BIBLIOGRAPHY

Actual research (10 sources):

Tan, S. Y., & Chong, C. R. (2024, October 22). *(PDF) AN EFFECTIVE LOST AND FOUND SYSTEM IN UNIVERSITY CAMPUS*. ResearchGate. Retrieved January 19, 2025, from https://www.researchgate.net/publication/374608419_AN_EFFECTIVE_LOST_AND_FOUND_SYSTEM_IN_UNIVERSITY_CAMPUS

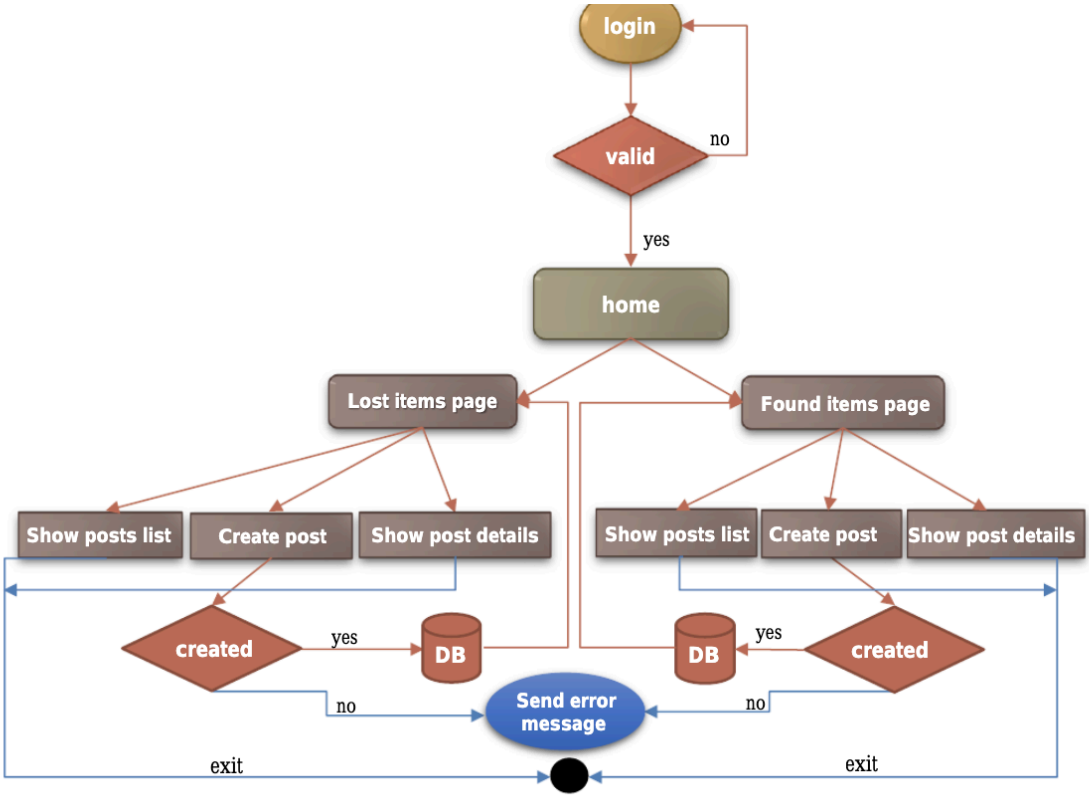
- This article analyzes current solutions in place for lost and found items, specifically for the application of a university. This paper looks into certain features, including the complexity of each feature such as account profiles, security questions, and search functions. This article made me consider what kind of useful features should go into the app while making it streamlined and simple enough to be inviting to its users. In particular, a table comparing features made me realize certain things like the security question are worth considering, and the behavior of people who use the app.

Wilson, D. C. (2023, May). *AppalLOCATE: A Lost and Found Solution*. University of North Carolina Greensboro. https://libres.uncg.edu/ir/asu/f/Wilson_Derek_Spring%202023_Thesis.pdf

- This is a similar Lost and Found solution a college student made for their final project. This app was aimed at universities for their students and staff to use. If I were to make this project more professionally, hopefully my paper would look like this. This paper covered the issues and process that goes into making a product for lost and found items, AppalLOCATE. The app uses Typesense, a paid service for its search function. With my experience with annoying search functions, this could prove very useful. Its mobile app build uses Capacitor, and uses a location service to send the location of an item. Not sure how useful that would be since this app is meant mostly for just the school, but might be helpful and worth implementing.
- Unlike the other solutions, each user doesn't seem to have owned items but uses a bulletin and each item is identified in a post, either lost post or found post.

