Transformation Matrices

CS 3451: Project 1A

1 - Objective

This first project is designed to familiarize you with the basics of creating transformation matrices. You will also use this project as the basis for the second part of Project 1.

2 - Deadline

Your project solution should be submitted on T-Square by 11:55PM on Friday, January 29.

3 - Process

3.1 Download the base source

Download and unzip the folder with the base code for this project.

3.2 Project description

In order to familiarize you with matrix transformations and operations, you will be completing the empty methods of a Matrix class. You will write code to do the following:

1. Print a matrix to screen.

Example: [1, 0, 0, 0]
[0, 1, 0, 0]
[0, 0, 1, 0]
[0, 0, 0, 1]

2. Create 4x4 scale, translate, and simple rotation matrices.

3. Perform matrix multiplication.

The provided source code gives you empty methods for each of these operations. This code will also test the correctness of your methods when you run it.

3.3 Source code

You should modify the source code in any way you see fit and comment your code (include your name in the header). The source code is written in Processing. Visit "Processing.org/reference/" for more information on built in functions and data structures. Please note that you are not allowed to use built-in processing functions to accomplish the tasks listed in the project description. When in doubt, ask.

3.4 Authorship Rules

The code that you turn in entirely your own. You are allowed to talk to other members of the class and to the Professor and the TA's about general implementation of the assignment. It is also fine to seek the help of others for general Processing/Java programming questions. You may not, however, use code that anyone other than yourself has written. The only exception is that you should use the source code that we provide for this project. Code that is explicitly **not** allowed includes code taken from the Web, from books, from other assignments or from any source other than yourself. You should not show your code to other students. Feel free to seek the help of the Professor and the TA's for suggestions about debugging your code.

Submission

In order to run the source code, it must be in a folder named after the main file. When submitting any assignment, leave it in this folder, compress it and submit via T-square.