



# BACKEND CHALLENGE

## INSTRUCTIONS

1. Please take the time to read through the instructions before attempting assignment.
2. This assignment has 3 main tasks.
3. You need to share a public GitHub repository with the complete source code of the project
4. Share a README file with complete instructions explaining how to set up, configure, and run the web application.
5. You need to share a PostMan collection & a sample env file along with your solution
6. Document the code with comments to provide explanation and improve code readability.
7. We will be checking for plagiarism & Github clones, submissions with the same will be rejected outrightly.
8. We prefer submission in NestJs. However, if you can't do it in NestJs, please submit it in NodeJs. ([Reference link](#) for NestJs)
9. Once you are done, please email your assignment at [hiring@zagnow.in](mailto:hiring@zagnow.in)
10. The submission deadline is mentioned in the email of which this PDF was a part.

**Note:** *Please make sure the code is running properly without errors before sharing.*



## Context:

There is a restaurant listing platform that provides information about various restaurants and has features such as restaurant menus, images, addresses, features, pricing, book a table, call for ordering, user-reviews, etc.

It also helps customers to book a table for dining or call the restaurant for ordering, basically an interaction between businesses (vendors) and users (customers).

## Objective:

- a. Your task is to Design and Implement a Web application for the same.
- b. The application should include **user authentication**, **CRUD operation** for **business listings** and **reviews**

## Task:

### 1. User Authentication

- a. Implement JWT authentication
- b. Create 3 user authorisation levels for role-based access (Business Owner, User & admin)

### 2. Listing Management

- a. Create CRUD operations for business listings
- b. Business owners should be able to create their listings and should have details such as:
  - i. Listing name
  - ii. Business phone
  - iii. City, address
  - iv. Images

### LISTING ACCESS GRID

ROLE	CREATE	READ	UPDATE	DELETE
Business Owner	Yes	Yes	Yes	No
User	No	Yes	No	No
Admin	Yes	Yes	Yes	Yes



### 3. Review Management

- a. Implement a review system where only logged-in users can reviews for businesses
- b. Allow business owners to respond to reviews

**REVIEW ACCESS GRID**

ROLE	CREATE	READ	UPDATE	DELETE
Business Owner	No	Yes	Yes	No
User	Yes	Yes	Yes	Yes
Admin	Yes	Yes	Yes	Yes

### Deliverables:

1. Implementation of JWT authentication with role-based access
2. Role-based authorisation - CRUD operations for listings and reviews

### Evaluation Criteria:

1. Correct implementation of CRUD operations, user auth and role-based access
2. Effective review system with average ratings and the ability for business owners to respond
3. Feature-rich and visually appealing dashboards for both business owners and users
4. Clear documentation, including API documentation and a comprehensive README
5. Code quality, organization, and adherence to industry best practices
6. Fully functional API so that we can check the endpoints in Postman at our end.

**Good luck!**