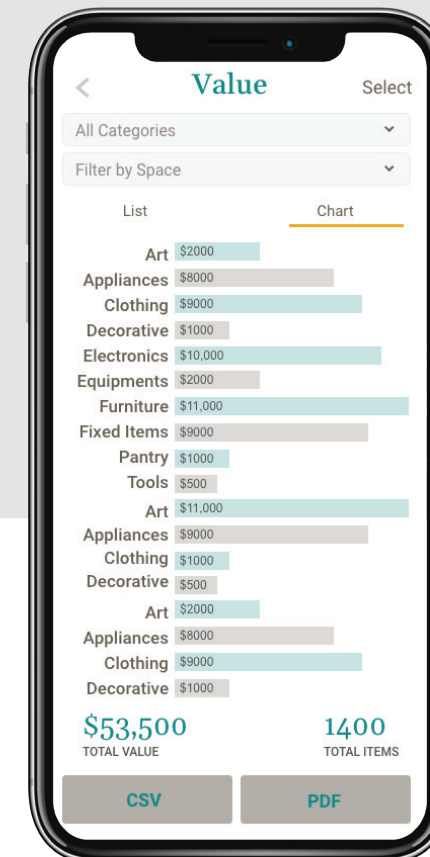
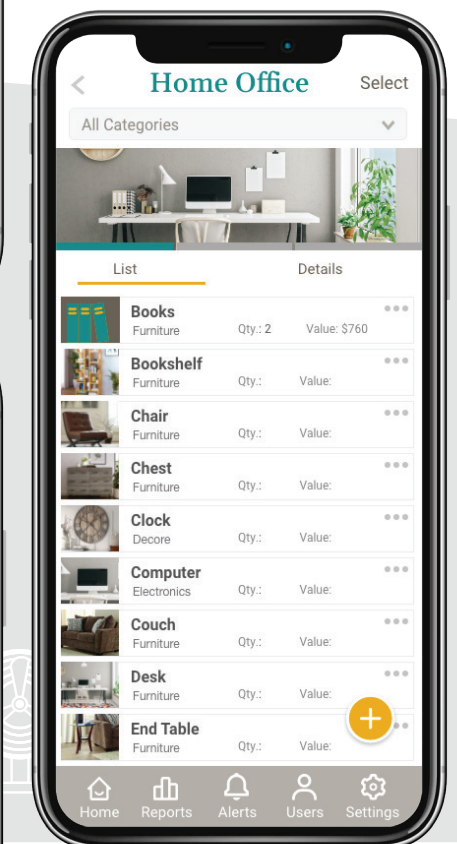
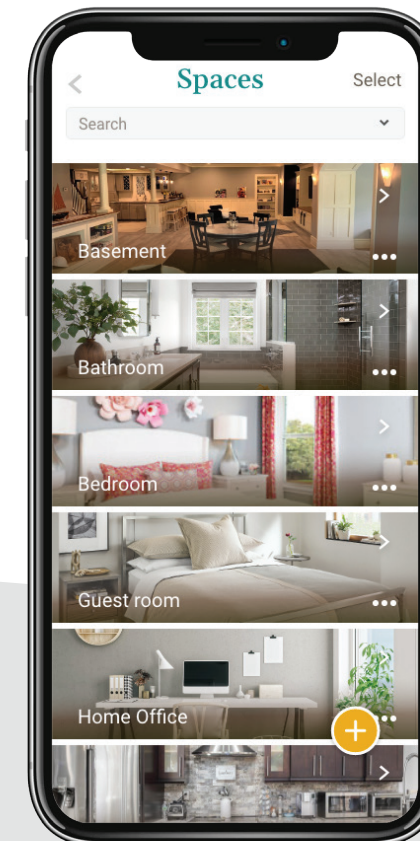
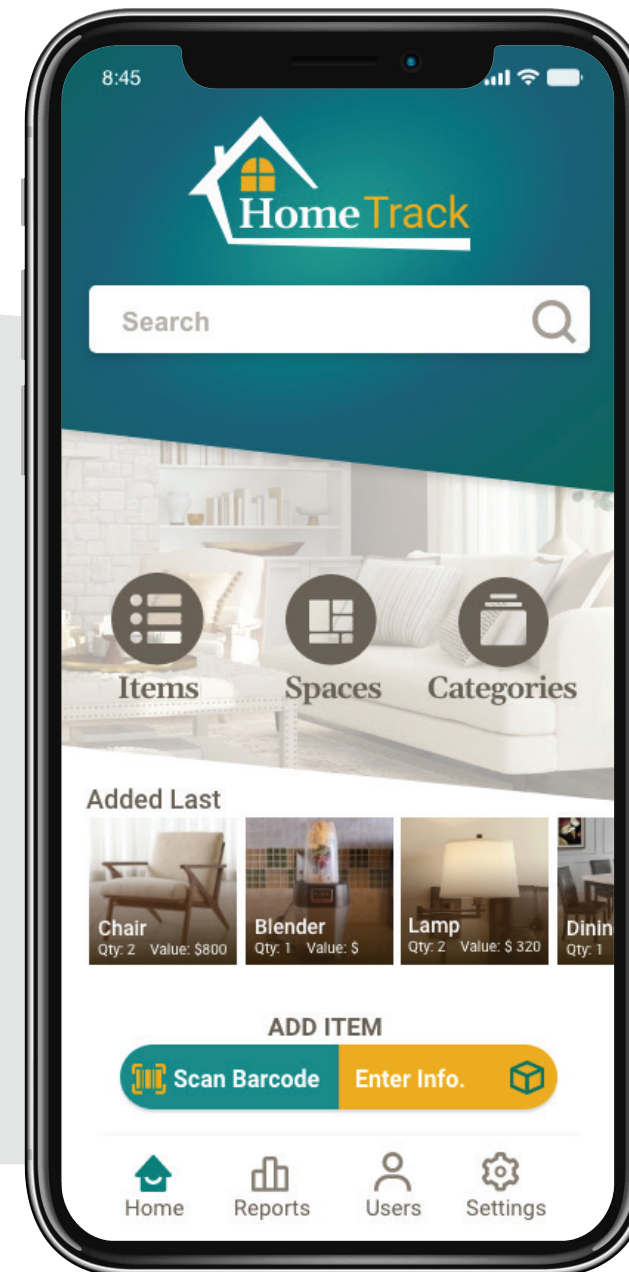




Home inventory management app.



## Back Home from a Vacation

In 2018 September, I returned from a family vacation to find our home severely damaged due to a leaking water pipe on the first floor. Our home had to be completely gutted down and rebuilt.

Apart from the stressful process of figuring out the rebuilding logistics, I also had to make a list of our personal belongings for the claim process. It was a daunting task to meticulously document the many possessions we had accumulated over the years.

The claim process did not have to be so difficult. Several items never made the claim list, and now, two years later, I can still think of items that were not included. The loss on unclaimed items was totally avoidable.





## The Problem

People own thousands of items and their belongings keep growing over time. With about [300,000 items in an average american home](#), we don't have the mental capacity to keep track or account for all our belongings. Data also shows that every [1 in 20 homes has an insurance claim](#). So, underestimating the value/quantity of one's possessions can lead to severe monetary loss in the event of property damage.

## Hypothesis

A product that keeps track of home items to help manage one's belongings. Users can maintain a comprehensive list of things they own by adding details like quantity, cost, location, and warranty information. In turn, the product provides a detailed account of all their possessions.



# Outline of Research

---

I decided to research the following aspects to get an understanding of the problem space, potential users and opportunities to provide novel and effective solution.



## Issues users have due to poor management of their possessions

- Stress due to clutter
- Underestimating amount/value of property for insurance claims
- Unknowingly buying what they already own
- Problem tracing belongings



## Goals/Motivations of users to manage their belongings

- Declutter/minimalist living/organizing home
- Insurance claims due to property damage
- Sell belongings to make money or give away
- Hobbyist/collectors wanting to keep things organized



## Competitors

- Direct competitors like home inventory apps
- Indirect competitors like home organization apps
- Unrelated apps offering competing features like schedulers and planners



# Secondary Research



## Key Findings

**1 in 20**  
INSURED HOMES  
has a claim each year  
([Insurance Information Institute](#))

*There are 72 million insured homes which amounts to **3.6 million claims each year.***

**300,000**  
ITEMS  
in an average American home  
([LA Times](#))

*People have too much stuff and not enough space or time. **Tidying and decluttering is not just a trend.** Professional organizers typically charge between \$30 and \$80 per hour. Per-project rates for a single room range from \$200 to \$375 (such as a kitchen, utility room or home office).*

**\$30,000**  
WORTH OF STUFF  
in a two-bedroom apartment of  
an average renter  
([usnews](#)).

**52%**  
HOMEOWNERS  
prepared an inventory  
of their possessions  
([Insurance Information Institute](#))

*How one maintains inventory is important as not having it digitally or storing in a local computer might result in loss of data when property damage occurs.*

# Competitive Research

## Features Analysis

I looked into 3 competing products (Sortly, NestEgg and MyStuff) to understand the features they offer and explore opportunities to make HomeTrack better.










Sortly



NestEgg






MyStuff

Competitors		HomeTrack
TARGET	 Home and Office	<b>Focus on home inventory</b> management for the MVP to narrow down the scope and target audience for primary research.
FEATURES TO VALIDATED	 Multi-users	User interviews later revealed why it is important to have <b>multiple users as part of the MVP</b> feature.
	 Data Sync for devices/platforms	Customer journey map showed that <b>data sync between devices and exporting/sharing data are essential feature.</b>
	 Exporting pdf and csv	
OPPORTUNITIES TO EXPLORE	 Barcode scanning	Scanning barcode is a great feature to enter items but the existing products have a clunky user experience. <b>Barcode scanning has potential to improve</b> by providing a seamless experience.
	 Video upload	Not all products provide <b>video upload</b> feature, which can come handy while keeping a <b>record of interior spaces</b> and items in them.
	 Cloude storage	Cloud storage, if provided by competitors, is a paid feature. HomeTrack can provide limited cloud storage for free version to safely store all the data.

# Heuristic Analysis

Heuristic analysis helped understand usability issues with some of the competing products. I gave a rating for each product against a tested feature. Here are my learnings from the 3 heuristics I tested:

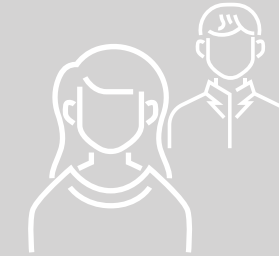
Heuristics & Feature Tested	Competitors			Learnings
	 Sortly	 NestEgg	 MyStuff	
<b>Match between system and the real world</b> Assigning a category/room to an item	Poor	Average	Good	<i>ISSUE:</i> User has to create a category and/or location for an item.  <b>TAKEAWAY:</b> Provide <b>default set of categories and locations</b> as most categories/rooms within indoor space are very standard. This will cover most of the items/rooms making it easy for users to choose rather than create each category.
<b>Visibility of system status</b> Selecting a picture from the phone to add to an item.	Poor	Good	Good	<i>ISSUE:</i> Lack of feedback to users about the number of photos selected to add to an item.  <b>TAKEAWAY:</b> Adding an item will be a frequently used flow, especially during the initial phase of usage. <b>Showing the last added item on the home screen</b> will give users feedback on their action.
<b>Consistency and standards</b> Overall use of the app	Average	Good	Poor	<i>ISSUE:</i> Inconsistent placement of action buttons and icons that are difficult to understand.  <b>TAKEAWAY:</b> Choose icons carefully to <b>not clash with existing platform icons and add labels to avoid ambiguity.</b>



# Primary Research



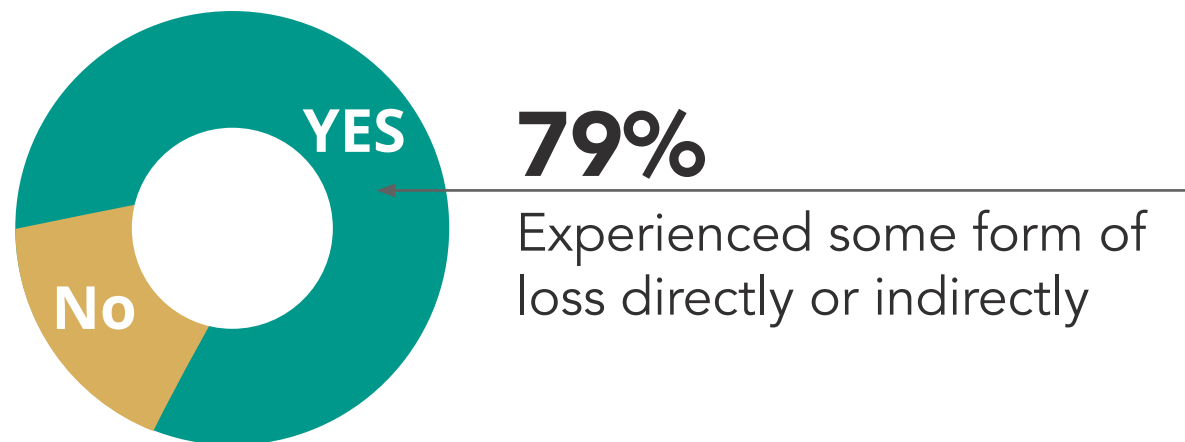
Survey  
28 Participants



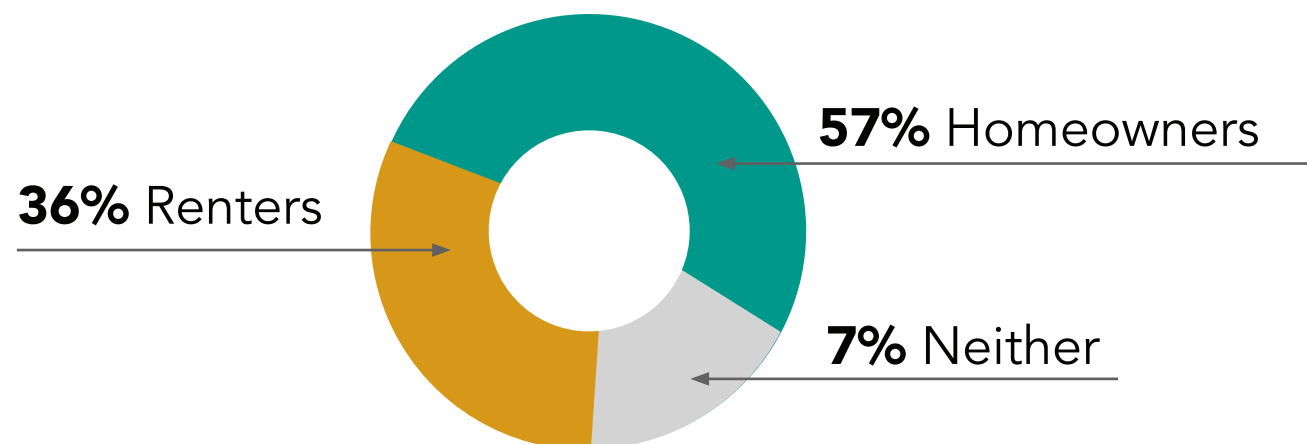
User Interviews  
3 Participants

## Key Survey Findings

Have you or anyone you know experienced property damage/loss? (Due to fire, water, theft or other reasons.)



Are you a homeowner or renter?



Do you have any of these experiences regarding your belongings?

- 46%** Regularly search for belongings in the home
- 11%** Considering renting a storage unit
- 18%** Duplicates (and triplicates) of things
- 32%** Difficulty keeping inventory of belongings
- 21%** Stressed from keeping track of belongings
- 14%** Moved a while back but still not done unpacking
- 11%** Other Issues
- 32%** Feel well organized with their home inventory\*

\*Few of the participants from the 32% who felt they were well organized with their home inventory also stated that they had issues. Some of the reasons for this anomaly were revealed in user interviews.

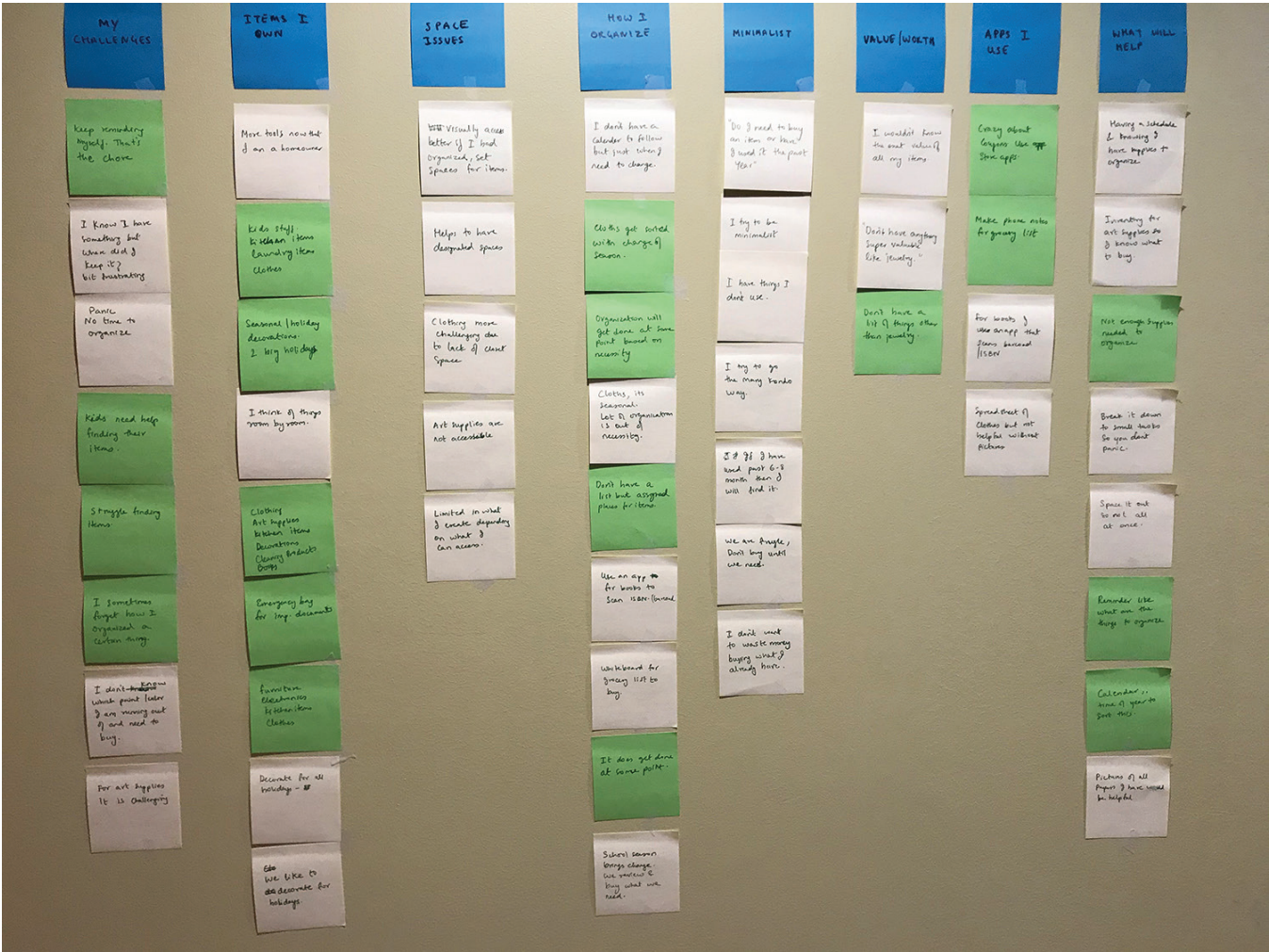
"I use an app for my books to scan the ISBN. Wish I had something like that for my other home items"

"My partner loves cooking and takes care of the kitchen items so it's well organized"

On average, people have around \$15,000 worth of items in their wardrobe at any given time.

survey.

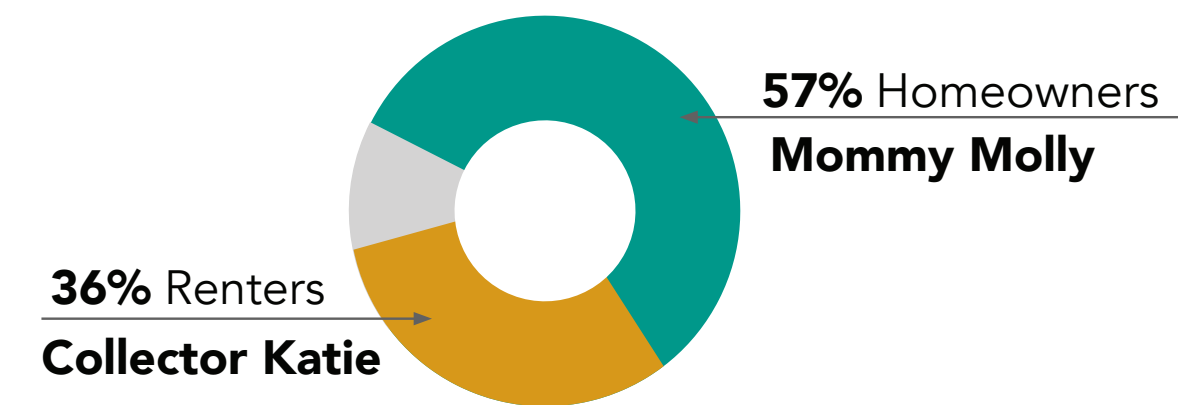
"I know I have this thing but where did I keep it? It's a bit frustrating"






# Personas

I considered home ownership as a key demographic for my personas as this criteria would help me understand the audience that is most invested in their belongings (seeing them as personal assets).



**Collector Katie is a renter and represents 36% of my target users.** She is a librarian and collects books. She is also an artist who loves to paint and has a huge collection of art supplies. She struggles to keep track of these supplies.



"I scan my books using an app and wish I had something similar for my art supplies"

**Collector Katie**

Artistic Book lover Coupon Savvy

**Goals**

- To manage home items better.
- To use space effectively.
- Make the most of deals when shopping.

**Frustrations**

- To buy something and realize later that I already have it.
- To not have enough time to keep things in order.
- It feels so limiting when I can only create art using items that are handy and easily accessible.

**Bio**

Katie is head of science library and loves reading. She has a huge collection of books that she keeps track with the help of an app. She loves to paint too and has a big collection of paints supplies, brushes, handmade papers, and gold mediums. She sometimes finds it limiting to create art depending on what she has handy. Keeping track of her art supplies is a challenge as at times she goes to the store with a coupon but can't remember which paint color needs to be bought. She also finds it difficult to keep her clothes organized given the changing seasons and limited closet space.

**Personality**

Introvert Extrovert

Thinking Feeling

Sensing Intuition

Judging Perceiving

**Motivations**

Incentive

Fear

Growth

Power

Social

**Preferred Channels**

Social Media


Mobile

Email

Traditional Ads

**Brands**

**Mommy Molly represents 57% of my target users who are homeowners.** She is married and a busy working mom trying to balance her home and work life. She wants to teach her kids good values like being responsible. Long term security of her family is important to her.



"reminding myself that I need to organize my items, that's the chore"

**Age:** 48  
**Work:** Doctor  
**Family:** Married with 2 kids  
**Home Info:** Home Owner  
**Home size:** 3,000 - 4,000 sq ft  
**Household Income:** 300K  
**Character:** Forgetful

Busy mom Family-focused Forgetful

**Goals**

- Make kids more responsible and instill good habits.
- Spend more time with kids.
- Plan for longterm security of home and family.

**Frustrations**

- That things only get done when the necessity arises rather than being able to plan ahead for them.
- Looking for items I know I have but can't remember where I kept them.
- Husband will only help to the extent of a specific task delegated to him.

**Bio**

Molly is a Doctor by profession. She has a busy lifestyle balancing work and family. Being well organized with her home items is important to her. Her way of organizing items seasonally and having assigned spaces for items mostly works for her but could use improvement. Her kids don't move things a lot but need her help sometimes finding what they need. She keeps track of her valuables by holding on to receipts and making list of items like jewelry. She uses her phone to keep a list of groceries. Organization for her oftentimes happens out of necessity even though she would like to be more proactive about it.

**Personality**

Introvert Extrovert

Thinking Feeling

Sensing Intuition

Judging Perceiving

**Motivations**

Incentive

Fear

Growth

Power

Social

**Preferred Channels**

Traditional Ads

Online & Social Media

Referral

Email




























**Brands & Influencers**



# Customer Journey Map

Customer Journey Mapping helped uncover current and future opportunities of the product.

Scenario: Mommy Molly finds her basement is damaged due to water leak.

Phases	Discover Damage	Contact Insurance	Damage Walkthrough	Damage Evaluation	Resolution	Claim Closed									
Actions	Looking at all the damage Asking kids to not walk into the flooded basement.  Looking for insurance contact information	Talks to insurance company Meets the insurance adjuster  Go through the papers the adjustor gave	Walking through the basement Picking items that are all wet  Going through more damaged items	Meet the subcontractor for contents inventory  Watch the content inventory people going through damaged items before leaving for work.  Looking at the basement after coming from work.	Looking quickly through the damaged items list emailed by insurance. Searching home for items missing on the list  Looking thoroughly through the damaged items list shared by insurance.  Creating a list of items that are missing from the list Looking into old online orders and receipts for original cost of items Sending missing items list to property inspector  Receive list of some additional missing item added to the claim	Looking at the final claim payment.  Looking through the final inventory list of the claim.									
Thoughts	How will I deal with all this loss? This doesn't look safe. Need to make sure kids are kept away.  What number do I need to call? Am I even covered for all this damage?	They seem helpful I am glad I will be covered for all the damage  Looks like I will get paid in parts	My kids art is ruined. Oh! my childhood photos are ruined.  I wonder if this painting can be restored.	Sounds like they will do a thorough job.  They are not keeping proper record before throwing items. I don't have time to keep track of them.  They cleared a lot of things. Not sure what they kept and what they threw away	I thought my spare blender was in the basement. Why is it not on this list? I wonder what else is not part of the record?  I am so sure I had my blender in the basement  So many things are missing. I thought insurance was going to be thorough with listing my damaged items. I wish I had a record of all my items. Where did I buy that end table from? How much did it cost?  This is taking so much time. I am exhausted. This is all the information I have. Hope they consider these as items I owned.  That table was way more expensive than what they are paying. I need to check all my other expensive items.	I am glad this is over.  Just have to bear the loss. Don't even know how much I lost. I wish I was prepared for this process									
Emotions	 Dispair	 Worried	 Hopeful	 Disappointed	 Miserable	 Unsure	 Hopeful	 Angry	 Skeptical	 Surprised	 Confused	 Exhausted	 Frustrated	 Dismayed	 Dissappointed
Channels	 Phone	 Internet	 Person	 Printed material	 Website	 Person	 Email	 Pen and Paper	 Computer	 Receipts and Records	 Person	 Email			
Opportunities <small>(MVP or Potential Features)</small>	<ul style="list-style-type: none"><li>Provide safety steps to follow when dealing with property damage.</li><li>Store home insurance details and contact info.</li></ul>	<ul style="list-style-type: none"><li>Provide basic information to understand what to expect from the meeting and what questions to ask the adjustor.</li></ul>	<ul style="list-style-type: none"><li>Provide cloude storage of pictures (MVP)</li></ul>	<ul style="list-style-type: none"><li>Store photos and videos of rooms. (MVP)</li><li>Provide alerts to update room photos annually/after some period.</li></ul>	<ul style="list-style-type: none"><li>Store information about room/location of an item (MVP)</li><li>Search for items (MVP)</li><li>Store pictures, purchase details and receipts (MVP)</li><li>Sync across devices to enable access to data on bigger screens (MVP)</li><li>Generate spradsheet of items and their details (MVP)</li><li>Share data/items list (MVP)</li><li>Categorize items by type and value (high value items) (MVP)</li></ul>	<ul style="list-style-type: none"><li>Calculate value of items (MVP)</li><li>Choose custom list of items to get their value. (MVP)</li></ul>									



## User Stories

Equipped with the discoveries made from the customer journey mapping, I developed user stories for the tasks users need/want to accomplish. **User story mapping** exercise started to reveal a structure for the site map.

