Data Design and Modeling

Università della Svizzera italiana

Project Work

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Project Work

- Group work
- No team changes allowed
- Subsequent assignments
- Maximum 3 points on the final mark
- passed with minimum 1.5 points out of 3

total sufficient mark including written exam = 6 points

minimum on written exam = 4 points

Project work - part 3

- Design, store and query graph data on NoSQL DBs
- Statistical data about virus spreading around the world
- Two options:
  - Use any open data source and import real data about the virus
  - Define your own randomized dataset

Project work - part 3

In case you generate data:

- Information about infected, hospitalized, ICU hospitalized, dead people per day and per location
- Information about tests (positive, negative) by age range, genre, and location
- Location should be at least at country level, plus one more granular level (canton, province, state or so)
- Information about traveling people to/from each country, and share of infected ones
- Occupancy rate of hospital and ICU beds dedicated to COVID
- Description of (national) institutes certifying the respective data

Project work - part 3

In case you use real data:

- Dataset and structure as similar as possible to the one specified above
- Same granularity

Project work – part 3

- Implement the solution in a NoSQL technology of your choice. Prefer a solution not based on Mongo/Neo4J
- Write the specification and hypotheses of the problem and solution
- If using real data: describe source and schema
- Design conceptual model (ER or similar)
- Store the data in NoSQL DB of choice
- Write statistical queries to analyze the phenomenon
- Prepare a short report describing the above aspects

Project work - part 3

- 3 randomly selected groups will present their work in class

- Optional: if you want you can actually implement also some application / UI, especially for visualizing statistical results of queries and/or filtering over the queries
  (a bonus on the mark will apply)

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