

Lab Assignment 1

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Consider the following graph on 8 vertices. Label its vertices arbitrarily. Task is to find the number of spanning trees in the graph. As we learnt in the class that the number of spanning trees is given by any cofactor the Laplacian of the graph. Calculate the cofactor using the LU decomposition.

In a single file you need to submit (1) code, (2) Laplacian matrix, (3) LU decomposition of the submatrix to find its cofactor, (4) number of the spanning trees.

Please note that you have to give the arbitrary labelling to the vertices. Note that the Laplacian matrix will change depending on the labelling. Also, LU decomposition will also be different depending on which cofactor one choose to calculate. I hope everyone of us come up with different Laplacian and LU decomposed matrices. Yet the number of the spanning trees will be the same.

Deadline: Septmeber 3, 11:59 pm.

