CS405 PROJECT-1 REPORT

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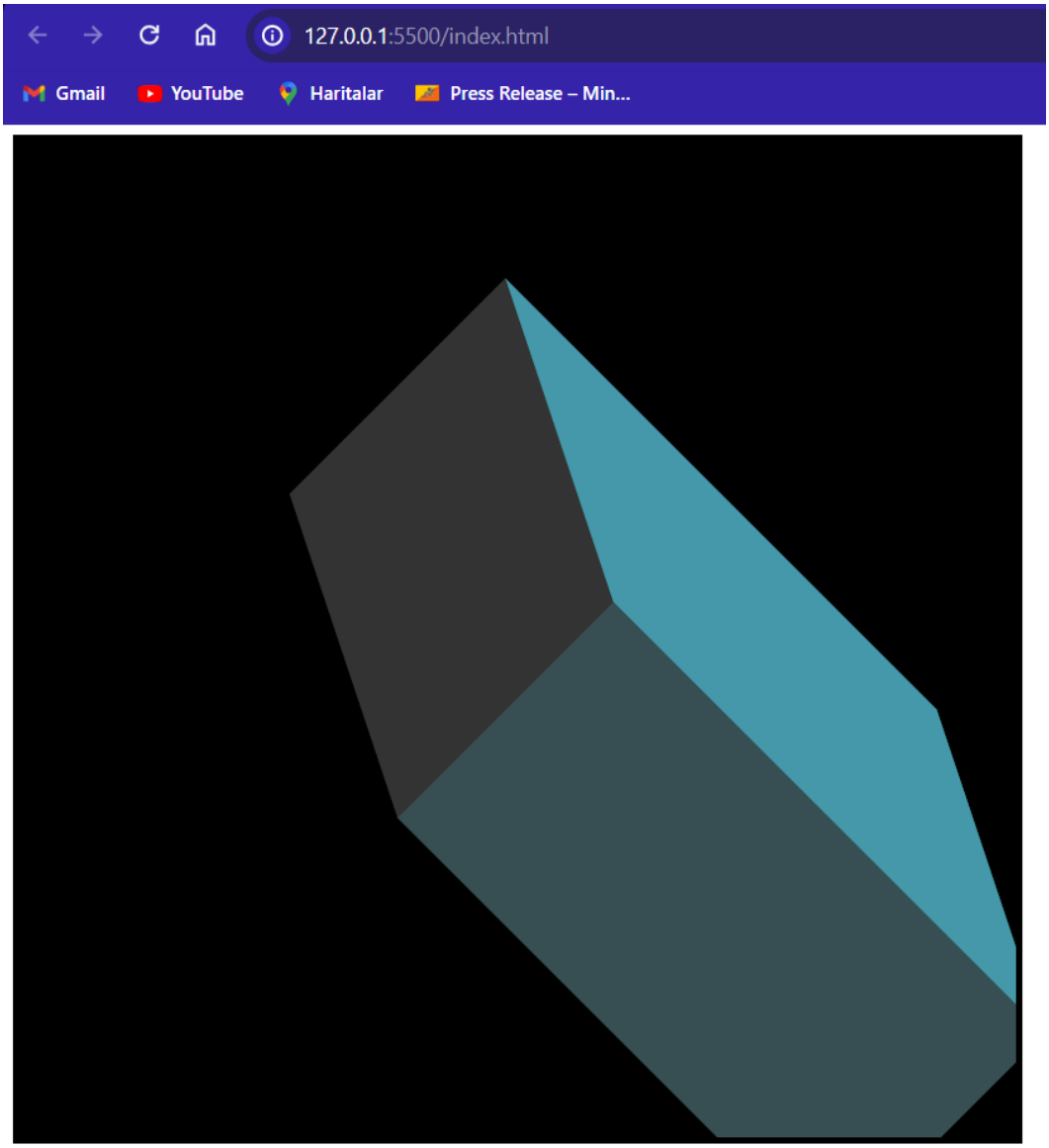
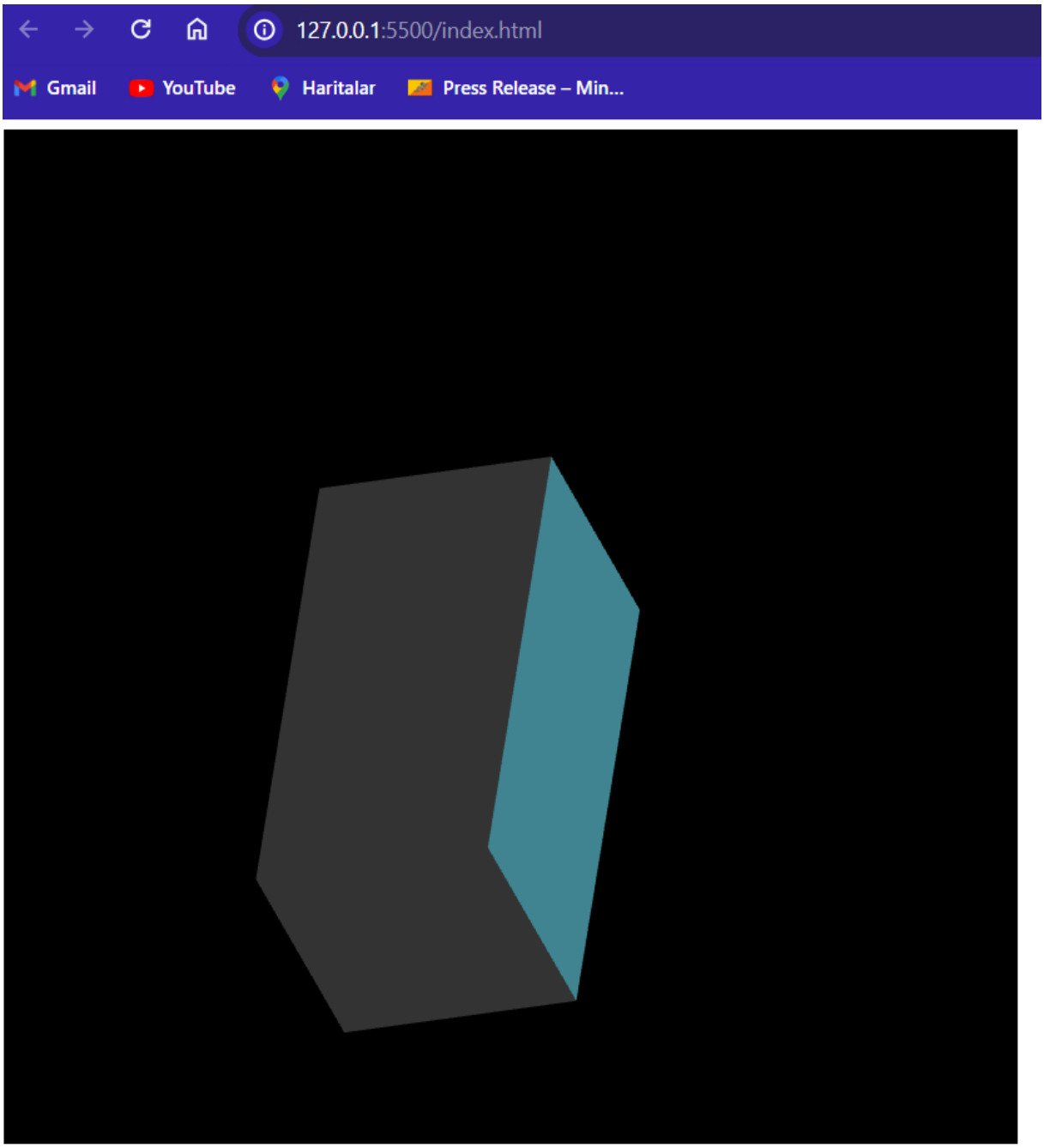
For the first task, I initially used ChatGPT as instructed. I copied the provided text and pasted it into ChatGPT, hoping for a specific answer, but it didn't generate the response I needed. I attempted using the text in a document within SUcourse, but that also didn't yield the desired outcome. I persisted until I obtained the desired format and successfully acquired the necessary information. I visualized the outcome and attached a screenshot for reference:



