Backend Hiring Assessment

Datasets: Each of the below datasets have some differences in the field schema

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[salary_survey-1.csv](#)

[salary_survey-2.csv](#)

[salary_survey-3.csv](#)

Exercise - A: Database Design Exercise - Storing Compensation Data

Allowed Technologies: ElasticSearch(NoSQL)

- Create a schema for storing the compensation data provided in one of the above available datasets. The schema should take into account proper design of Index schema Mapping with appropriate types per field.
- Upload at least one dataset to the schema
  - **BONUS Goal**: upload **all 3** salary datasets to the database schema
- Validate that you can perform the following queries. You can export the results of these queries via ES Kibana Console responses(JSON) or attach screenshots of the the output
  - Average compensation of roles where the role is some kind of engineer
  - Average, min, and max compensation per city (if available in dataset)
  - One interesting query of your choice
- Provide the Index mapping chosen and the justification for the chosen mapping
  - A document(PDF) would suffice

Exercise - B: Expose an API for querying compensation data

The goal of this exercise is to design a read-only API (REST or GraphAPI) that returns one or more records from a static set of compensation data.

Allowed Technologies: Spring Boot

- list compensation data via API GET request
  - Filter by one or more fields/attributes (e.g. /compensation_data?salary[gte]=120000&zip_code=11201)
  - Sort by one or more fields/attributes i.e. timestamp, salary (e.g. /compensation_data?timestamp=desc)
- fetch a single record via GET request
  - **Bonus Goal**: return a sparse fieldset (e.g. /compensation_data?fields=first_name,last_name,salary)

Evaluation Guidelines

- A good motivation and explanation of your approach along with a good understanding of its shortcomings and ideas of improvements is as important, if not more important than the execution!
- Readable code and good documentation is appreciated!
- Keep an environment for easy set-up!
- Ask us questions if you are stuck or are having problems!

Submission Details

Deadline: 7 days after task received

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