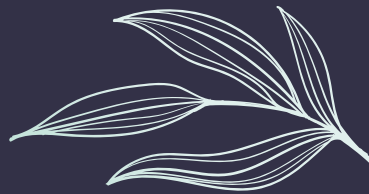




Sleep Deprivation Project Pitch

Siya Rajpal, Anish Kulkarni, Benjamin Xia, Janav Kati,
Rena Wu, Sia Sheth, Xinyi Li, Yiren Zhou, Yong Liang,
Karthik Vetrivelan



Problem

Have you ever had an appliance break down on you, and you didn't know what to do? Let me guess - you have no idea where your warranty card is.

Have you had a hard time remembering the maintenance schedules for various products?



Photo by Karolina Grabowska:
<https://www.pexels.com/photo/woman-at-desk-looking-at-receipt-and-scratching-her-head-5900030/>

Don't worry, WarranTracker has got your back now.



Solution

WarranTracker will store important information about your appliance, such as the serial ID and the warranty expiry date, so you don't need to remember anything while calling customer service.





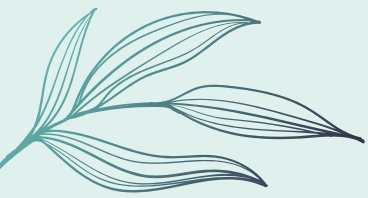
What are
the
Features?



Main Page Features

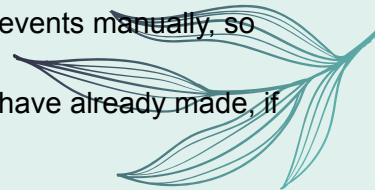
- Add a new profile (Users may add new appliances to their homes)
- choose an existing product (Users may want to look up some details about an appliance)
- filter products and events (Users may want to find a product faster)
 - by location? (bedroom1, bedroom2, kitchen, bathroom1, 2...)
 - by size? (large, medium, small)
 - personalized tags
- go to calendar view/list view (for upcoming maintenance events) (Users may want to plan for upcoming maintenance events)
- show unsolved problems (Users may want to see if there's any unfixed problems)
 - show a list of fault records of unsolved problems





Product Page Features

- broken or not - Users may want to know the current status of a product
- malfunction page
 - **read/update** warranty info - Users may want to learn more about a product
 - brand, model, serial no., proof of purchase
 - read/update/add fault record - Users may want to see the history of a product
 - content
 - when/how did a product malfunction
 - how did you fix it
- maintenance page
 - **current maintenance events of the product in list view by date** - solves user problems about not knowing when they should maintain their products by making a list of dates readily available
 - **read/update/add** frequency: one time/every xx months/days - allows the user to set when maintenance should occur ahead of time, solving the issue that users don't know when to get maintenance done
 - content recommendations (should these be given?): gives user guidance on how to take care of a certain type of item if they lost care instructions or care instructions didn't come with the item
 - for purifier/AC/heating/water tank for cats: change filter/clean the filter
 - **read/add/update** maintenance not listed for appliances - allows user to input maintenance events manually, so that they remember when it is happening
 - **delete/update** scheduled maintenance events if need be - allows users to edit events they have already made, if they are canceled by a third party or re-scheduled, etc.





Feature Priorities

1. Main page: add a new product, view existing products
2. Product Page: create/read profiles with the required information
3. Product Page: delete product profiles
4. Product Page/Malfunction page: update profiles with auxiliary information
 1. information not required when first creating the profile
5. Product Page/Malfunction page: read/add/update notes to the product profiles
 1. fault records — past breakdowns, how things were fixed, etc
6. Main Page: filtering products by custom filters
7. Maintenance Page: read/update/create/delete maintenance events with frequencies
8. Maintenance Page: read/add/update specifications for maintenance events
9. Maintenance Page: include content recommendations for certain products
10. Maintenance Page/Main Page: a list view of maintenance dates
11. Main Page: settings like user-name, password, etc
 1. making the application accessible from multiple devices with the sign-in?





Who are we making this app for?

User Personas



Cathy, a College student



- Name: Cathy Brown
- Occupation: Student
- Demographic: 21 years old, lives in Los Angeles, CA.

Challenges:

As a busy college student, Cathy usually does not have time to fix or maintain items. But she does not have enough money to purchase a new item when something broken. It always takes her a lot of time to figure out the customer service numbers to call. She also has trouble finding serial numbers and dates she purchased a product. Cathy feels very stressed every time she need help.

