

# Case Study Task: Full Stack Developer

## Project Overview:

You are tasked with creating a full-stack web application that manages a collection of items. The application should have a front end developed using Angular and a back end developed using C# WebAPI. The data to be managed could be related to books, magazines, groceries, or any other type of items.

## Front-End Requirements:

Angular Framework: Use Angular to build the front end of the application.

UI Library: You are free to choose any UI library or styling method for the project.

Routing: Implement routing to navigate between the table view and the form for creating/editing items.

Table View: Display a table that shows the list of items fetched from the backend. If there are no items, display a placeholder.

Form: Create a simple form with a few fields to add/update data. Utilize Reactive Forms for form handling and include basic validation.

## RxJS Usage:

Demonstrate your proficiency in using RxJS for handling asynchronous operations, such as fetching data and managing state within the application.

## To showcase more of your knowledge and skills you may add those:

1. Try to use Signal API (maybe combine RxJS and Signals)
2. Use the new template Control Flow
3. Add error handling
4. Think of good code quality (DRY, SOLID)
5. Use state management of any kind
6. Cover code with testing

## Back-End Requirements:

IDE: Use either Visual Studio Code or Visual Studio Community Edition for developing the C# WebAPI.

WebAPI: Develop a C# WebAPI project to handle backend operations.

CRUD Operations: Implement methods in the WebAPI to perform CRUD operations (Get, Insert, Update) on the data.



Persistent Storage: Use any form of persistent storage such as SQL, NoSQL, CSV, XML, or TXT to store and retrieve data.

Dependency Injection: Utilize Dependency Injection in your C# WebAPI project.

### **GitHub Repository:**

Version Control: Push the complete project to a GitHub repository.

Repository Access: Add the following GitHub users as reviewers or make the repository public: **maciejrakowskihumanoo**, **ihor-shturmov** and **louis-humanoo**

### **Timeframe:**

Complete this Case Study within a maximum timeframe of 6 hours.

### **Additional Notes:**

- Ensure that the project is well-organised, follows best coding practices, and includes appropriate comments/documentation.
- Consider error handling on both the front end and back end.
- Provide clear instructions on how to run the application locally.
- Feel free to use any additional libraries or tools that you find necessary.

### **Evaluation Criteria:**

- Adherence to requirements.
- Code quality, organisation, and documentation.
- User interface design and functionality.
- Proper usage of Angular, RxJS, and C#.
- Effective use of dependency injection.
- Correct implementation of CRUD operations.
- GitHub repository structure and access.

### **Submission:**

Share the GitHub repository link with the reviewers upon completion. Send your work back to us once completed.

*Good luck, and we look forward to reviewing your full-stack development skills!*