Foodover

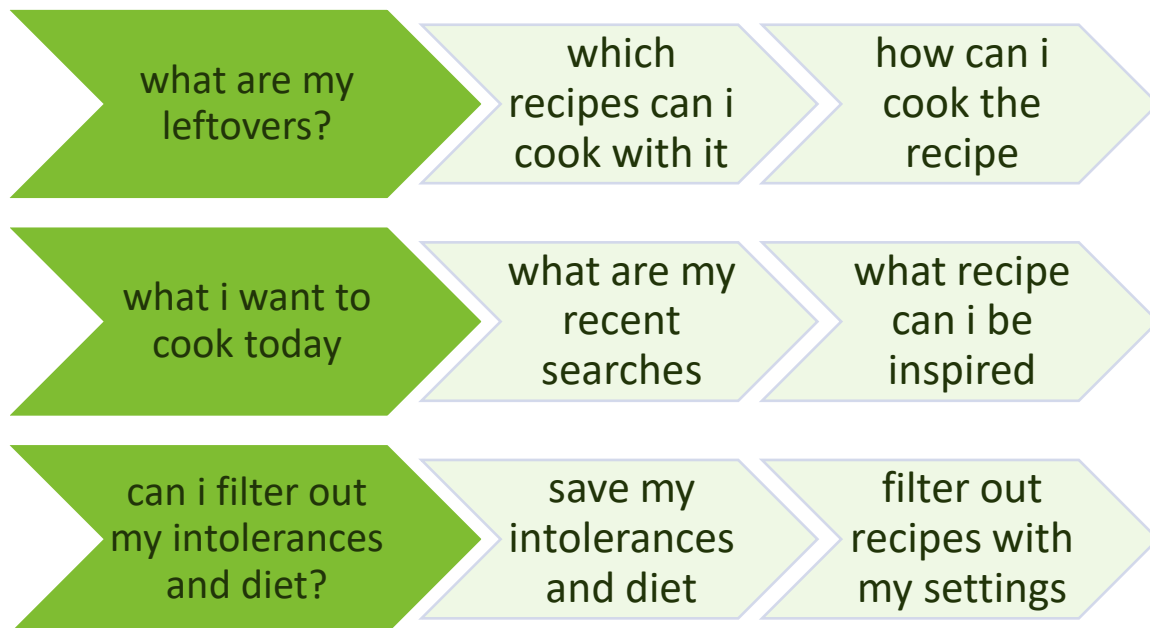created by Lukas Marschall, mail@lmarschall.com

Contents

Ideate

Normally we use cooking apps to get inspired by the recipes we discover. With this app we pursue another approach. Here we enter our leftover foods and get inspired by the different possible recipes we can cook with our leftovers. The following diagram displays the main points this app was designed for.

|		
enter your ingredients and get recipe recommendations	scan barcode of leftover products	save last searches and make suggestions at startup
share and save favorite recipes	filter intolerances, diets and meal types	deliver as progressive web application

User Flow

To improve the structure of the application we created a user flow chart displaying the needs of our users. We worked out three different major use cases for our app displayed in the following diagram.

| what are my leftovers?	which recipes can i cook with it	how can i cook the recipe
what i want to cook today	what are my recent searches	what recipe can i be inspired
can i filter out my intolerances and diet?	save my intolerances and diet	filter out recipes with my settings

App Colours

In order to generate a uniform look of the app we decided to use a monochromatic colour scheme on all our components. In the following diagram the used colours are displayed.