Salman, Z. A.-J., & Athab, O. A. (2022, January). *SMARTPHONE APPLICATION FOR MANAGING MISSED AND FOUND BELONGINGS*. ResearchGate. https://www.researchgate.net/publication/357859863_SMARTPHONE_APPLICATION_FOR_MANAGING_MISSED_AND_FOUND_BELONGINGS

- This paper is a summary of the results of a custom made lost and found solution. Funnily enough, this iteration of a lost and found solution also uses Google's firebase and may be useful in understanding the architecture behind an app like this. This project seems to be the most similar to what I aim to create. However, I'm not planning on using flutter to create my app; instead, I'll be using react native. The navigation map for this project actually looks a little simpler than what I was aiming to create, only having two main pages: a lost page and a found page, not even including an individual chat system. This project makes me hesitate on adding individual DMs for lost and found items. Maybe make it easy to dispose of a quick DM chat, and just have each interaction be in its own forums? Also, should chats be public or private?



Clark, M. (2017, October 31). *Carnival explains how its NFC and BLE devices will power next-generation cruise ship guest experiences*. NFCW. https://www.nfcw.com/2017/10/31/355368/carnival-nfc-ble-next-generation-cruise-ship-experiences/

- Back when I was researching different approaches to this capstone, I had thought about tagging each item individually and having something like a scanner in each doorway track where each item has been. I'd heard of the cruise ship medallions from my parents, and wondered if such a BLE tool could be of use. However, considering each ship contains "7,000 scanners and sensors," the range of BLE in earlier research (~10 ft or so) and the cost of each BLE broadcaster, I found this idea to be highly impractical. This source helped me realize the limitations in my scope and narrow down my capstone idea.

Lifesaver https://lifesavertechnologies.com/how-it-works
Users collaborate to find each other's stuff & contact each other to return items

- QR code sticker (or enter code?) to identify each object
    - Order online and have a sticker shipped to you
      "There is no limit to the number of items you can tag, so get tagging!"
- When item is identified, you can set up a DM with the owner of the item and set up a time and place to return the item via chat system
  "From there, either meet in person to retrieve your lost item or provide a mailing address and get it shipped back to you!"
- Much simpler interface, there are only two bottom tabs: items you own and direct messages you have
    - Could this simplicity be useful in the app design later?

- mobile app and web app compatible
    - first making a mobile app. If I have time, maybe a website would be easier for everyone? Websites aren't very convenient for phones but are compatible with most devices connected to internet with a decent keyboard

Lost and Found
https://play.google.com/store/apps/details?id=com.techju.developer.lostandfound&hl=en-US&pli=1
Users collaborate to find each other's stuff and contact each other to return items
...man this is way too identical to what I want to do

- Homepage shows log of posts notifies when something is marked as lost and then marked as found, with focus on posts closest to you
    - Most of the users seem to live in Asia, rendering it ineffective for me
- Item page doesn't work, but each post shows an item with information including
    - item name
    - image of the item
    - owner phone number
    - owner mailing address
    - reward
        - this may come in handy, unless I create some other way to gamify this app so people use it
- This app does not have its own chat system, so you'll rely on the phone number for contact.
- You can search for items near you with a queue page that can filter by location (and maybe proximity)

https://www.ileftmystuff.com/
System hotels pay subscription for to streamline the process of guests reaching out to hotels and hotels returning items to guests

- Enter hotel address or Client ID number
    - optionally you can upload a photo to help with the process
- The service notifies the hotel & they'll send you updates on whether the thing was found (sounds like the hotel has to find the item for you)
- Once item is found, you pay for a shipping label & the courier will pick "it" (the label, I think?) up for you
  And then the package with your item will be shipped to you
- this would be a cool solution, but it sounds too hard to hustle a delivery service for SLA students. Unless I drag in each teacher to help with deliveries, I don't see this system to be very practical for my use case.

Levent. (2023, November 27). Gamification Techniques for Non-Gaming Apps. ShyftUp.
https://www.shyftup.com/blog/gamification-techniques-for-non-gaming-apps/

- Considering the app requires active participation in users to go out of their way to help someone else, I'll need some sort of form of motivation to get people to do extra work. This suggests app personalization (which could be little decorations in the accounts based on how helpful you've been, like karma points).Points, badges, and achievements are all considered when gamifying the app. I' m not sure what kind of storytelling or challenges I could do for this app, since it's highly dependent on what other people do and not a narrative I've made.

Graf, K. (n.d.). Gamification in Non-Gaming Apps: Drive Engagement and Loyalty. DreamWalk

App Development. Retrieved January 19, 2025, from https://dreamwalk.com.au/blog/gamification-non-gaming-apps

- Another site for apps. Levels and progression are suggested by this website, and are worth looking into. Maybe different levels depending on how often you find stuff for others? I'd want to be careful about how much to gamify, so then people aren't using the metric as the goal, instead of the overall goal of helping other people. Group challenges may be very helpful, like encouraging multiple people to get involved in finding a specific thing that's been lost for a while. Perhaps I should hold off on gamifying features other than a point system for this app. Afterall, I have to make each feature as a high school student with limited time. Adults who post papers have fewer features.