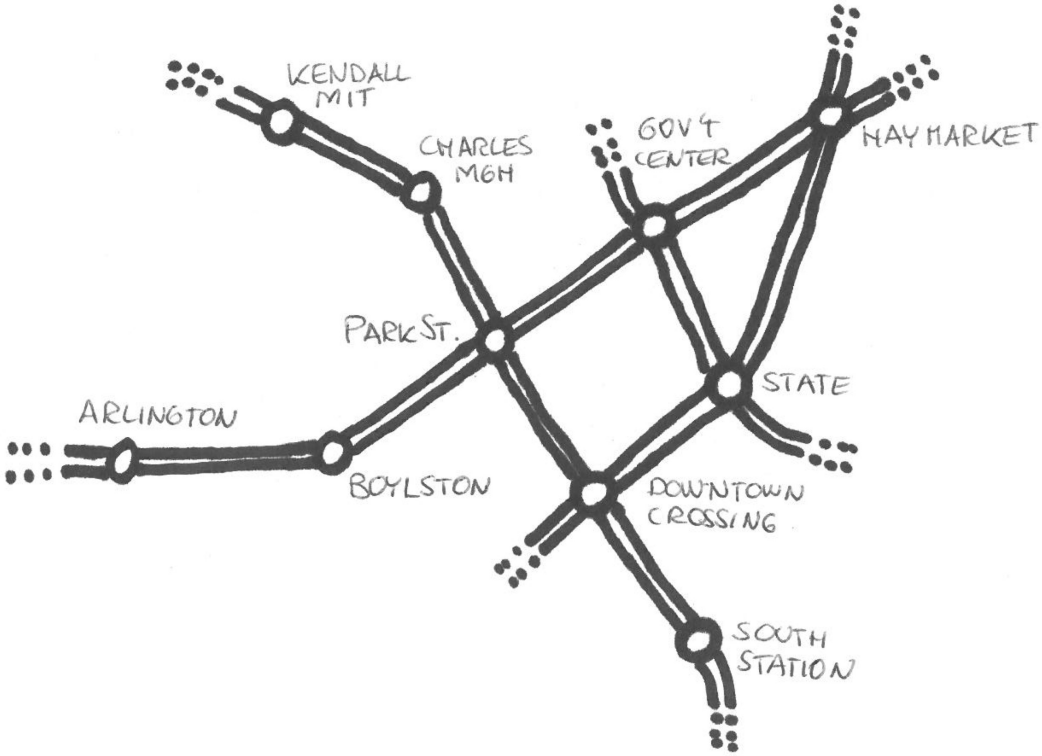
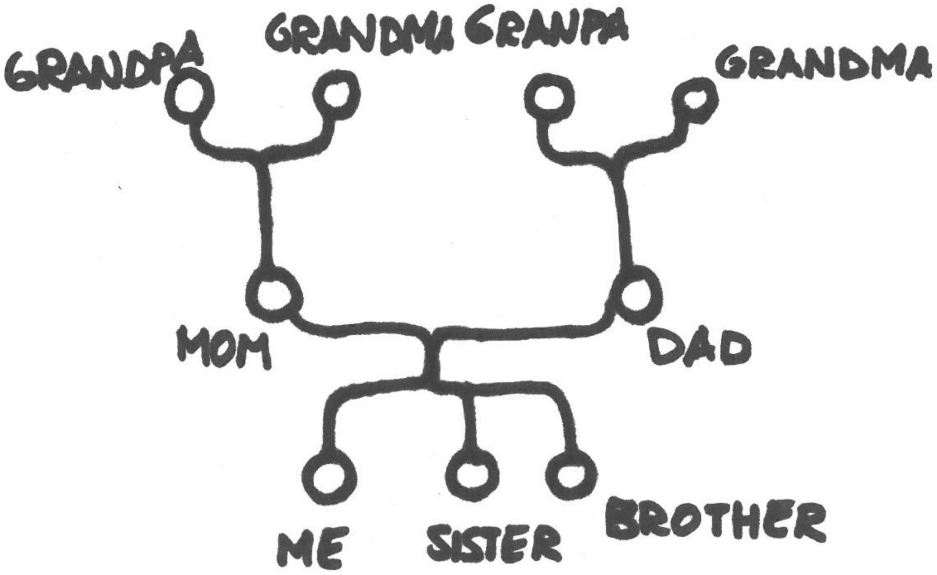
Networks ahoy!

Networks and their theory is a branch of mathematics that examines the properties of a networks. A network is a set of dots connected by links. We are surrounded by networks! For example: the subway network, genealogy trees, social networks are examples of networks and maths is used to understand them





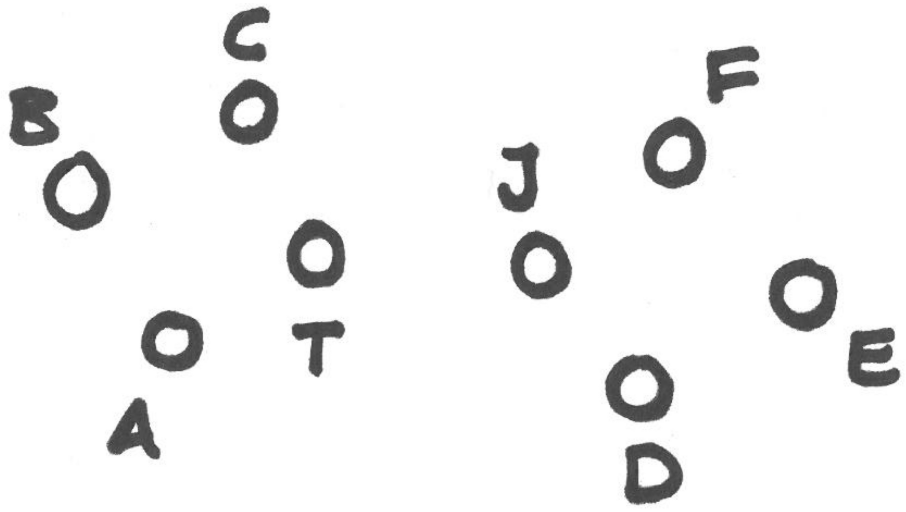
Thinking like a network scientist

Some complicated problems are easy when you think of them as a network. For example. The school is going to a visit the Museum of Fine Arts. There are only two cars and students are asked who they want to go with. Here are their preferences:

- John wants to go with his friends Ted and Frank.
- Ethan would prefer to go with Don and John.
- Bob answered that Carol and Alice are his preferences.
- Ted is choosing his friends Carol, Bob and Alice
- Carol wants to go with her friends Alice and Bob.
- Finally, Frank chose Ethan and Don, while Don only chose John.

Can you find the best distribution of kids for the two cars so kids go mostly with their friends?

1. Build the network of "who wants to go with whom"



2. Who is the most popular kid?
   a) Bob b) Alice c) Ethan d) John e) Ted

3. Which is the best way to split the 8 kids into two groups?