To start off, I was a little confused by the project as it initially asked for an image but then also mentioned we could use our old project as part of this. It also stated that we needed four objects. So, I ended up doing a bit of everything, and while it may not directly relate to the assignment, it still demonstrates my understanding of the project. I drew inspiration from an old creepy pasta called Petscop, which influenced the lava floor and dark red lighting theme.

For the functionality, I followed the instructions pretty well. For my choices, I created a house and a tree, just like the image, and white boarded them. This is a term I learned in a previous class, where you lay the foundation for the design. The controllers are inspired by my enjoyment of video games, especially horror ones, as they bring a lot of excitement.

Overall, the controls are quite simple: you use your mouse to look around (uncommenting one line of code was all it took for that). Then, for the next few controls, I used WASD and OP, and QE. WASD is for directional control, allowing you to explore the surrounding area and get a close-up view of things. The QE controls let you go up and down to get a higher viewpoint, so you can check things out. This added vertical movement allows users to explore the scene from different angles, providing a more dynamic perspective. OP allows the user to toggle between 3D and 2D views, providing a front-facing view of the project. The 2D view especially is useful for checking the scene’s layout and structure, offering a clearer overview of the environment. These controls were designed to enhance the overall experience, making navigation intuitive and fun.

To make the code more organized, I’ve divided it into three sections: one for textures, one for lights, and one for objects. These three are the backbone of the code and allow for parts to be easily added, making it possible for the user to work in sections instead of being overwhelmed by a large amount of code. Personally, I picked it up really quickly, which helped me get things done relatively fast. The functions allow users to input whatever lighting, colors, or textures they want, enabling rapid customization.

This whole code section along with OpenGL gave really good insight into how the 3D space work in code and I can say that I enjoyed this a lot more than I thought I was going to. I think one of my favorite parts is how reuable the code was and swapping between projects so that I could research and find out what belongs in which section. This code is extremely modular and has a lot of room for customization and I might revisit this on my free time to make my own projet.