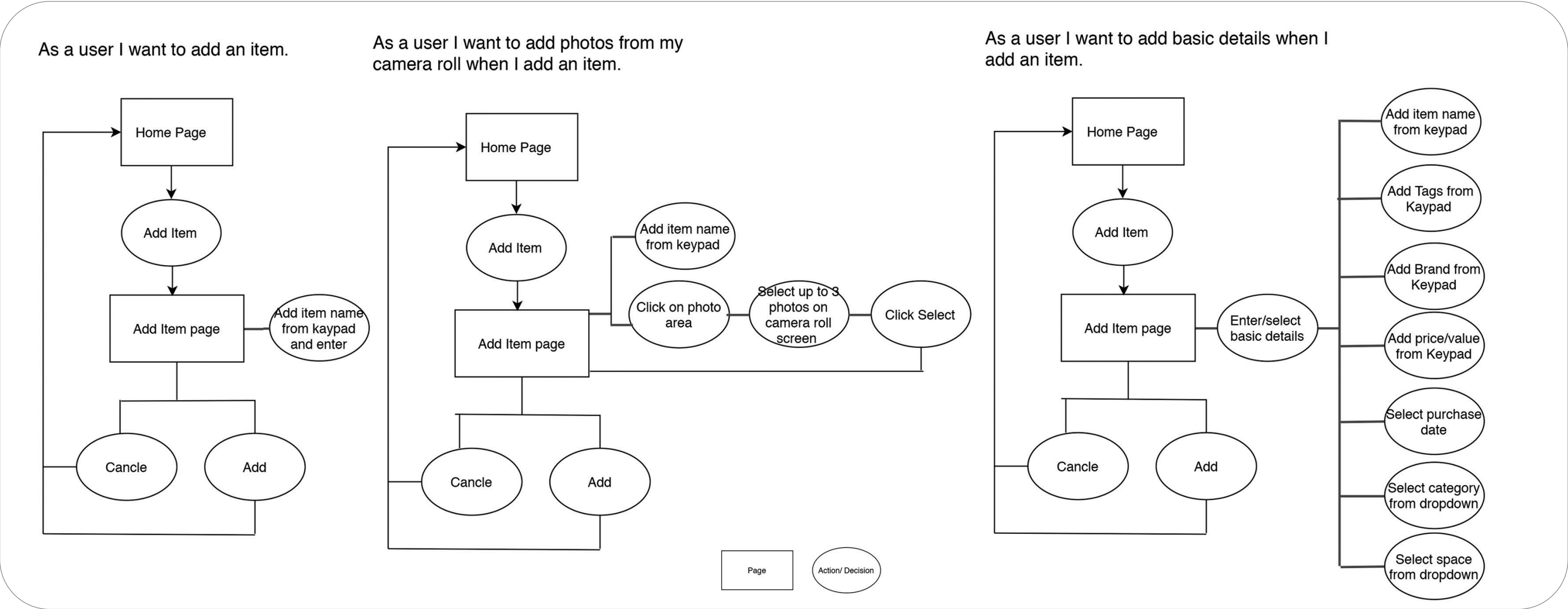
EPIC	User Story									
Add Item	add a new item	add item name	add item quantity	add item price	add receipt	add photo	add warranty	delete item	edit item	add with barcode
						select/ take photo				scan barcode
Add Room	add a room	select room for item	delete/ edit room	add items to room	add space within room	add items to space	find items			
Add Category	add item category	add sub-category	delete/edit catetories	add items to categories	find items					
Reports	total value of all my belongings	total items I own	see when warranty expires	get specific list	see all my expensive items	get pdf or spreadsheet of items				
						create/ share files				
Manage Users	add more users	limit what others can see or add	delete/ edit users	add user photo	approve other's items					

# User Flows

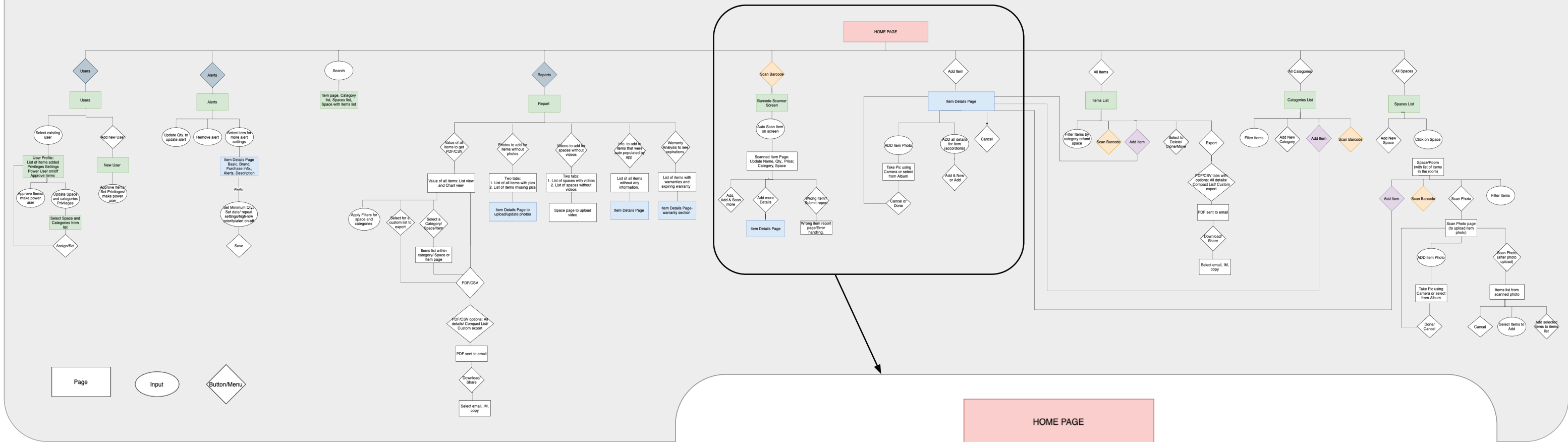
I created user flows from the user stories, combining flows of tasks falling under similar themes. **Red routes** (listed below) emerged from this process, showing critical paths users will take to accomplish essential tasks.

- Adding Item
- Categories/Spaces
- Generating Reports

## Progressively building on user flows using user stories



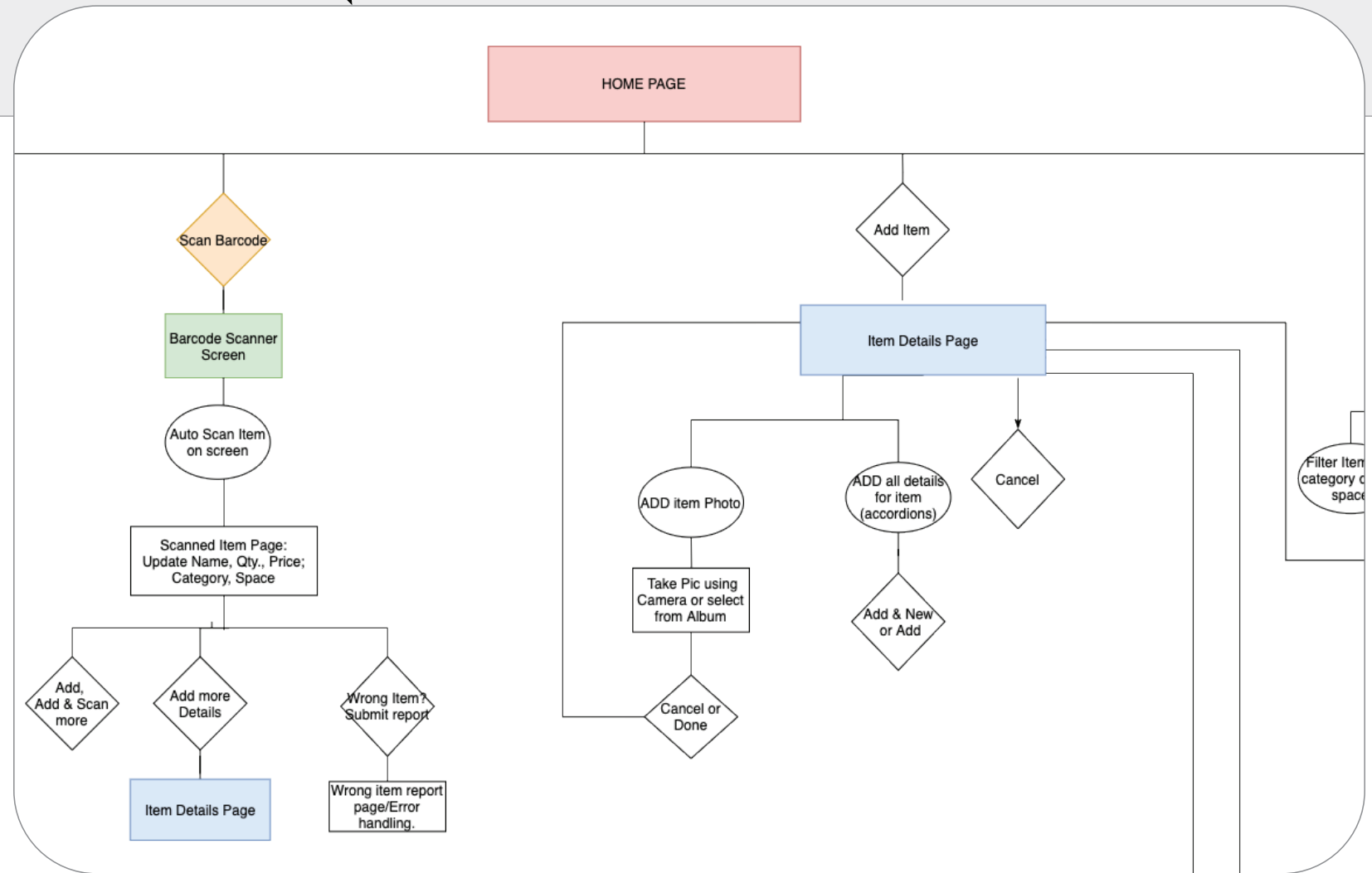




# Information Architecture

After translating the user flows onto the information architecture I noticed that:

- A user will navigate to the 'Item Details' screen from several different flows like Items, Space, Category, Reports, and Search. **It is important to maintain a seamless experience of this "Item Details" screen.**
- The process of adding an item by scanning a barcode involved few additional steps that could be **simplified to reduce the number of clicks for the user.**

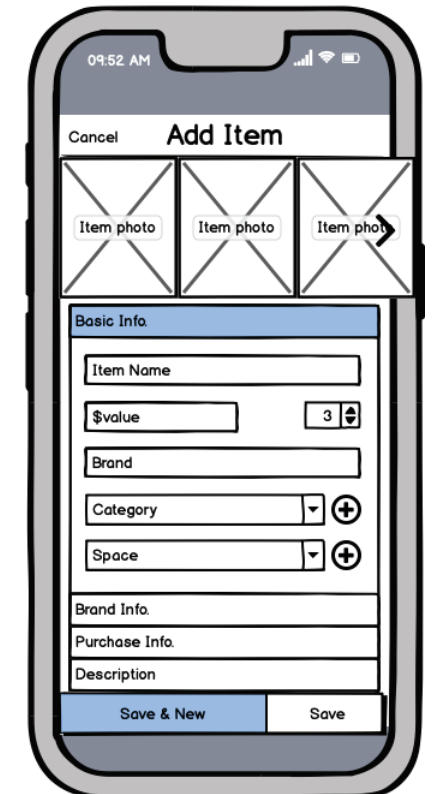
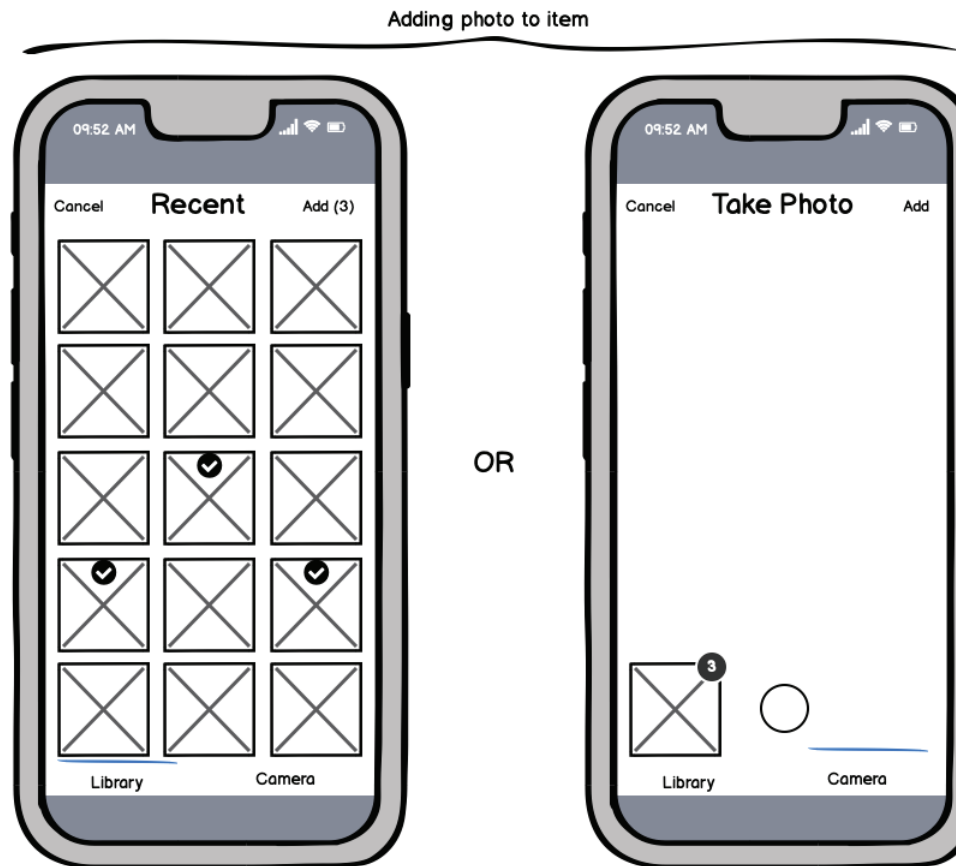
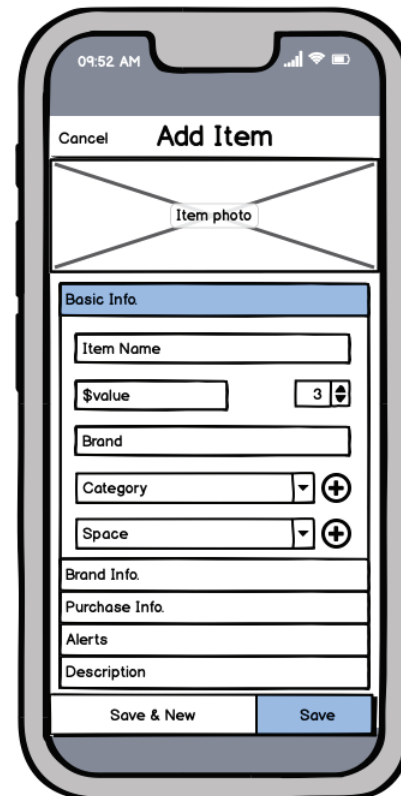
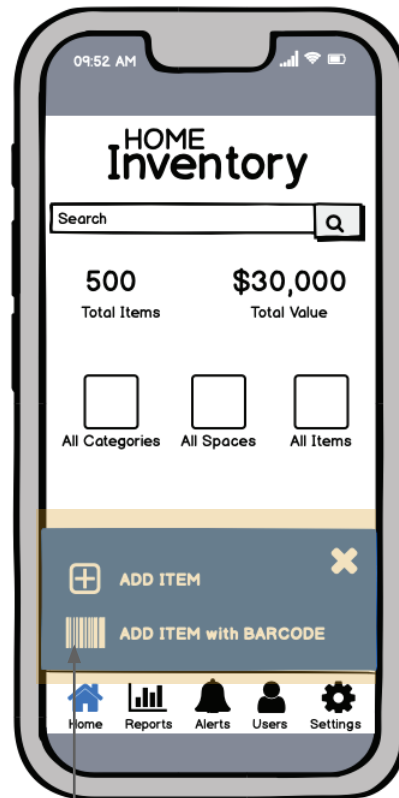
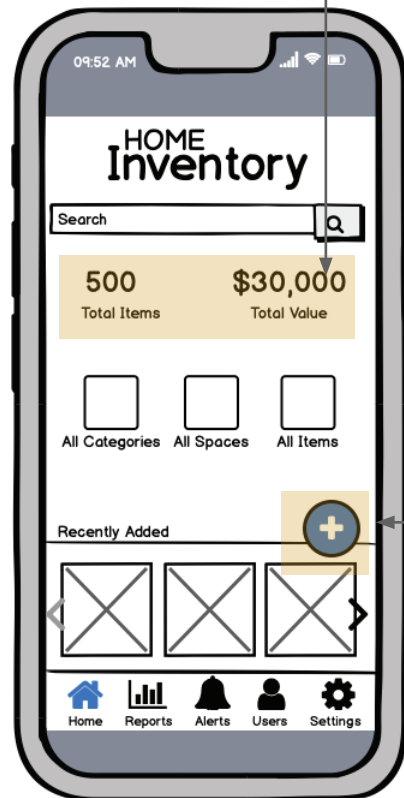


# Sketches

I started sketching the screens for the critical flows and iterated through many design options quickly with these low fidelity sketches. This process helped to fix a few inconsistencies while looking at these screens as a whole.

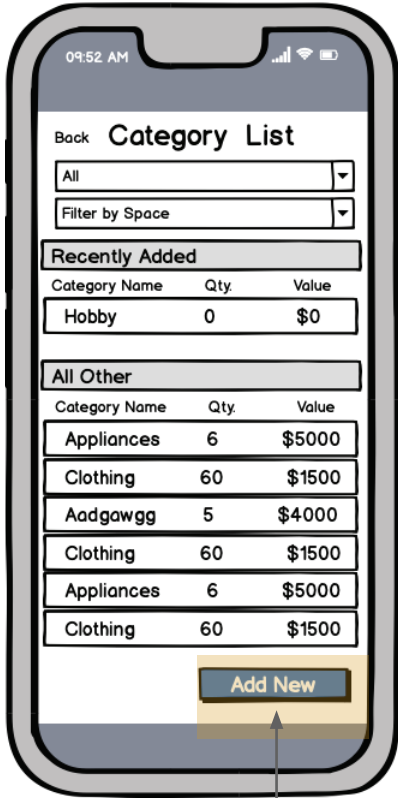
## Home & Adding Items

I started with the home page as a dashboard giving access to all the key information but later removed total value as it is sensitive information that should not show up right at the launch of the app.

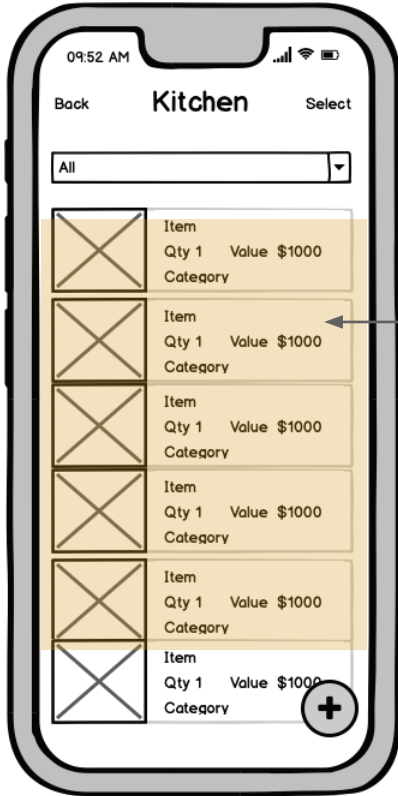
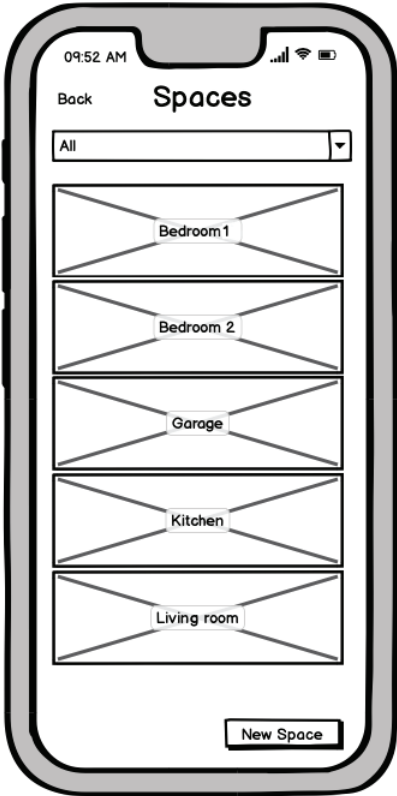
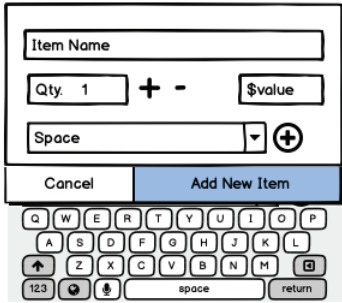
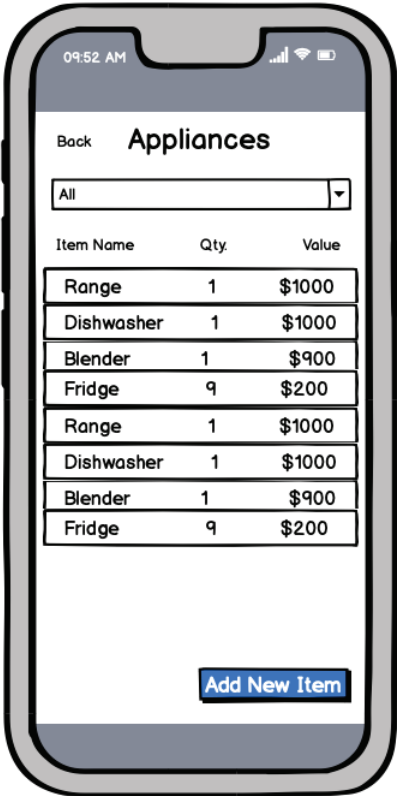


I noticed that since the 'Add Item' flow will be frequently used, its button being upfront on the screen will reduce additional click for this process.

Categories and Spaces

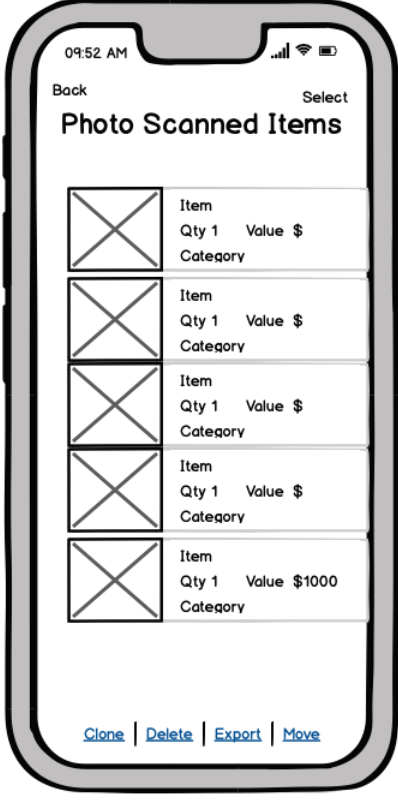
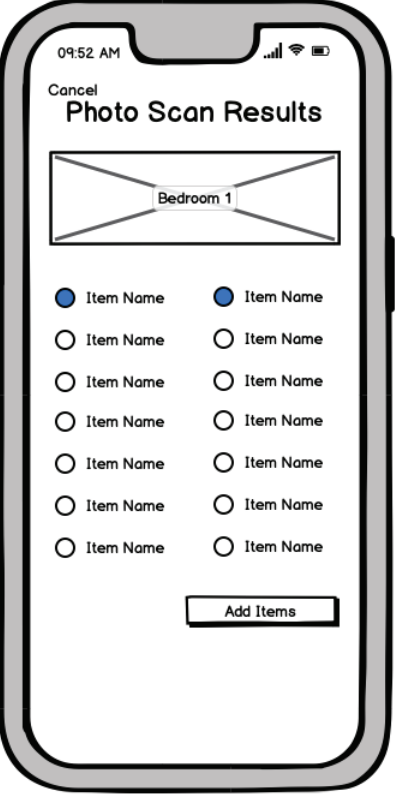
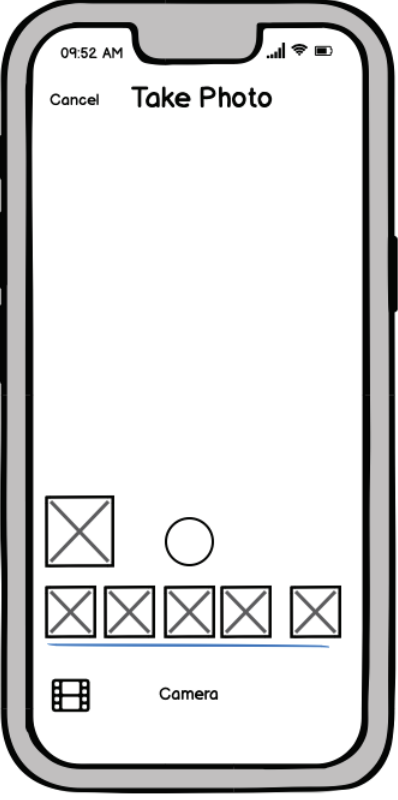
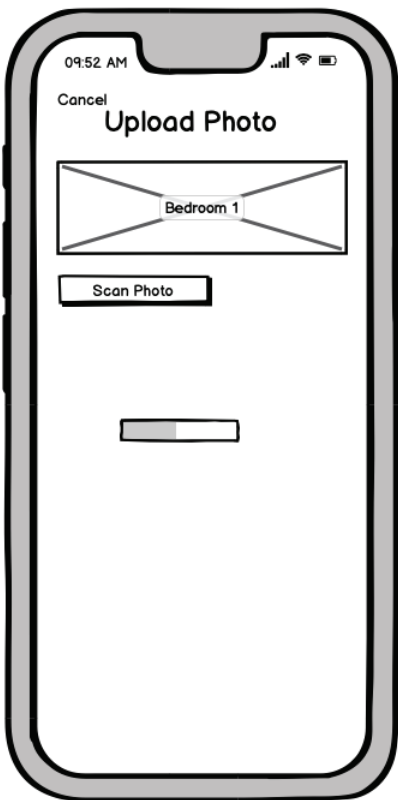


Adding a new item, category, space appears on many screens/flows and needs to be consistent in terms of behavior and UI.



