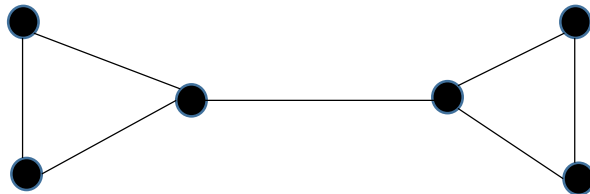# MA 653: Network Science
2023
Assignment #2

Community Detection

[For this assignment, you can form groups of two.]

1. Using numerical software for matrices, construct the modularity matrix for this small network:

Find the eigenvector of the modularity matrix corresponding to the largest eigenvalue and hence divide the network into two communities.

2. Using a network tool (Gephi or NetworkX), generate a network with 10 nodes and 50 edges. Identify the communities of the network using the Louvain algorithm.

Submission date: 28-04-2023

Submission Procedure: Demonstrate the program in the lab.