Java programming intake

Description

At iO we have an insatiable curiosity and what better way than to build a knowledge sharing platform to help us on our way. Your mission, should you choose to accept it, is to build a new knowledge sharing platform where our iO colleagues can keep their curiosity going. To start off, we would like to have a list of TedTalks for our pilot system. The list of TedTalks is available as a csv file which you should import into the system.

Functional requirements

Backend

For the list of TedTalks we want available for our pilot, we have provided a csv with all the required data. For the backend, it should be able to read the csv file and persist it. Furthermore, it should provide CRUD (Create/Read/Update/Delete) functionality.

- CRUD
  - {C} - Be able to add a new TedTalk
  - {R} - Be able to search for a TedTalk based on
    - Author
    - Title
    - Views
    - Likes
  - {U} - Be able to update a TedTalk based on the id
  - {D} - Be able to delete a TedTalk based on the id

Front-end

- We’re not looking for any front-end implementation for this assignment.
- Should be possible to call the web APIs with a client e.g. cURL, postman

Non-functional requirements

- Java
- Unit tests
- Your framework of choice
- Documentation where needed

Extra requirements

- Database - Choose a non in-memory database and write queries for it.
- Design patterns - Pick a few patterns and apply it.
- Docker - Run your application in a container (a separate one for the db if you have chosen one).
- Tests - Implement integration tests and end-to-end tests and explain some metrics.
- Caching - Implement a caching mechanism.
- API documentation - document your models and operations, so someone without access to your source will be able to use your API.
- API versioning - Implement versioning in your API
- API content type negotiation - Make content negotiation possible.
- API security - Implement security in a broad sense.
- RESTful API - Build your API according to the RESTful principles.

Assignment

For this assignment, we are looking forward to you implementing the requirements given above. We would also like to know what approach you have taken, techniques used and your chosen architecture.

Judging criteria

- Coding style
- Performance
- Security

Things to keep in mind

- Spent at most 4 hours. We don’t want you to go wasting your precious time.
- No worries if you don’t finish it on time, we are not judging you on it.
- We are looking for quality and not quantity, make sure your code is of high quality.
- Your project should be simple to run and include instructions on how to run it.
- If you want to show us your mad skills, don’t hesitate to pick up more requirements in the ‘Extra requirements’ section.

Data

For the dataset, we have provided you a csv file which you need to use.