The Items list on the Space page can have additional views to accommodate more items on the screen (with maybe showing less details).

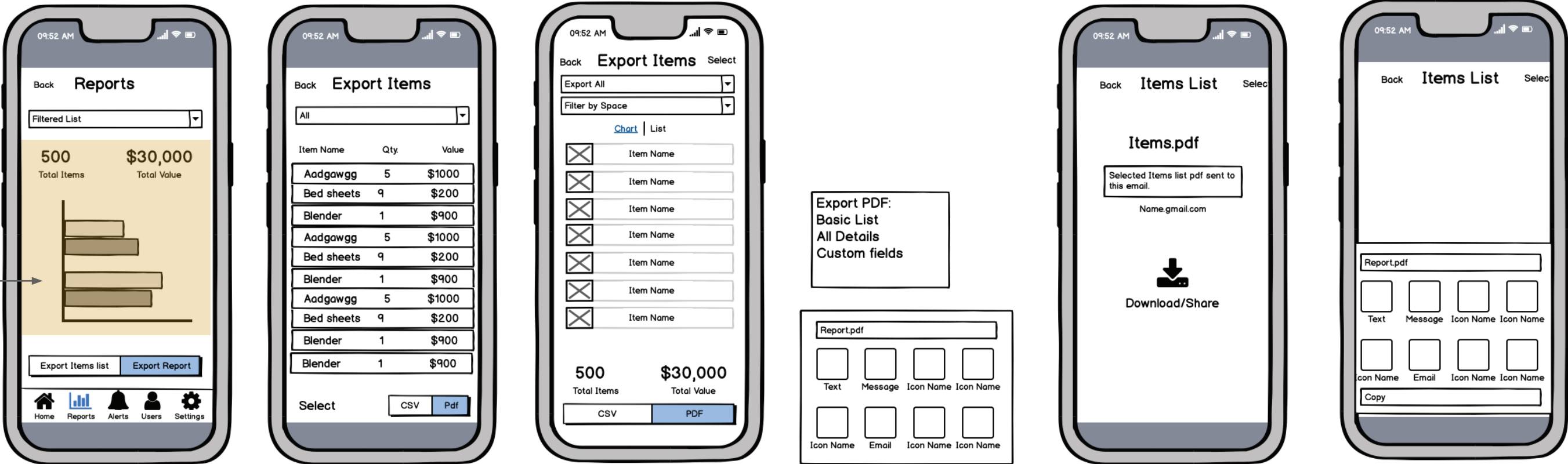
Scan a photo to identify items and pick identified items to add to items list.





More information on analysis of items can be provided on the 'Reports' page apart from just total value and total items.

Reports

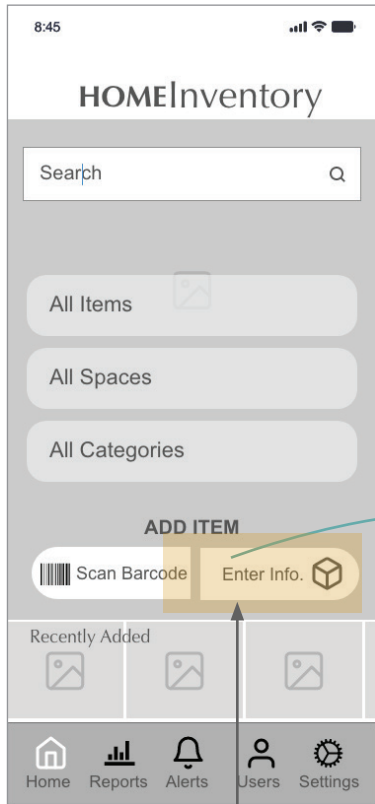


Users

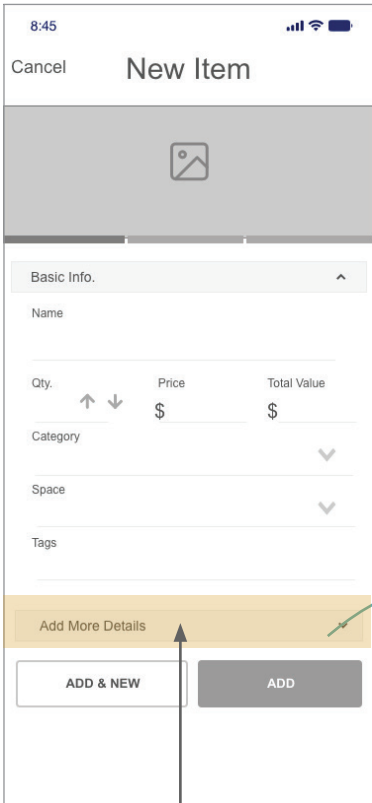


# Guerilla Testing

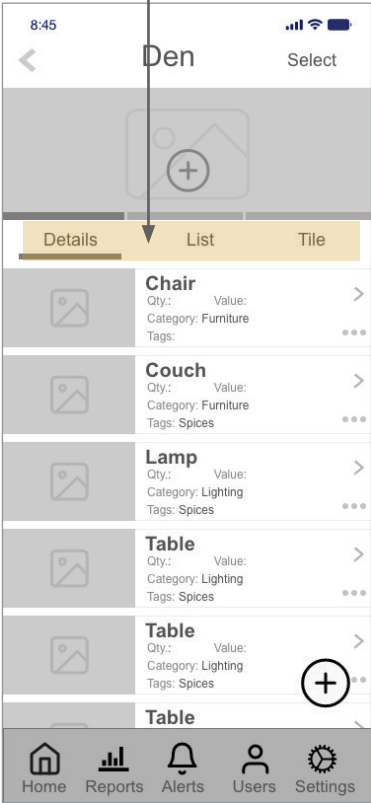
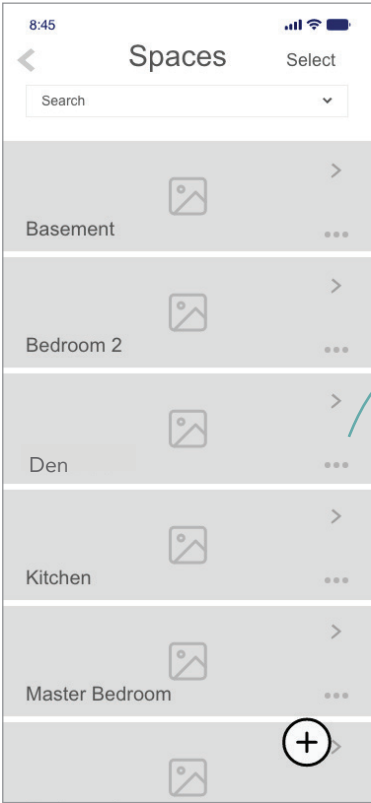
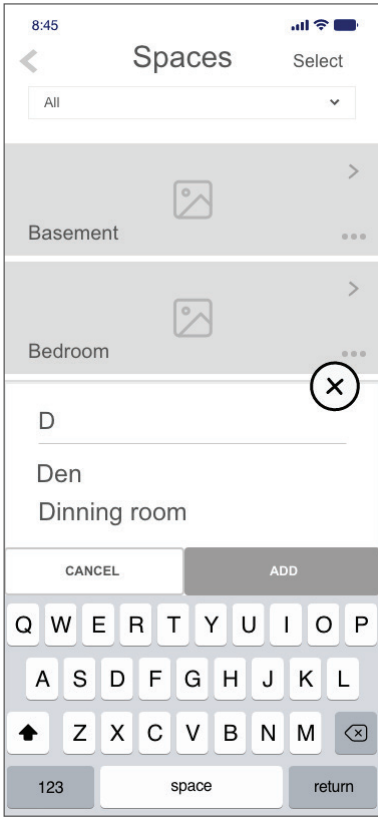
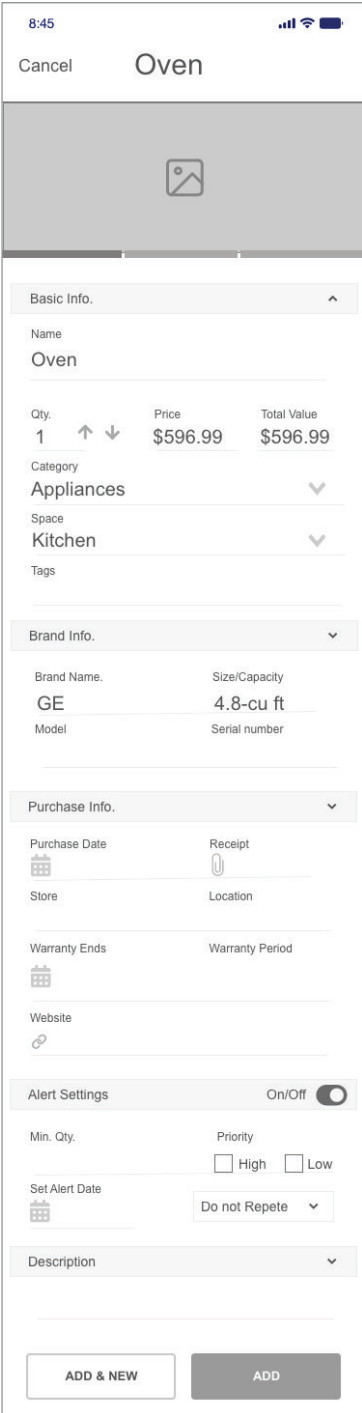
I conducted a guerrilla usability test of the red routes by sharing a clickable prototype created in InVision with designs from Adobe XD. I tested with 3 participants during a gathering and 2 family members. The goal was to discover potential issues by seeing if users are able to navigate through the app and also get some initial feedback on the interface design.



Users were able to navigate through the task of adding an item but 3 out of 5 users took some time noticing the 'Enter Info.' button.



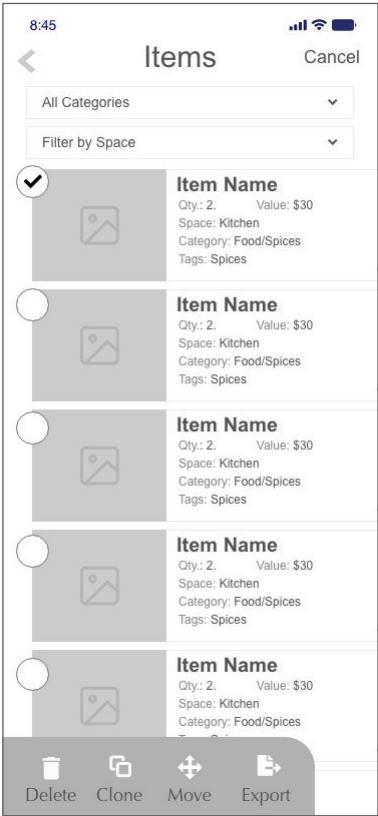
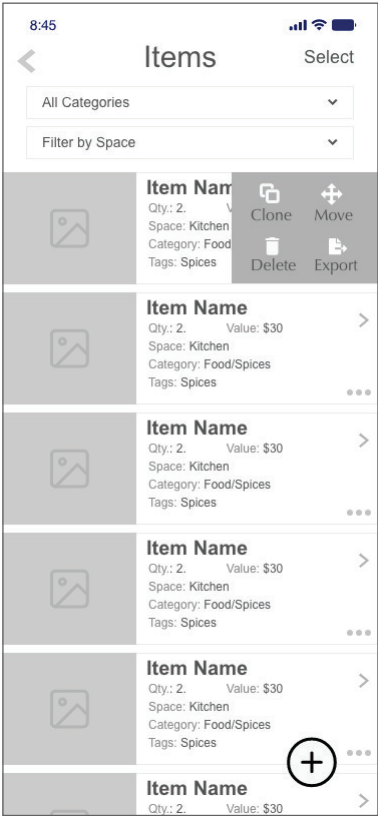
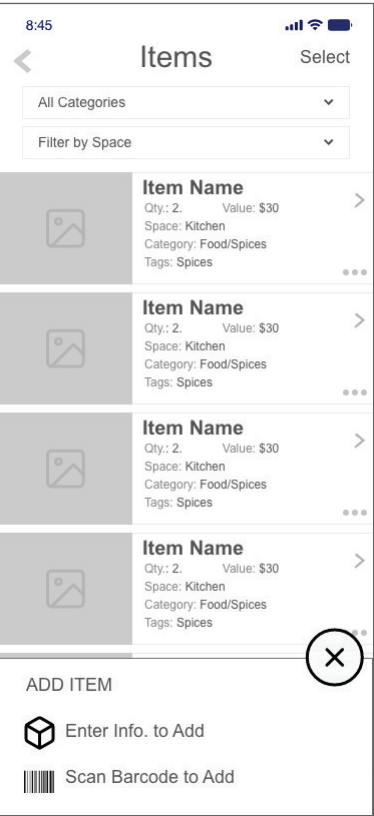
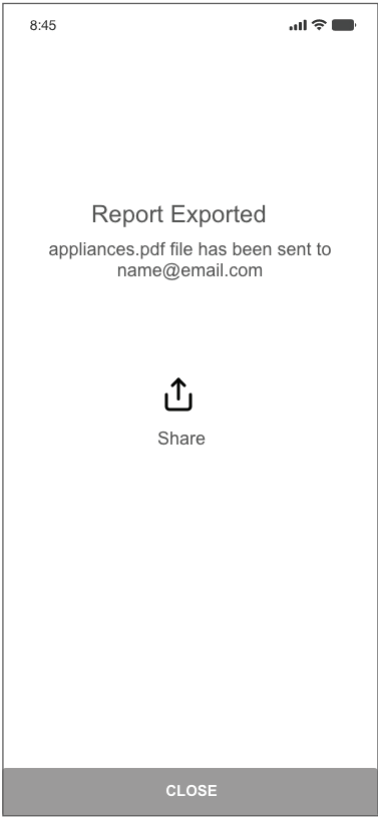
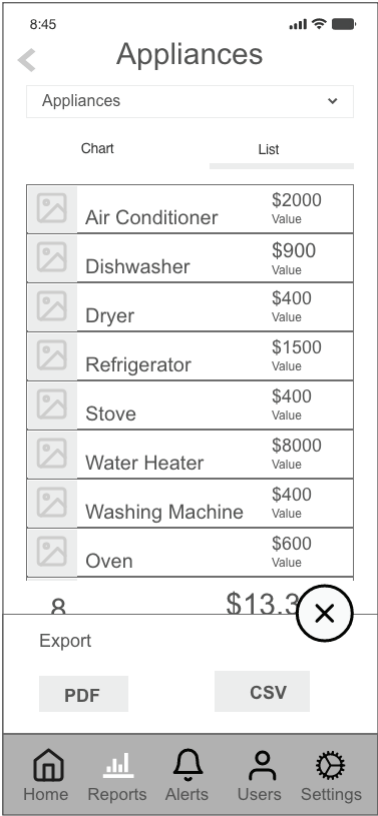
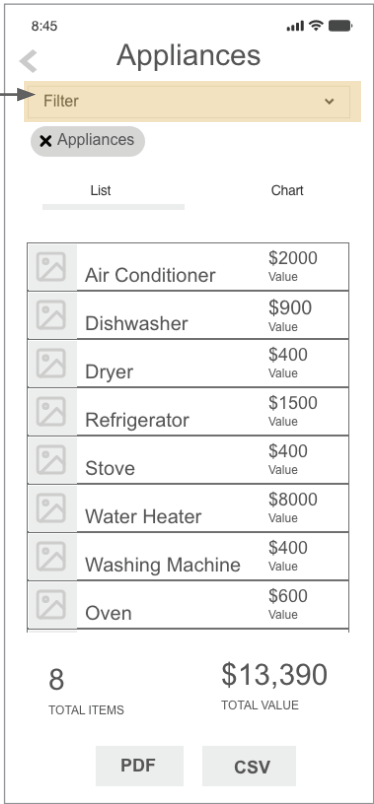
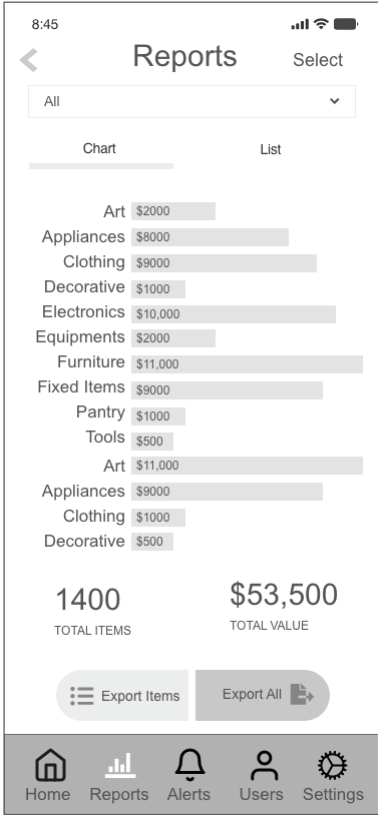
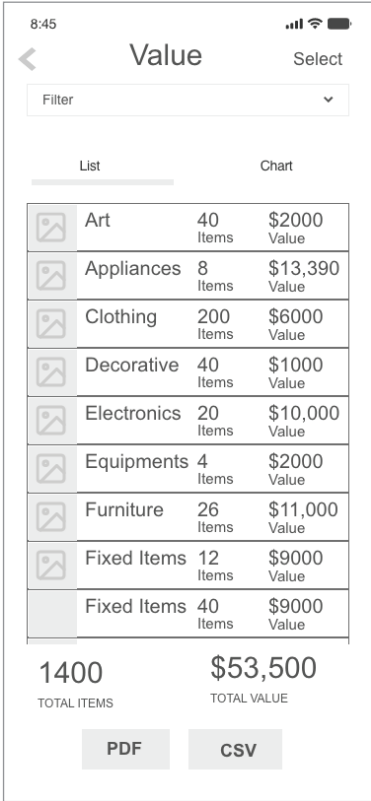
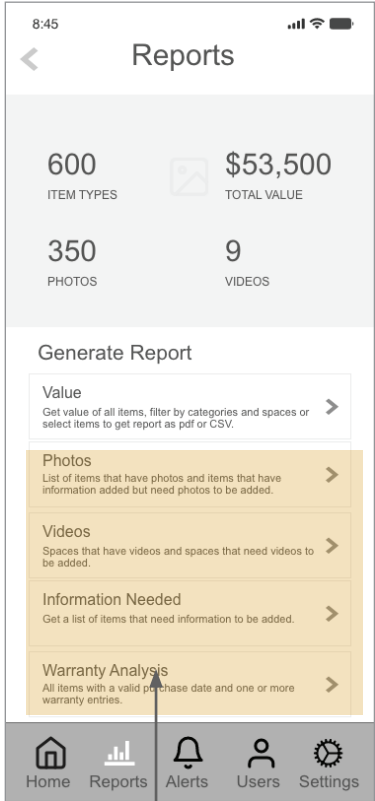
I moved all the additional details to another screen to reduce the cognitive load so users see few basic fields to enter data and can choose to add more details on the next screen.



I added additional views for the items being displayed in a space so viewers can choose to see more items or less items (with more details for each item.)

Guerilla Testing

The filter was a bit limiting and needed additional sorting to quickly arrive at a custom list of items.

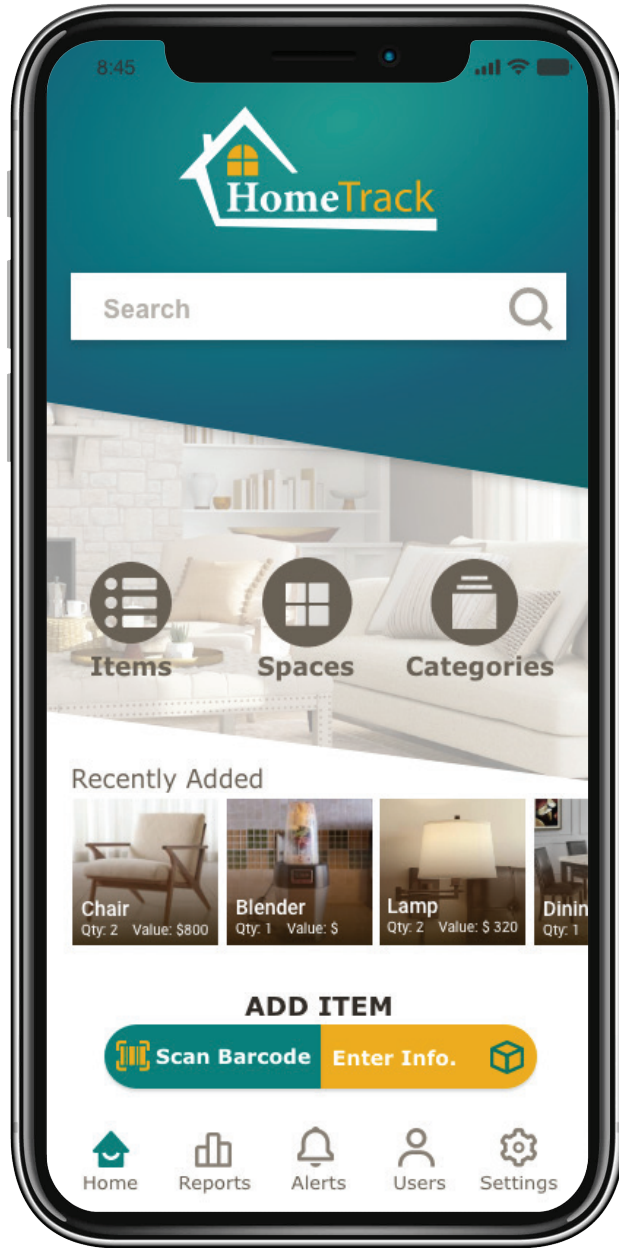
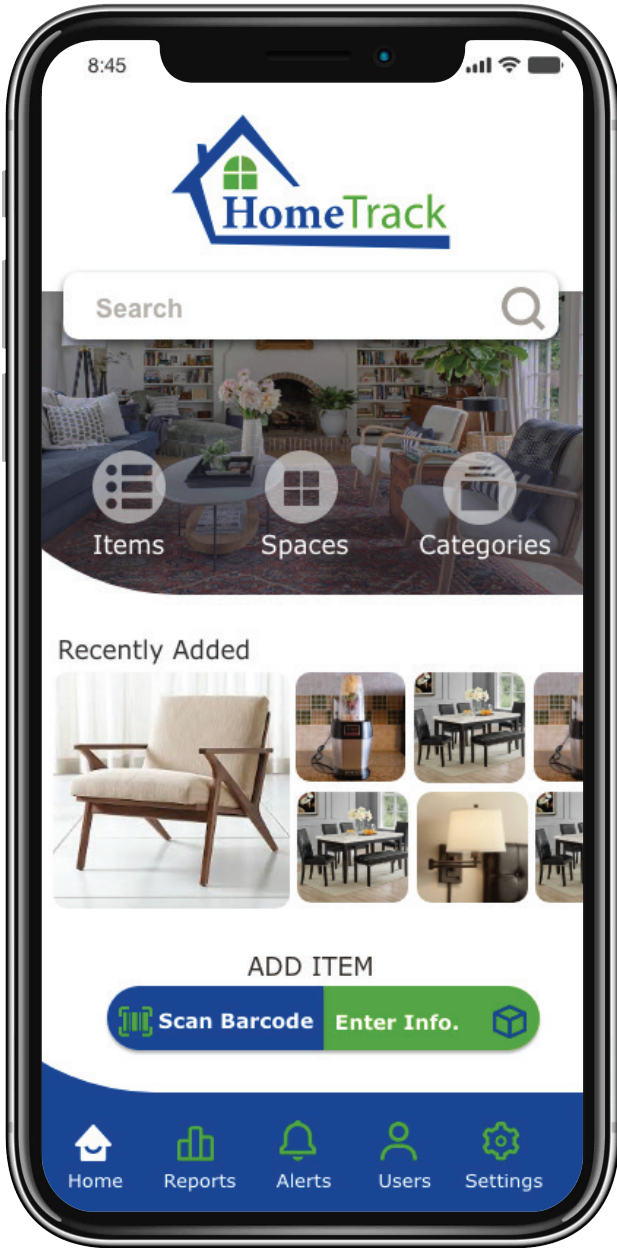
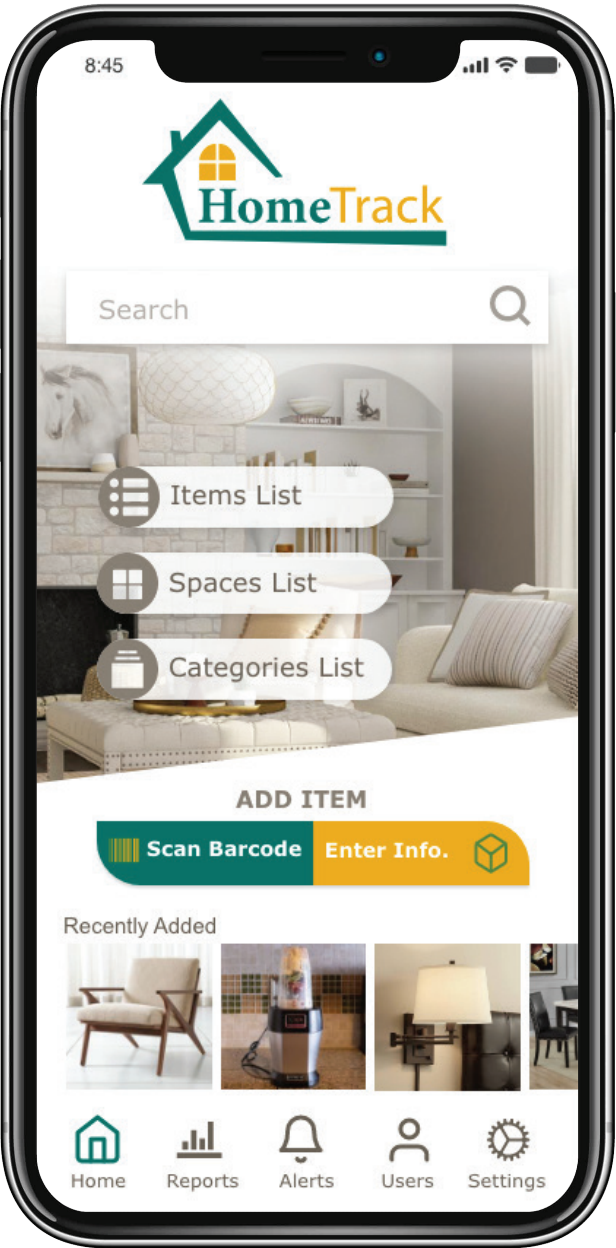


- I added more reporting features like:
- Assessing items that have warranties
  - Reviewing items/spaces to see the ones that the user did not add photos/videos during initial adding.