Moving on to the second task, I employed a matrix calculator, the link to which I've included in the references. This calculator was essential for handling computations involving large numbers. Firstly, I applied a translation and then a scaling operation. Subsequently, I sequentially performed rotations along the x, y, and z axes. Ultimately, I obtained the transformation matrix and incorporated it into the "TASK2" section in "utils.js," similar to the approach used in the first task. The screenshot below shows the implementation:



In the third part of the project, I utilized ChatGPT to create the animation. Initially, I copied and pasted the generated code, but it proved challenging to implement due to my lack of experience in this area. However, after multiple attempts, I realized that the code provided by GPT remained consistent without correcting the issue. Therefore, I examined the code and debugged it using "console.log," carefully following the parameters.

Eventually, I identified that the variable "progress," designed to control the animation loop, ranged between -2 and -1, causing a malfunction. Upon declaring and assigning it a correct value, this issue was resolved. Despite the improvement, the animation was still not functioning accurately, as it lacked a time parameter. It only depicted the transition from the target position to the initial position, which was incorrect.

Despite attempting to rectify this through ChatGPT, the solution remained elusive, and I became stuck. Consequently, I delved into the code and found that the variable "phase," responsible for indicating the time phase, started at -10000 milliseconds, which was entirely incorrect. I conveyed this information to ChatGPT, and eventually, it provided the final code that met the project requirements.

In conclusion, the entire experience was incredibly enriching, and I gleaned invaluable knowledge from it. I'm immensely grateful to Selim Hoca for overseeing such an exceptional project. Throughout this journey, I utilized ChatGPT, debugging techniques, and a matrix calculator. While ChatGPT proved beneficial in certain aspects by expediting the project's progress, it fell short in handling complex mathematical calculations and lacked problem-solving capabilities in specific sections of the code. Nevertheless, I'm optimistic about its potential for future development and improvement in these areas.

REFERENCES

- Calculator.net. (n.d.). Matrix calculator. Retrieved from https://www.calculator.net/matrix-calculator.html