SMBUD 2021 - Project work

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Suppose you want to build an information system for managing pandemic information for a given country.

DELIVERY #1

The first need to address is to trace contacts between people, to monitor the viral diffusion.

Design, store, and a query graph data structure in a NoSQL DB for supporting a contact tracing application for COVID-19.

You need to record:

- People and their connections:
  - Same-family contact by default
  - Contact tracing app and other devices
  - Explicit data collection (e.g., restaurant, theatre, hospital,…)
- Time and place of the contact (when possible depending on the cases above)
- Personal data of each person (including vaccines, tests, contagion date and place when possible)

Tasks to perform:

- Write the specification and hypotheses of the problem and solution
- Design conceptual model (ER or similar)
- Store a sample dataset in Neo4J (some hundred nodes at least)
- Write basic Queries (minimum 5) and Commands (minimum 3) useful for typical usage scenarios
- Prepare a short report describing the above aspects
- Optional: if you want you can actually implement also some application / UI or similar (a bonus on the mark will apply)

Deliverables to submit:

- Short report as above
- ZIP with the implementation (including the database, as creation script or link to DB dump)

Deadline:

- November 14th 2021