Portfolio Assignment: Develop a web application

By

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1 Finalization phase

For the web application exercise I chose to develop a digital cookbook. In the beginning I only knew what I wanted it to look like. It was clear to me that there should be a starting page where the user can choose between adding or searching for a recipe. By clicking on the 'add recipe' link three text areas are loaded to the page where the recipe name, the needed recipe ingredients and the instructions on how to prepare the dish can be entered. Below of the text areas is a submit button, which will add the recipe to the database. From this page as well, the user can navigate to the 'search recipe' page, by clicking the link 'search recipe'. On this page there is only one text area in which the user can enter an ingredient and recipes which include this recipe will show up. I also wanted to include a food picture to have a nicer overall appearance.

The first challenge for me was to figure out which Web Component Framework to use since I am completely new to this field and have no practical experience so far. After some research on the web, I decided to use the Vue.js framework for the front-end which seems simple and at the same time sufficient for my needs of creating this kind of application. By choosing this kind of framework for the front-end of my application it was possible to use HTML and CSS for the visual aspects of the application and JavaScript for the dynamic aspects of it.

For the back end I chose to use an SQLite database, since I already came across SQL databases in a different course and according to the SQLite website it is small, fast, self-contained, highly reliable and a full-featured SQL database engine. A Node.js and Express.js are implemented as the backend server and API, to make communication between front-end and back-end possible.

The SQLite database stores the recipes with their name, ingredients, instructions and additionally creates an ID, so every recipe is distinguishable from another. The API POST/recipe method takes the input from the text areas and inserts a recipe into the SQLite database. The GET/recipe method uses the input from the search text area and selects the recipes which include a certain ingredient.

Getting practical and starting coding the application, I used Visual Studio Code as IDE. I had to install Vue, node.js, npm (Node package Manger), SQLite, express, axios and body-parser before I was able to start coding the app. For this I did ask ChatGPT for help where I used the following prompt: "I want to build a web app using vue.js, where I can add recipes to a SQLite databank and then search for recipes with specific ingredients". For me this was helpful to get started with the project, but I still had to make several adjustments in order for the application to work and look good. This was probably the most challenging part for me of this task, getting the application being responsive so it looks good for different window sizes and

also looks good and is easy to use on a mobile device. I was thinking about implementing a bootstrap template but then decided to use my own CSS stylesheet in the app. After this I would say my digital cookbook web application is finally ready for use.

The figure below shows a simplified structure of the web application which I had in mind from the beginning of development.
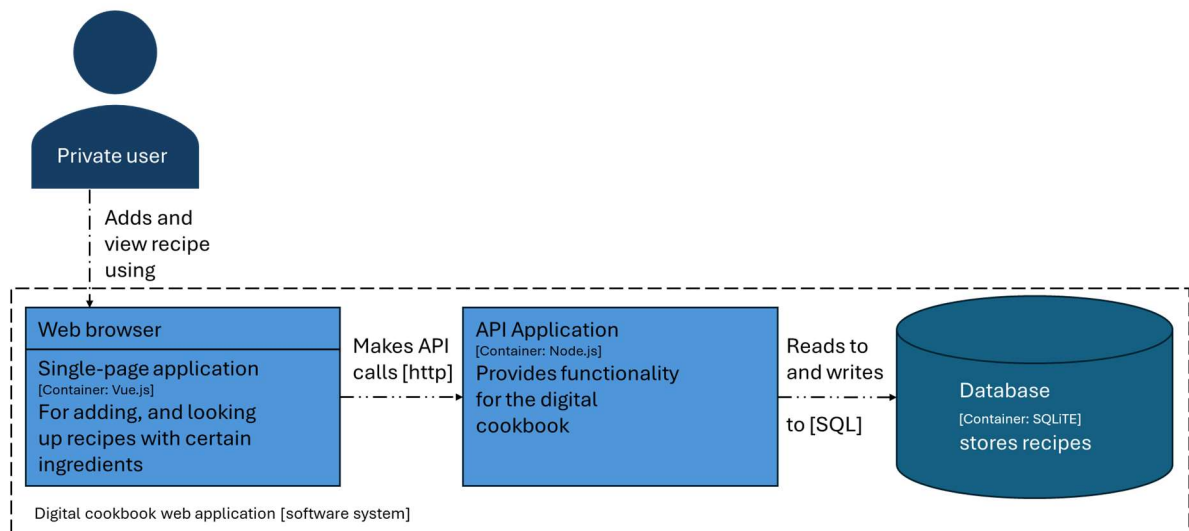

Figure 1: Container diagram for the digital cookbook web application

I did not change this during working on the application because it still is sufficient and serving the needs of what has to be possible to do. Of course, the application could be extended in order to be able to adjust the recipes in the database further, e.g. delete or edit an existing recipe, but for now and for the initial idea I had it serves its purpose.