# Home Designs

Three Home screen design options below incorporated improvements revealed through guerilla testing. Quick testing of the screens showed that 4 out of 5 participants preferred the third design.



**Search bar:** Survey results showed that 46% of participants had trouble finding items and user interviews also revealed this as a recurring issue.

**Icons:** User flows and Information Architecture revealed that there are several paths for an action like adding an item. Items, Spaces and Categories help users easily take the path that works best for them thus providing flexibility and efficiency of use.

**Recently Added:** Users can quickly access what they added last and update or edit details they missed.

**Adding Items:** The 'Add Item' buttons are made prominent using design techniques like color, contrast and white space.

**Users:** Interview insights revealed that a household needed shared usage of an inventory system.



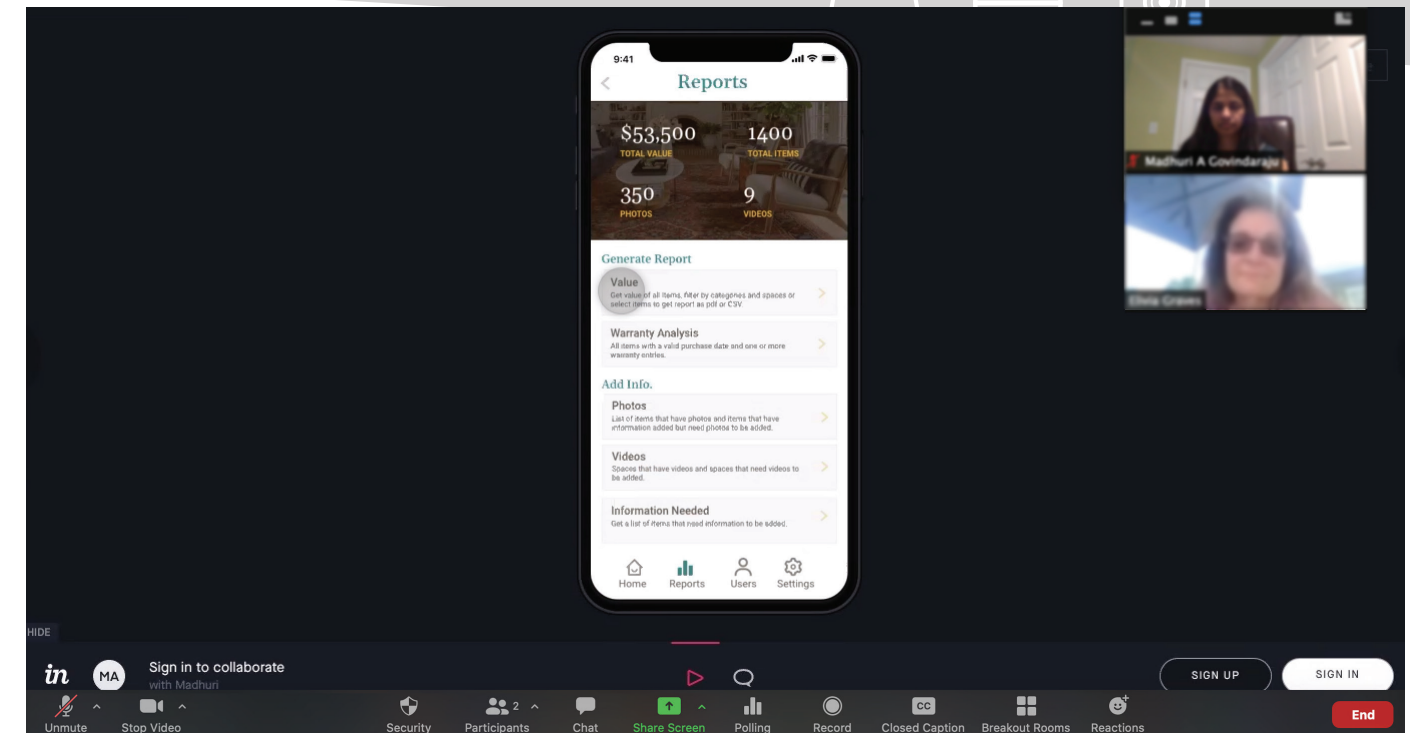
# Usability Testing

## Round One

I made a plan to test my designs and created a prototype in InVision. All testing was done remotely using Zoom where participants shared their screen while going through the tasks.

## Key Findings

- On the Home screen users had some difficulty understanding some of the text namely: Spaces, Recently Added, and Alerts.
- On the 'Reports' page "Item Types" was difficult to understand. Amongst all these, Alerts was the most ambiguous for all users.
- Users wanted to add some description to items while adding basic information.
- Users wanted to see more items when viewing a list of items than seeing less items with more details.



# Usability Testing

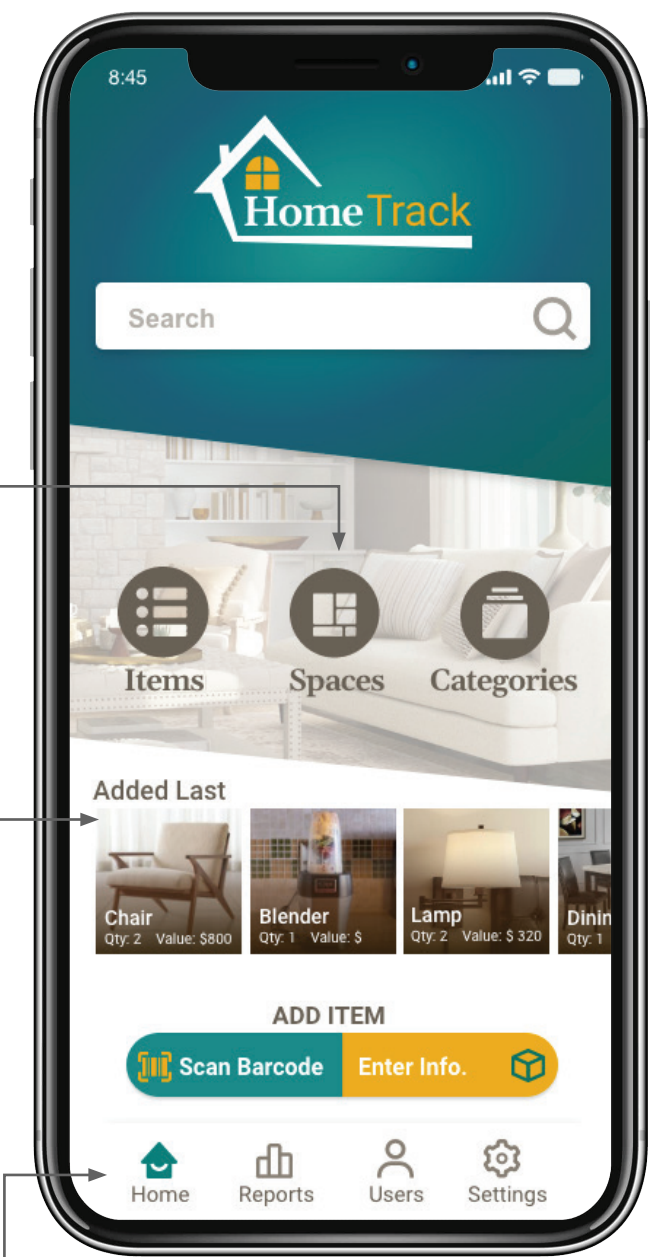
## Spaces instead of Rooms

I choose the term 'spaces' instead of 'rooms' that some users preferred as:

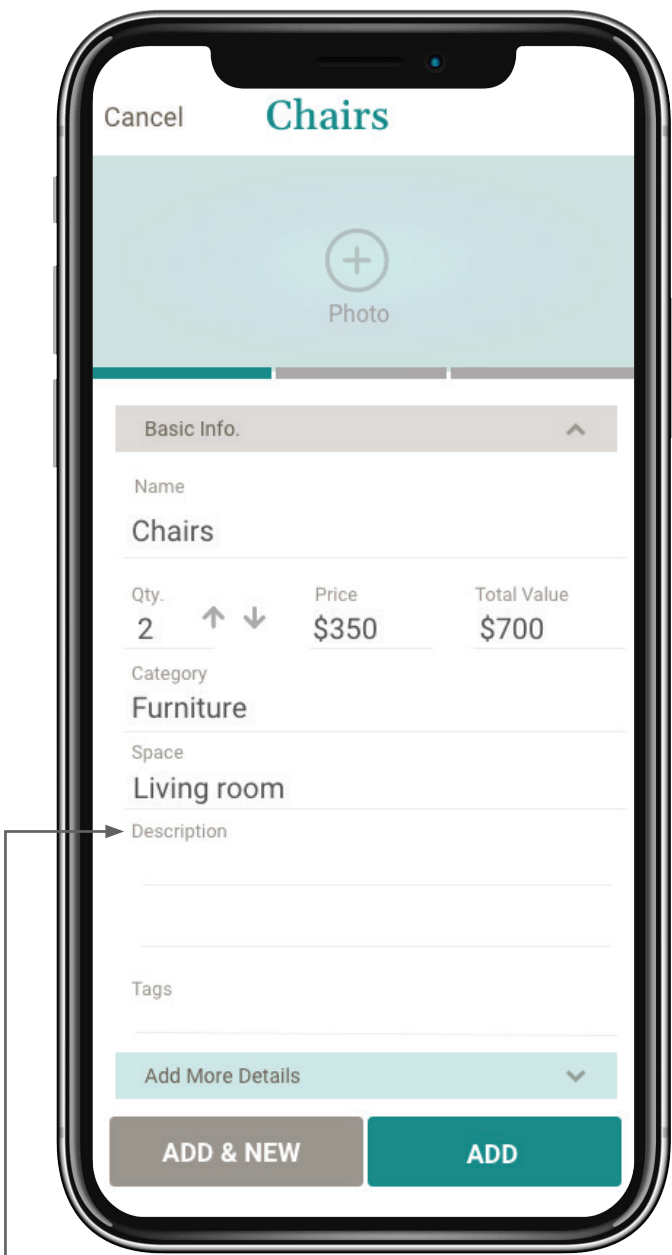
- The naming did not cause any issue though with the user flow of navigating to a room.
- 'Spaces' is still relatable and has the advantage of covering areas that might not be set rooms in a house but for certain purposes (like a lounge near staircase or an office nook.)
- I tweaked the icon to look more like a floorplan.

## Added Last

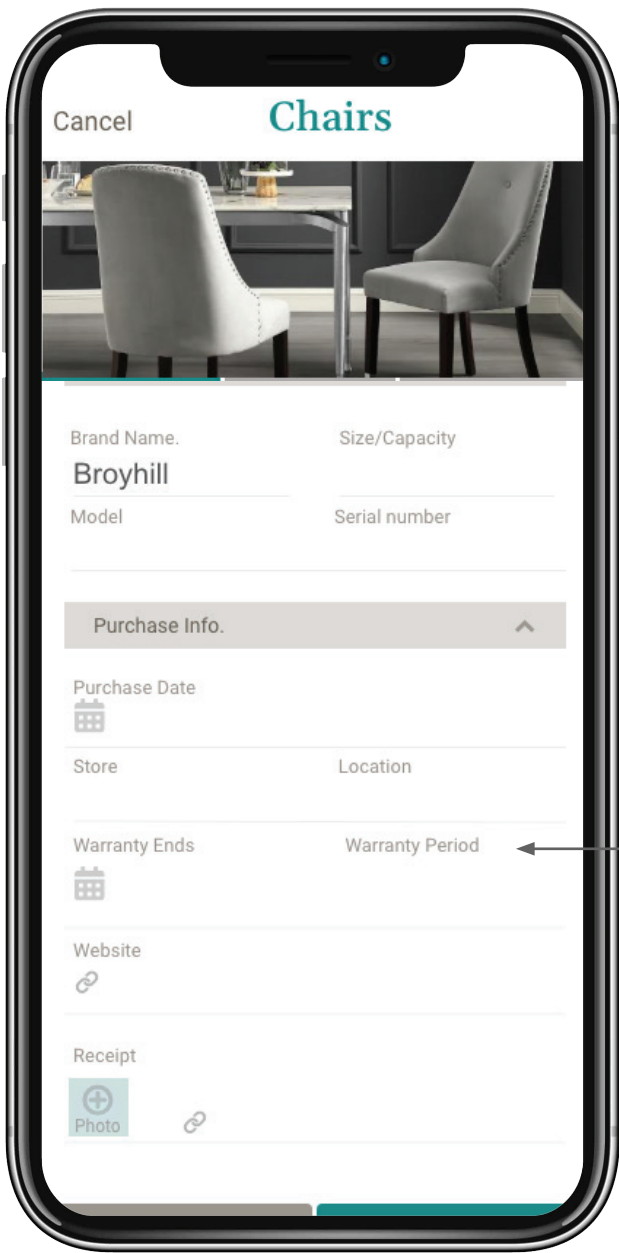
One user pointed out that 'Recently Added' will display an item they added a few months back as recent too, if that was when the user last added an item. I changed the title to 'Added Last' to accommodate the timeframe of usage.



**Alerts** was earlier part of the MVP (on the tab bar) but needs additional user research to provide more value. Testing already revealed that it would be a useful feature to inform users of things like warranty expirations.



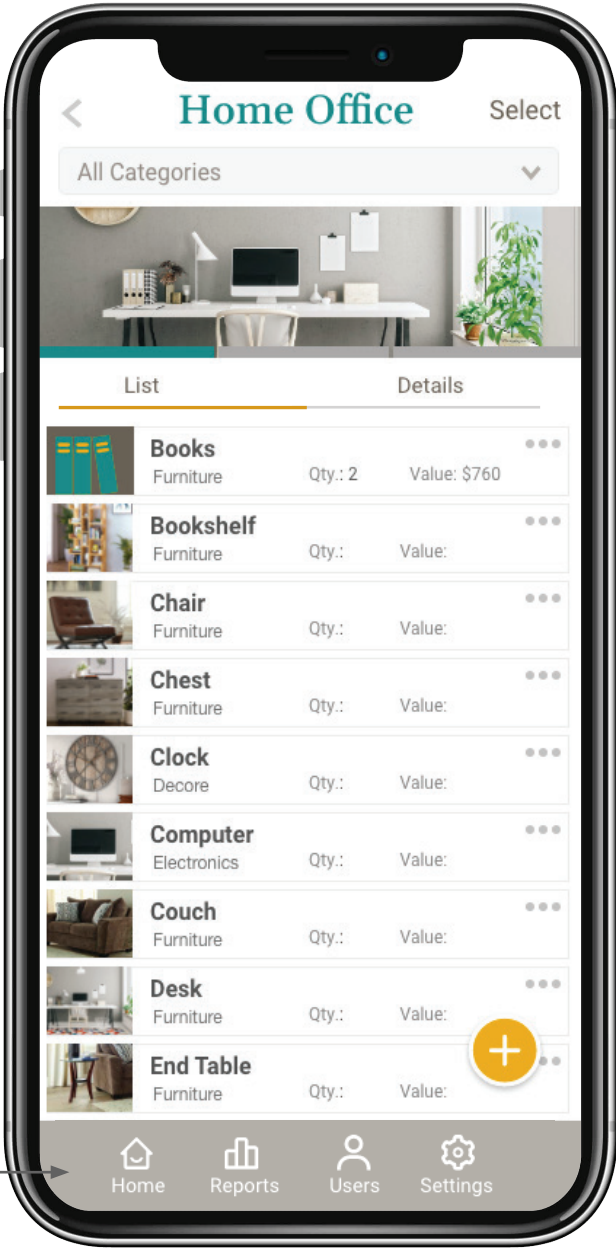
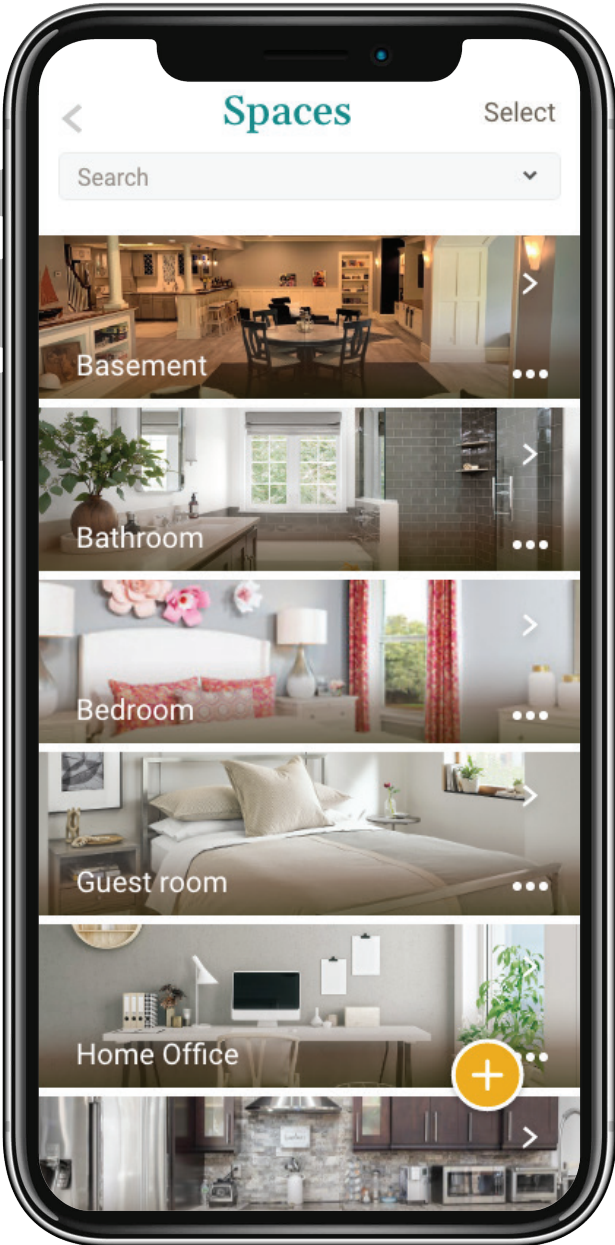
I added 'Description' (that was earlier part of additional details) to 'Basic Info' as users wanted to add custom details on this screen itself.



Users liked all the additional information they could add to an item, especially **warranty details**.

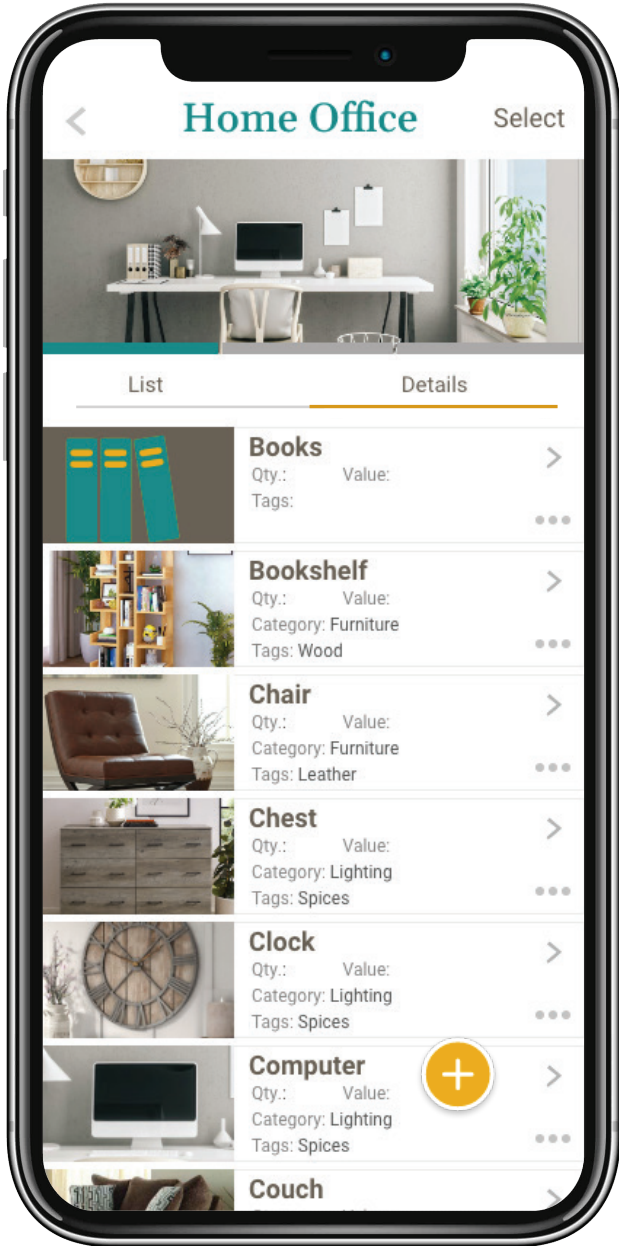
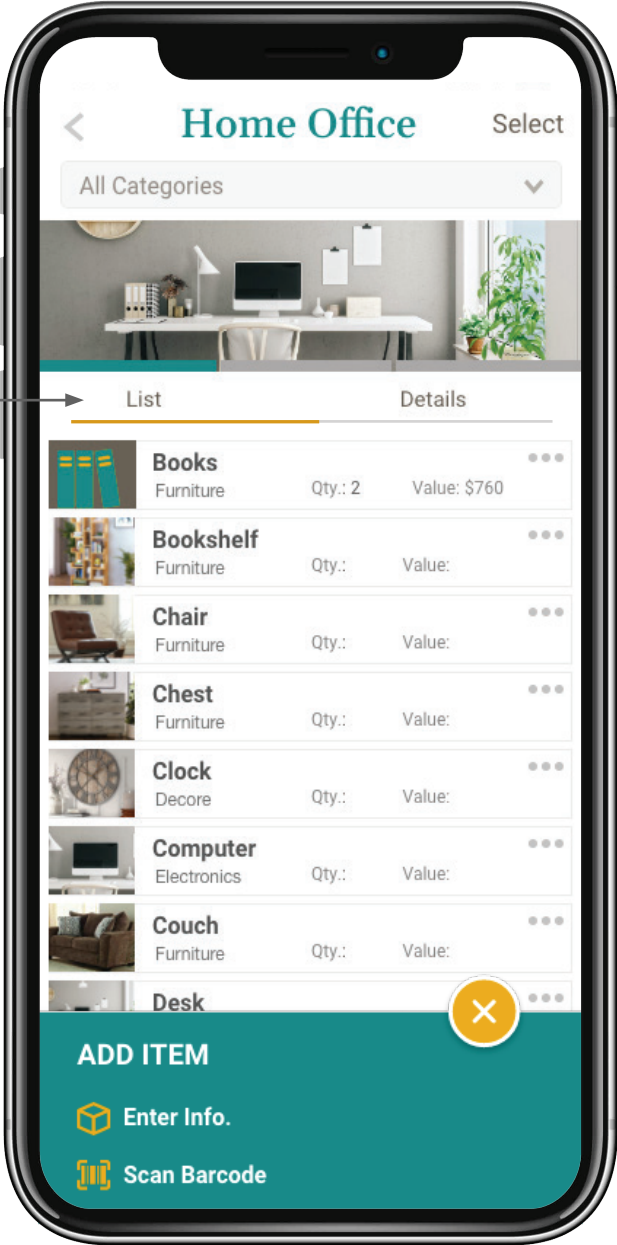


Usability Testing



Tab bar helps with ease of navigation and disappears on scroll for seamless list view.

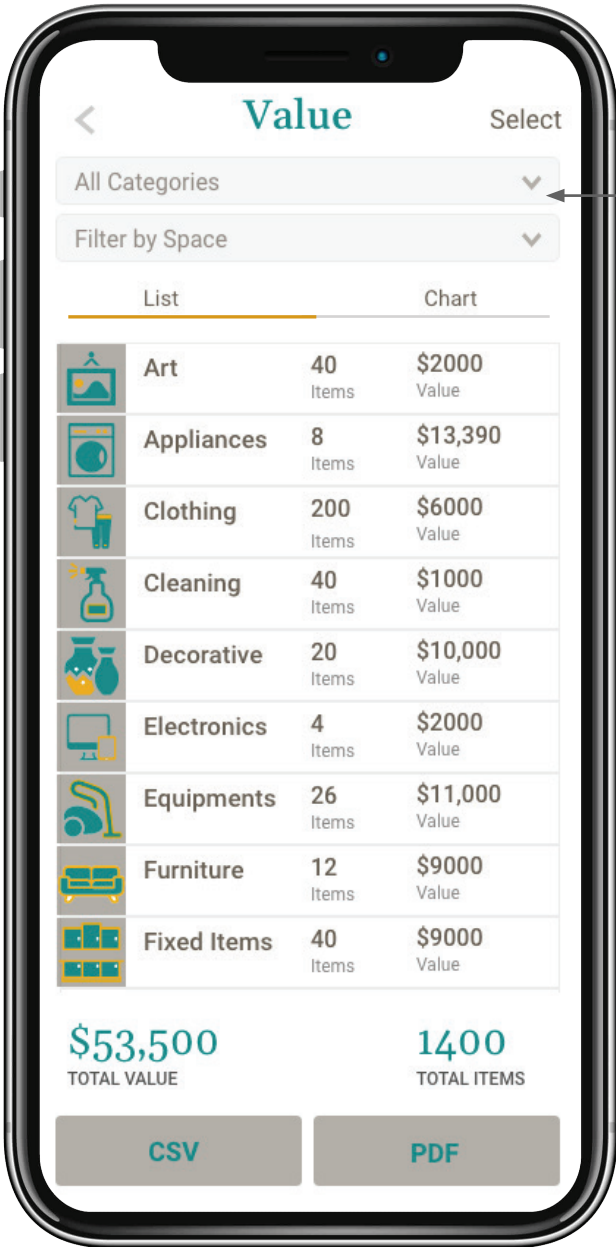
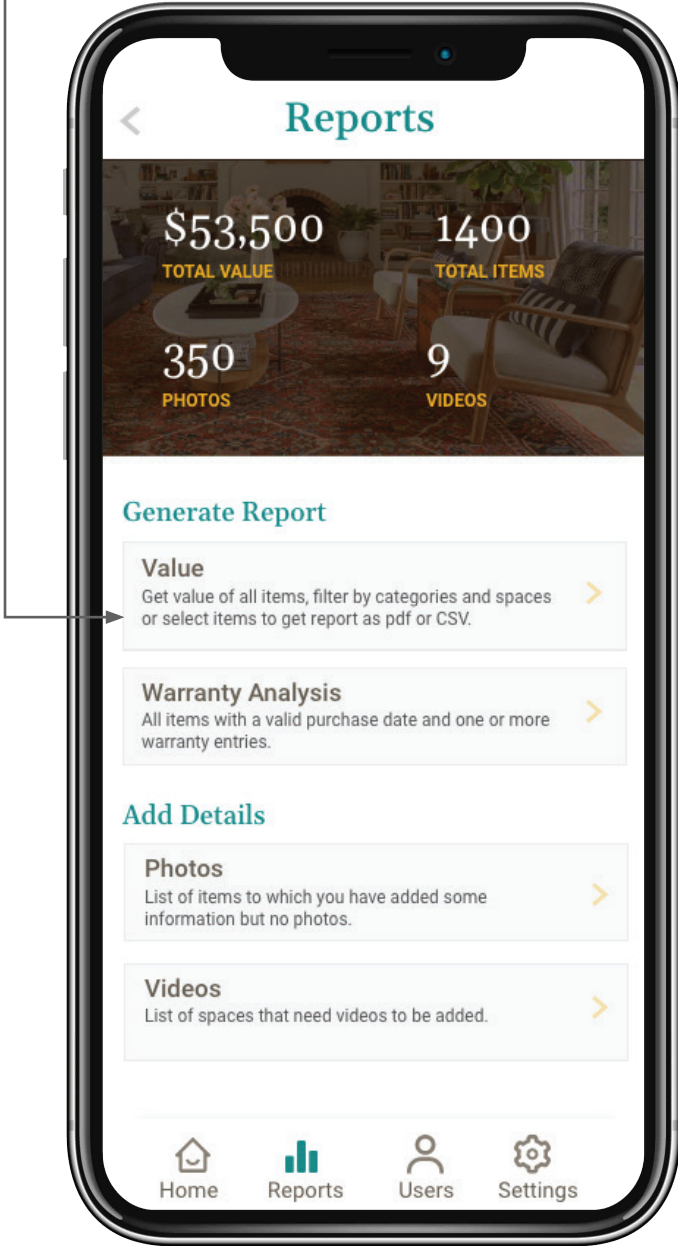
4 out of 5 users wanted to see the list view first on these space/room screens. Also, most users did not find the 'Tile' view to be very useful. I removed it as 'List' and 'Details' provided enough flexibility.



