



CLAY SOLUTIONS B.V.

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Clay test case back-end

Introduction

First of all: Thanks a lot for committing to this assignment! We understand that it puts a claim on your spare time. The reason we ask potential new team members to work on this test is actually quite simple. Clay's goal is to connect 1.000.000 locks to our Cloud platform with only 50 people. So you bet we need the best. All current team members have passed this test so we believe that everyone therefore may expect an equal (or better) level.

What our development team believes in

We sat down to define what is needed to achieve that "1.000.000/50" goal and from a development perspective this is what we believe in:

WE STRIVE TO...

Deliver quality and stable products. Host all products redundant, scalable and securely.
Adhere to strict coding conventions. Get work done in an efficient and fast way and Keep it simple!

Business case

As Clay, we want an interface which allows users to open doors and show historical events to extend our user experience beyond classical tags. As you are applying for a backend position please take into account that your focus should be on the back-end, we expect a well-designed (and working) back-end.

BACKGROUND

In our office we have two doors: the main entrance and the storage room. Every employee should have access to the main entrance, but only a few people, like the director or the office manager, should have access to the storage room where all sorts of valuable things are stored.

Currently, the doors can only be opened if you present a physical object (that we call a tag) to the lock. However, we want to let users open the doors remotely. Maybe the office manager is sick and she wants to let someone into the storage room, or an employee forgot their tag and they need to get into the office.

We would also like certain users to be able to view the history of events: when did someone enter? Or failed to enter? This feature should not be available to everyone.

TAKE INTO ACCOUNT

We have described just one office with 2 doors, but there may be offices with more doors and a different number of users. The back-end should therefore be built with scalability in mind. It should also be ready to support both mobile and web consumers. We strive to use continuous delivery, so the codebase should be ready to support integration in such a tool.

DELIVERABLES

For time-management purposes take into consideration that you are applying for a backend position and that we want to assess your skills on this domain, so no need to create a UI. We expect the solution to be ready to be deployed to production and we want to be able to manage doors and access.

We work agile and according to SCRUM principles so we expect a fully running application. In order to do a good review we would need:

1. The source code preferably in an online repository
2. A video (~ 5-10mins) with a working demo (you can create video using Postman and just hit those endpoints without implementing any kind of UI)
3. 1-page document about the architecture and project decisions (why use technology A or B)

The deadline for submitting your test case is 7 days

Summary

Only people that we believe will fit the team are asked to work on this assignment. So it's not that we simply ask anyone to work on it. That's why we really hope you'll give it your best because we so far in the process believe you could be the great new team mate. Clay strives to improve quality and knowledge in the team. Basically this means that we hope to learn from you, same as you can expect to learn from your future Clay team mates.

Good luck,

Clay