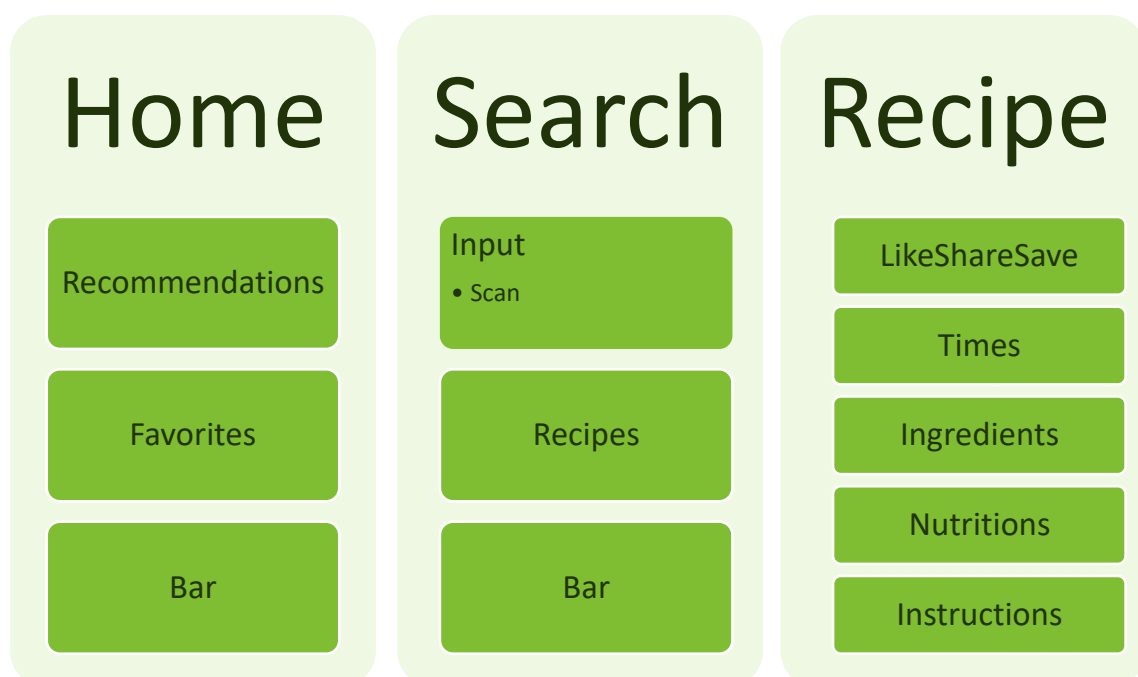| #EEF8E3	#B0DC7A	#7FBD32	#496D1D	#213409
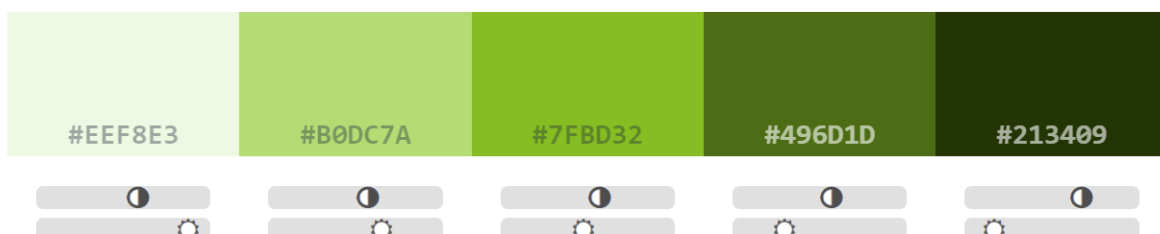
The App Stack

The following diagram shows the technologies used to develop this application.
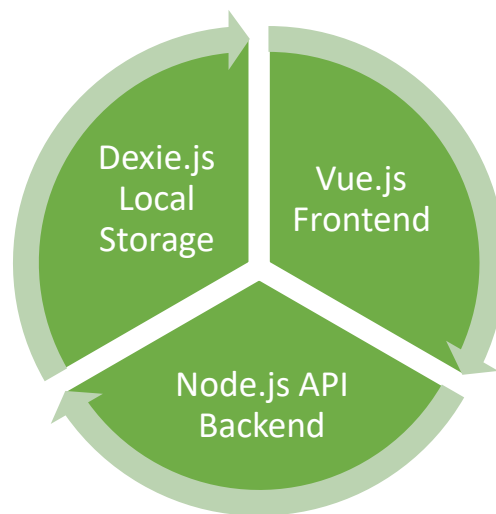
Components Structure

This frontend is based on the Vue.js framework and build with different nested components to deliver a modular build-up. In the following diagram you can see the individual components of each major component.

A full list of all components used is included in the Vuese generated documentation in the app root folder.

Home

Recommendations

Favorites

Bar

Search

Input
- Scan

Recipes

Bar

Recipe

LikeShareSave

Times

Ingredients

Nutritions

Instructions

Third Party APIs

The app uses different information sources including three major third party apis. Our goal was to utilize as many as possible open source libraries.

ZXing

"ZXing ("zebra crossing") is an open-source, multi-format 1D/2D barcode image processing library implemented in Java, with ports to other languages."

from github

This library provides the ability to use the camera of our mobile devices to scan the frames for barcodes and decode those codes to search them in product databases.

Open Food Facts

Open Food Facts is an open source food product database. We use the interface of this endpoint to get product information about our scanned product code from the zxing library.

Spoonacular

Spoonacular is a commercial api endpoint allowing us to specifically make api calls to receive recipe recommendations based on their ingredients. On our search for a suitable recipe endpoint this api was superior for our needs, because it provides an all in one solution for all the uses cases we want to provide for our app.

Visual Design

The app is based on three major components. The Home Screen provides the user with recommended recipes based on his recent searches and his favourites. The Search Screen allows the user to enter his ingredients and search for the available recipes. The Recipe Screen shows us information about the selected recipe.

Home Screen

By opening the app, the user is welcomed with recipes recommended based on his last searches, or if no search was done yet, recommend by random recipes to get inspired.


Right on the home screen the user has access to his saved favourite recipes, so he can quickly cook reappearing ingredients with his loved recipes.

