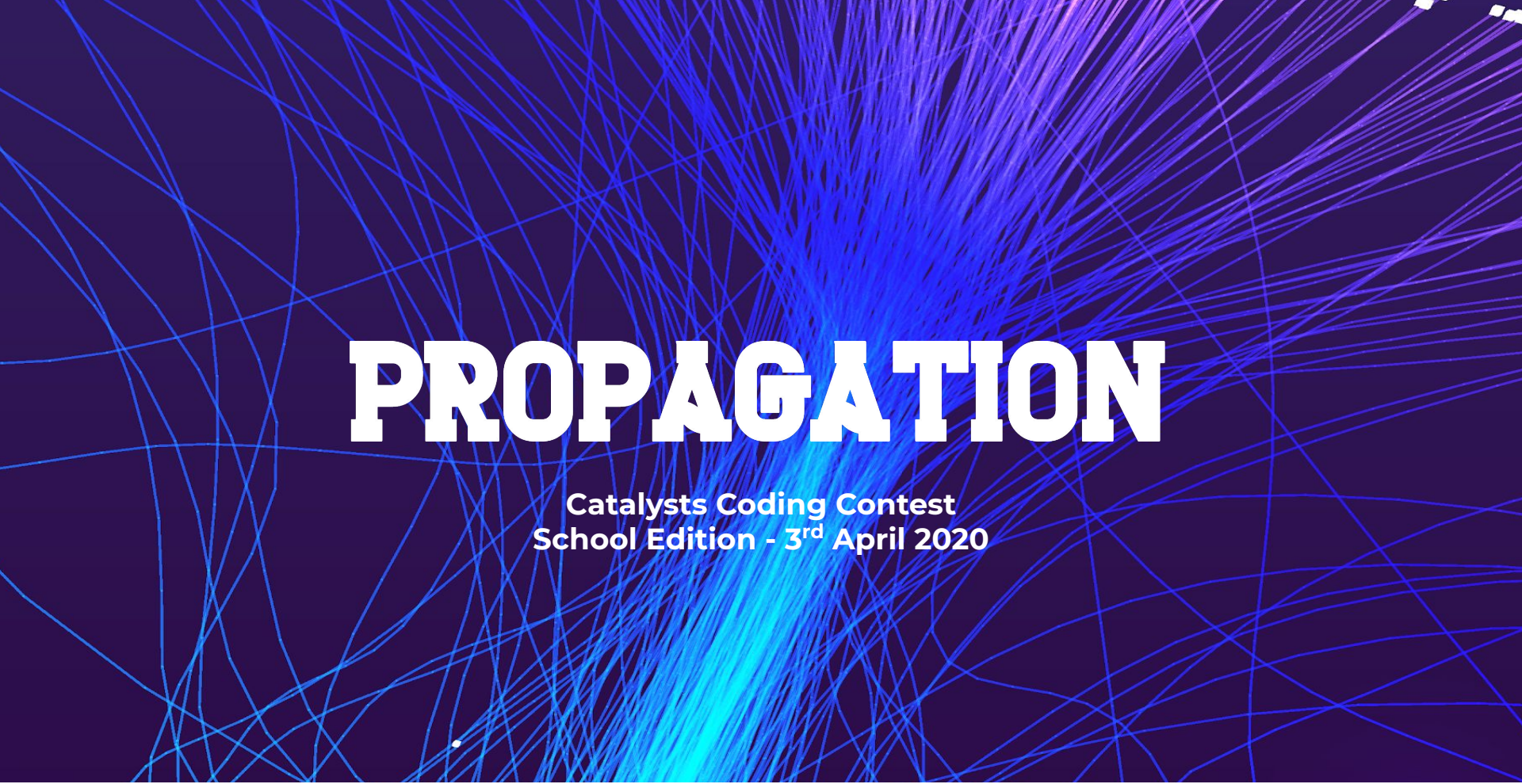


April 2020, New York

Influencers are quite a tool to be used nowadays reaching millions and millions of people with just one click of a button. They can push news, products and information of all sorts to everyone who is following them.

In order to make sure their models work and are fine tuned, simulations have to be done - many of them. Your task is to build these simulations and check how rapidly news propagate in different scenarios.

> Your task

- Create simulations which model information propagation in real life
- Information starts from a few people (influencers) and iteratively spreads to their followers and connections
- Each subsequent connection has connections of its own propagating the news further
- Later on, you'll also have to model news of different types and people who are more or less receptive to those different types of news

Level 1

> Level 1

Parsing the population

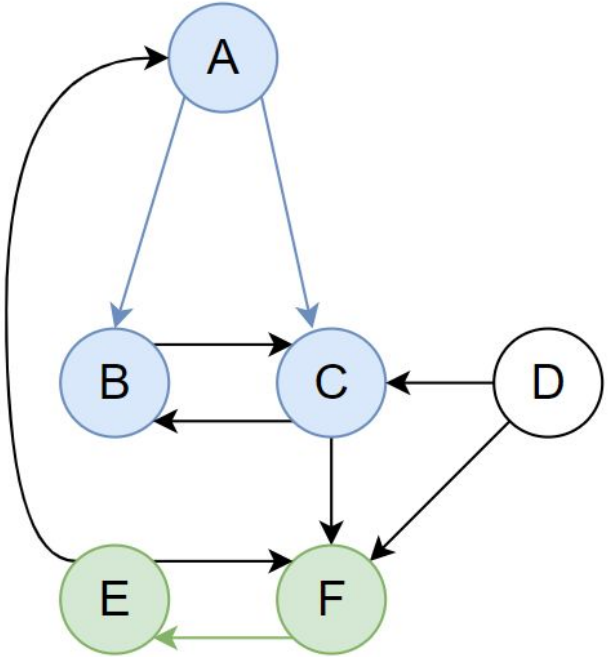
Task for Level 1:
You'll have to first model your population and its social media interactions.

By reading a graph-like structure, print the number of followers for some of the given people in our modeled network.

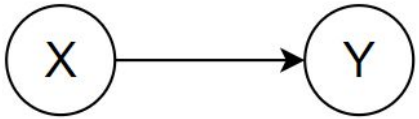
> Level 1

- The graph structure has nodes that represent people. Every individual has a name, for now, and later on will receive more attributes.
- The edges of the graph are directional “follow” relations. The edge A B means that B follows A on some social media platform. Meaning that if A shares some news B will see them and possibly share them further on to his followers, if any.
- In the input files, you’ll find a list of all people’s names and we’ll use those names to refer to them whenever needed.

> Level 1



- A has 2 followers, B and C
- F has only one follower, E
- D has no followers



- Information flows from X to Y. Y is a follower of X.

CATALYSTS CODING CONTEST

> Level 1

	Input	Output
Format	*P* *name (repeats for P lines)* *E* *nameA nameB (repeats for E lines)* *N* *queryName (repeats for N lines)*	*answer (repeated for N lines, one per query)*
Types	**P (int)** Number of people in our network **name (string)** Name of one person **E (int)** Number of follow relations in our network **nameA (string)** Name of the person that is followed **nameB (string)** Name of the person that follows **N (int)** Number of queries that follow **queryName (string)** Person whose number of followers we want to know	**answer (int)** number of followers of the given person
Example	*Sadly, example inputs and outputs can get a little too long and there is no room to show them here. Please download the level archive and open the example input and output from there. Thank you!*	