

Peaches Programming
No BS Guide to Java Spring Boot
Version 2 [mid 2024]
Final Exam

****Download this to your computer & highlight as you complete tasks****

1. Product CRUD (create / read/ update / delete)

a. Required fields:

- i. Id (use a GUID)
- ii. Description
- iii. Price
- iv. Manufacturer
- v. Category
 - 1. Db must have a table for categories that are unique
 - 2. Many products: 1 category mapping
- vi. Timestamp
 - 1. Created
 - 2. Updated
- vii. Region
 - 1. US/CAN
 - a. Enum

b. Read a product

- i. Get a specific product by Id
- ii. Get a list of product by search
 - 1. Product DTO
 - a. (don't send the timestamps)
 - 2. Search criteria (query string param)
 - a. name / description
 - b. Category
 - 3. Order by (query string param)
 - a. Price
 - b. ABC order
 - 4. Limit to the first 10 results
 - a. Expect a lot of products to be in there
 - 5. Cache getProducts for performance for 5 min

c. Create / Update a product

- i. Product Validator class
 1. use on both endpoints
 2. Exception handling to send back good message to the UI -> can choose Spring's default or your own custom response
- ii. External API integration
 1. No profanity in name or description
 2. 3rd party API: Profanity Filter API
 - a. Will need API key
 - b. [Profanity Filter API](#)
 3. Send message back to UI if profanity present

d. Delete product by Id

- i. Delete request -> only send the GUID

e. Logging

- i. Add logging to each endpoint, each exception, each logical flow for the application

f. Testing

- i. Business wants "thorough testing"
- ii. Unit tests for each logical flow of the application
- iii. TDD (test driven development)
 1. Write the unit tests first then the code

g. Security

- i. Only logged in users can create/update/delete products
- ii. But ALL users (not authenticated) can Get Products
- iii. Use JWTs & Security Filter Chain
- iv. 1 Role or 1 Authority saved in your database.
 1. Only the superuser can delete products but any authenticated user can create / update product

Stuck?

Check out the final exam walkthrough (from the previous version of this playlist)

- ▶ Spring Boot Final Exam Part 1
- ▶ Spring Boot Final Exam Part 2
- ▶ Spring Boot Final Exam Part 3
- ▶ Spring Boot Final Exam Part 4

Also try using ChatGPT, Google Gemini.

Or take a break & exercise. (not kidding, this is a documented phenomena).

Or try the rubber duck method.

https://en.wikipedia.org/wiki/Rubber_duck_debugging