Development Challenge
Restaurant table booking platform

Introduction

The goal of this challenge is to develop a **restaurant table booking platform** for **Couraça**. The platform should support both customer-facing and staff-facing functionality.

1. Challenge Goals

The web platform should allow the following functionalities.

As a customer:

- Make a reservation by providing:
  - Name
  - Phone Number
  - Date & time
  - Number of guests
  - Additional notes

- The system should either:
  - Automatically assign an available table, **or**
  - Allow the customer to choose a table manually from available slots

As an admin/staff:

- Secure login and authentication are required
- View all reservations (both upcoming and past)
- Cancel an existing reservation
- Ensure no double-booking (no two reservations for the same table at overlapping times)
- View a daily summary including:
  - Total reservations
  - Total guests
  - Tables occupied vs available
- Define and manage the restaurant's total seating capacity (tables and/or seats)

2. Extra Features (Optional)

Candidates may implement additional features to demonstrate creativity and problem-solving skills:

- Edit/update reservations
- Data visualization with charts (e.g., bookings per day/week/month, occupancy rate, reservations by table size).
- Search or filter reservations by:
    - Date (day/week/month)
    - Customer name
- Waitlist management
- ER diagram of the database
- Anything you might want to add :)

3. Phases of Development

The project is divided into frontend and backend phases, detailed below.

3.1 Frontend Development

During the frontend phase, we expect web pages that allow users to add, view, and analyze their financial transactions. You are free to use any CSS framework such as Tailwind, Bootstrap, or any similar one you are familiar with.

For frontend development, you should use a modern JavaScript framework such as React, Angular, or VueJS. If you are new to these, we recommend React, a JavaScript library for building interactive web applications.

3.2 Backend Development

For the backend, you should develop a server that responds to frontend requests and integrates with a database to store information about reservations data. You are free to use any backend technology you are familiar with, such as:
- Django
- Ruby on Rails
- .NET
- ExpressJS

For the database, you can use relational databases like PostgreSQL and MySQL, or non-relational databases like MongoDB. If you are unfamiliar with any of these, we recommend using Django or Ruby on Rails. Again, you are welcome to check the material we selected for learning.

4. Tips

Take advantage of your strengths. If you feel that backend development is not progressing as expected, focus more on the frontend, and vice versa. You are free to implement additional features that showcase your problem-solving skills.

5. Delivery

For the delivery, you will need to send the following to the email guilherme.cabaco@jeknowledge.com by the 19th of October:

- The GitHub repository link or a .zip file containing the codebase.
- A README.md file with setup instructions and any relevant details about the project.

You will need to present what you have completed in the hard skills interview.

Conclusion

We encourage you to approach the challenge creatively and practically, delivering a user-friendly restaurant table booking platform. Focus on completing the essential tasks, while also exploring additional features if time allows. Good luck!