top, front and side views. Later I would apply the transformations like Translating, Rotating, Shearing, and Scaling. This would basically give me the idea of 2D and later apply this knowledge to the creation of the 3D objects. For 3D objects additional features like generating the projections, editing and changing the projections, creating the textures or mappings of the objects will be developed further in the assignments. This week I added the textures and perspective camera view.

Implementation:

In this final week I added the functionality of the ASCII character Bouncing Geometric figure for the box. Plane is also added to the screen where the box is bounced on the plane. Different view of the 3D Box can be seen with dragging on the screen. Perspective camera has been used along with rendering.

Canvas_ascii_effect.html:- This file contains code of the 3d rendering of the cube on the plane. Different characters on the cube are modified along with the space ascii and cube bounces – animates on the plane. Animation is included in the animate function and the rendering is included in the render function.

.js files : All the js files related to this for rendering , effects and controls are added along with the main three.js files.

References:

1. https://www.w3schools.com/graphics/
2. https://stackoverflow.com/
3. https://threejs.org/