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Part 1: Technical Assessment

Batch Form

Model

10/04/2024

Quantity

License Level

Comment (Not required)

Submit

Dear Candidate,

Welcome to the technical assessment for the Web Developer position at our organisation.

This task aims to evaluate your skills in developing a web application using NextJS, TypeScript, and Docker.

Please carefully follow the instructions below.

Task Overview:

Building a Containerised NextJS Application with PostgreSQL Database.

Frontend Requirements:

Replicate the provided form in NextJS.

Implement the form on the index route, which is the root directory of your site (e.g., localhost:3000/).

Utilise TailwindCSS for styling to a reasonable extent.
Ensure the use of TypeScript in your implementation.

The form should include:

- A dropdown for the "Model" field with options:
 1. Model 1
 2. Model 2
 3. Model 3
- A dropdown for "License Level" ranging from 0 to 9.
- An input field for "Quantity" (integer).
- Other necessary form fields.

Frontend Hint:

- Make proficient use of flexbox for layout purposes.

Docker Requirements:

Containerise the NextJS portion, ensuring it runs in its own Docker container.
Set up a PostgreSQL container to host the database.
Use Docker-compose to define your application in a YAML file.



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Backend Requirements:

Utilise NextJS's server environment as your backend.

Implement Prisma as your ORM for querying the PostgreSQL database.

Define your database schema using Prisma's schema file.

Form Submission Logic:

When the form is submitted, in the DB an entry in a 'batches' table should be created. The entry should correctly contain each of the submitted fields: model, date, license level, quantity, and optional comment.

In another table called 'machine_numbers', for the quantity provided, create an entry with a unique random string called 'serial_number' and make sure to create a relation to the associated batch.

(E.g., On form submission a row is inserted into 'batches', and if the quantity was 5, then 5 rows would be inserted into 'machine_numbers').

Submission Guidelines:

Create a New Repository:

- Initialise a new GitHub repository for this task (do not mention FCL within the code base).
- Ensure the repository is set up with a Next.js project, and the form is accessible at the index route (e.g., localhost:3000/).

Evaluation Criteria:

- Successful replication of the provided form with the specified features.
- Proper use of NextJS, TypeScript, and TailwindCSS.
- Correct implementation of Docker containers using Docker-compose.
- Prisma integration for database operations.
- Handling of form submissions and batch creation.