**README.MD**

**CS-330**

**8-3 Journal: Portfolio Submission**

**How do I approach designing software?**

**What new design skills has your work on the project helped you develop?**

This project helped me strengthen my understanding of spatial design in 3D environments. While I still have much to learn about balancing aesthetics and functionality, I gained hands-on experience with layout decisions, lighting placement, and object orientation. It’s just the beginning, and I recognize that more complexity is involved in professional design work that I hope to explore further.

**What design process did you follow for your project work?**

I took a practical approach, starting with a simple vision of a desk scene and breaking it into individual objects. From there, I tackled each object individually, doing my best to fit them together naturally. I did not follow a formal design model and would benefit from deeper planning and tools like sketches or flowcharts in future work.

**How could tactics from your design approach be applied in future work?**

Even though my process was basic, it showed me the value of starting with a small piece and building outward. I can carry this into future projects, focusing on one section at a time rather than trying to do everything at once. I also learned that design is an evolving process and that early attempts don’t have to be perfect.

**How do I approach developing programs?**

**What new development strategies did you use while working on your 3D scene?**

One of my most significant changes during this project was learning to break problems into smaller, more manageable steps. Instead of building everything at once, I focused on developing one object or feature at a time. I also began understanding how transformations work in 3D space, which was initially challenging. While I did not fully master matrix operations, working through them helped me start thinking more visually. I also tried to improve how I structured my code by grouping similar tasks, making things easier to follow. I still have much to learn, but this project helped me build better habits.

**How did iteration factor into your development?**

Iteration was the core of my process. I had to revise things constantly, from object placement to camera controls to lighting. Nothing worked correctly on the first try. Sometimes, I felt stuck, but each minor adjustment helped me move forward. This experience taught me the importance of staying patient and flexible during development.

**How has your approach to developing code evolved throughout the milestones that led to the project’s completion?**

In the beginning, I was focused on just getting things to work. As I progressed through the milestones, I saw how reusable logic and clear structure could make my work easier. While I wouldn’t describe my current style as polished, I can see real progress in thinking through problems and handling complexity.

**How can computer science help me achieve my goals?**

**How do computational graphics and visualizations provide new knowledge and skills that can be applied in your future educational pathway?**

This course offered me a real look at what goes into creating interactive visual software. I now understand some basics of rendering, camera control, and 3D modeling topics I had only read about before. I still have a long road ahead in mastering these skills, but it has opened my eyes to what is possible, and I’m excited to continue learning in future classes.

**How do computational graphics and visualizations give you new knowledge and skills that can be applied in your future professional pathway?**

Even though I am still in the early stages, I see how these skills could apply in fields like simulation, design, training environments, or education. The ability to transform abstract data into visual, interactive experiences is powerful. While I’m not yet at a point where I can do this confidently, this project offered a glimpse into how computer science can facilitate that, and it motivates me to keep going.