Requirements Documentation

Assumptions

- No "reservation" dates are considered for the rooms. If one is reserved, it is gone until being released.
- You know that potential clients would be able to call the public endpoints using REST or GraphQL but have no preferred choice.
- Each service will run on instances with a maximum of 1 CPU and 1 GB of RAM. Eventual scaling has to happen horizontally in the future, instances cannot be scaled vertically.
- API authentication happens with two static API-Secrets you define (one for public, one for restricted endpoints)
- You will not keep ownership of all services but will hand some over to other teams later.
- You are free to choose SQL and/or NoSQL depending on what you see would fit (Please do not use DBaaS)

If a user relation/info is required we always use the following:

```
{
 "id": "b9fa7d71-548c-4739-8e6a-0931cc218cd1",
 "name": "Jane Doe",
 "role": "USER"
}
```

No data schema is given but if it gives inspiration, a list of available rooms might look like this for example:

```
[
    {
        "id": "d635c003-fffc-4beb-87b8-eaf3458cf772",
        "name": "Economy Single Room",
        "available_amount": 10,
        "required_points": 260
    }
]
```

Requirements

Your proof-of-concept should be able to handle the following cases:

- Using an internal API-Secret, one should be able to increase or decrease the amount of “bonus points” a user has.
- Using a public API-Secret, a client is able to reserve a room (if there are availabilities)
  - If he/she has enough bonus points, the status of this room <-> user relation changes to "RESERVED" and bonus points are subtracted
  - If he/she does not have enough bonus points, the status changes to “PENDING_APPROVAL”
- Each modification to a room availability, reservation or the amount of bonus points of a user is being tracked in a database or equivalent separately.
- Room status changes trigger a text based email to notify us (as service owner) of a change.
  - Note: The actual sending of that email can be left out.
- The whole setup is running by using one command within the terminal.