

Introduction: What was your project and why were you interested in it.

This project is entitled “Folium”, it is an informational and eCommerce mobile app for plants and their care. Despite being a Graduate Student, and a computer science major at that, I touch grass often and love plants. This affection was instilled by my mother, a master gardener in her own right, who ran a landscape design company and filled our home densely with vegetation.

My thumbs aren’t as innately green as hers, so I require reference. It’s painful to track down all of the data I require for the houseplants I have or covet, as often it’s spread across several sources. My goal was to create a go-to well of knowledge, including detailed profiles of each plant, and “sell” those plants. Previously I worked as a FrontEnd Developer for a B2B/B2C ecommerce platform so it felt like a natural add in.

Objective analysis: List all objectives from your last approved proposal. For each, label them as completed, partially completed, or not completed. If partially completed or not completed, explain why.

Primary Objectives		
Objective	Status	Notes
Creation of 25 - 50 Plant Profiles accessible via Google Firestore	Complete	
Ability to access the Android Devices’ internal Compass (Some plants want south facing windows other east etc)	Complete	
Ability to Access the Android Devices Light Sensor to test light intensity (Some plants prefer dim, indirect, or direct sunlight)	Complete	
Implementation of Firebase Auth for login	Complete	

Secondary		
Objective	Status	Notes
Ability to add addresses to user profile	Complete	
Ability to remove/edit addresses	Complete	
Ability to select shipping address	Complete	
Add to cart	Complete	
Account Registration	Complete	
Password resets	Complete	
Ability to log in/out, controlling the access level of data in the app	Complete	

Tertiary		
Objective	Status	Notes
Creation of 50 - 100 Plant Profiles	Complete	
Comments on plant profiles or creation of a forum to request advice	Complete	
Ability to rate plant	Incomplete	Began implementation, thus why the false rating associated with the plant profile has an if/else for # relating to a word like excellent, good, ok. Felt extra.
Ability to Access the Geolocation of the Android Device and for it to tell you	Incomplete cont.	Had already completed all first and secondary objectives, time running short. cont.

what Hardiness Zone the user is currently located in		
Expand to Exterior Plants like Herbs and Perennials or container Plants	Incomplete	Had already completed all first and secondary objectives, time running short.
Personalized Plant watering and fertilization calendar/Checklist	Incomplete	Felt like implementing a second app entirely, written off after several weeks.
Database search capability	Incomplete	Had already completed all first and secondary objectives, time running short.
Stand up payment processor like Stripe payments	Incomplete	Had already completed all first and secondary objectives, time running short.

Oops Additional things not covered by an original objective		
Objective	Status	Notes
Creation of Light/Dark Themes	Complete	
Ability to add/subtract number of plants to purchase in cart	Complete	
Cart subtotal, tax, shipping, and total calculation	Complete	
Use of Firebase Storage for assets	Complete	
Use of Firebase Firestore for storage or plant profiles, user profiles	Complete	

Screenshots: give me some screen shots of your application in action. This will help me greatly with future classes.

Please see the Screenshots folder attached

Final thoughts: Share the final thoughts on your project. What did you learn overall? Where you happy with it? Where would you like to take it next? Provide any other information you'd like me to consider for your final assessment.

Mobile Application development is a rabbit warren. If you can think of something to implement not only is there documentation, but also recipes, old documentation to trip you up, and probably permissions to require. Overall it was an engaging class, it was nice for the code to be the focus as opposed to theory/ getting the basics of a language down. I greatly enjoyed these puzzles that the lifecycles of the app presented during development.

Overall I learned that the skill set is very easy to pick up if you are willing to wade through the docs, it's just verbose. I'm fairly proud of the functionality of the application, having completed more of the objectives than I thought I would.

It was also enjoyable to return to a favored subject and learn more about the plants I am neglecting due to this semester and the plants I'd like to get (and neglect for another excuse) in the future. There was a particularly fun tangent about Lux (the light readings a light sensor takes) and micromoles (how we should really measure light for plants). It would take calibrating a lux device to even attempt getting workable data to convert to micromoles. So, in the end I put a note with the sensor functionality pushing heavy duty enthusiasts to get another device, but these readings are good enough for beginners to use and experiment with.

If I were to take it to the next level I'd like to simplify some of the layouts for reusability, after several labs I started to notice patterns where items could be reused with a little extra thought and better naming conventions (recycler views, recycler view items).

I'd honestly like to try to implement the comments system as well, I left an area to navigate to comments from a plant profile. So having people from different zones expands on care techniques would be nice. After all, here in zone 6a makes a difference for even house plants when considering zone 9a, which tends to have more daylight hours all year. The payment processor would be interesting too, then you can run through the entire purchase flow using tester card data.

For the final grade, please also consider the items in my "oops" table, the use of those specific firebase technologies probably should have been in my primary objectives, the cart totaling in secondary, and the themes are tertiary.