

**Please Note:**

**All responses submitted in this test/questionnaire are subject to analysis for AI-generated content. Candidates are expected to provide original work. Submissions identified as AI-generated or lacking authenticity may be disqualified or result in further review.**

## Full-Stack To-Do List Application Challenge

### Project Overview

Create a full-stack To-Do List application using Node.js, React, and a database of your choice. The application should allow users to manage their tasks by adding, editing, and deleting them. This challenge will assess your full-stack development skills and adherence to best practices.

### Project Requirements

#### 1. Git Repository and Commits:

- Create a public Git repository on GitHub, GitLab, or a similar platform.
- Make meaningful and organized commits throughout the development process. Each commit should have a clear purpose.

#### 2. Database Setup:

- Use a database of your choice (e.g., MongoDB, MySQL, PostgreSQL).
- Design a schema with the following fields:

- id (auto-increment)
- title (string, 255)
- description (text)
- created\_at (datetime, default to current timestamp)
- updated\_at (datetime, default to current timestamp)

#### 3. Backend API:

- Implement CRUD operations (Create, Read, Update, Delete) for tasks using Node.js.
- Expose RESTful API endpoints for managing tasks.

#### 4. Frontend Application (React):

- Create a user-friendly web interface using React.
- Display a list of tasks.
- Add a new task with a title and description.
- Edit existing tasks.

- Delete tasks.

## 5. Docker (Optional):

- Create a `Dockerfile` for both the backend and frontend.
- Use `docker-compose.yml` to containerize the full application.
- Provide instructions on how to run the application using Docker.

## 6. Showcase Your Expertise (Optional):

- Add any additional features or improvements that demonstrate your expertise, ex: Unit tests etc.
- Consider implementing advanced features such as user authentication, task prioritization, due dates, categories, or any other innovative features.
- Provide clear explanations and documentation for the added features.

## 7. README.md:

- Include a detailed README.md in the repository that explains how to:
- Install and run the application locally.
- Deploy the application on GCP.
- Navigate and use the To-Do List application.

## Deliverable

A public Git repository containing the full-stack To-Do List application:

- Organized and meaningful commits that demonstrate your development process.
- A README.md file with detailed setup instructions and explanations.
- Docker configuration (if applicable).

## Evaluation Criteria

Candidates will be evaluated based on:

- Code quality and organization.
- Database schema design.
- User interface design (React).
- Proper usage of Node.js for CRUD operations.
- Use of Docker (if applicable).

This challenge aims to assess your full-stack development skills, database management, and ability to create a functional web application. Good luck, and happy coding!