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

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**3D Modeling Proposal: Desk Scene**

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

**Objects I Plan to Model:**

1. Coffee Mug: An essential item on my desk, primarily cylindrical in shape. The handle adds a level of complexity, making it an interesting challenge to model accurately in 3D.

2. Desk Lamp: With its sleek, modern design, the lamp combines various shapes such as cylinders, cones, and spheres. This will allow me to experiment with different forms to achieve a realistic structure.

3. Notebook: A constant presence on my desk, it may seem simple, but capturing the texture of the pages and the intricacies of the spiral binding will push my attention to detail.

4. Pencil: While seemingly straightforward, the pencil requires precise proportions. I’ll focus on elements like the sharpened tip and eraser to enhance its realism.

**Basic 3D Shapes I’ll Use:**

* Cylinders: Cylinders will be used for the coffee mug and the body of the pencil. The mug's handle will also be represented by a smaller, curved cylinder.
* Box: The notebook will be modeled as a thin rectangular box. The main challenge will be applying the right texture to enhance its realism.
* Cone: A cone will be used for the pencil tip. Though a small detail, it is crucial for an accurate representation.
* Sphere: The desk lamp’s on-off switch will be represented by a sphere. Adding such minor details will contribute to a more complete and realistic scene.
* Plane: The desk surface will be represented by a plane, serving as the foundation that grounds all the objects in the scene.

**Why I Chose These Objects:**

I chose these items because they are familiar and easy to reference, allowing me to accurately capture their shapes and details. They incorporate a variety of basic forms, giving me the opportunity to practice different modeling techniques. This selection ensures that my project remains manageable while also providing room to experiment with more intricate textures and lighting as I refine my skills.

**Plan for Execution:**

I will start by sketching the objects and breaking them down into their basic shapes. Next, I will begin modeling them in OpenGL, initially focusing on blocking out their fundamental forms. Once the basic structures are in place, I will refine the details, such as the mug’s handle and the notebook’s texture. Finally, I will apply lighting and textures to enhance realism and bring the scene to life.

**Conclusion:**

This project balances simplicity with detail, allowing me to develop fundamental 3D modeling skills while creating something personal and engaging. I'm excited to see how these everyday objects come to life in a virtual 3D environment and to gain hands-on experience with various modeling tools and techniques.

A desk with a lamp and a notebook

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