

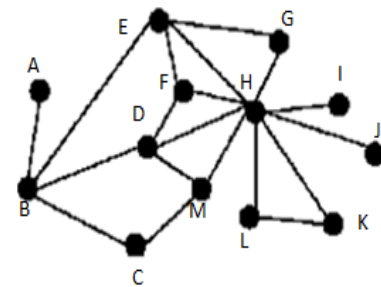
ASSIGNMENT 09: Link Prediction

Following are the pre-defined functions for Link prediction algorithms in Networkx:

<code>resource_allocation_index(G[, ebunch])</code>	Compute the resource allocation index of all node pairs in ebunch.
<code>jaccard_coefficient(G[, ebunch])</code>	Compute the Jaccard coefficient of all node pairs in ebunch.
<code>adamic_adar_index(G[, ebunch])</code>	Compute the Adamic-Adar index of all node pairs in ebunch.
<code>preferential_attachment(G[, ebunch])</code>	Compute the preferential attachment score of all node pairs in ebunch.
<code>cn_soundarajan_hopcroft(G[, ebunch, community])</code>	Count the number of common neighbors of all node pairs in ebunch using community information.
<code>ra_index_soundarajan_hopcroft(G[, ebunch, ...])</code>	Compute the resource allocation index of all node pairs in ebunch using community information.
<code>within_inter_cluster(G[, ebunch, delta, ...])</code>	Compute the ratio of within- and inter-cluster common neighbors of all node pairs in ebunch.

Draw the following graph in NetworkX

Compute score (u, v) for all edges. Remove the edges with low score. And also predict the links between disconnected nodes in future.



- Calculate Katz score for node 'L'.
- Calculate Adar/adamic score for node 'D'.
- Compute the Jaccard coefficient of all node pairs in ebunch.
- Compute the preferential attachment score of all node pairs in ebunch.