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2754- Capstone Project

4/29/2023

Week 17: Final Report

**Background**

I was a Young Living Essential Oil distributor, and they have a reference book called “Essential Oils Desk Reference”. It is extremely useful; however, it is heavy and cumbersome. You have to use the index to find the correct page for what you are looking for.

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**Idea**

My idea was to take that cumbersome 810-page book and turn it into an application with more features.

**Obstacles**

One obstacle I had was deciding to switch from setting up and using a SQL database to using an online database called Firebase Realtime Database. It is a simple database platform, but I had never used it before and had to read and watch videos on how to use and set up a database on this platform. I don’t particularly like setting up databases. I can work with and manipulate data within a database no problem but setting on up from scratch is not my strong point. Another obstacle for me is documentation. I hate writing documents. As a person with a scientific background, taking notes is easy. I can even write SOPs for instrumentation without any trouble, however, writing documentation for this project was extremely hard. I’m not sure if I was just over thinking it but I really struggled with it.

**The Process**

The first thing I did was start setting up a SQL database in Azure, but I ended up scraping that after a couple of weeks. I found Firebase which is a Google cloud database engine. It is easy to set up and add information to it. It took a bit to figure out how to add a primary key, but I did eventually figure it out (see screenshot below). It took about 2-3 weeks to populate my database with enough data for this project. I had started working on the SQL database but then pivoted to using Firebase after about a week. I was originally going to have multiple tables that linked together with primary and foreign keys but found that it wasn’t necessary for this project at this point. I will revisit the database later when I have more time to plan and implement it correctly. In an ideal situation, I would like to have multiple tables and be able to link them together. That way there wouldn’t be redundant data. I would like to create 1 table for each of the following: extraction methods, constituents, images, botanical family and directions for use.

Table

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I did end up creating a paid account on an app build site called AppyPie to help me create and build my application. I needed the ability to work on this from anywhere, even while I was at work. I couldn’t have my company IT department install the needed software on any of our work computers, so having the ability to work on the internet was a real lifesaver for me. I did use some of the built in features to structure the app the way I wanted it but I was able to add a lot of custom code and personalize it to my liking. I used adobe photoshop to crop and edit photos for my app and I added custom backgrounds to it as well.

When you first open the app, the user must log in or create an account (see picture below). The app will not allow you to proceed unless you log in. I plan at some point to have a page for the user to keep track of their oil inventory and add their own notes and recipes to the app on their own device. I’m thinking this may be paid subscription content further down the road.

Graphical user interface, application

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Once logged in, you can then access all the content in the app, for now. There is a section for EO Definitions, Schools of Application, Applications, the EO database and Recipes. The EO Definition section contains background information about what an essential oil is. The Schools of Application contains information about the 3 schools of thought about Essential Oils and a little history of each one. The Applications section has information about how to use the oils properly. While essential oils are relatively harmless, they must be used properly. There are some oils that can cause photosensitivity, these are the citrus oils (Lemon, Lime, Grapefruit, etc.). You should only use these oils topically at night or cover the area and always follow the label instructions with these oils.

A picture containing application

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The book icon is the tab for the list of essential oils and once on that page, it pulls a list of the oils from the database. You then click on the desired oil to get more information on it (see below). I still have a lot of work to do on the database as Young Living as over 250 essential oils and blends. I only have a handful of them entered for testing purposes. I still need to add a few fields to the database, such as the safety warnings or certifications. I need to add the medical properties, fragrant influence, and historical data fields also. I also need to get the search feature to search within the ingredients field to find all the references to a specific essential oil.

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There is also a recipe section that has several sections included. These are Diffuser Blends, Vitality and Baking with einkorn. Each tab has its own style and color. I would like to add more to these sections in the future. Eventually with the seasonal blends for the diffuser blends section, I would like to add hyperlinks to the names of all the oils used that would take the user to Young Living’s site for that oil so they could purchase it if they wanted to. I have a couple of them done for demonstration purposes right now.

I have gotten a lot of feedback from friends and coworkers about the app. Several people have asked me when it will go live but unfortunately, I don’t have an answer for them about it yet. I feel I still have a lot of work to do on it, especially finishing up the database entry of all the oils.