CS 3233-01 Homework #1
Fall 2019

Due: September 13 at class time

Assignment

Write a function that multiplies a 3x3 matrix by a 3x1 matrix/vector, producing 3x1 matrix/vector result.

Write additional functions to do each of the three fundamental transforms: translate, scale, and rotate. Each of these functions should populate the necessary matrix and vector, and call the function above to do the computation.

Include a main program to drive a demonstration of your functions. Enable the user to enter a point (x and y coordinates) in 2-dimensional space, and choose and perform a transform of that point.

Write your solution in Python. You may not use a library implementation of the matrix or vector. You must implement them yourself. You may use trigonometric functions from the library, if you wish, or you may write your own trig functions.

As with all programming assignments, you must use your best programming skills on this project.

Instructions for Turning in Your Program

Submit your source code to this assignment on Canvas by the beginning of class on the due date. Also, turn in a hardcopy of your code in class on the due date.