CS 4720 Final Project
The Ultimate Recipe Book

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Introduction

The final project in CS 4720 (Internet Programming) is an initiative by Prof. Perry for a creative project conducted by students to further improve their skills in web development. My goal for this project is to further improve my web development skills with new technology called Angular. Therefore, the reason behind my project is to make a web app that implements HTTP connections to a database, and dynamic web applications (HTML, CSS, and Typescript).

Project Details

The name of the project is The Ultimate Recipe Book. As the name implies, this web app is a type of recipe book where users can login to their account, add recipes to their book, and add the ingredients of the recipe to the shopping list, so that users can refer to the list without going through the recipe again.

Requirements

Proposed requirements:

There are two sections of The Ultimate Recipe Book: Recipes and Shopping List.

I. The Recipes requirements are:
    1. Users will be able to browse the current recipes within the recipe book. There will be list of recipes to scroll through.
    2. Users can see the details of each existing recipe. This includes the following:
        i. Title of the recipe
        ii. Image of the recipe
        iii. Description of the recipe

iv. Name of the recipe's ingredients

v. Amount of the recipe's ingredients

3. Users can manage selected recipes by the following:

i. Add ingredients to the shopping list

ii. Edit current recipe details

a. Alter the title of the recipe

b. Alter the image of the recipe

c. Alter the description of the recipe

d. Add or remove ingredients of the recipe

iii. Delete selected recipe

II. The Shopping List requirements are:

1. Users can add ingredients to their shopping list

i. Add the name of the ingredient

ii. Add the amount of the ingredient

2. User can edit ingredients in their shopping list

i. Alter and update the name of the ingredient

ii. Alter and update the amount of the ingredient

iii. Delete the name of the ingredient

iv. Delete the amount of the ingredient

Additional requirements:

In addition to the proposed requirements, I added several requirements for user identification and a way to save new or altered recipes.

1. Users can create an account with email and password as identification

2. Users can login to an account with email and password as identification
3. Users can logout from the account
4. Users can save added and/or altered recipes in Recipes
5. Users can save added and/or altered ingredients in Shopping List
6. Users can load previously saved data

Project Status

I started the project in the February after the proposal was submitted and approved by Prof. Perry. By the progress report submission, I was at 40% completion of the project by having the frontend of the Recipes and Shopping List completed. The project status is complete, and the app is working properly based on the proposed requirements. I also added several working requirements. The Ultimate Recipe Book frontend is completed with Angular, and it is connected to Firebase with HTTP implementation. The site is also currently hosted on Github Pages.

Tools

Platform and framework – Angular 5 which includes HTML, CSS, Typescript

UI Kit - Material Design for Bootstrap 4 (Angular)

Database – Firebase

Project Location

https://github.com/alphaHades/recipe

Live Site

https://alphahades.github.io/recipe/

Lesson Learned/ Conclusion

During my progress creating the Angular web app, I learned how to create an Angular application based on Architecture angular guidance (https://angular.io/guide/architecture). In short, Angular is a component-based application architecture, so each feature of this application (Recipes and Shopping List) contains components to build a working application. The architecture contains the following:

I. Modules: this contains and groups components, directives, and services. This can be combined with other modules to create an application

II. Components:
    1. Templates: this combines HTML with Angular markup that can modify the HTML elements before they are displayed.
    2. Directives: this changes the appearance or behavior of a DOM element.
    3. Data binding: the automatic synchronization of data between the model and view components.

III. Services and dependency injection
    1. Services: this is used for data access.
    2. Routing: this is used to route and navigate between pages in the application.

IV. Observable: this is used to handle data sources. This is implemented to improve reactive service by passing messages between publishers and subscribers.

V. Form: this is used to create a form for user input.

All in all, I think this project has helped me to learn more about the new and emerging web development using Angular, as most web development apps are done using Angular.