CSCI 2150L Introduction to scientific computing

Homework Assignment 1

100 Marks

1. Write a .m MATLAB program to rotate the below given matrix using the rotation matrix with an angle of 35°.

Where the first row are the x co-ordinates and second row are the y co-ordinates of 3 points.

To rotate a matrix in 2D we need to have a rotational matrix

1. Your program should take the matrix and the angle as input. It should display the rotated matrix in Command window and should plot those points as well. Label your graph axes.
2. You will have to loop over the above given matrix to plot those points. Do not directly take co-ordinates from the matrix and plot them individually.
3. You should display 2 subplots, first should contain the original matrix and second should contain the rotated one. Give names to your graph and X and Y labels.

THINGS TO SUBMIT---

1. You have to submit a file named **rotation.m** on elc in the dropbox provided for submission.
2. MATLAB files are by default saved with .m extensions.
3. **This assignment is due on Sept 21th 11:59 pm.**
4. **Your assignment should be strictly your own work.**