

Network Measures: Homework #2

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Problem 1

Given graph(fig.1), compute the three central nodes based on *degree*, *eigenvector*, *Katz*($\alpha = \beta = 0.3$), *PageRank*, *betweenness* and *closeness* centrality methods. You should implement all these centrality methods by c, c++, java or c#

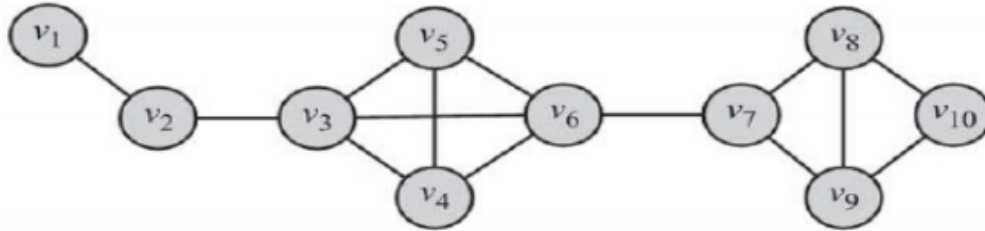


Figure 1: Graph

Solution

Table 1: Results

	First node	Second node	Thrid node
degree centrality	1	2	4
eigenvector centrality	0.05	0.16	0.47
Katz centrality	1.57	4.24	11.56
Pagerank centrality	0.37	0.45	0.48
betweenness centrality	0	16	28
closeness centrality	0.28	0.38	0.5