

## DEVELOPMENT ASSESSMENT Frontend and Backend Integrated

### Concept Demo Web App

Create a demo web app concept including basic documentation on Functional, Logical and Technical design/architecture choices. Documentation requires at least a diagram explaining system architecture(s) and a diagram explaining software architecture(s).

Use additional images and text as you think useful, valuable, and explain. Please consider handing over this project to someone who will add more functionality.

So, hand it over like you would like it to be handed over to you.

### The Concept: Your Grocery List

The demo web app concept we require is a grocery list application where a user can add, remove, and tag items to shop on their grocery list. The data source resides on the backend, and the frontend is only used for user interaction and data updating. Please make a nice, clean split between front and backend to allow new frontends to be built upon the same backend. Or even the backend to be swapped for a different implementation.

### Functional

The application has the following functional user stories:

1. A user can register with username, full name and password.
2. A user can login with the registered username and password.
3. Users can see their grocery list. Do not allow to load products of other users.
4. A user can add a product to their grocery list.
5. A user can remove a product from their grocery list.
6. A user can tag a product to their grocery list (like while shopping, buying in store and putting it in basket).
7. A user can un-tag a product from their grocery list (like while shopping, putting it back from basket to display).
8. Users can logout.
9. If there is not an active session, the user cannot see any product. Login is mandatory.

### Technical \*

The application has the following clean separate technical implemented parts:

- Frontend using web technologies like HTML5, CSS3, JavaScript
  - *TypeScript/CSS preprocessor if you know any.*
- Whatever framework or library like React, Angular, Vue, etc.
- Backend (preferably using C#, Java, Node.js) for storing the groceries persistent in a database.
- Database of your choice like SQL Server, Maria DB, Oracle, Mongo DB, etc.
- A minimal REST interface using JSON to connect frontend and backend.

Preferably keep things simple, technically nice, user friendly but not too fancy. We will not judge your visual design skills; we will assess your overall professionalism and technical capabilities on this demonstrator.

### Source

The application source should demonstrate your knowledge about modern software development as well as the level of your capabilities to apply them in a semi life-like scenario like this demonstration. Feel free to use modern things such: modern software patterns, modern syntax.

If you know git, let us know, by storing the code on a git remote repository (*commit message self-explained*).

### Language

We will appreciate if you use English on the user interface and code (classes, endpoints, database, etc.).

### Professional

Do include all your design choices, documentation, and other information/documentation to show your capability in applying your knowledge. Please note that you will be evaluated as a software developer, which is much broader than just the code you've created.

### Deliveries

You have until Sunday night to complete this assignment.

You may send partial results of your work for each phase of development. Requirements clarification (questions), Analysis (documentation with diagram), Code (can send separated progress for back and front, still if not finished).

You can store your code in a remote repository.

Please ask questions up front if things are unclear or if you have any other questions.

**Good Luck!**