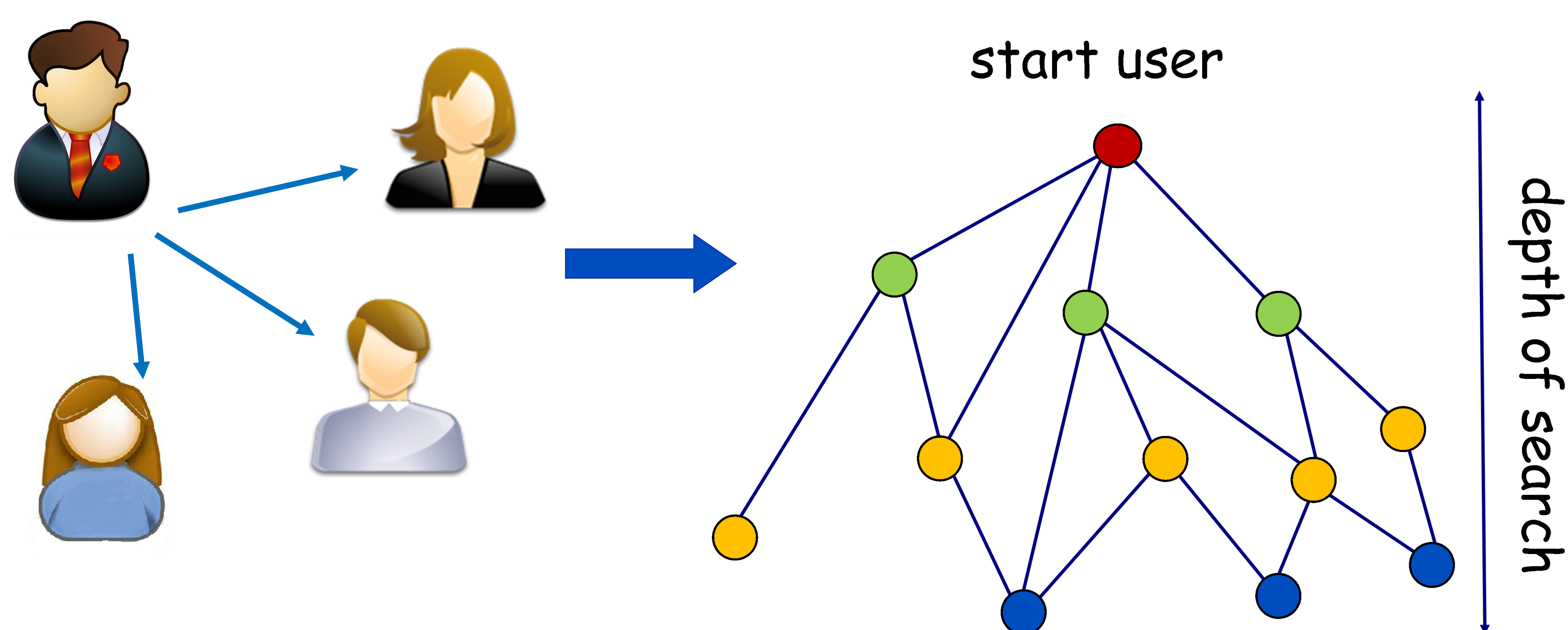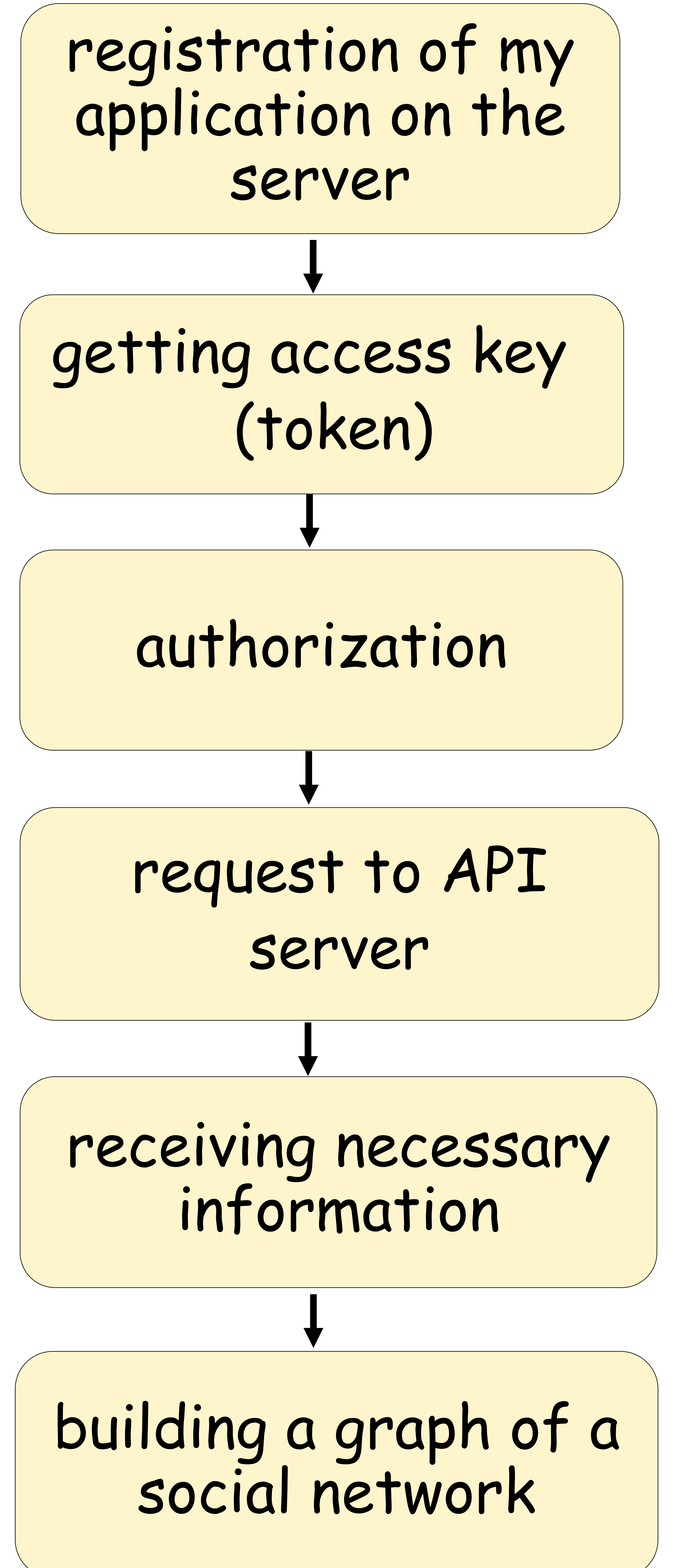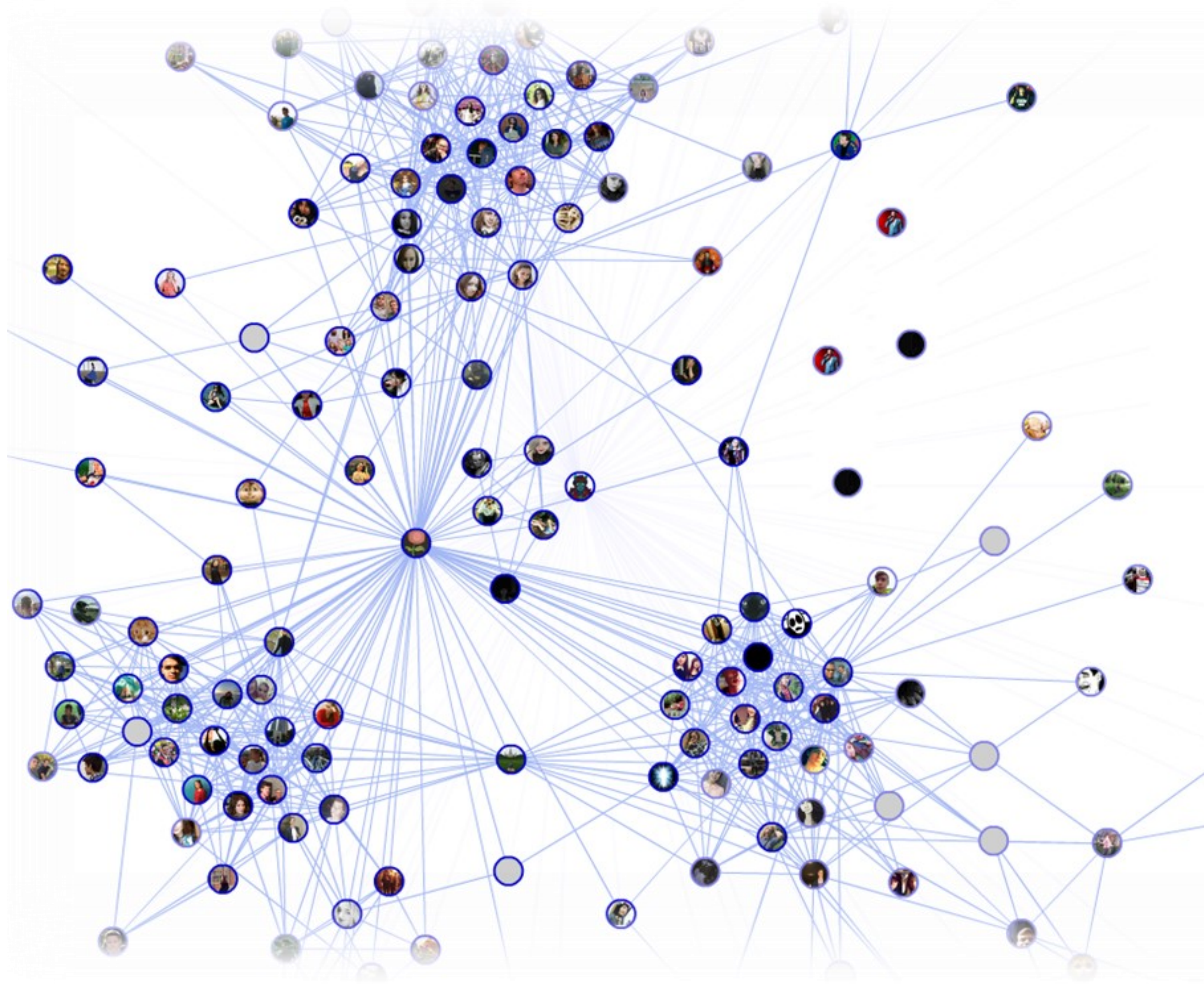# Social network analysis

Social network analysis is one of the most important trends in Sociology.

Social network VKontakte is very popular among Russian-speaking people.
80 million users visit their pages every day.

- social network: VKontakte
- vertices: users of social network
- edges: social connection is maintained

registration of my application on the server

↓

getting access key (token)

↓

authorization

↓

request to API server

↓

receiving necessary information

↓

building a graph of a social network

The principal result of this work is creating a computer program that finds the maximal clique in a graph built on the base of the social network VKontakte.

This can be used for identifying and targeting certain social groups for public purposes as well as commercial ones.

Areas where maximum cliques algorithms are used:

- community detection in networks
- data mining in bioinformatics
- analysis of financial networks
- computer vision
- coding theory
- patterns in telecommunications traffic

Applications of Ramsey theory include results in:

- number theory
- algebra
- information theory
- theoretical computer science
- geometry
- topology
- set theory
- ergodic theory