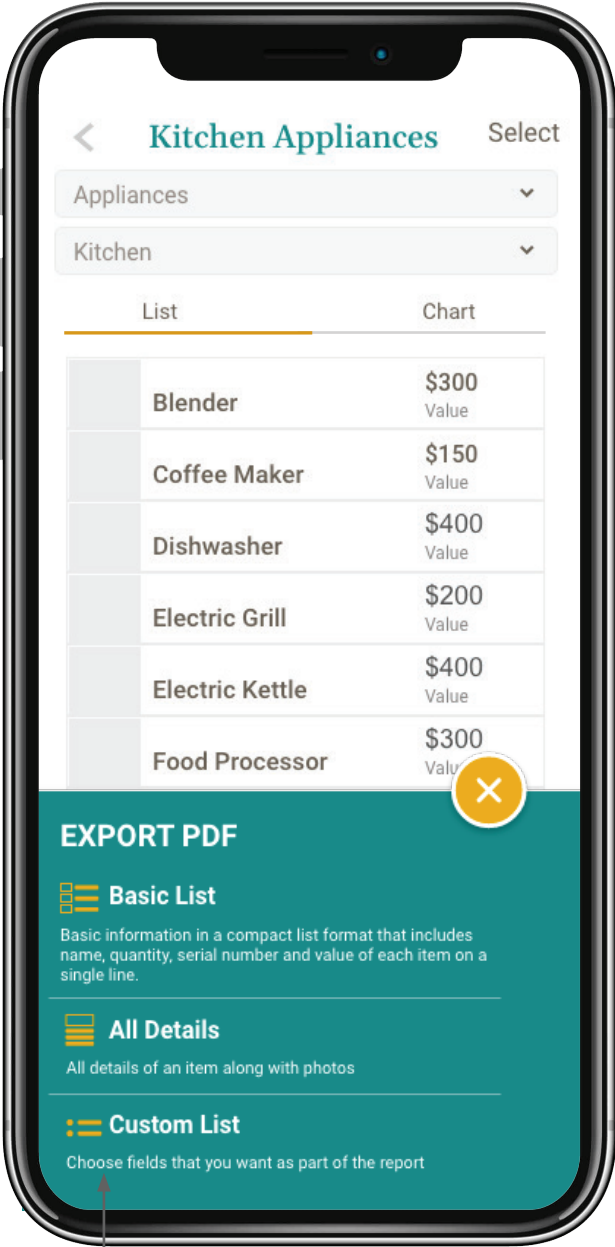
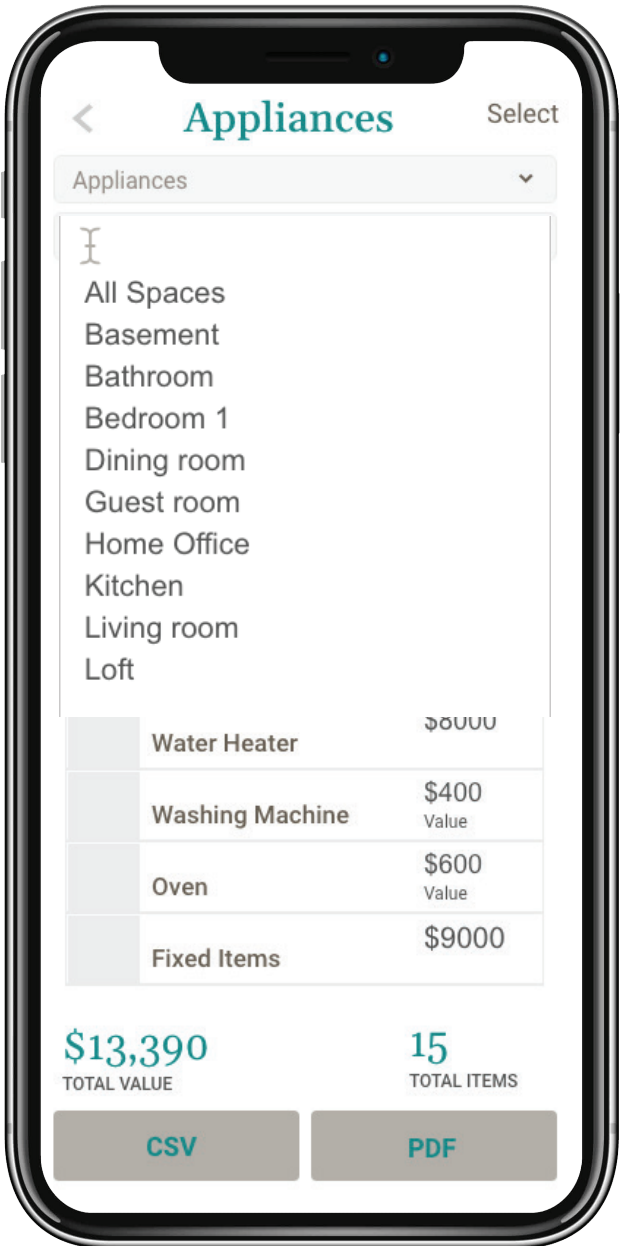


Usability Testing

Users were most interested in Value and Warranty information so I separated those from other items.



Users found the double filter option with categories and spaces very useful and liked how it helped to quickly arrive at a custom list.



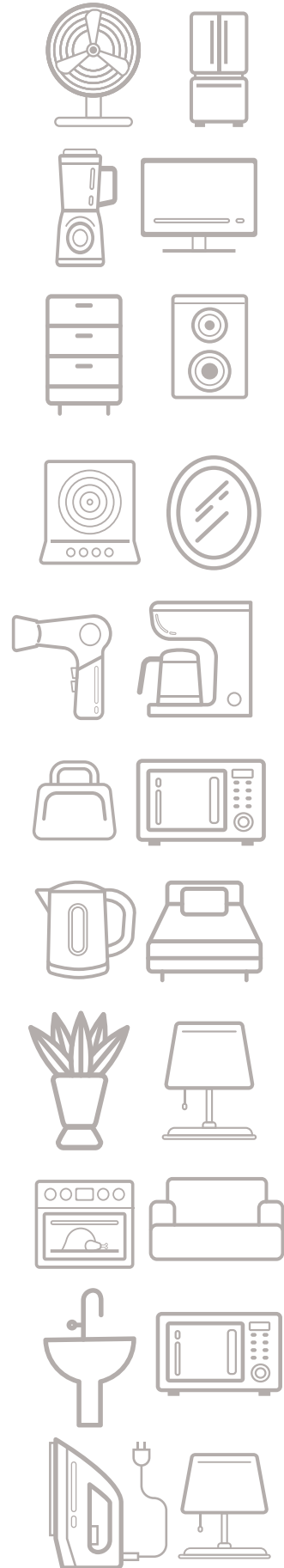
Users liked the different PDF options to choose the amount of details they need in their report.

# Round Two

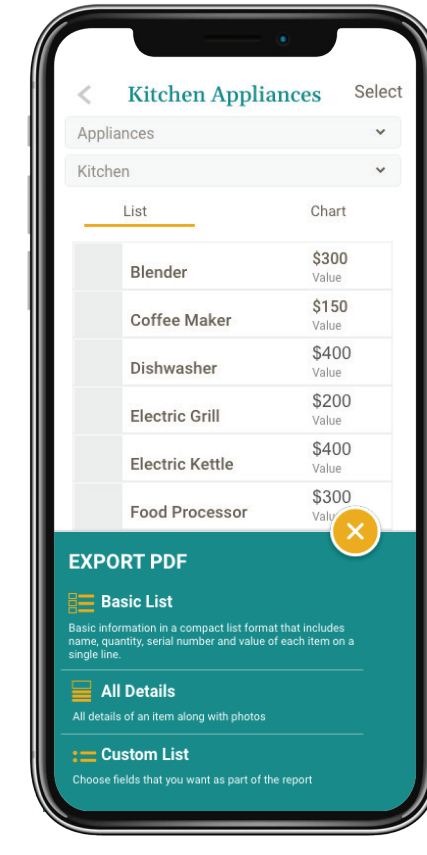
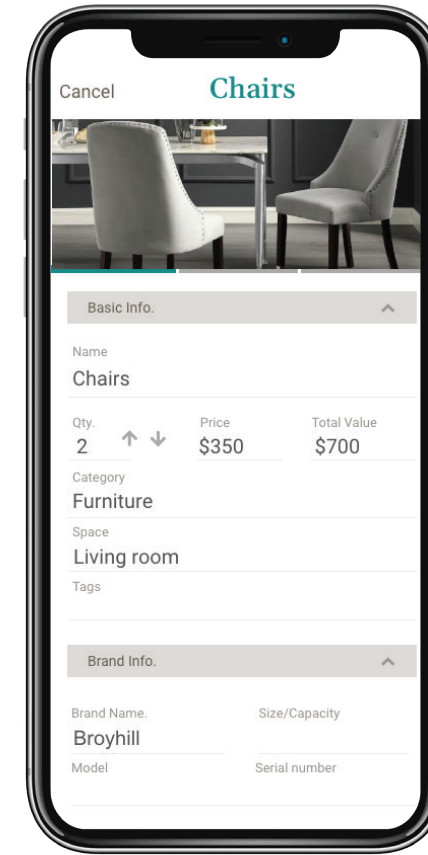
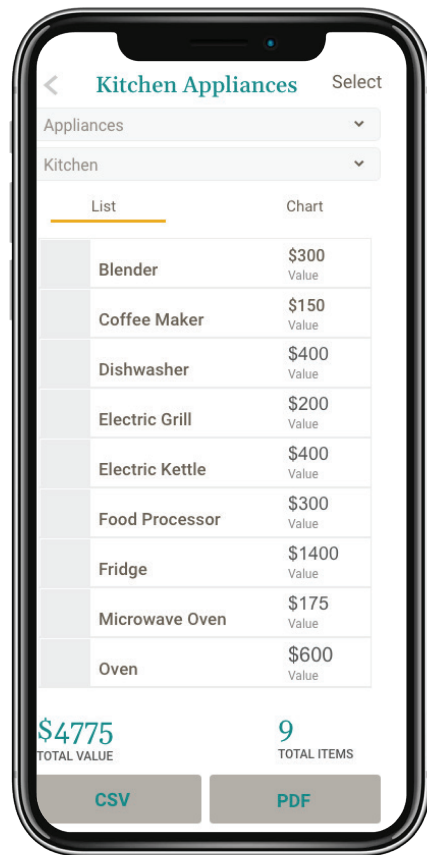
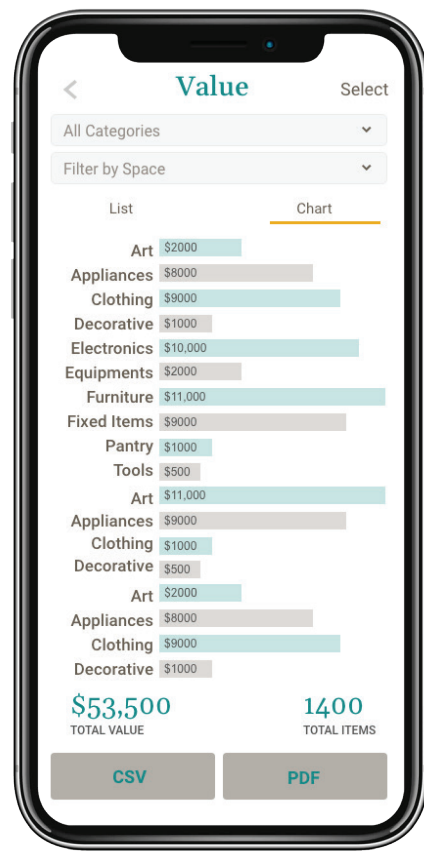
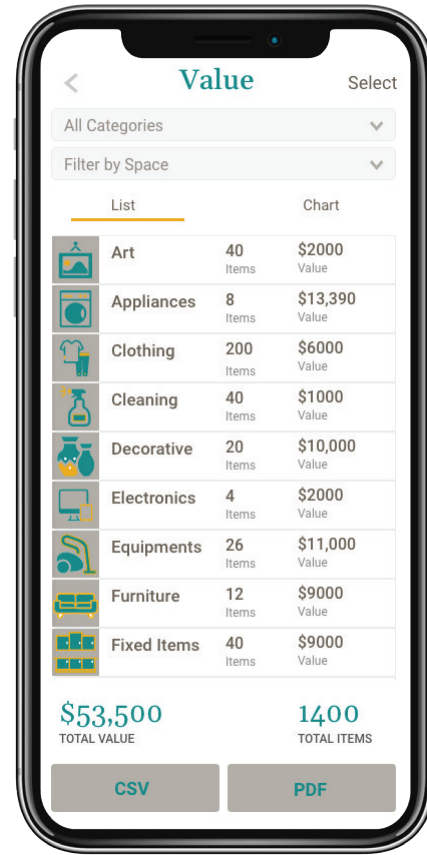
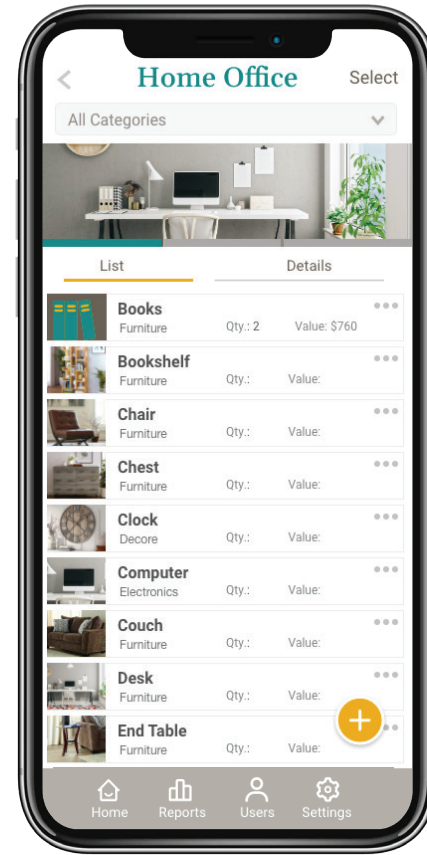
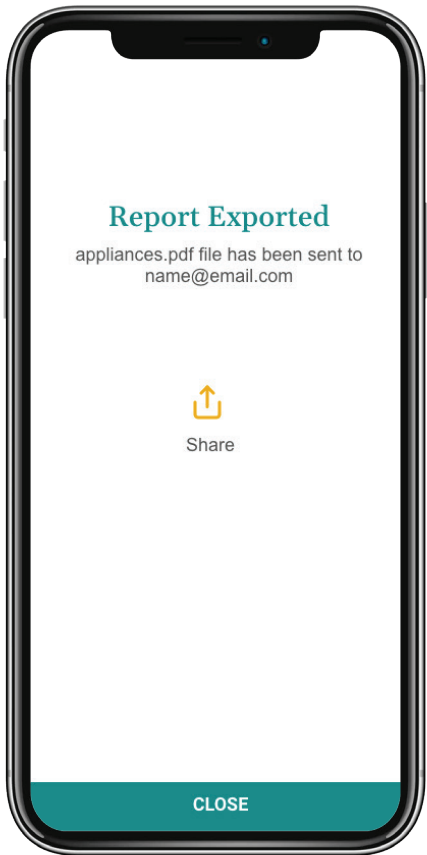
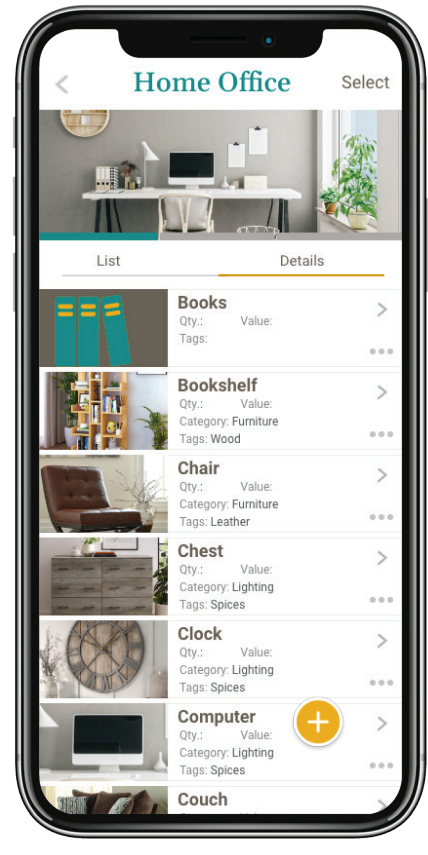
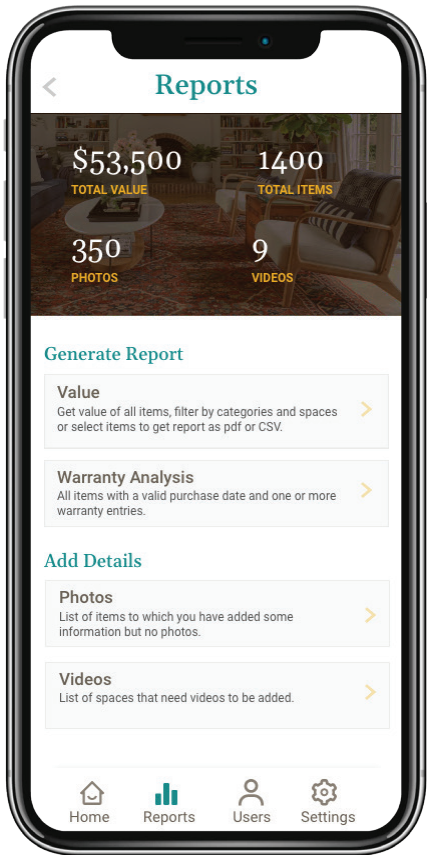
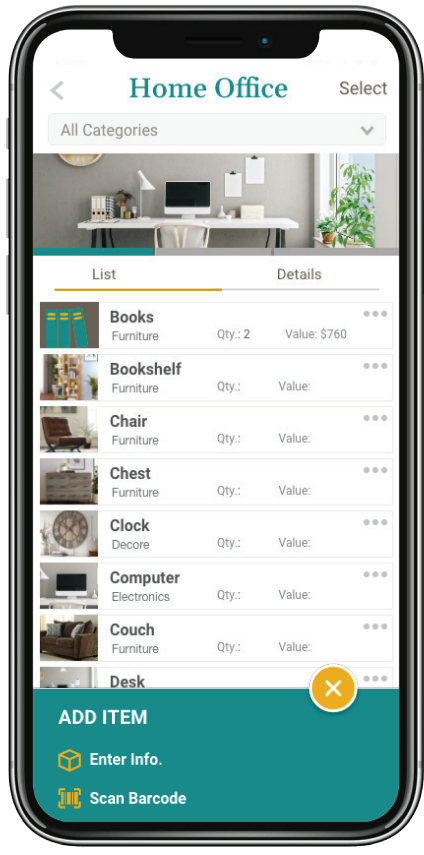
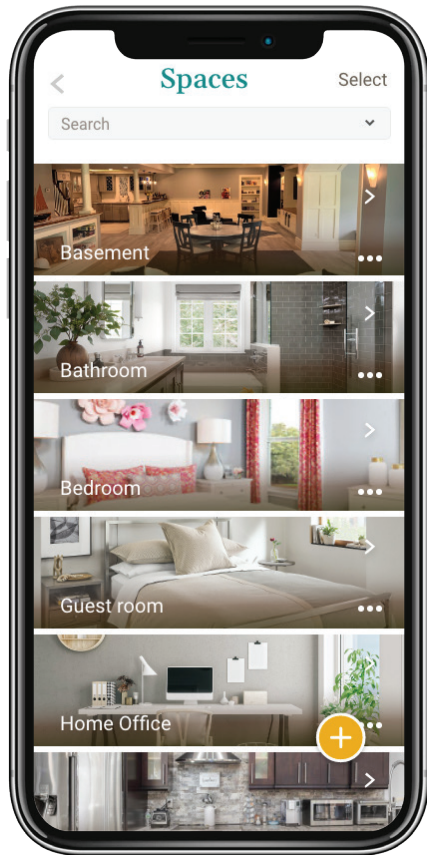
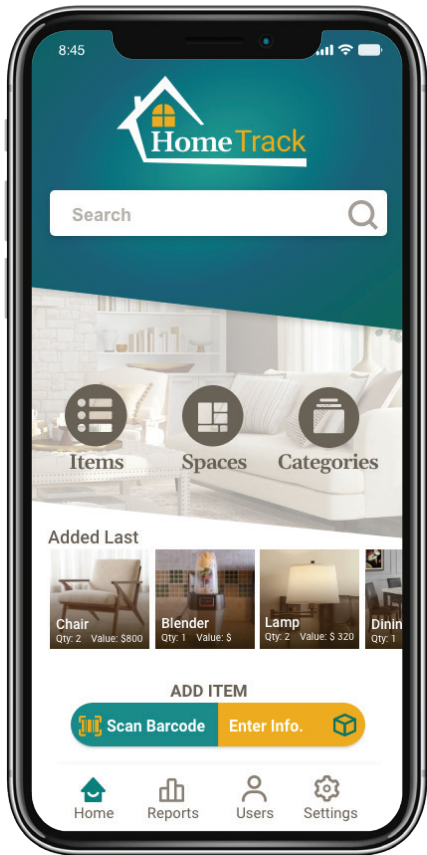
I conducted a second round of usability testing with 4 participants remotely on Zoom. I made changes to the prototype before this round of testing incorporating feedback from the first round of testing. The objective of this round was to see if the updates helped resolve the earlier issues.

## Summary

- The changes made after the first round of testing helped resolve all the issues from that usability testing.
- Users were satisfied with all the details they could add to an item. Also, they really liked the filter feature (by category and space) to arrive at a custom list.
- One user expressed concern about 'Reports' having sensitive information on phone. Reports can be password protected and admin (main user) can set privileges so other users are not able to access it.









# Final Thoughts



## About the Product

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- Competitors products are mainly targeted towards businesses and offer the same functionality for home use without customizing for the needs of homeowners. These products seem too complex for home use. So, I wanted to focus primarily on the needs of users managing their personal belongings.
- User interviews revealed that the product needs to cater to a whole household and not just an individual. These findings meant that apart from the primary audience, there will be younger and older users that need to be considered during future usability tests.
- While mapping out the customer journey, I noticed that it is essential to access this product on multiple devices. The two important tasks of the product are entering data and generating lists/reports of items. A phone app would work well for the former especially to scan items and add photos whereas bigger screens will be very useful for reviewing inventory data.



## Beyond MVP

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### **Planning home organization tasks by creating schedules**

During user interviews all participants said that they would like to be more organized but only get to sorting and organizing home items when the need arises like looking into clothes during season change. They found home organization a daunting process. A planning and scheduling feature will help users create tasks and get reminders to keep their inventory up-to-date.



### **Alerts for annual home maintenance and inventory check**

Some of the home items need maintenance work that can be managed by creating alerts. Alerts can also be created for frequently used items to check for low quantity.



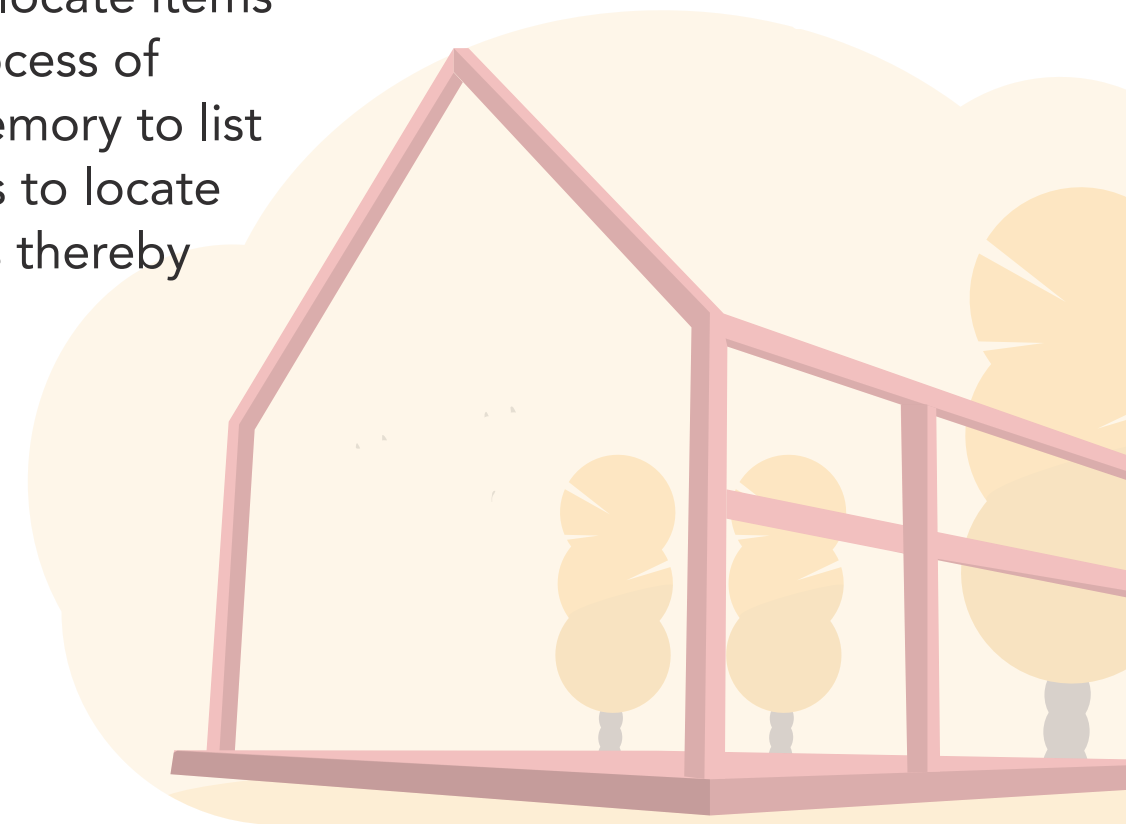
### **Planning and managing remodelling projects**

Remodelling projects can sometimes go out of control especially for busy households already juggling several activities. The app can provide a general overview to plan home updates and help document receipts, photos, timeline and budget for home improvement projects.

