

P.A INFOTEL COMPANY LIMITED

Assignment

Front End Web App Dashboard for Hotel Administration

# Develop backend for a hotel booking application using NestJS. Swagger UI is required, please provide an endpoint with detailed documentation.

The deadline for this assignment is Friday 09th August 09:00 AM. Reply-all to the email in which the assignment is sent with a GitHub Link to your repo. Please make sure to have a detailed README explaining any design choice, technology use, refresh-token implementation, and API endpoints provided.

# There are three tasks:

1. **Authentication:**
   1. Basic Auth: email + password. Let the user signup with an email and password.
   2. JWT authentication: attach access and refresh tokens to HTTP-only cookies so client does not need to send access token to backend. Design a refresh-token rotation scheme to automatically generate new access-refresh token pair when access token is expired
   3. Google login
2. **XML processing:**

Given 10 XML files in the assignment folder, write code to produce JSON data with the following format. Write a GET API with path /booking/<confirmation\_no>. This path is a protected route with JWT guard. which will produce data from the corresponding file.

To test your algorithm capability, please write your own XML-JSON converter using any iterative/recursive approach of your choice, optimizing for Big-O algorithm complexity. In the README file, please describe in english your algorithm, what it does and your design choice. Additionally, write a separate converter code that uses a library of your choice.

In short, you should write **2 separate code pieces to convert XML-JSON**: one that uses a third-party library, and one that does not.

***\*Make sure your code can process any XML file given (treat them as test cases). DON’T write 10 different code pieces to process 10 XML files.***

{

"confirmation\_no": "531340616",

"resv\_name\_id": "37596129",

"arrival": "2024-07-24",

"departure": "2024-07-26",

"adults": 4,

"children": 0,

"roomtype": "V2GDK",

"ratecode": "BGBARGIB",

"rateamount": {

"amount": 9831780,

"currency": "VND"

},

"guarantee": "GRD",

"method\_payment": "VA",

"computed\_resv\_status": "InHouse",

"last\_name": "Smith",

"first\_name": "Alan",

"title": "Mr",

"phone\_number": "+84123456789",

"email": "test@email.com",

"booking\_balance": 39327120,

"booking\_created\_date": "2024-07-22"

}

1. **Payment integration:**

Write a POST payment api with path /payment/<confirmation\_no> that lets the user pay for the rate amount listed in the XML. This path is a protected route with JWT guard.

For example if the client calls {{hostname}}/payment/531340616, the client will be redirected to the Vietcombank payment page with the payment amount of 9831780 in VND.

When the transaction is successful, the client will be redirected to a success-page on the frontend hosted in localhost:3000/payment-success. Else, if failed, the client will be redirected to localhost:3000 /payment-fail.

Please follow the Vietcombank document attached.