Exercise 1: Based on the experiments above, draw a network below which represents the interactions between the proteins A, B, C and D. **NOTE:** In all cases in this exercise, interactions can be inferred even if not reciprocal.

![Diagram of protein interactions](image)

Comment: Inconsistent results are often observed in Y2H screens (as for the B-A interaction). The B-B interaction could be an artifact of the experiment (auto-activation) or reflect dimerization. Therefore, negative controls (e.g. B as bait without prey) are always important.

Exercise 2: What is your confidence in the interaction between A and B? Can proteins, like B, interact with themselves? Are there proteins which do not interact?
Exercise 3: Based on the experiments above, draw a network below which represents the interactions between the proteins A, B, C and D using the matrix model to interpret APMS based data.
Exercise 4: Based on the experiments above, draw a network below which represents the interactions between the proteins A, B, C and D using the spoke model for interpreting APMS based data.
Exercise 5: Based on the experiments above, draw a network which represents the interactions between the protein.

Comment: Self-interactions are ignored.
Exercise 6: Based on the experiments above, calculate the missing scores based on the protein complex (pull-down) scoring method then draw a network which represents the interactions between proteins with pull-down scores > -0.15 (i.e. higher confidence than -0.15)

Example: $S(A,B) = \log_{10}(\frac{4*7}{5*8})$
Exercise 7: Based on the experiments above, draw a network which represents the interactions between the proteins.
Exercise 8: Based on the experiments above, draw a network which represents the interactions between proteins with binary interaction scores above -0.40.

Exercise 9: Based on the experiments above, draw a network which represents the interactions between proteins with binary interaction scores above -0.65.