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| INDEX | | | |
|  | DATE | TITLE | SIGN |
| 1 |  | **Write a program to compute the following for a given**  **a network: (i) number of edges, (ii) number of nodes; (iii) degree of node; (iv) node with lowest degree; (v) the adjacency list; (vi) matrix of the graph.** |  |
| 2 |  | **Perform following tasks: (i) View data collection forms**  **and/or import onemode/two-mode datasets; (ii) Basic**  **Networks matrices transformations** |  |
| 3 |  | **Compute the following node level measures: (i) Density; (ii) Degree; (iii) Reciprocity; (iv) Transitivity; (v) Centralization; (vi) Clustering.** |  |
| 4 |  | **For a given network find the following: (i) Length of**  **the shortest path from a given node to another node; (ii) the density of the graph** |  |
| 5 |  | **Write a program to distinguish between a network as a**  **matrix, a network as an edge list, and a network as a sociogram (or “network graph”) using 3 distinct networks representatives of each.** |  |
| 6 |  | **Write a program to exhibit structural equivalence,**  **automorphic equivalence, and regular equivalence from a network.** |  |
| 7 |  | **Create sociograms for the persons-by-persons** |  |
|  | **network and the committee-bycommittee network**  **for a given relevant problem. Create one-mode**  **network and two-node network for the same** |  |
| 8 |  | **Perform SVD analysis of a network.** |  |