## Design Learnings

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- At first I struggled to figure out what features to exclude for the MVP (minimum viable product) as everything seemed very useful. User research helped me to break this list into features critical for the core functionality and the ones that would be nice to have.
- My interview locations were a mix of at-home and formal outdoor settings. I noticed how surroundings can make an impact in gathering insightful information as people who were interviewed at their own home shared more details not just about themselves and their belongings but also about habits of family members.
- Apart from keeping their belongings organized, it was challenging for people to locate items or remember if they owned an item over time. While going through my claim process of accounting for my belongings, the most difficult part was relying solely on my memory to list items and their details. In my design, along with 'Search' and adding custom tags to locate items, I also added filter and sort options to generate a custom list of belongings thereby reducing time and effort in tracking items.



***Thank You!***

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# Appendix

## Problem Statement Revision

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### Previous Version

People own a large number of items and it only keeps growing over time. They seldom keep track of everything they own and most likely would underestimate the value/quantity of their belongings. I wanted to explore this problem of the tedious process of keeping track of one's belongings.

### Revised Version

People own thousands of items and their belongings keep growing over time. With about [300,000 items in an average american home](#), we don't have the mental capacity to keep track or account for all our belongings. Data also shows that every [1 in 20 homes has an insurance claim](#). So, underestimating the value/quantity of one's possessions can lead to severe monetary loss in the event of property damage.

## Additional Secondary Research

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### About stuff people own

21 Surprising Statistics That Reveal How Much Stuff We Actually Own ([The Wall Street Journal](#))

Global retail sales were projected to amount to around 30 trillion U.S. dollars by 2023, up from approximately 23 trillion U.S. dollars in 2017 ([Statista](#))

How Much Stuff Do We Have? The Results Are In ([Simple Family Finance](#))

### Recognizing objects from photos that the app could use to enter items

[How To Use Google Lens To Identify Objects In Photos](#)

[Visual Search of objects](#)

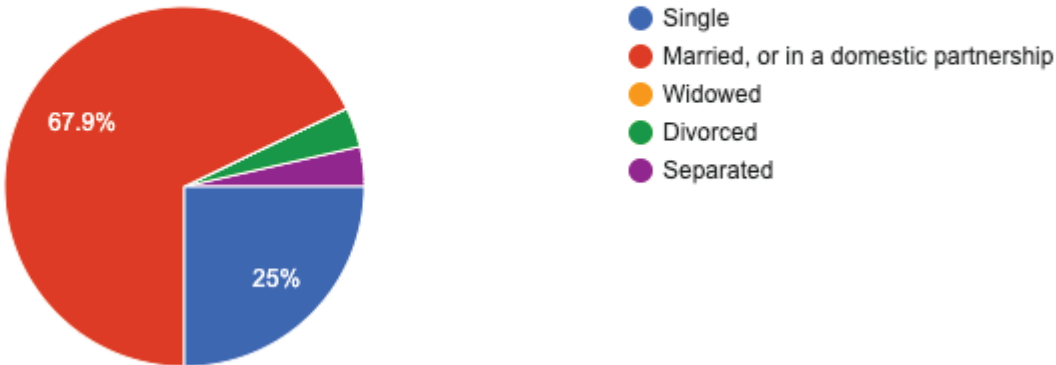
[Website that will identify any image you throw at it](#)

[8 Nifty Apps to Identify Anything Using Your Phone's Camera](#)

# Survey Results

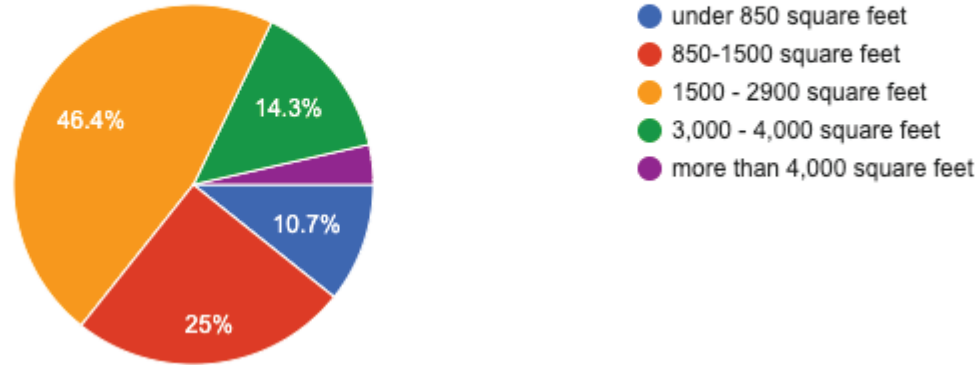
What is your marital status?

28 responses



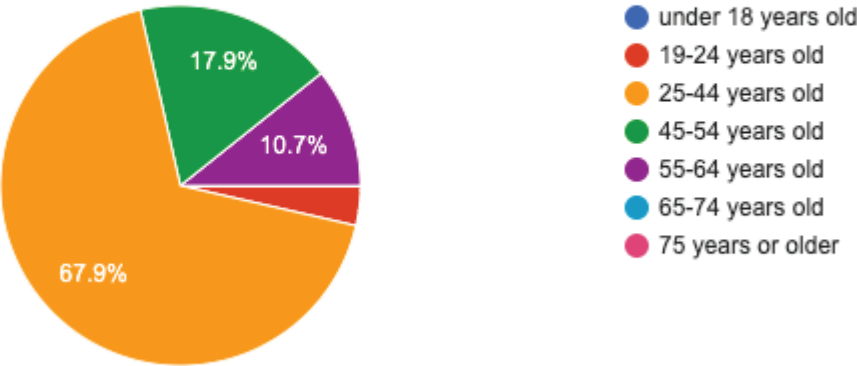
What is the approximate square footage of the home you live in?

28 responses



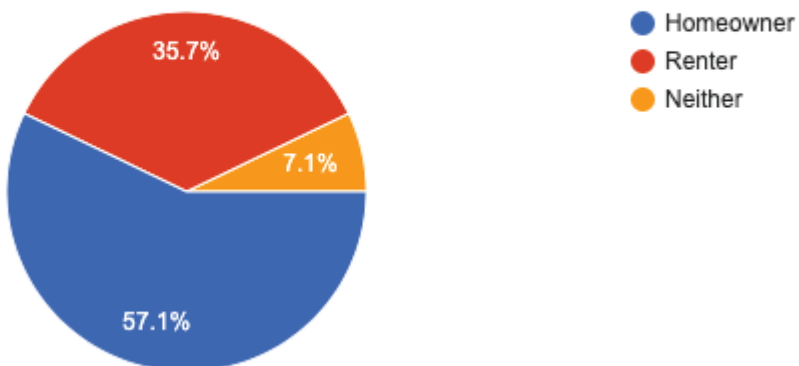
How old are you?

28 responses

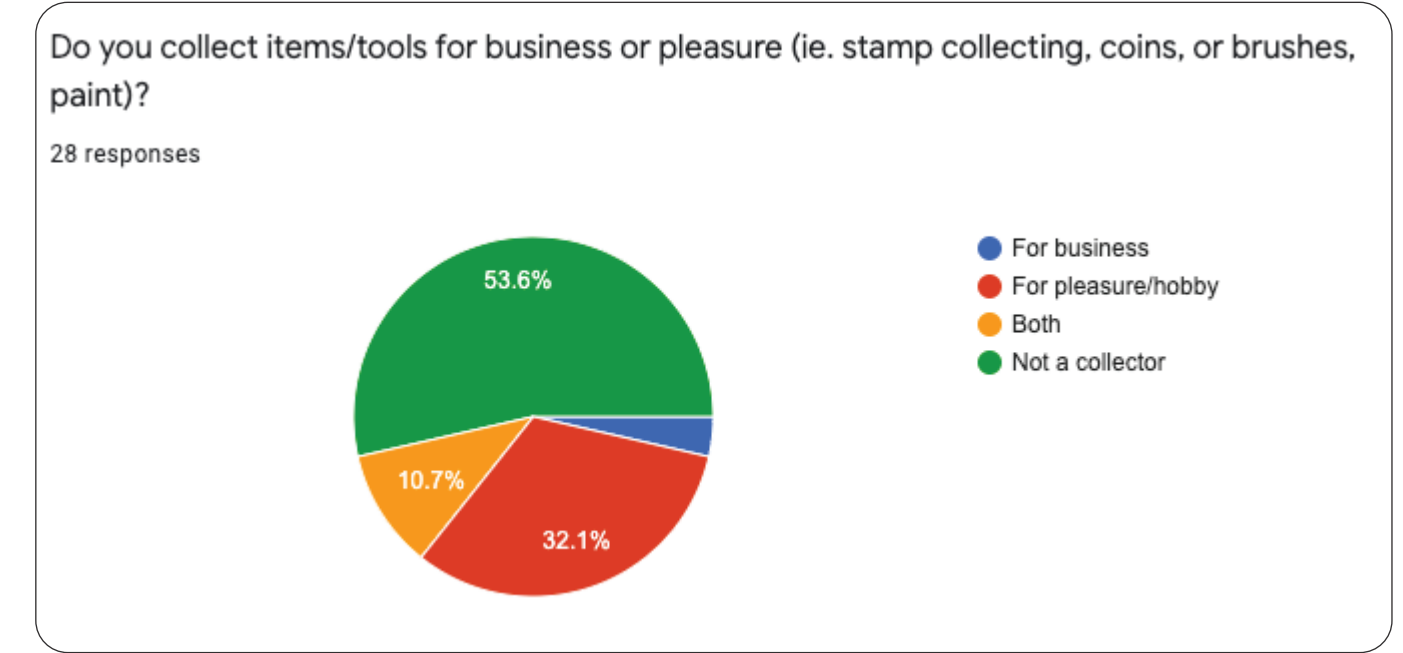
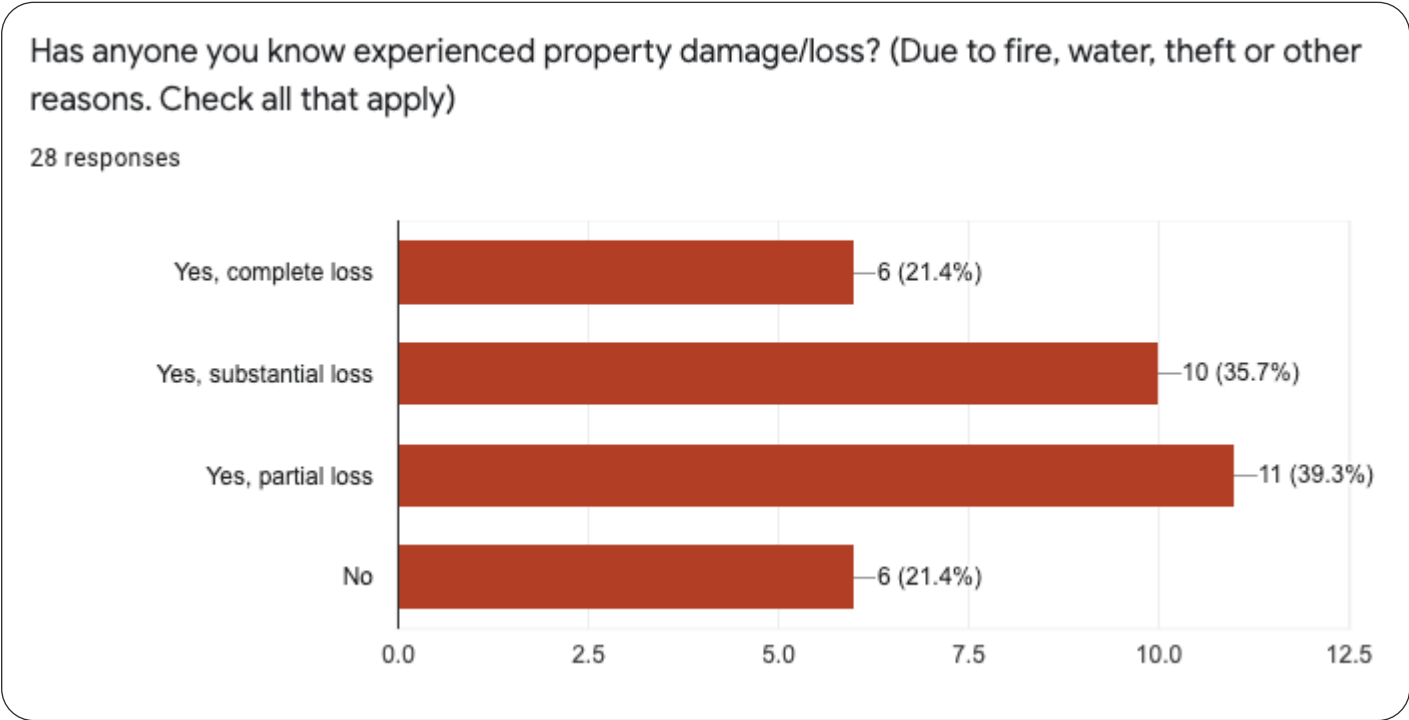
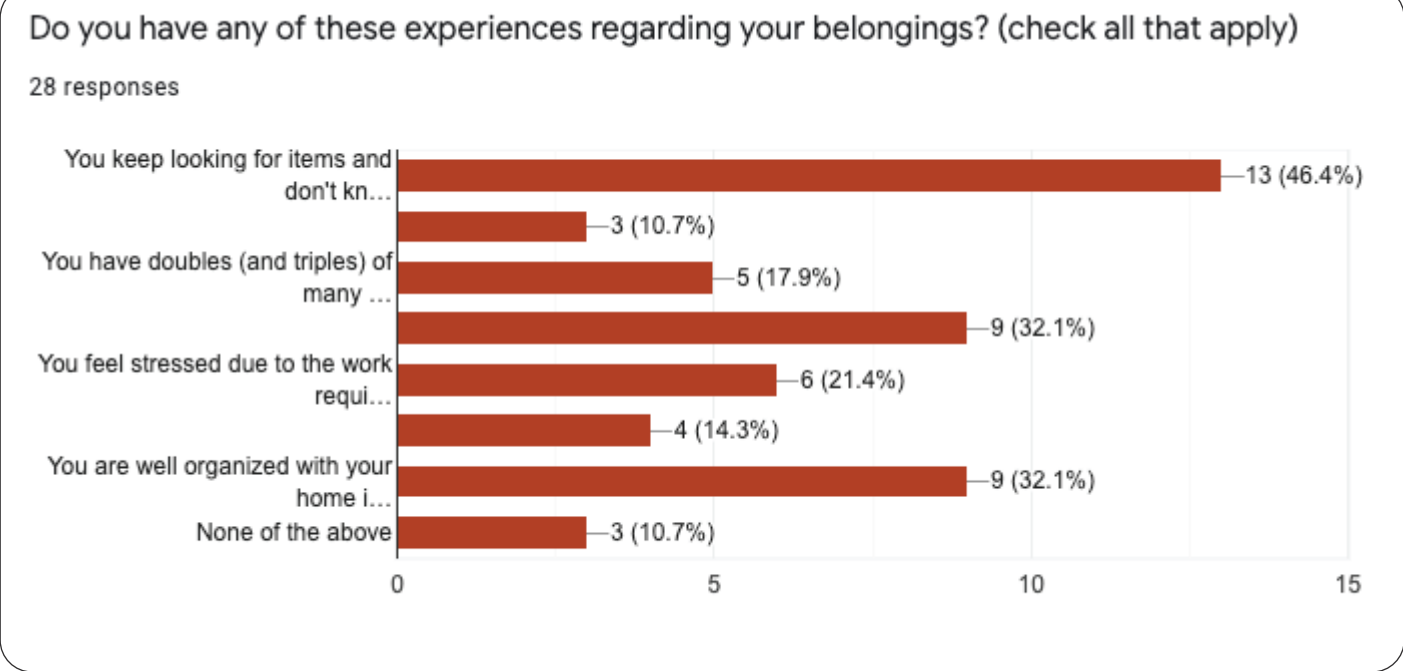
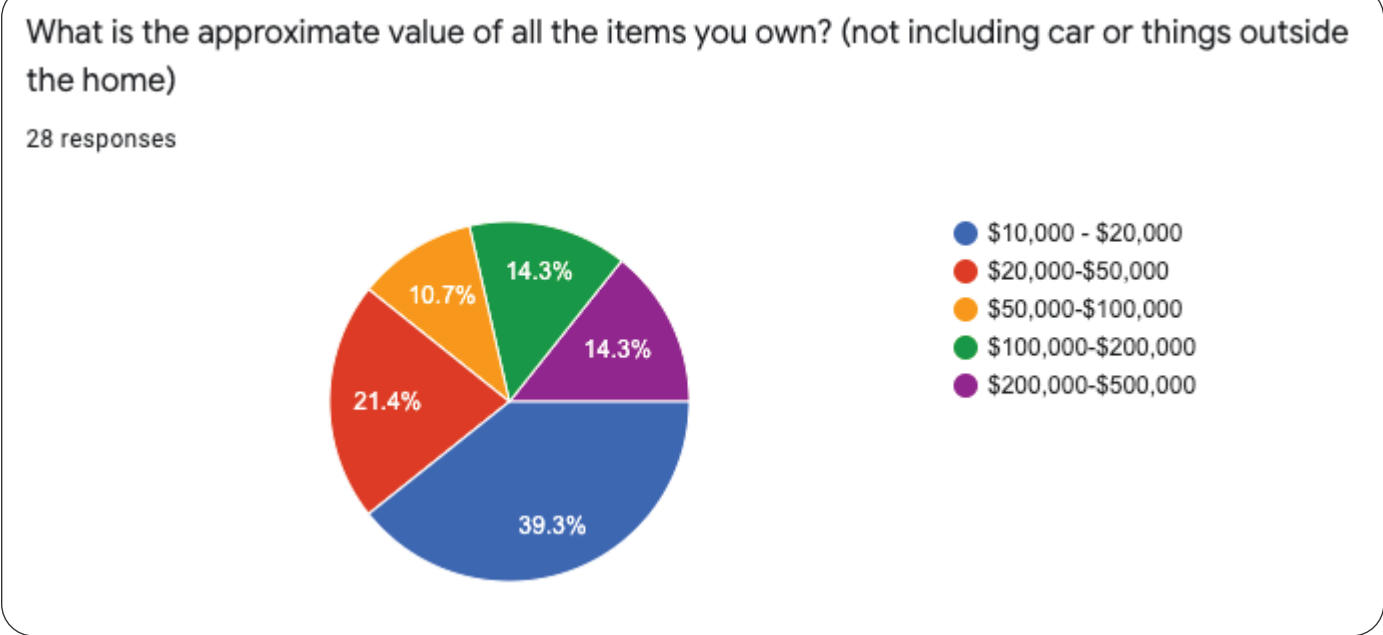


Are you a homeowner or renter?

28 responses



# Survey Results





# User Interview Notes

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**Smith J.**

3-11-2020 at 11 am  
Single, homeowner  
Moved from an apartment to a 2 story cape  
cod

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Insightful quotes  
*"Things I own are furniture, electronics (lap-  
top), clothing, music stuff. Don't have any-  
thing super valuable like jewelry."*  
  
*"I have things I don't use. I have a  
multi-function blender, do I need an insta-  
pot? I reflect on if I have used it in the past  
year"*

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[More notes](#)

**Bailey S.**

3-12- 2020 at 3:30 pm  
Married with kids, homeowner  
Moved into 2 story house approx. 3 years  
from a rental home

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Insightful quotes  
About organizing:  
*"just that I have to keep reminding myself  
to get it done. That's the chore I feel but it  
does get done at some point based on the  
necessity."*  
  
*"Even though I put effort in organizing, I  
sometimes forget how I have organized  
things. So writing it down is probably a  
good idea."*

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[More notes](#)

**Miller A.**

3-13-2020 at 3 pm  
Renter, living with partner  
Moved into a 2 story house from a 2 story,  
2 years back.

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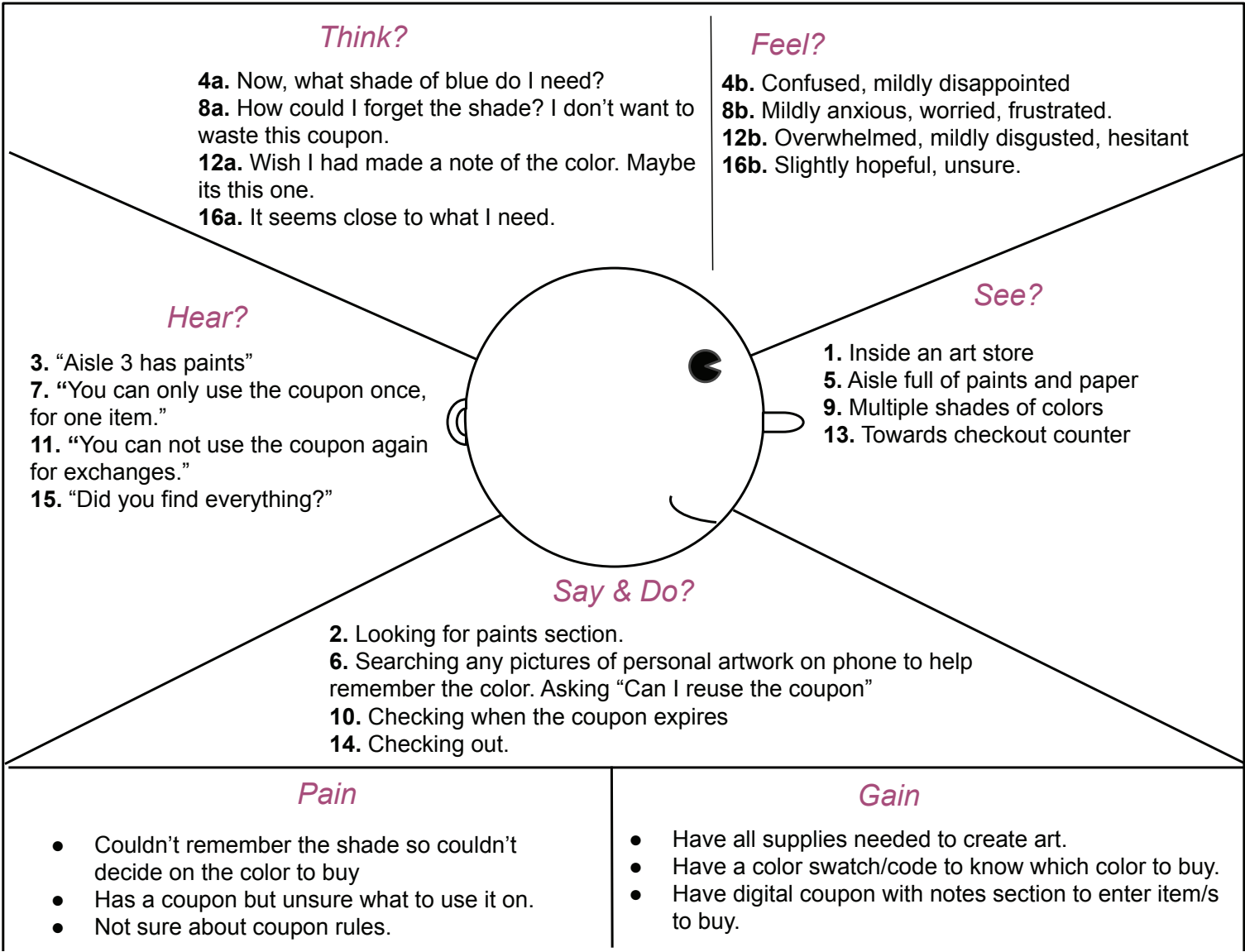
Insightful quotes  
*"If I have a coupon and go to an art store,  
I don't know which paint, colors, markers,  
I am running out and need to buy. I would  
love some system to track my paint, paint  
brushes... "*  
  
*"Panic, I think it is mostly time, like do I  
have time to organize things? It does re-  
quire some thought and planning and sup-  
plies."*  
  
*" Also, I don't want to waste money buying  
what I already have. Like my mom would  
say I need duct tape and keep buying and  
then later would find duct tape at 6 differ-  
ent places in the home."*

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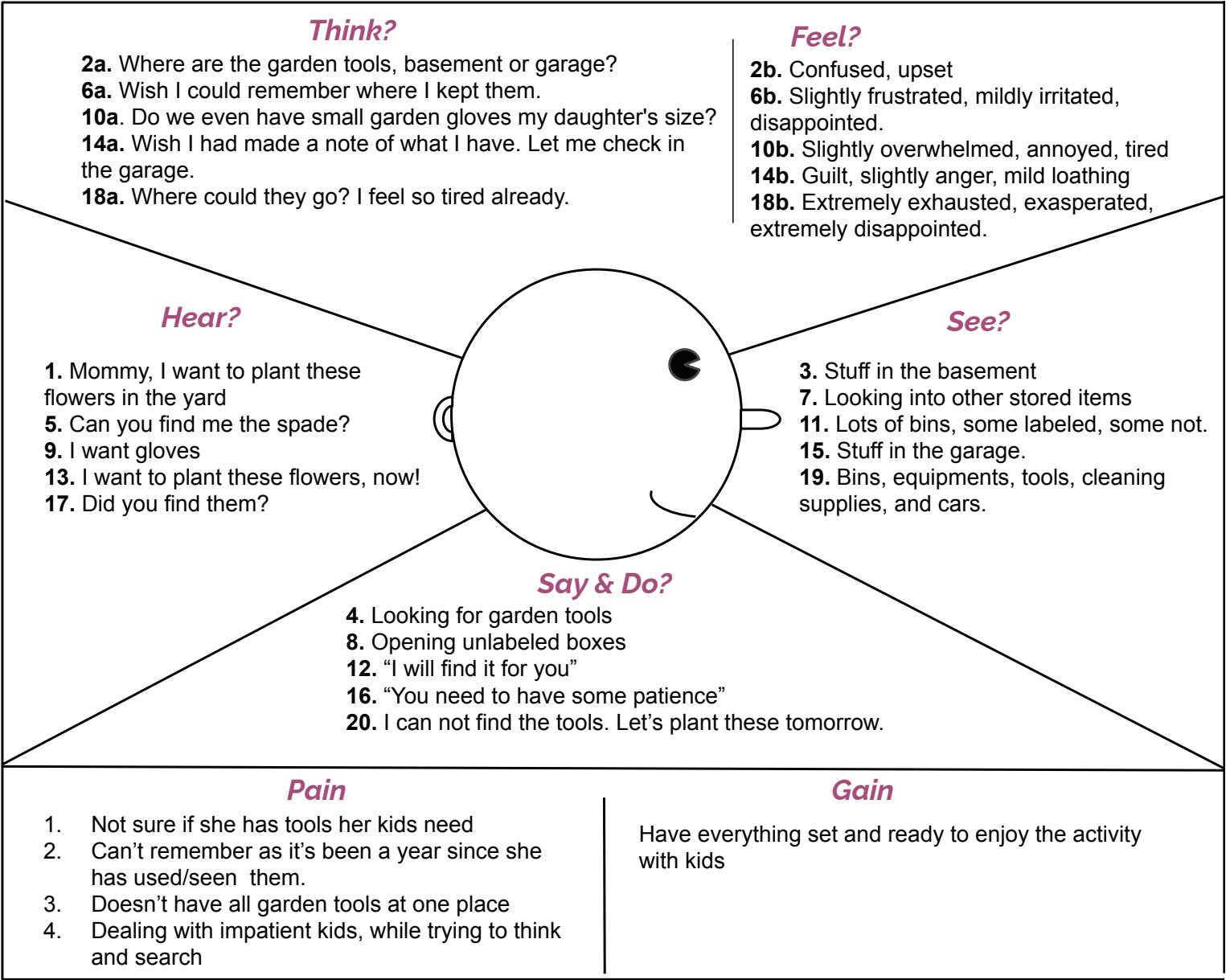
[More notes](#)

# Empathy Maps

Katie visits the art store with a coupon. She wants to buy a paint but can't remember the shade.