Search Screen

On the search screen the result of the last search is displayed. The recipes are displayed with there according likes collected by the Spoonacular community. By clicking on the recipe, the user is routed to the selected recipe page.
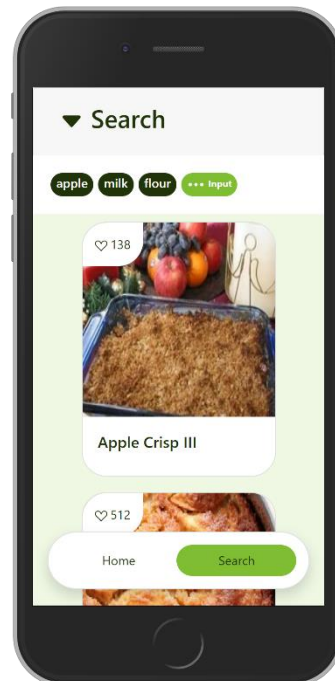
By clicking the input button, the input modal is opened. In the modal the user can input his leftover ingredients. The ingredients are being displayed with there distinct picture. By pressing the scan button, the user can scan the barcode of a product and add this to the ingredients list. After entering the ingredients, the user can search for possible recipes by clicking the search for recipes button.
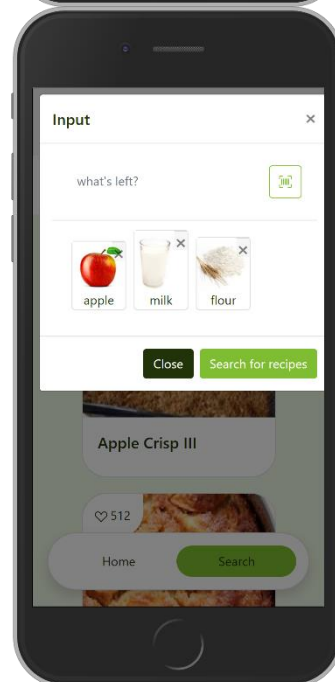
Recipe Page
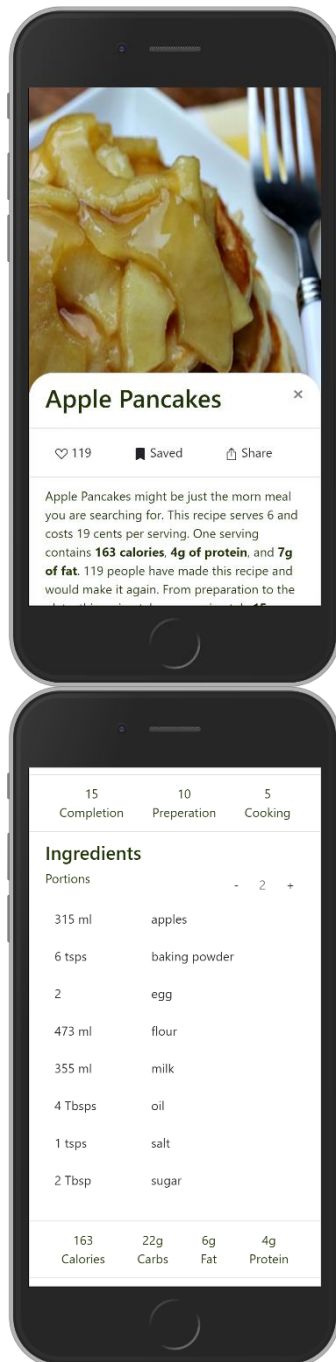
On the recipes screen the user sees the picture of the recipe in the background. In the Likes Share Save Bar the user can add the recipe to his favourites by clicking the save button or share the recipe with friends over the Web Share Api.

On the recipe screen different information about the recipe are displayed. In the Times bar the times for the recipe to be ready, to be prepared and cooked are shown. In the Ingredients list, all used ingredients are displayed and the user can alter the number of portions being cooked. The nutrition bar delivers the number of calories, carbs, fat and protein one portion delivers.
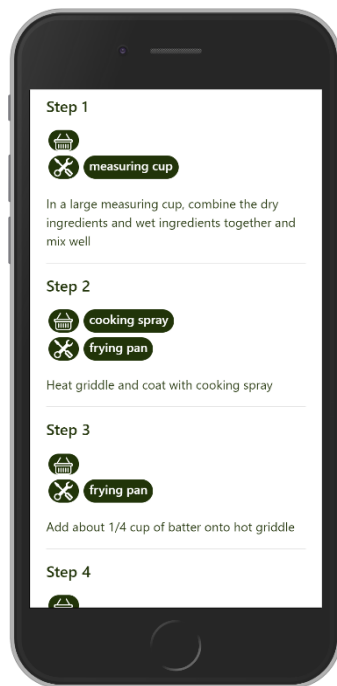
The instructions of the recipe show a step by step guide how to prepare the ingredients and tools for successfully cooking the recipe.

Further Improvements

This project was realised over the period of three weeks. Right now, there is no valid filter functionality in the Spoonacular "findbyIngredients" endpoint, here we will have to utilize the "complexSearch" endpoint in combination to effectively filter the user intolerances and diets. Due to time limitations this could not be realized.