Home Assignment - Fullstack

OVERVIEW

This assignment is composed of 2 parts - Frontend & Backend.

Each part has a bonus section.

Front end should be created using React.

Back end should be created using NestJS.

Some of the things we will assess:

- Design skills (general architecture, separation of concerns, etc)

- Code readability (code style, code comments, etc)

- Data modelling skills

- Presentation/explanation skills

1. FRONT END

OVERVIEW

In this assignment you will create a React application. The application is a “marketing site” that will provide information on all Selina locations and events that take place in each location.

The focus of this assignment is to have a clean and organized project. Both on the application and in the code and file structure. No design is provided but you should aspire to have a ‘clean’ looking app.

Using existing APIs you can find all the information needed to present all selina locations and to present the events of these locations.

Guidelines

No CSS framework

Hooks

Responsive UI: Desktop / Tab / Mobile

API’s to use:

https://locations.selinatech.com/locations

This will return a list of locations including the content of each location.

https://events.selinatech.com/events/aggregated/<LOCATION-ID>

This will return events that take place at a specific location.

You can use location id’s from the first call as parameters for the second call.

SPECIFICATIONS

Main Page

This is the homepage of the app. It consists of 3 parts:

1. Top navigation bar
2. Main section
3. A Footer

Top Navigation Bar

Left side - Selina logo.

Right side - one item “Locations”.

This “Locations” item - on hover - should open a menu of all countries and each country on hover should open a sub menu with all the locations within that country. On clicking a location it should lead to a new page - the “Location Page”.

Main Section

Just a single image

Footer

A footer with black background. 3 random locations in the footer that link to the location page.

Bonus front end 1 - Location Page

A location page presents details of that specific location.

The page consists of:

1. The same Navigation bar,
2. Image Carousel.
3. Content about the location.
4. Event Section
5. Footer

Image Carousel

Images from the location.

Content about the location

- Location Name
- Description
- Other content from the response

Event Section

This section uses the 2nd API to get events per location.

A date picker should allow a user to select a date range with up to a month ahead.

The selected dates filter the results that are provided in the API.

For each event - display its content.

Footer

The same footer with black background. 3 random locations in the footer that link to the location page.

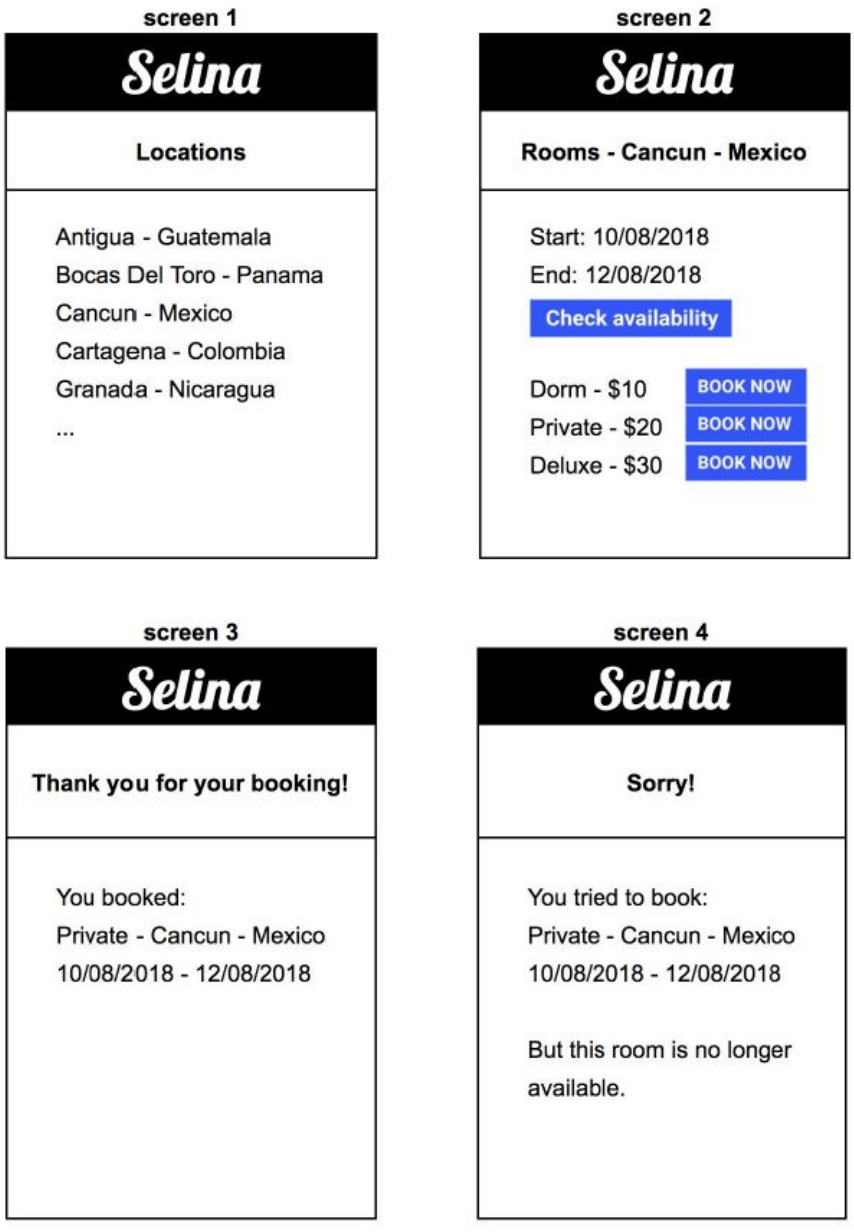
Bonus front end 2

- Create the carousel of images with an animation and a slider.
- Add some buttons with CSS animations to the project
- Also - feel free to surprise us with anything you find cool!

2. BACK END

OVERVIEW

Create API services to support the following online functionality (**no need** to build the UI, these screens are only included to demonstrate the required functionality):



DESCRIPTION:

- Screen 1 shows the locations that have a Selina
- Clicking on one of the Selina locations, will open screen 2
- On screen 2, user chooses start/end date, and after clicking ‘check availability’, available room types will be displayed for the chosen location
- User can click ‘book now’ for one of the available room types
- If room type is still available, booking will be created, and screen 3 will be shown
- If room type is not available anymore, screen 4 will be shown

INSTRUCTIONS:

- Assume a user is logged in already
- Create data model and database
- Create RESTful API services with endpoints supporting:
    - Show list of Selina locations
    - Show available room types for a specific location
    - Create room booking
- Every location has 3 room types (Dorm, Private, Deluxe), with 10 rooms of each type
- Implement algorithm to determine room type availability
- Add some unit tests
- Take into consideration that this system will be used by many users in parallel, so design it accordingly.

Bonus back end:

- Bonus tasks: (you don’t have to do these, only if time permits)
    - 1: support ordering & filtering the list of locations by country
    - 2: create an API endpoint that shows the top 3 of locations based on the number of rooms booked
    - 3: imagine that a location also has a list of activities that are bookable (for example: surf lesson, jungle trekking, etc), adjust the data model and API accordingly (assume no limit in availability of an activity)

Good Luck!!