Project 5 – Texture Mapping

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Description:

- Display Lists and Texture Objects:

  I've set up display lists and texture objects for all planets and an extra list for spheres. There's also a constant, "NowPlanet," to indicate the current planet, defaulting to Earth.

- Dynamic Adjustments:

  The "LightAndViewDistanceAccordingToPlanet" attribute adapts light sources and viewpoints based on the visible planet. This adjustment prevents the view and light source from penetrating larger planets.

- Structured Automation:

  Code from the website is organized into respective functions, utilizing the struct code of planets to automate operations instead of repetition.

- Texture and Lighting Controls:

  Boolean variables, "EnableTextureMode" and "EnableLightingMode," control texture and lighting modes. They're toggled using keyboard inputs: "t/T" for texture and "l/L" for lighting.

- Keyboard Functionality:

  Implemented keyboard functionalities for planets, activated by their initial letter as defined in the planet struct object in the project description.

- Light Source:

  The light source moves in a circular motion with a distance of "LightAndViewDistanceAccordingToPlanet" units on the z-axis. The light can be changed from a point light to a spotlight using the keyboard shortcut 'P/p'.

Kaltura Video Link: https://media.oregonstate.edu/media/t/1_aehibgcf