Pixaera Full Stack Coding Challenge

Overview

This challenge is designed to assess your ability to build a full-stack web application using React, NestJS with TypeScript, TypeORM, and PostgreSQL. You will create a simple Todo application that includes user authentication (email/password) and allows authenticated users to manage (add/remove) their todo items.

Requirements

- **Frontend (React):**

  - Implement a login page where users can log in using their email and password.
  - Implement a registration page where new users can sign up by providing their email and password.
  - Implement a protected home page that is accessible only to authenticated users. This page will display the user's list of todo items.
  - On the home page, provide a form to add a new todo item and the functionality to remove existing items.
  - Use React Router for navigation between the login, registration, and home pages.
  - Implement state management as you see fit (Context API, Redux, etc.).

- **Backend (NestJS with TypeScript):**

  - Implement authentication using email and password.
  - Securely store user passwords in the PostgreSQL database using TypeORM.
  - Implement JWT for handling authentication tokens. Generate a token upon login and require it for accessing the protected routes.
  - Use TypeORM to model and interact with the PostgreSQL database.

Evaluation Criteria

- **Functionality:** The application should meet all the specified requirements.
- **Code Quality:** Your code should be clean, well-organized, and properly commented.
- **Security:** Implement proper security measures for authentication and protect sensitive routes.
- **Database Design:** Efficient use of database tables and relationships.
- **Error Handling:** Properly handle and display errors on both the client and server sides.

Submission Guidelines

- Provide a GitHub repository link containing the source code for both the frontend and backend parts of the application.
- Include a README file with setup instructions on how to run your application locally.
- Document any assumptions or design decisions you made during the development process.

This challenge is an opportunity to showcase your full-stack development skills, focusing on modern web technologies and best practices.

Good luck!