**Project 8 Rotating a platonic solid with OpenCV**

Name: \_Riya Dev\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_5\_\_\_\_\_\_\_\_\_\_ Date: \_4/18/2021\_\_\_\_\_\_\_\_\_\_\_

Did you name your file l081.cpp (Lower case L, then 071)? \_yes\_\_\_

Does your file compile & run on terminals/jupyterhub? \_yes\_\_\_

Did you use a rotation matrix? \_yes\_\_\_\_\_\_\_\_\_\_

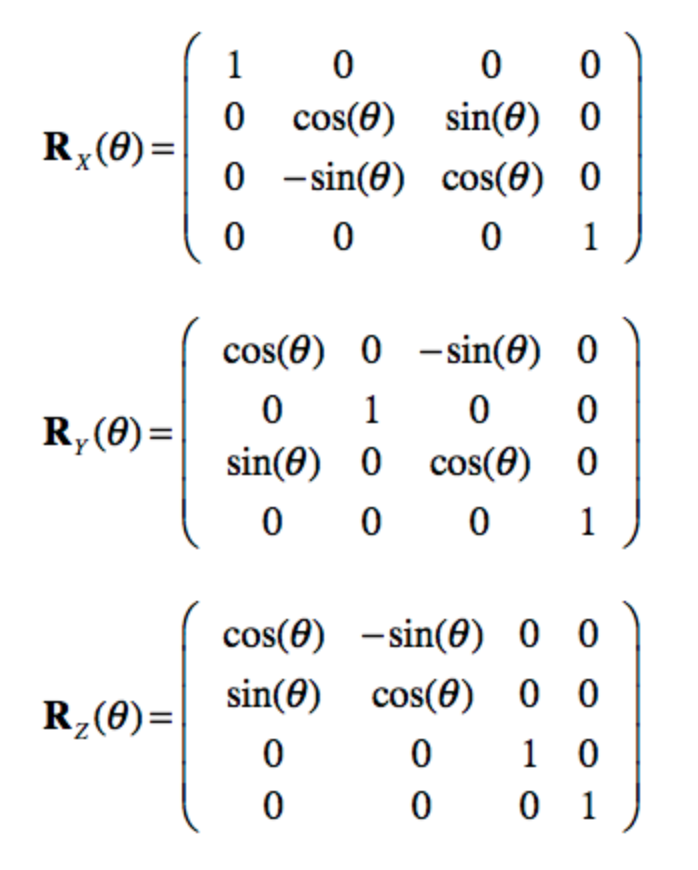
Did you do orthographic rendering? \_yes\_\_\_\_\_\_\_\_\_\_

Did you start from the coordinates I provided for the cube?? \_yes\_\_\_

Describe here in words all the transformations you applied to vertices, for each describe how you implemented it in your code (by multiplying with a matrix, what was the matrix, or by adding a matrix, what was that matrix… be specific):

Multiplied by X rotation matrix and Y rotation matrix.

From <https://www.brainvoyager.com/bv/doc/UsersGuide/CoordsAndTransforms/SpatialTransformationMatrices.html#:~:text=The%204%20by%204%20transformation,in%20the%20first%20three%20columns>:



Did you use homogeneous coordinates? \_yes\_\_\_

(that allows you to combine all transformations into one matrix)

Did you combine all those transformations into one single matrix? \_yes\_\_\_

If you used only one transformation matrix, what was it?

Did you name your video rotation.avi? \_yes\_\_\_\_\_\_\_\_\_\_

What functions/methods from OpenCV did you use?

​​cv2.circle(image, center\_coordinates, radius, color, thickness)

cv2.line(image, start\_point, end\_point, color, thickness)

What functions/methods from OpenCV did you experiment with but ended up not using?

Obs.: feel free to rotate any platonic solid, around any line.