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CS 330 - M2-3 Milestone One: Project Proposal***

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**3D Modeling Proposal: Desk Scene**

For my 3D modeling project, I’ve decided to replicate a small, personal space that I interact with daily: the corner of my desk. This space is filled with familiar objects that I see every day, and I thought it would be both fun and challenging to recreate them in a 3D environment. By focusing on these simple items, I can explore how everyday objects can be broken down into basic shapes and develop my 3D modeling skills.

**Objects I Plan to Model:**

1. **Coffee Mug**: This is a must-have for my desk, and it's mostly cylindrical. The mug’s handle, however, provides a bit of complexity, which will be a fun challenge to replicate in 3D.
2. **Desk Lamp**: With a simple and modern design, the lamp will allow me to play with a combination of shapes, including cylinders, cones, and spheres, to get the structure just right.
3. **Notebook**: This object is always present on my desk, and although it appears simple, achieving the texture of the pages and the notebook's spiral binding will test my skills in adding fine details.
4. **Pencil**: The pencil seems straightforward but requires careful attention to its proportions. I’ll focus on the details like the tip and eraser to make it stand out.

**Basic 3D Shapes I’ll Use:**

* **Cylinders**: I’ll use cylinders for the coffee mug and the body of the pencil. The handle of the mug will also be a smaller, curved cylinder.
* **Box**: This shape will be used for the notebook, which is essentially a thin rectangle. The challenge will lie in applying the right texture to make it look realistic.
* **Cone**: The cone will represent the tip of the pencil. Although a small detail, it’s essential for an accurate representation.
* **Sphere**: I’ll use a sphere for the on-off switch of the desk lamp. Including such small details will help make the overall scene feel more complete.
* **Plane**: The plane will serve as the desk surface, grounding all the objects and giving the scene structure.

**Why I Chose These Objects:**

I selected these items because they are both familiar and accessible, making it easy to reference their shapes and details. They offer a mix of different basic shapes, allowing me to practice various modeling techniques while creating a scene that’s meaningful to me. This choice ensures that my project will be manageable, while also giving me room to explore more complex textures and lighting as I progress.

**Plan for Execution:**

I will begin by sketching out the objects and identifying the basic shapes that make up each one. Once that’s done, I will start building the models in OpenGL, focusing first on blocking out the objects with their basic shapes. After that, I will refine the details, such as the handle of the mug and the texture of the notebook. Finally, I’ll apply lighting and textures to bring the scene to life.

**Conclusion:**

This project will be a blend of simplicity and detail, giving me the opportunity to practice fundamental 3D modeling skills while creating something personal and engaging. I’m looking forward to seeing how these everyday objects take on new life in a virtual 3D environment and gaining more experience with the tools and techniques of 3D modeling.

A desk with a lamp and a notebook

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