**2023\_Task\_Backend-Engineer**

Challenge Details

Hi there!

Thank you for your interest in applying for the Backend Engineer posit on at House of Dishes and

welcome to the second round of the interview process. Here we are looking to understand the

candidate’s thought process, coding ability, documentat on and problem-solving skills.

You have 4 days(96 hours) from the receipt of this document to submit the challenge

Please Note: Contents of this document are conﬁdent al. You are not allowed to share this document

with the outside world.

**Problem Statement**

**Build Backend and Frontend as per the below descript on:**

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Candidates expected to implement required features for a library management system based on

the provided scenario.

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Candidates have to implement web REST APIs for each required act on related to the scenario.

Proper JWT based authent cat on should be implemented in each protected web api endpoint.

Ensure a user can only perform act ons using apis which are allowed to the role assigned to that

user.

**Scenario(API)**

The are two roles in the system; LIBRARIAN and MEMBER

1. As a User

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I can sign up either as LIBRARIAN and MEMBER using username and password

I can login using username/password and get JWT access token

2. As a Librarian

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I can add, update, and remove Books from the system

I can add, update, view, and remove Member from the system



3. As a Member

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I can view, borrow, and return available Books

Once a book is borrowed, its status will change to BORROWED

Once a book is returned, its status will change to AVAILABLE

I can delete my own account

**Frontend**:

Design and develop frontend to implement the API. Showcase all the features in the frontend.

**Instruct ons**

**Frontend**

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Use simple bootstrap components (addit onal libraries and css can be used but does not have

any weightage in the review).

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Only HTML, CSS and JavaScript are used. No framework.

Host the frontend as a simple website in a github.io / gitlab page or any other host.

The codebase should be hosted in a public git repo (GitHub / gitlab) .

The applicat on size should be as small as possible (including JS libraries and css ﬁles).

All the libraries and css should be in the local (repository). No external website/library links

should be present including JS libraries and css.

**Backend (API)**

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Host the backend and database using free/paid service providers. For eg: heroku or any other.

Create the git public repository for both frontend and backend.

**Documentat on:**

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Add detailed structure of the tables.

Add a database diagram represent ng relat onships between tables.

Document each API with requirements, output and various errors.

Document the front end and ﬂow of the sof t are.

Document all host ng instruct ons.



**Deliverables**

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Host the backend and database using free service providers like heroku.

Host the frontend using free service providers.

Create the git public repository for frontend and backend.

Provide all the four links .

Link to the public git repo.

Documentat on ﬁle detailing the design approach and choices used in the code design should

also be added in the git repo.

