Simple Booking System for Landlords

What do we want to achieve?

We want to build a simple Booking app for Landlords with the next 5 use cases:

- As a landlord, I can publish an apartment with the fields "title", "description", and "features". List of possible features: "air conditioning", "heating", "elevator".
  - Business rules:
    - All fields are mandatory.
- As a user, I can filter apartments by "features".
- As a user, I can request the booking of an apartment by entering my "name" and "birthdate".
  - Business rules:
    - Users must be older than 18 years old.
    - The apartment must be available (true/false, no need to handle dates).
- As a landlord, when a user requests a booking for any of my apartments, I receive a notification to approve the booking request.
- As a landlord, I can approve the booking request.
  - Business rules:
    - The apartment must be available (true/false, no need to handle dates).
    - Once the booking request is approved, the apartment is no longer available.

Code Expectations

Must have

1. Create a public repository on Github and upload code in the main branch.
2. Easy set-up of the application to be executed (i.e. docker).
3. Create a Restful API to handle the use cases described above with PHP[1] using any framework of your choice (preferably Laravel).
4. Create a SPA using any frontend technology of your choice (ideally ReactJS) to build a simple UI to:
   a. Display apartments and show: title, description, features, and whether it's available or not (true/false)
   b. Filter them by "features".
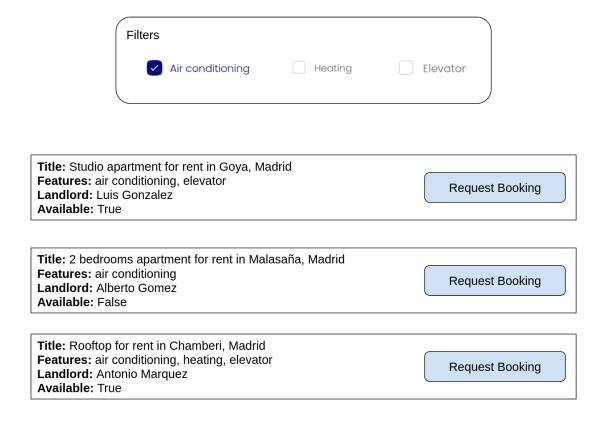   c. Allow a user to request the booking of an apartment.

Nice to have

5. Ensure that the business rules are satisfied with a suite of tests.
6. Show in your code that you have proven experience with Domain Driven Design.
7. Use design patterns to make switching the Notifications system in the future easy. For instance, if we want to switch from Email notifications to SMS, push mobile notifications, etc.
8. Imagine a scenario in which the notifications system is not reliable because it's frequently broken for periods of ~5 minutes. Make sure that your solution avoids this situation from having a negative impact on the business.

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[1] If you feel more comfortable with a different language, go for it!

List of Apartments Screen

Filters

☑ Air conditioning   ☐ Heating   ☐ Elevator

Title: Studio apartment for rent in Goya, Madrid
Features: air conditioning, elevator
Landlord: Luis Gonzalez
Available: True

Request Booking

Title: 2 bedrooms apartment for rent in Malasaña, Madrid
Features: air conditioning
Landlord: Alberto Gomez
Available: False

Request Booking

Title: Rooftop for rent in Chamberi, Madrid
Features: air conditioning, heating, elevator
Landlord: Antonio Marquez
Available: True

Request Booking

Request Booking Screen

Title: Studio apartment for rent in Goya, Madrid
Features: air conditioning, elevator
Landlord: Luis Gonzalez

Name: Roberto Rodriguez

Birthdate: 1990/01/20

Submit