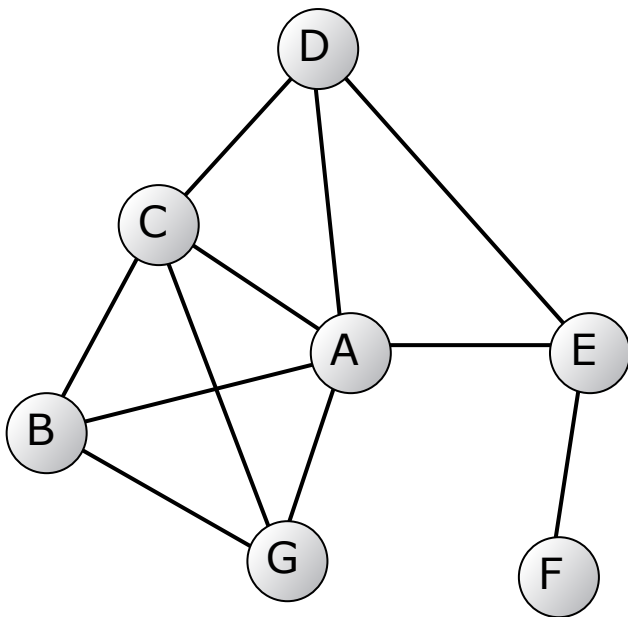


Exercise: Network topology measures



Node degree: The number of edges connecting a node to other nodes. Also known as the connectivity.

Clustering Coefficient:

$$C_I = \frac{n_I}{\binom{k}{2}} = \frac{2n_I}{k \cdot (k-1)}$$

k : neighbors of l

n_i : edges between node l 's neighbors, or number of triangles through node l .

For every node in the network, calculate these measures:

Degree of node

A: _____ B: _____ C: _____ D: _____

E: _____ F: _____ G: _____

Clustering Coefficient

A: _____ B: _____ C: _____ D: _____

E: _____ F: _____ G: _____

Shortest path between

A-B: _____ B-E: _____ C-F: _____

Average shortest path

: _____

Network Diameter

: _____

- the longest "shortest path" between two nodes in the network