Cathy's Needs:

Cathy needs to be able to find the phone number for technical support and describe the help she needs. Instead of looking for the serial number of a product for a long time, she needs to find an app or website to help her keep track the relevant information. In that app/website, she must not be expected to take too much time and worry about losing the information.

Henry, a Homeowner



- Name: Homeowner Henry
- Occupation: Financial Advisor
- Demographic: 35 years old, lives in San Diego, CA.

Challenges:

Outside of his job, Henry does not have much time to organize the other parts of his life. Henry does not enjoy having to spend the time to go to individual items websites to find care and maintenance instructions. Henry also feels that another reason it is not worth spending the time to research how to clean his household items as his children will ruin them again.

Henry's Needs:

Henry needs an app to help him organize all of his care and maintenance information in one place so he can streamline his home maintenance experience.

Larry, a Landlord



- Name: Landlord Larry
- Occupation: Landlord
- Demographic: 57 years old, lives in the SF Bay Area

Challenges:

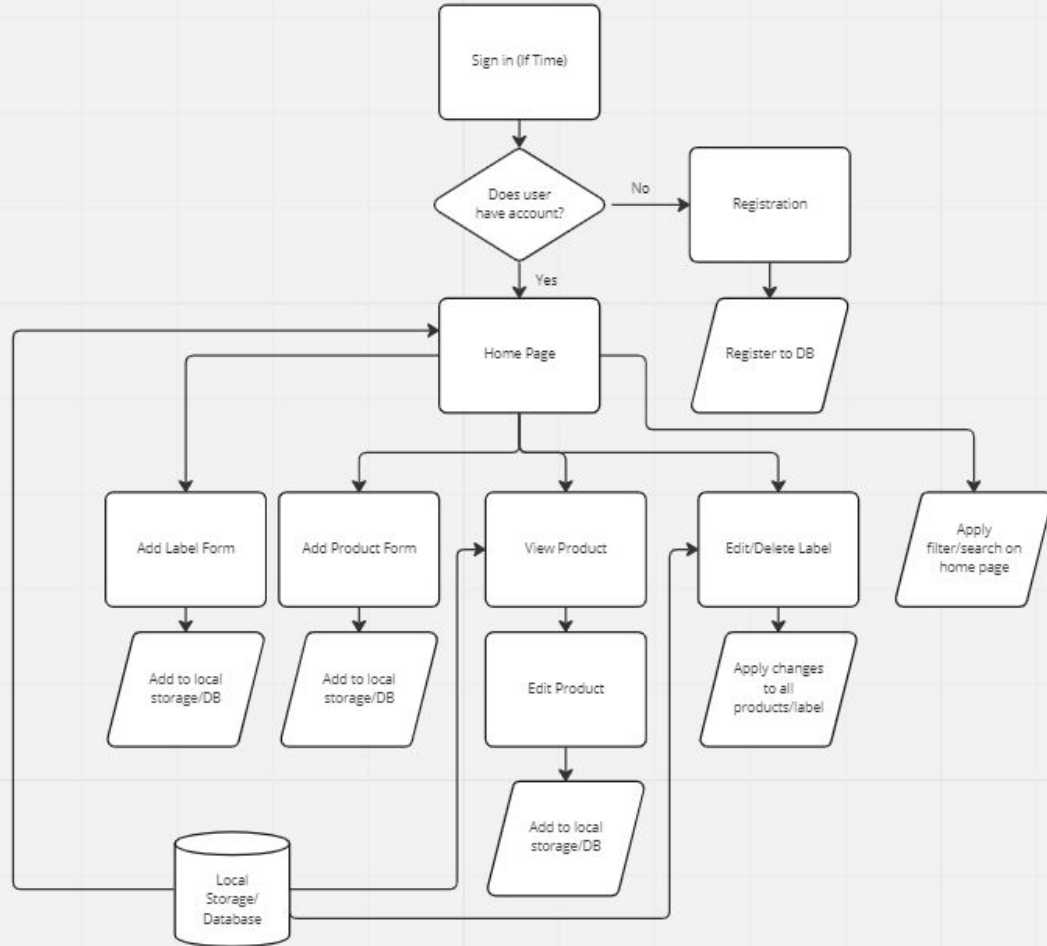
Larry has a difficult time keeping track of the appliances he needs to manage for his tenants. Everytime Larry needs to RMA a dishwasher or washing machine (or any other appliance), he needs to check his notebook to find where he purchased the unit, and find the receipt and warranty information in his unorganized cabinet. Many of his tenants have complained about how slow it takes for him to respond to maintenance requests.

