Lab: MongoDB – CRUD Operations

Preambule

This lab consists in migrating the Company database we used in the first part of the course (relational databases) to MongoDB (NOSQL databases).

1 Design

We make the following assumptions about the Company database: (a) most operations are reads, (b) most operations (both reads and writes) relate to employees, (c) departments are seldom updated.

Consider the E/A diagram of the database and propose an implementation of the database under MongoDB: collections, corresponding documents and IDs. What are the possible solutions? Which solution do you select and why?

Give a document example for each of the collections you defined.

2 Population

Create and populate the MongoDB database with the 15 employees listed in the script `company.sql`.

To do so, insert the first three employees by executing `insertOne()` at the MongoDB shell prompt. For the remaining employees, create a JS script based on and use `insertMany()`. Run the script with `load()` at the shell prompt.

3 Queries

Answer the questions listed in the script `queries.sql` provided on Campus.

4 Updates

Find the MongoDB commands that perform the following operations:

- raise the salary of all clerks by $300.00
- remove all the employees who don't have a manager
- move the "Accounting" department from New-York to Dallas
- remove all the missions of the employees who live in New-York

Run your commands and check the result.