**Project 8 Part 1 Rotating a platonic solid with OpenCV**

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Did you name your file l081.cpp (Lower case L, then 081)? 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):

I initially scaled the original points by a factor. Then, I iteratively rotated the points a multiple of 10 degrees around the X and Y axes and translated the points to the center of the Mat object; I did this a total of 105 times for each platonic solid. Since I used homogeneous coordinates, I multiplied the point with matrices to both rotate and translate the point.

Did you use homogenous coordinates? Yes

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

Did you combine all those transformations into one single matrix? No

Did you name your video rotation.avi? Yes

What functions/methods from OpenCV did you use?

VideoWriter: creates and write to AVI file

VideoWriter.write(): writes instance of Mat object to VideoWriter object

Mat: creates matrix object to make frames for video

Mat.t(): transposes matrix object

line(): draws line on Mat object

Scalar: creates tuple of 3 numbers

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

I ended up using all the OpenCV functions/methods that I experimented with.

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