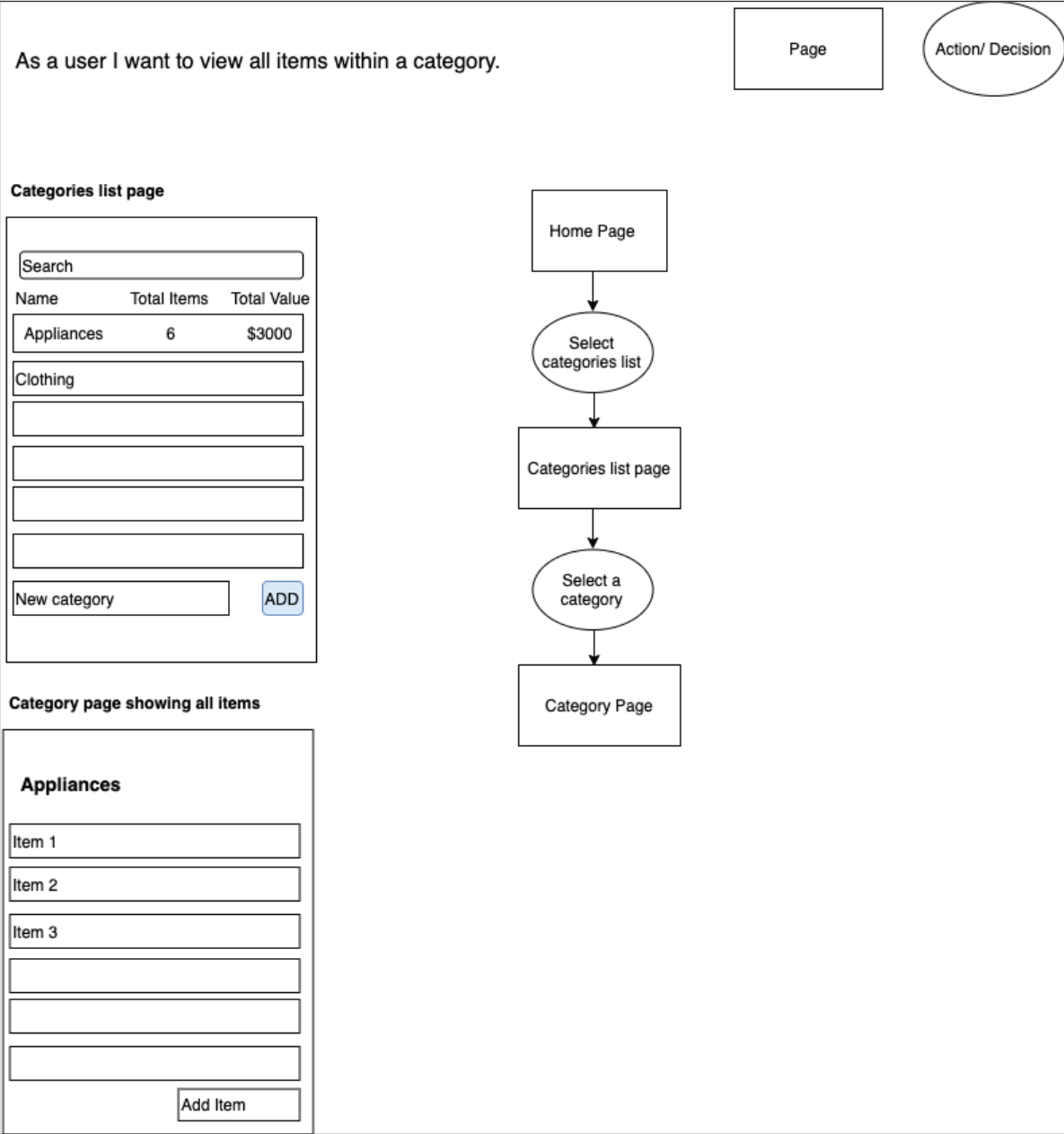
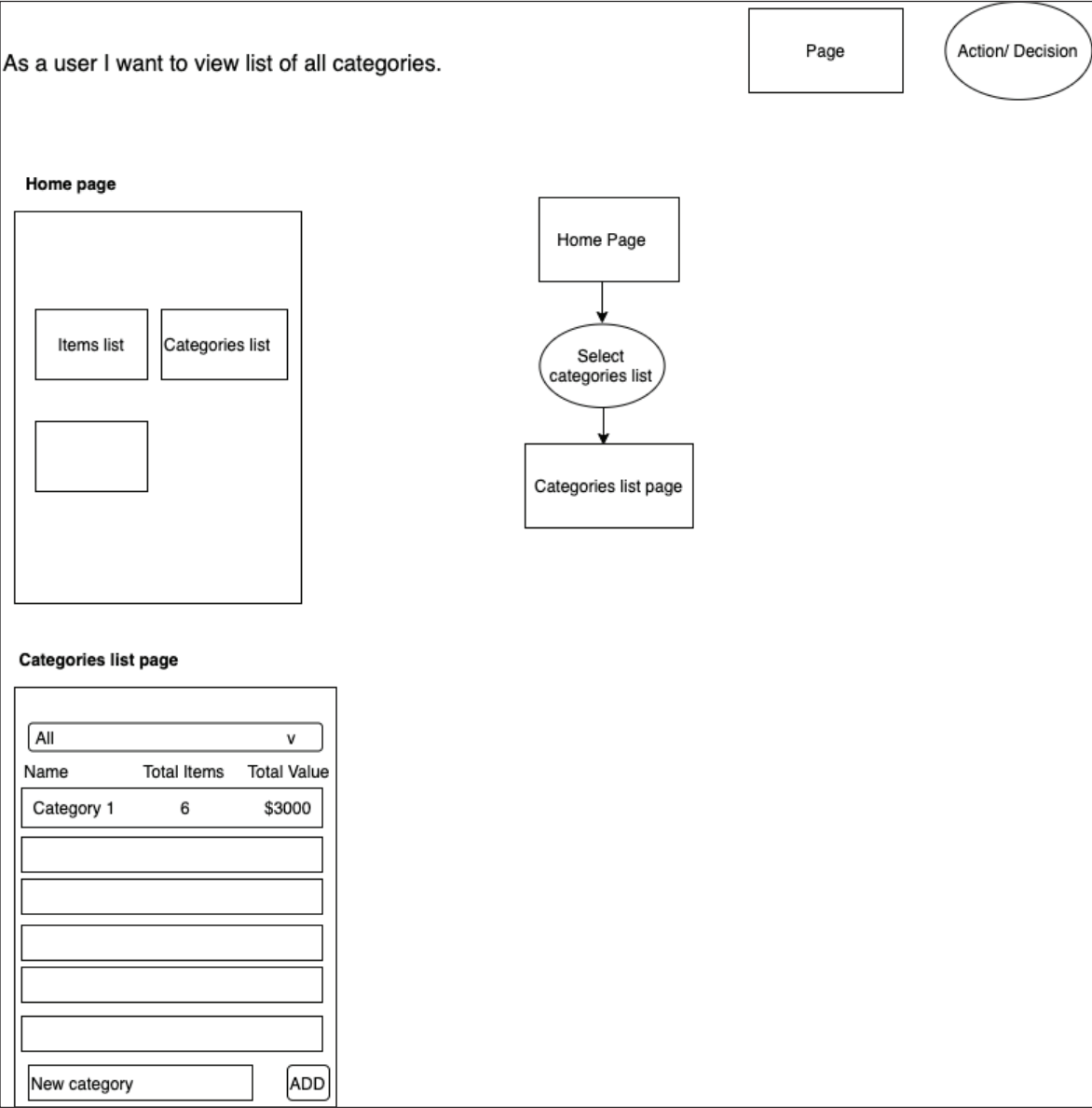


Molly's kids want to plant flowers and need garden tools. She is frantically looking for her tools from last year.

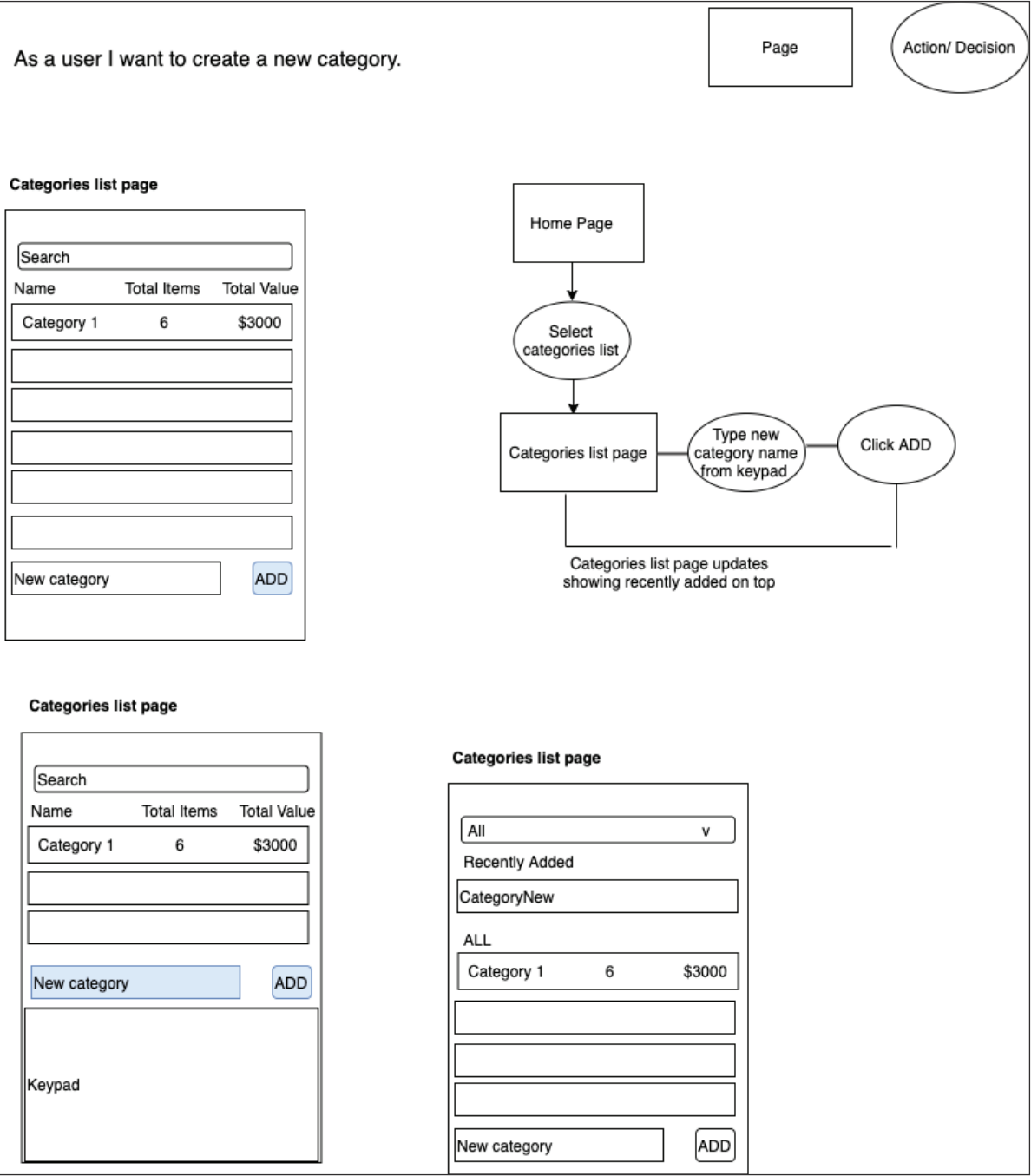
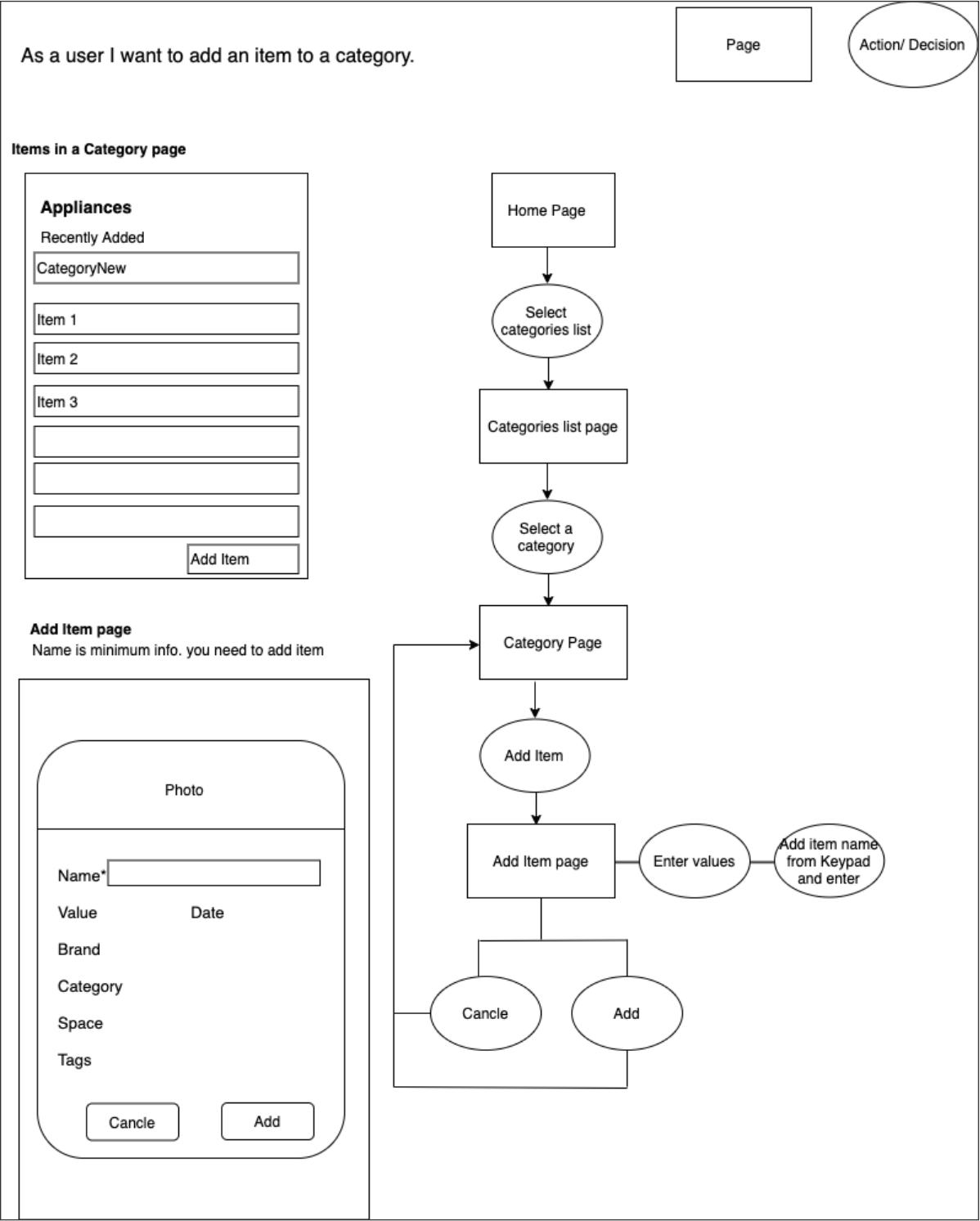


# Additional user flows and associated user stories

Along with creating a user flow for each of the user stories, I also draw a rough UI to guide me along the way. It helps to speed up the process of sketching later.

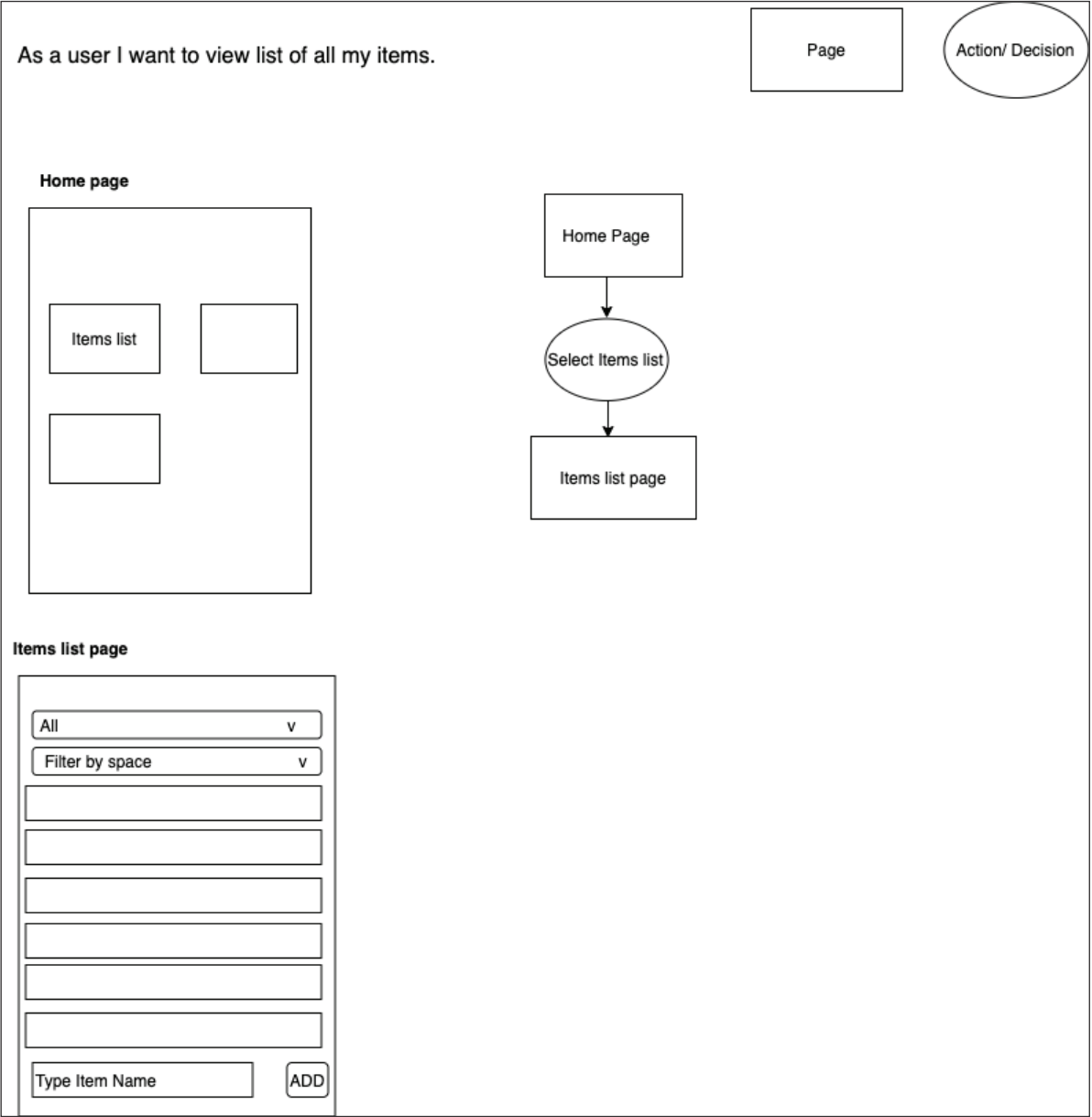
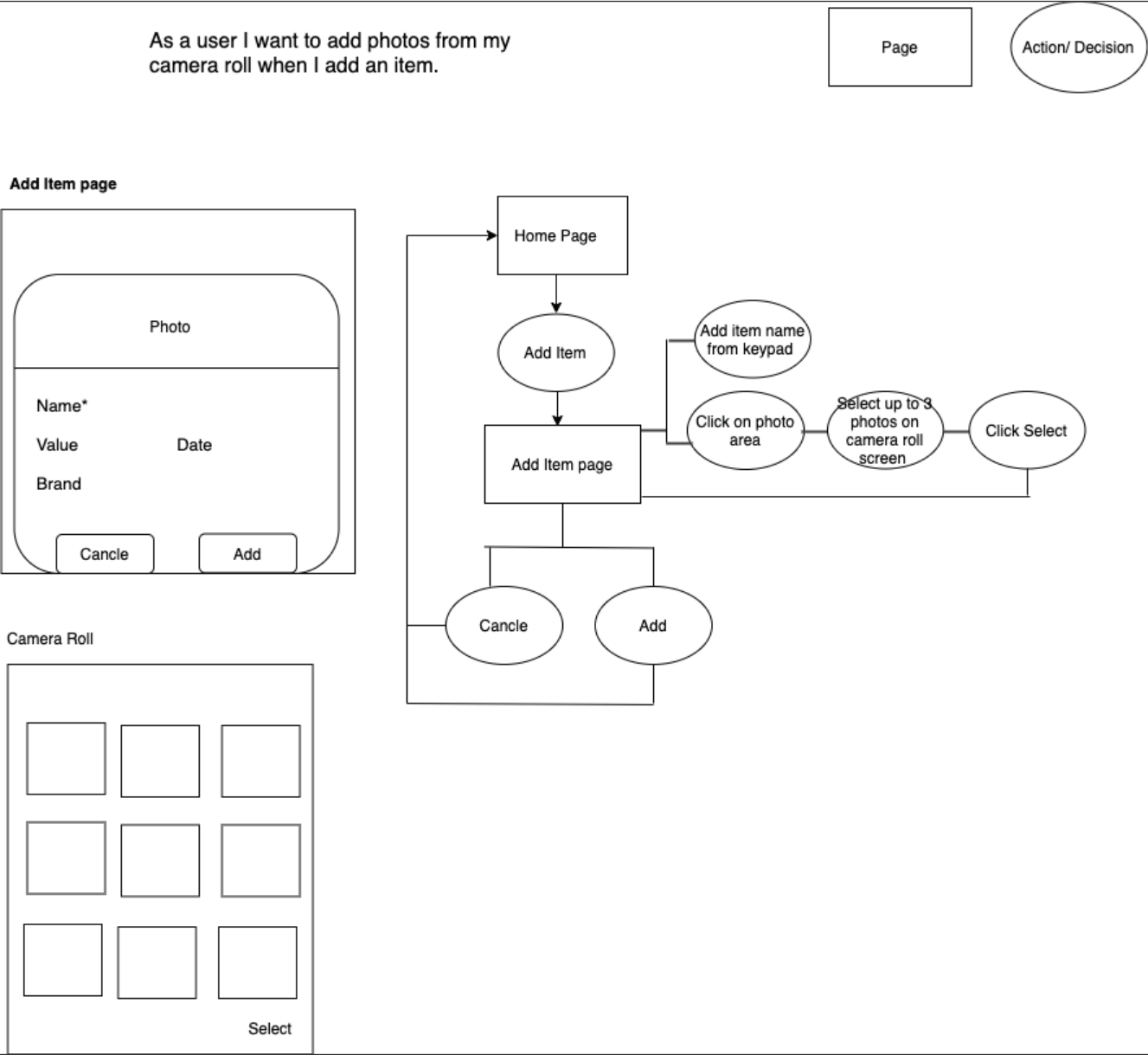


