

## The Challenge:

Develop a spring boot (<https://spring.io/guides/gs/spring-boot/>) **server side API** that satisfies the following acceptance criteria:

- A Retail Manager (using a RESTful client e.g. Chrome's Postman), can post a JSON payload to a shops endpoint containing details of the shop they want to add:
  - shopName
  - shopAddress.number
  - shopAddress.postCode
- The server side API uses the Google Maps **Geocoding** API to retrieve the **longitude** and **latitude** for the provided shopAddress
- The server side API then stores details of the shop to an in-memory array of shops. Details should contain:
  - shopName
  - shopAddress.number
  - shopAddress.postCode
  - shopLongitude
  - shopLatitude
- A Customer (using a RESTful client e.g. Chrome's Postman), can get a JSON payload from the shops endpoint containing details of the

shop nearest to them:

- o shopName
  - o shopAddress.number
  - o shopAddress.postCode
  - o shopLongitude
  - o shopLatitude
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- The server side API accepts two URL parameters for the request:
    - o customerLongitude
    - o customerLatitude
  
  - The server side API determines the nearest shop using the Customer's longitude and latitude.

### **Our Guidance:**

We wouldn't ask anyone to do a coding puzzle that we haven't done ourselves, so the people looking at your code understand the problem we're asking to be solved.

It took us around 4 - 6 hours of effort when doing this, so please use this as an indicator of effort required.

We are keen to see how much you think is enough, and how much would go into a Minimum Viable Product. As a guide, elegant and simple wins over feature rich every time.

Do you test drive your code? This is something we value. We want to

see that you are familiar and able to create a build process for your code that means it is easy to build, test and run. Any indicator of design (DDD, or design patterns) would make us smile, as well as BDD and TDD approaches to dev. We currently use Gradle as our build runner.

Please provide us with build, test and run instructions as well as the codebase, preferably via git (e.g. github) showing multiple commits, so we can see the evolution of your codebase.

Please document the server side API so we understand how to use it.

We also consider the extensibility of the code produced. Well factored code should be relatively easily extended. Some questions we'll probably ask:

- How would you make your server side API production ready?
- How you would expand this solution, given a longer development period?
- How would you integrate this solution into an existing collection of solutions used by the Retail Manager?