



## Backend Service Development

### # Objective

Build a **Booking Service** which allows you to choose seats and book.

### # Technology stack to be used

1. Any Golang web framework or NodeJS framework
2. Data store - Postgres or Mysql or any other
3. Hosting:
  - a. Option 1 - Host it on AWS or GCP and expose the endpoint
  - b. Option 2 - Containerize using Docker
4. Share the code via Github or Bitbucket or Gitlab
5. Test the app using any REST client such as Postman. Share the Postman collection of the REST APIs created.
6. Deadline - 7 days from receiving the assignment
7. Assignments will be processed on first come first order. So try to submit as soon as possible as we have limited positions open.

### # Assignment Specs:

A list of seats and the seat class will be provided. Every seat class will have associated pricing with it. Pricing will be in the format of min price, max price and normal price.

During the booking process when Seat is selected we should retrieve the pricing for that seat based on the number of bookings that have already happened for that seat class. If the seats in that particular class that was chosen are 60% full, then use the max price for all further seats booked. If the seats in the particular

class that was chosen are 40% to 60% full, then use the normal price for the seat booking. If the seats of the particular class that was chosen for less than 40% then choose the min price.

If there is no price available for that range, choose the next available price. **Ex.** If a seat class is only 30% full, but there is no min\_price for that class, use the normal\_price.

## **APIs to be build**

### **# Get All Seats**

GET /seats

Return all the seats, ordered by the seat class and also return a boolean is\_booked for every seat.

### **# Get Seat pricing**

GET /seats/id

Return the seat details along with the pricing for the seat based on the class.

**Note:** The pricing should be returned based on the bookings previously made for that seat class.

- Less than 40% of seats booked - use the min\_price, if min\_price is not available, use normal\_price
- 40% - 60% of seats booked - use the normal\_price, if normal\_price not available, use max\_price
- More than 60% of seats booked - use the max\_price, if max\_price is not available, use normal\_price

### **# Create Booking**

POST /booking

Create a booking for the selected seats.

Accept an array of seat ids to be booked, name and phone number of the user.

Create a booking if those seats are not previously booked. Return relevant error message if any seats chosen are already booked.

Upon successful booking, return the booking ID, and the total amount of the booking.

### # Retrieve Bookings



GET /bookings?userIdentifier=<email or phone number>

Return all bookings created by the user. The API should search by email or phone number. Any one has to be provided. Return error if no user identifier is provided.

### # Bonus features

1. Notification Integration: Send out booking confirmation notification (Email or SMS) when the booking is created. You can use third-party service providers like Twilio, Sendgrid, Textlocal etc.
2. Write a script to upload the default data to your database by reading the CSV file.

### Data for Seats (*Please export these as CSV files and use*)

1. Seat List -  Seats
2. Seat Pricing -  SeatPricing

If you have any questions feel free to drop a mail at [tech-hiring@theflurn.com](mailto:tech-hiring@theflurn.com)