**Project 8 Part 3 Rotating a platonic solid with OpenCV (perspective)**

Name: Randy Fu Period: 5 Date: 5/22

Did you name your file l083.cpp (Lower case L, then 083)? yes

Does your file compile & run on terminals? yes

Did you use a rotation matrix? 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 scaled the coordinates by 100 by multiplying by a matrix and rotated the matrix in the all axis with a radian value of .05

Describe in words the rotation you did:

I rotated the matrix in all axis with a radian value of .05

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? yes

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

I combined all the rotation matrices before rotating

What functions/methods from OpenCV did you use?

Mat

VideoWriter

VideoWriter.write

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

Did you do a perspective rendering? Yes

**Default values used (in case no parameters are given)**

What is the position of the eye you used? (1000,900.23,100.1156)

What is the plane of the screen you projected on? (700.5,200.1,100.12)

Did you name your video rotation.avi? Yes

What functions/methods from OpenCV did you use?

Circle

Point

Scalar

FILLED

Mat.t()

Norm()

Scalar()

.dot()

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

Obs.: feel free to rotate any platonic solid, around any line, and you may put the position of the screen/viewing window in any place as long as the rotating platonic solid can be seen reasonably.