IoT Product Engineering Java Interview Question

A shop in London has 2 million IoT tracking devices in the warehouse for sale, of which half needs configured to meet UK standards. A configured device will have a status "READY" and an ideal temperature between (-25'C to 85'C).

The configuration process requires a given IoT device to be associated with a SIM (Subscriber Identification Module) card. The SIM card holds information such as:

- SIM ID - uniquely identify the SIM card.
- Operator code – uniquely identify a mobile operator
- Country – country name, e.g. Italy
- Status – devices status can be Active, Waiting for activation, Blocked or Deactivated.

The shop can sell a device only if it meets the UK government's industry standard.

Task:

Using the Java programming language, develop a REST API that

a. Returns all devices in the warehouse that are waiting for activation.
b. Management endpoints that enable the shop manager to remove or update a device configuration status.
c. Returns an ordered result of devices available for sale.
d. Expected response format should be in JSON.

Please consider your approach to **clean code** and testing (**unit & integration**) when designing your solution. The developed solution should be testable with a step-by-step guide on building and running the application well documented in your README file.

Hint:

Framework: The Vodafone team uses the Spring Boot / Spring framework. However, you are free to use any framework of your choice.

Persistence: You are free to use a relational or NoSQL database in your design; however, ensure that you provide all necessary scripts required to set up and run the developed solution.

Files: Please, provide all files that will be required to build, test or run the developed solution.

Push the developed solution to GitHub or GitLab and provide a link to your repository.