SGNL Developer Test - April/May 2022

Estimated time: approx. 2 hours

The Human Resource department of a large corporation has asked for the installation of a door entry system on each of the company's buildings. The door entry system aims to protect unauthorized access to a department building and greet the employee whenever he/she gains access. The company has 5 buildings in three different countries as described below. Each employee will receive only one RFID card. He/she must tap the RFID card on the reader next to the door in order to gain access to the building.

You are asked to:

- design and implement the database (using MySQL or similar) managing buildings, departments and employees
- write an API using PHP that given the RFID card number will return a JSON record

The database

- The RFID card number is unique and 32 chars long string
- An employee can work in one or more departments
- UK buildings:
    - The **Isaac Newton** building: development and accounting departments
    - The **Oscar Wilde** building: HR and sales departments
    - The **Charles Darwin** building**:** the company headquarters
- USA buildings:
    - The **Benjamin Franklin** building: development and sales departments
- ITALY buildings:
    - The **Luciano Pavarotti** building: development and sales departments
- For an employee we need to store at least the Full name

The API

The specification you have been handed for a microservice associated with this security system is as follows:

```
curl -s 'https://api.domain.com/some/endpoint?cn=not_found | jq
{
"full_name": "",
"department": []
}

curl -s 'https://api.domain.com/some/endpoint?cn=142594708f3a5a3ac2980914a0fc954f | jq
{
"full_name": "Julius Caesar",
"department": ["director", "development"]
}
```

Test data

RFID card number	Employee	Departments
142594708f3a5a3ac2980914a0fc954f	Julius Caesar	director, development

Your solution

You are required to develop and test this endpoint. When returning your solution please include:

- Your database schema
- Your source code
- Details of any apache or other config required
- List of your test cases and data
- Any comments you would feed back about the service