Take-Home Task for Senior Backend Engineer Position

Background

Scientists need a digital solution to store and identify various items used in their experiments. These items come in different forms and might include samples, chemicals, devices, etc...

A usual practice in laboratories is to store the items in categories. Each category has attribute definitions and each item in those categories should fit into those definitions. You can imagine categories as database tables while attribute definitions are columns. Items are, in this case, the rows in those database tables.

The Task

Please create a REST API application using Java which provides the following functionality:

- Creating categories with attribute definitions
- Creating items in those categories
- Updating items
- Getting items of a category

As described in the background section, you can imagine the above functionality as in visual database design tools (e.g. MySQL Workbench). You are free to make assumptions and come up with your own solution. Keep in mind that we do not expect any UI development from you as this is a pure backend task.

Acceptance Criteria

- The challenge is purposefully open-ended. As long as you stay in the scope of the tasks above and clearly define your assumptions and definition of done, you may take your solution as far as you like. Our only expectation is that you should be able to clearly explain your decisions.

- We understand that not everyone has the same amount of "extra" time to devote to completing this challenge. It is up to you to determine the amount of time you spend on the exercise. In general, we are not expecting you to spend more than 8 hours in this challenge. So that the reviewer understands how you are defining the scope of work, please clearly indicate your solution (including the points you would work on if you had

more time) for the task in a README along with any other pertinent information.

- The whole idea of this exercise is to understand how you approach software development. Assume you are writing production code. Your solution should indicate your way of working.

How to submit your solution

Please upload your solution to your github account and share it publicly with us.

Let us know if you have any questions, and we look forward to seeing your approach.

Good Luck!