Larry's Needs:

Larry needs an app that will allow him to quickly look up the warranty information for large quantities of appliances, and be able to view and manage the RMA histories of each product. Specifically, he would prefer to be able to search up appliances based on which apartment the appliance is part of, and see an appliance RMA history.

System Diagrams



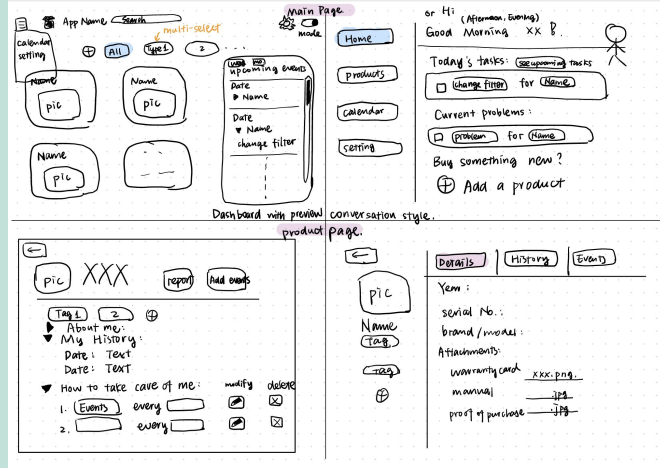




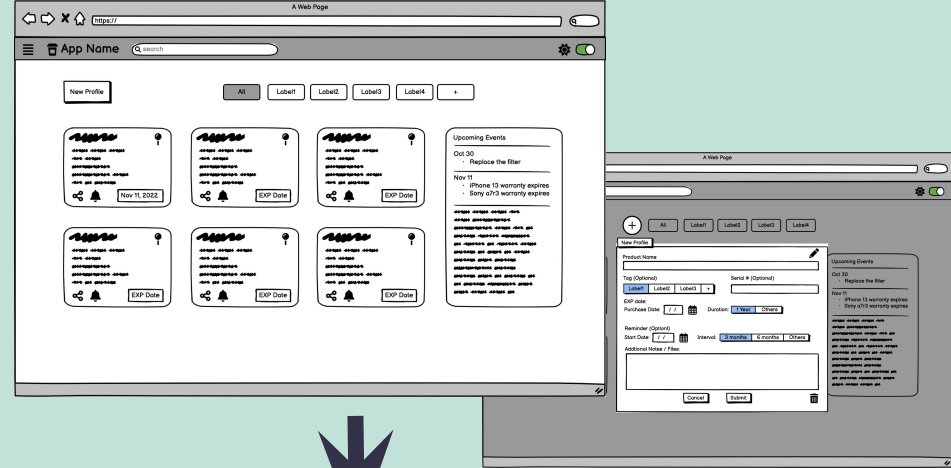
Wireframes



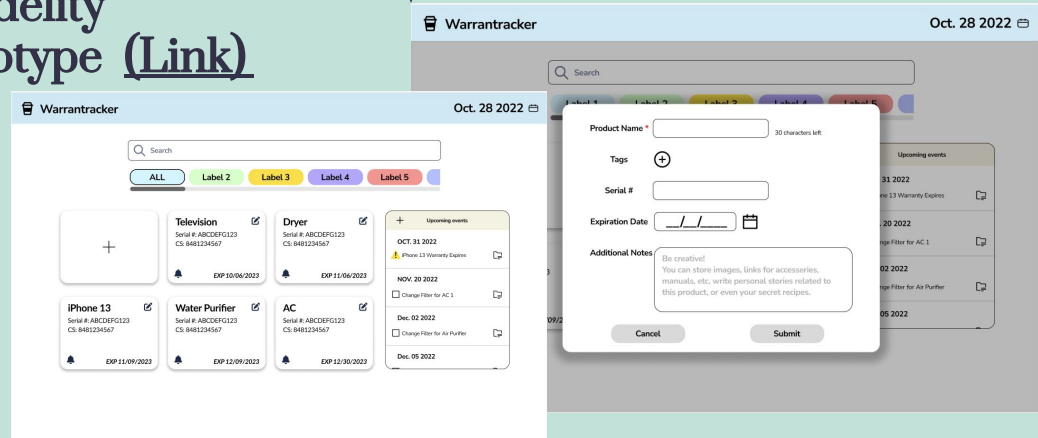
Low-fidelity/Sketches



Mid-fidelity Wireframes

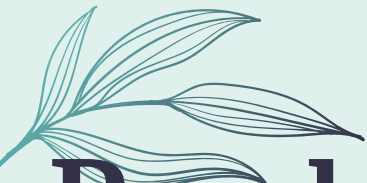


Hi-fidelity Prototype [\(Link\)](#)

