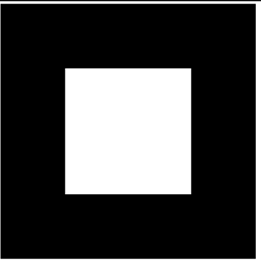
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In first task, I used prom.txt file to generate a cube from transformation matrix, then I implemented the function and visualized it, and I got this cube, Chatgpt calculated my matrix by himself. And I got this:



<https://chat.openai.com/share/39cf80bf-4f99-45d5-beb6-25d951e2e54b>

For the Second task, I used the functions which are provided (scaling, rotation, translation, multiply, get transpose), to create my view matrix, and I found that my matrix is [1.0606601536273956, 0, 1.0606601536273956, 0, 0, 1.5, 0, 0, -1.0606601536273956, 0, 1.0606601536273956, 0, 0, 0, 0, 1] give me these values and also, I visualized my cube after that and found this cube, so I found that it is different from ChatGPT’s cube, the differ may be occur from calculation mistake of ChatGPT , lack of operation presence of ChatGPT , lack of math of ChatGPT… I also used Math.pi/4 which is actually 180/4= 45.



<https://chat.openai.com/share/fad3c927-82d7-4d90-a6d6-166a7dc8aea8>

For the Part 3 I asked the ChatGPT to make me animation function, and he made me 1 which is using another function called interpolation, which is interpolating between 2 matrices, and in my animation function I used.

const halfAnimationDuration = 5000; // 5 seconds for each half

let progress = elapsed / halfAnimationDuration;

if (progress > 1) { progress = 2 - progress; }, my starting time 10000 (10 seconds) I divide 2 to make 5 seconds each half and calculate progress for each half to see the animation.