



WireApps

Back-End Software Engineer

Back-End Technical Assessment - Node.js

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Document: ***Back-end Technical Assessment - Node.js***



Document

This assessment is part of the interview screening process for Back-end Software Engineers. To face this assessment, a candidate will have completed the first interview panel. Upon successful completion of the assessment, the candidate will be guided through the next stage of the interview process.

Scenario

There is a pharmacy, where the main people are the owner, managers, and cashiers. They need a system to make their business processes more efficient by reducing their workload that has to be performed manually.

This new system should be able to:

- Authenticate Users using Username and Password
 - ❖ Must include Name, Username, Password, Role (Feel free to add any other appropriate fields)
- Manage Inventory of Medication
 - ❖ Query existing medicines
 - Must include Name, Description, and Quantity (Feel free to add any other appropriate fields)
 - ❖ Insert and update records
 - ❖ Soft delete medication records
 - ❖ Delete records
- Manage Customer Records
 - ❖ Query existing customers
 - ❖ Insert and Update customer details
 - ❖ Soft delete customer records
 - ❖ Delete customer records
- Allow actions based on User Roles
 - ❖ All users can query medication records and customer records



- ❖ Only the Owner can insert, update, soft delete and (permanently) delete medication records and customer records. Managers and Cashiers should not be able to insert or (permanently) delete any data.
- ❖ Managers can update and soft delete medication records and customer records, but they cannot insert or (permanently) delete data.
- ❖ Cashiers can update medication records and customer records, but they cannot insert, or delete data



Questions

1. What would be the main API endpoints you would create when building this solution?
 - a. List them in a table like below:

HTTP Method	URL	Description
GET	/api/v1/users	Find all Users

2. What are the data models you would create to implement this solution?
 - a. Provide an ER Diagram or Class / Interface / DDL / Schema

3. What are the frameworks / libraries you would use to build this solution?
 - a. List them in a table like below:

Name of the package	What would you accomplish using that?
ExpressJS	Web Application Framework

4. What are the main programs and tools you would use to build this solution?
 - a. List them in a table like below:

Name of the program	What would you accomplish using that?
Visual Studio Code	IDE

5. What is the approach you would use to implement User Permissions based on User Roles?
 - a. Please explain the steps in point form using plain English.
 - b. You may provide code snippets where you feel appropriate.