**Task 1**

In this part I copy paste the transformation-prompt.txt to chatgpt and I got transformationMatrix as Float32AArray then I uncomment the modelViewMatrix = getChatGPTModelViewMatrix(); in index.html. Then I got the cube when running the index.html Also when we click Show Work in chat we can see translation, scale and rotation calculations that will help us our calculations in Task 2

Screenshot of it:

A blue cube with a black background

Description automatically generated

Chat: <https://chat.openai.com/share/4e7d8797-e1de-4ac6-89bb-0ae66ae9bb06>

**Task 2**

Calculations done in Utils.js with using Translation Matrix, Scaling Matrix, Rotation X Matrix (30 degrees), Rotation Y Matrix (45 degrees), Rotation Z Matrix (60 degrees), Multiply Translation and Scaling, Multiply the result with Rotation X, Multiply the result with Rotation Y, Multiply the result with Rotation Z. After defining all of them in getModelViewMatrix we combine the transformations.

A close up of a computer screen

Description automatically generated

After combination of transformations we got CalculatedtransformationMatrix that will return. Cube is changing when we compare it to task 1 because calculations in gpt are not fully correct gpt makes some calculation errors. I also uncomment the modelViewMatrix = getModelViewMatrix(); in index.html to launch my own calculation of matrix.

Screenshot of it:

A blue and grey cube

Description automatically generated

**Task 3**

In that task, I write prompt that includes my first task and second task. I requested Gpt to animate first task to second task also with giving instructions. Then Gpt gave getPeriodicMovement function with timing feature then I uncomment modelViewMatrix = getPeriodicMovement(startTime); in index.html I got rotation from task 1 to task 2 and then return task 2 to task 1.

Video Link:

Chat Link: <https://chat.openai.com/share/4894efd3-1e83-48f6-a0f1-353a2b49e2a4>