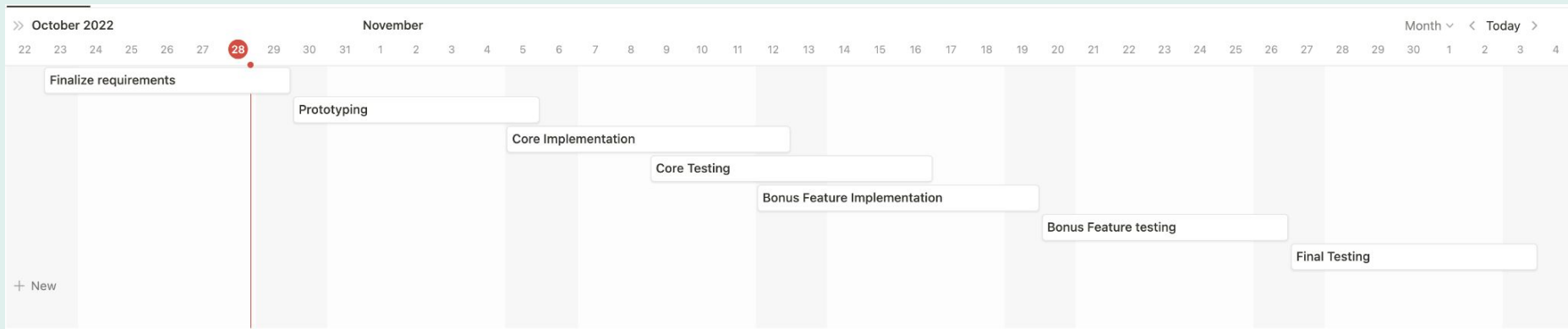


Our Project Roadmap





Roadmap



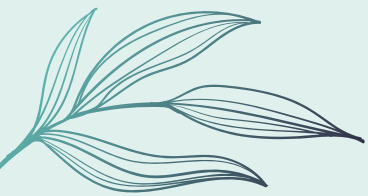
For details, please visit [Roadmap](#)





Risks, Rabbit Holes, No-go's





Project Risk

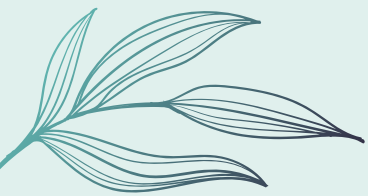
At the moment, the biggest risks to the project comes in the form of the **profile features** - attempting to implement too much (image storage, text descriptions, file storage) could take too much time. Currently, we only really have ~6 weeks.

Having more brainstorming sessions, along with a “cut-down” meeting just before the final project pitch would let us generalize features and cut back on time wasted in the project.

Ideally, we want all team members to implement **proper coding practices** : set up unit tests for each new feature, avoid excessive internal dependency (rely mostly on interfaces, not objects), and document all additions to the code.

The above additions will help us decouple our application and keep it user-friendly.

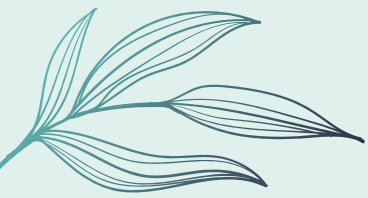




Rabbit Holes

- *Multiple Label Selection :*
 - **Problem** : Multiple labels will involve a lot more classifying of product profiles, and can lead to issues in sorting.
 - **Patch** : Currently, it may be better to rely on singular label selection for the products in the file.
- *Content recommendation :*
 - **Problem** : Content recommendation involves understanding what kind of product is being labelled, and keeping a list of common fail-points for said product - too much complexity.
 - **Patch** : For now, the best strategy is to give users a text-box for their own data entry.
- *Scheduled Maintenance lists :*
 - **Problem** : Scheduling lists of maintenance could involve the implementation of a calendar functionality, which would be time consuming and messy, especially when using only basic HTML/CSS/JS.
 - **Patch** : The best fix would be to prioritize by time of entry, or another simple sort. Worth looking into for more precise calendar implementation later.





Project No-Gos

- We decided to not implement a computer vision feature to **read data from a picture** and make entries to avoid complexity.
- We are not implementing an **in-app calendar** to create reminders for maintenance.
- Given our limited time, we have decided to keep **new dependencies and frameworks to a minimum** as we do not know how to properly deploy them. We may end up having to deal with unknown behaviour.
- We have also decided against building **complex systems** like implementing file sharing using HTTPS from scratch.



Technologies

- HTML, CSS, JavaScript
- Bootstrap
- ...