# Additional user flows and associated user stories

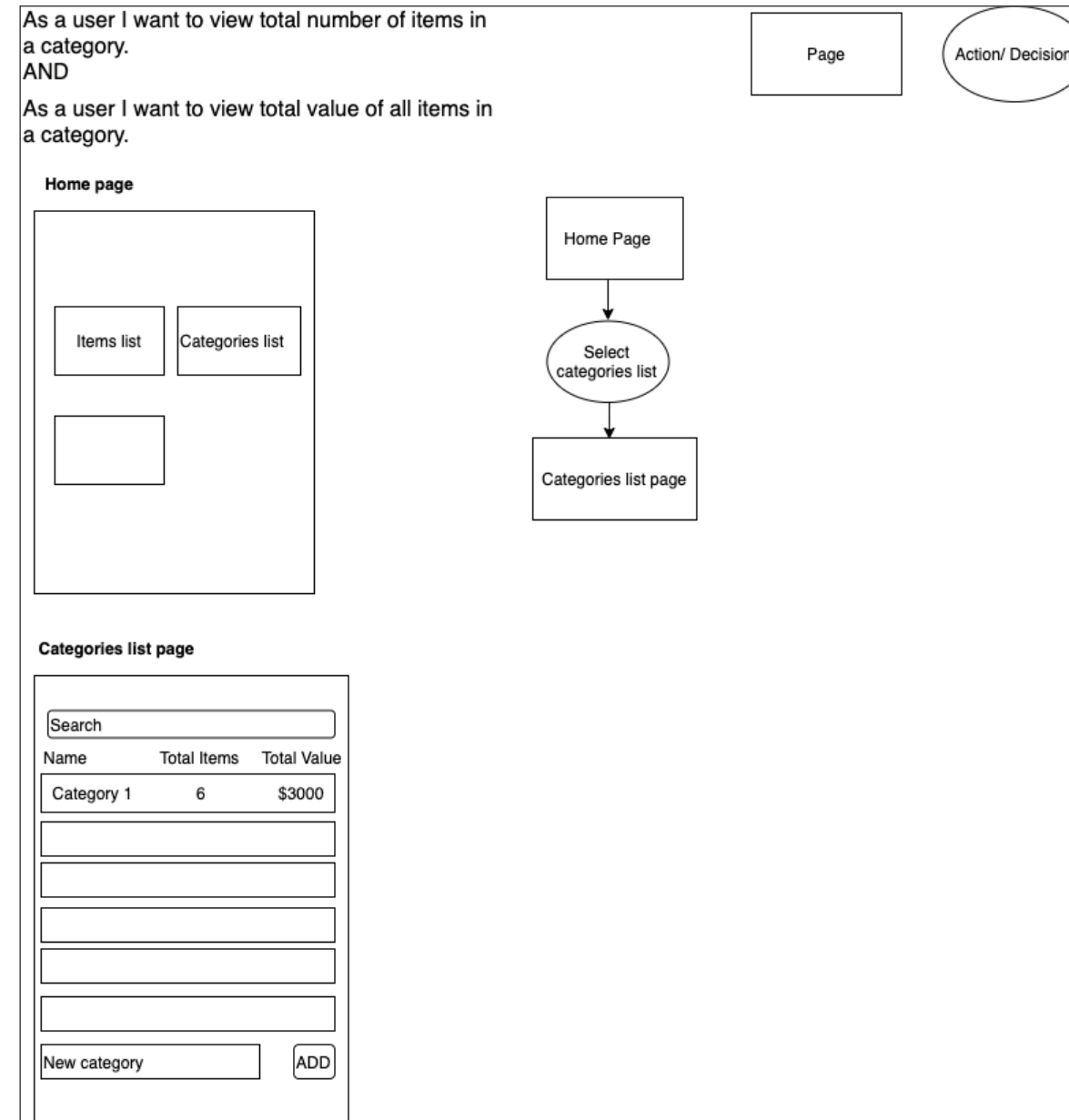
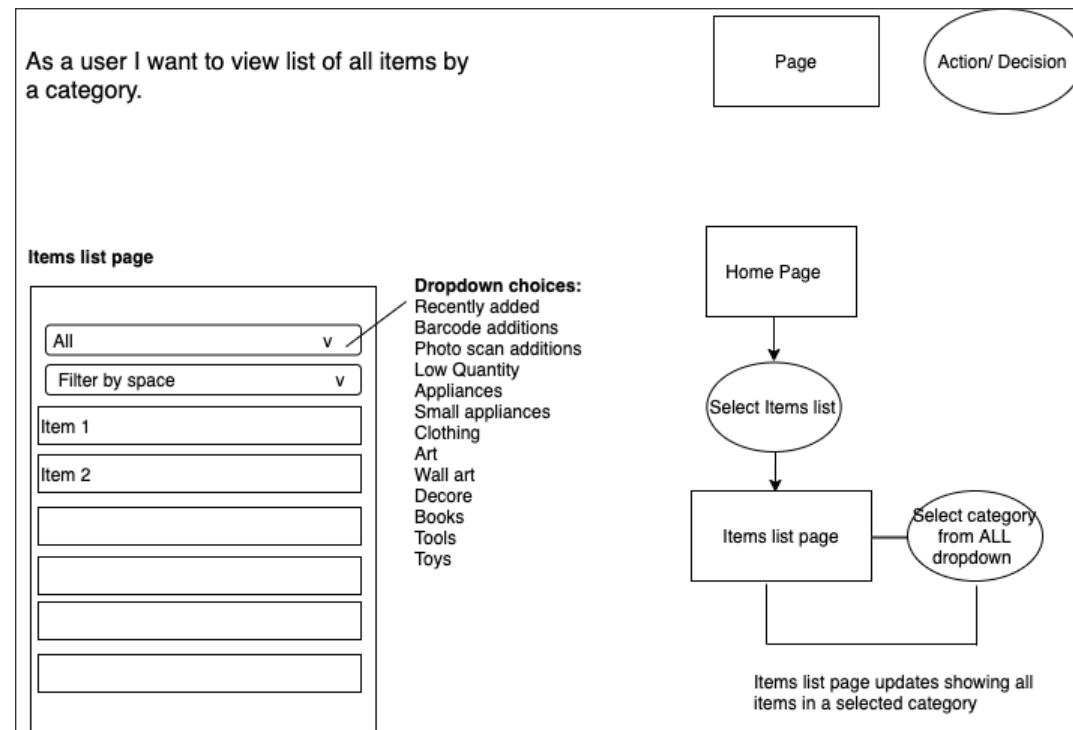
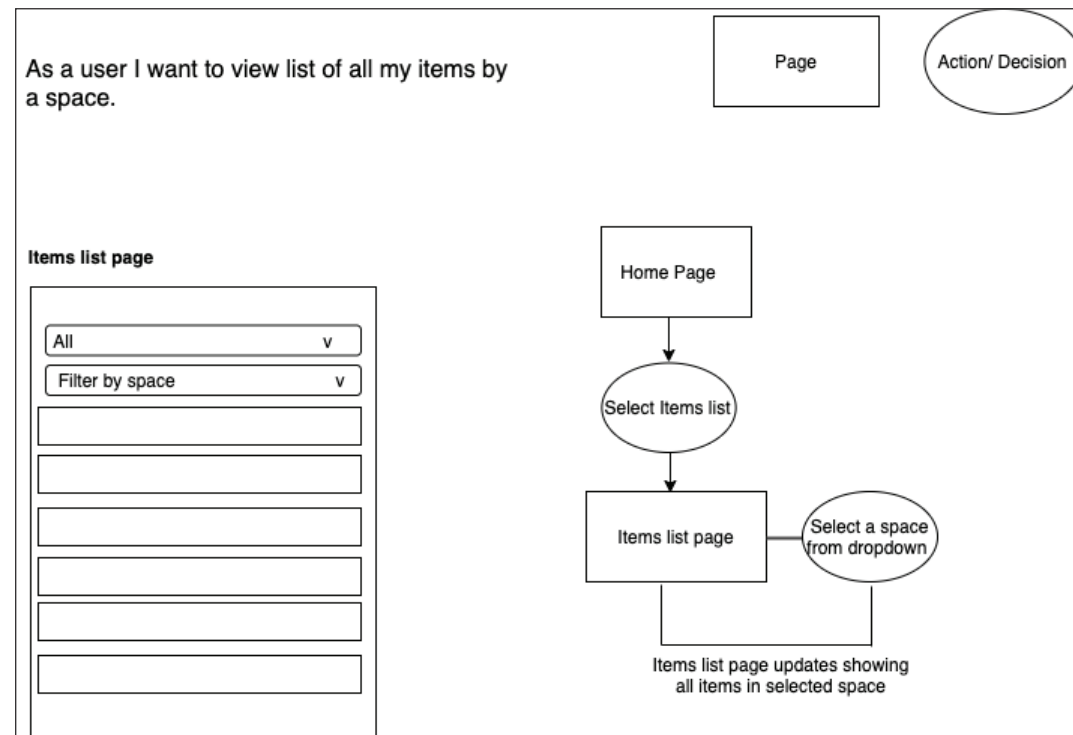




# Additional user flows and associated user stories

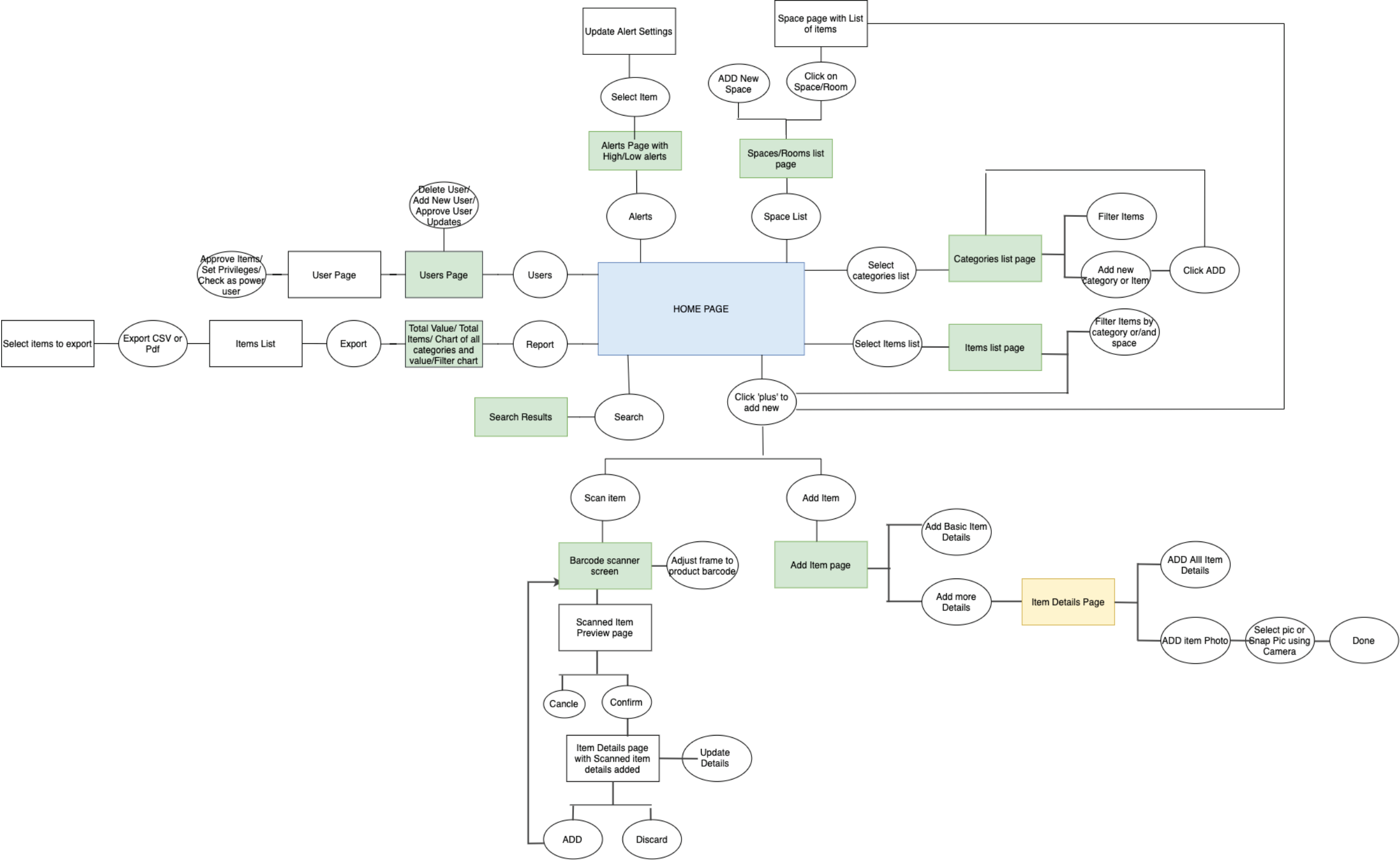


## Additional user flows and associated user stories

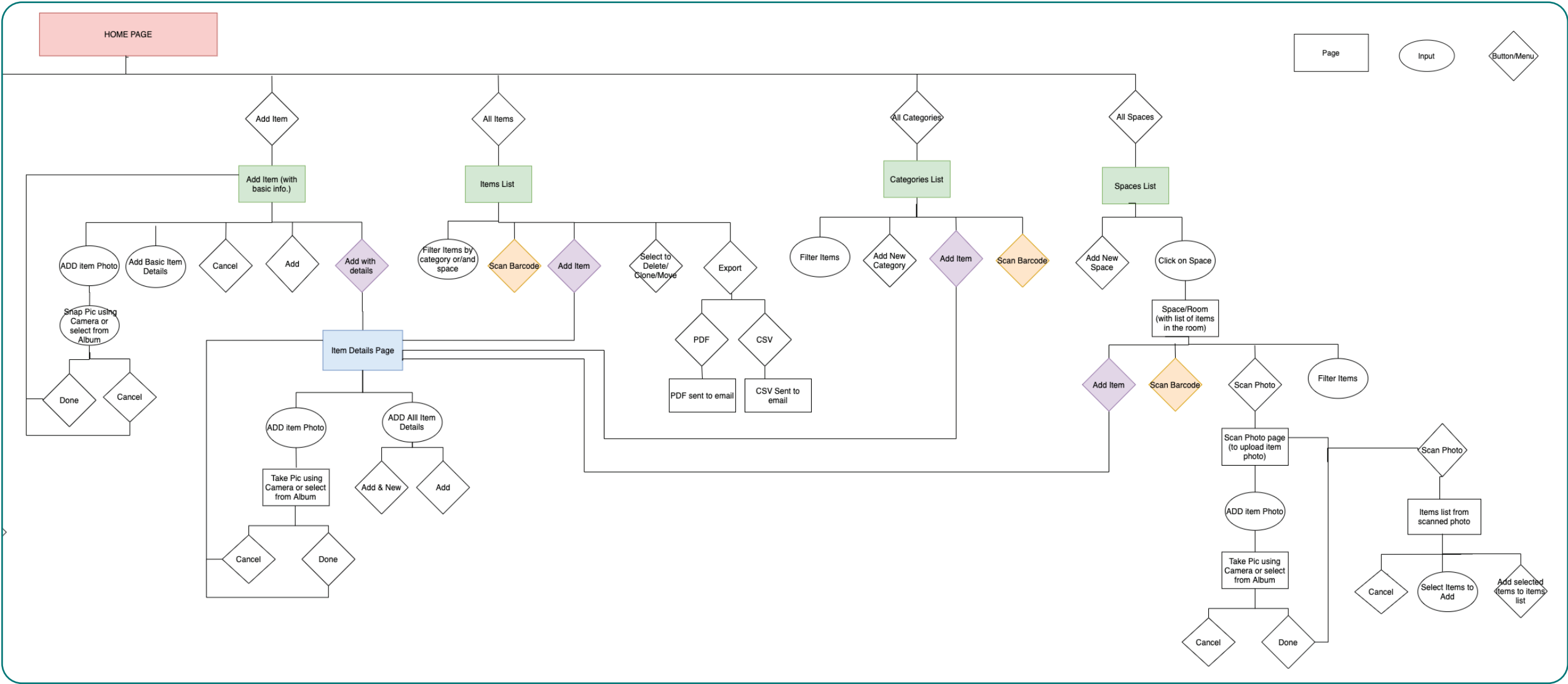


# Information Architecture Iterations

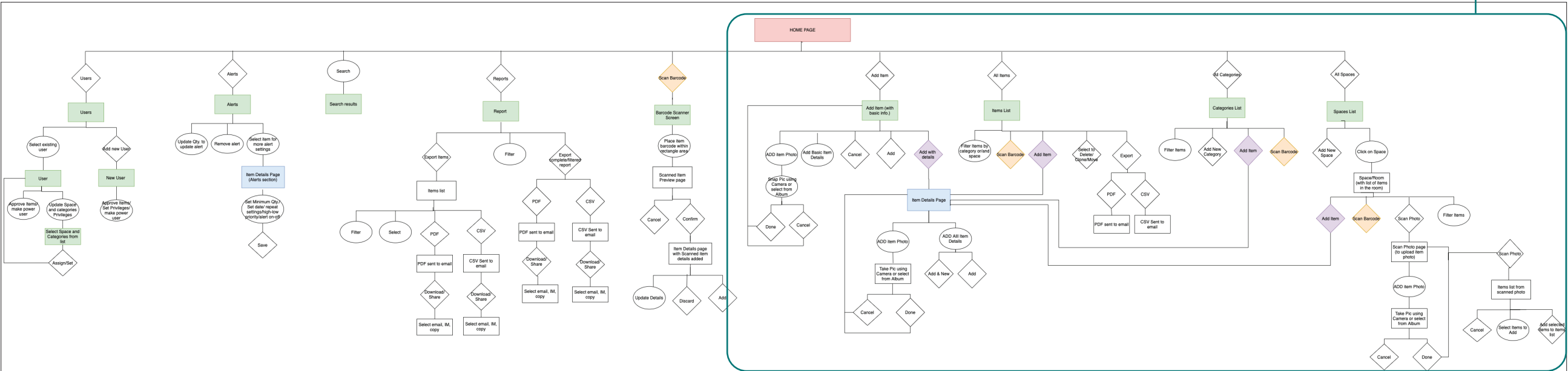
My 1st version of the IA was difficult to read especially the connection between flows because of the structure.



# Information Architecture Iterations



With this 2nd version it was easier to understand how some screens were connected/ common across flows.

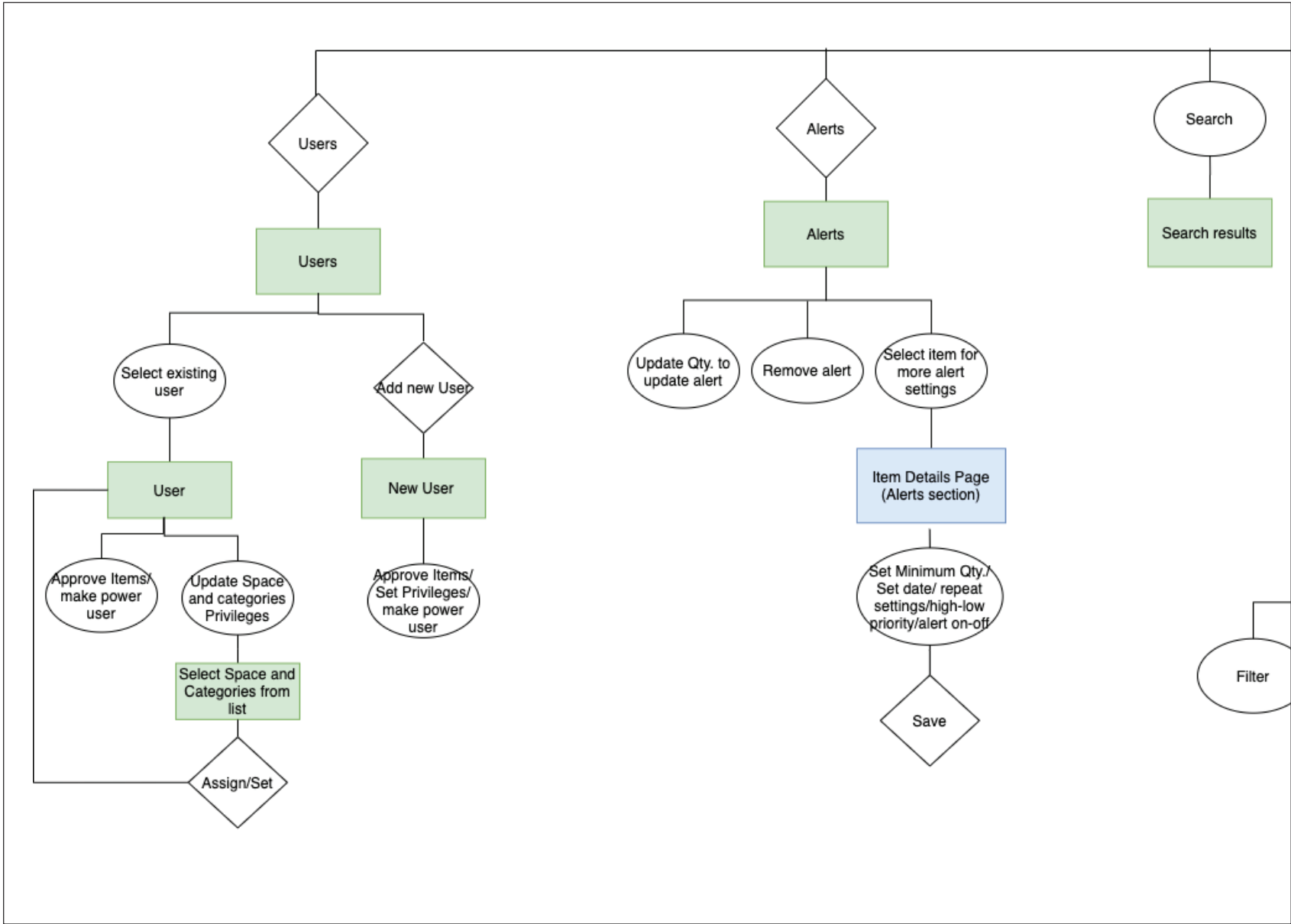




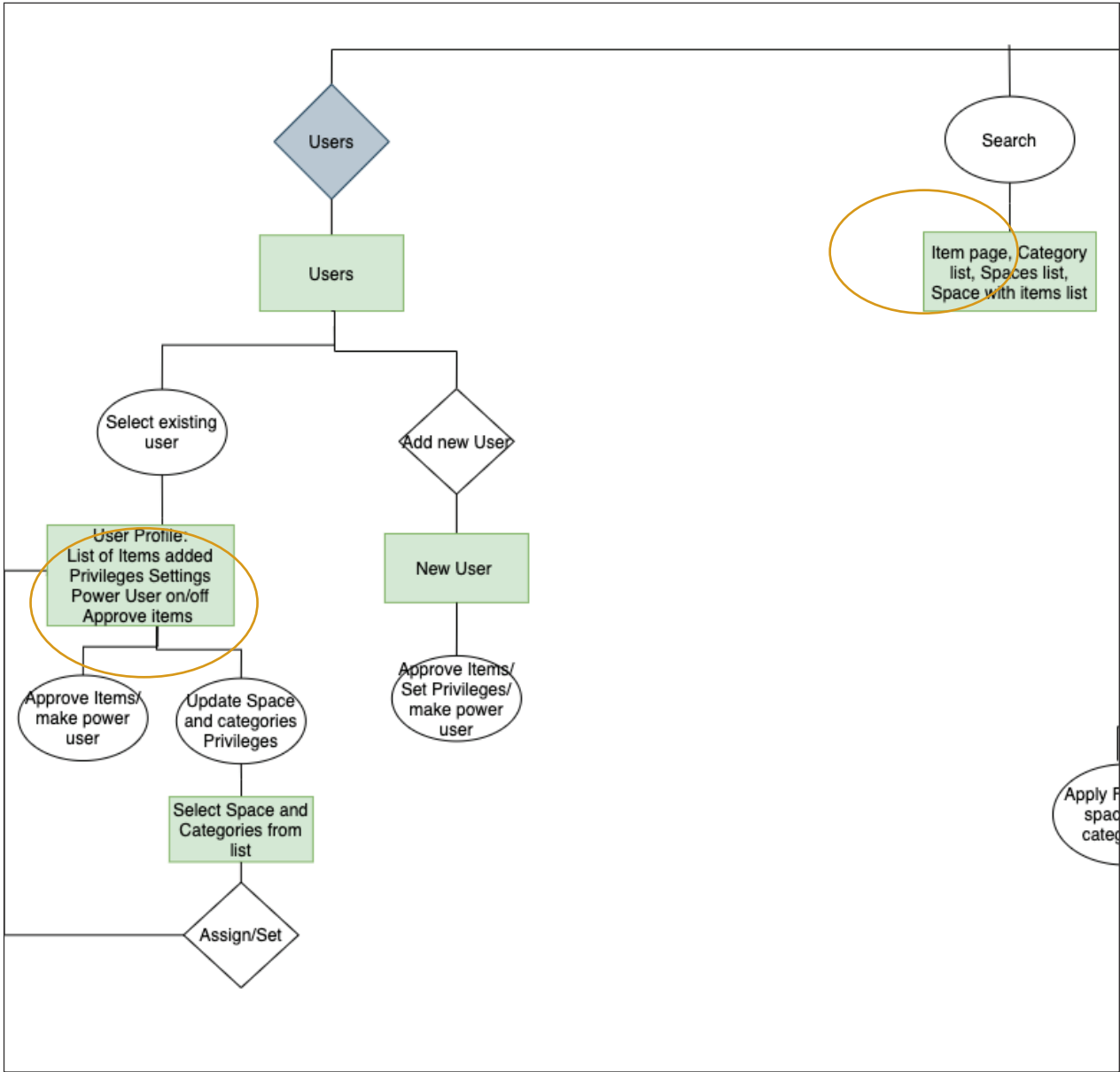
# Information Architecture Iterations

In my 3rd and final version I added more information to the pages to specify the tasks users can perform on those pages. I also removed the Alerts flow as it was not part of the MVP now.

## IA version 2



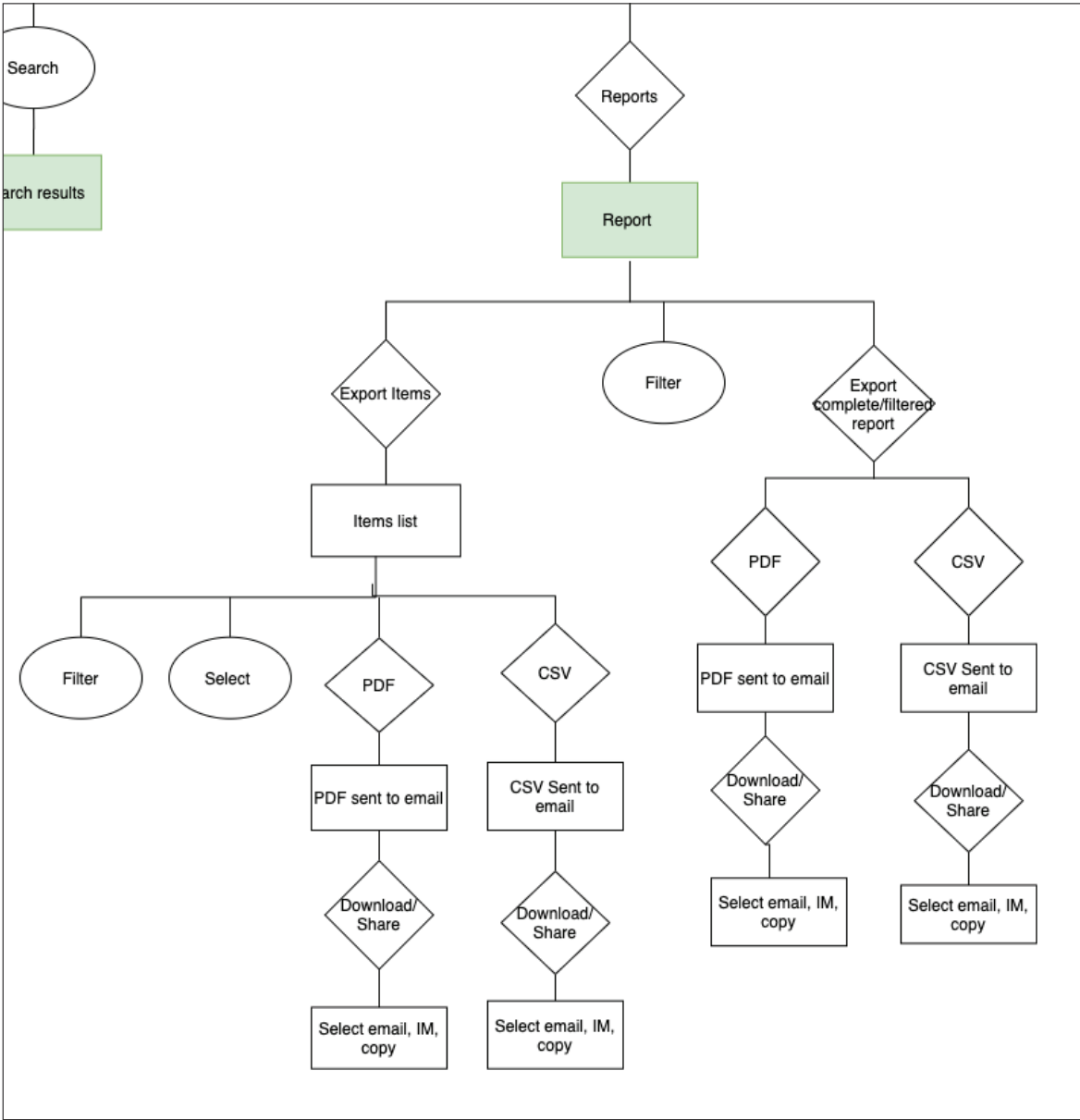
## IA version 3



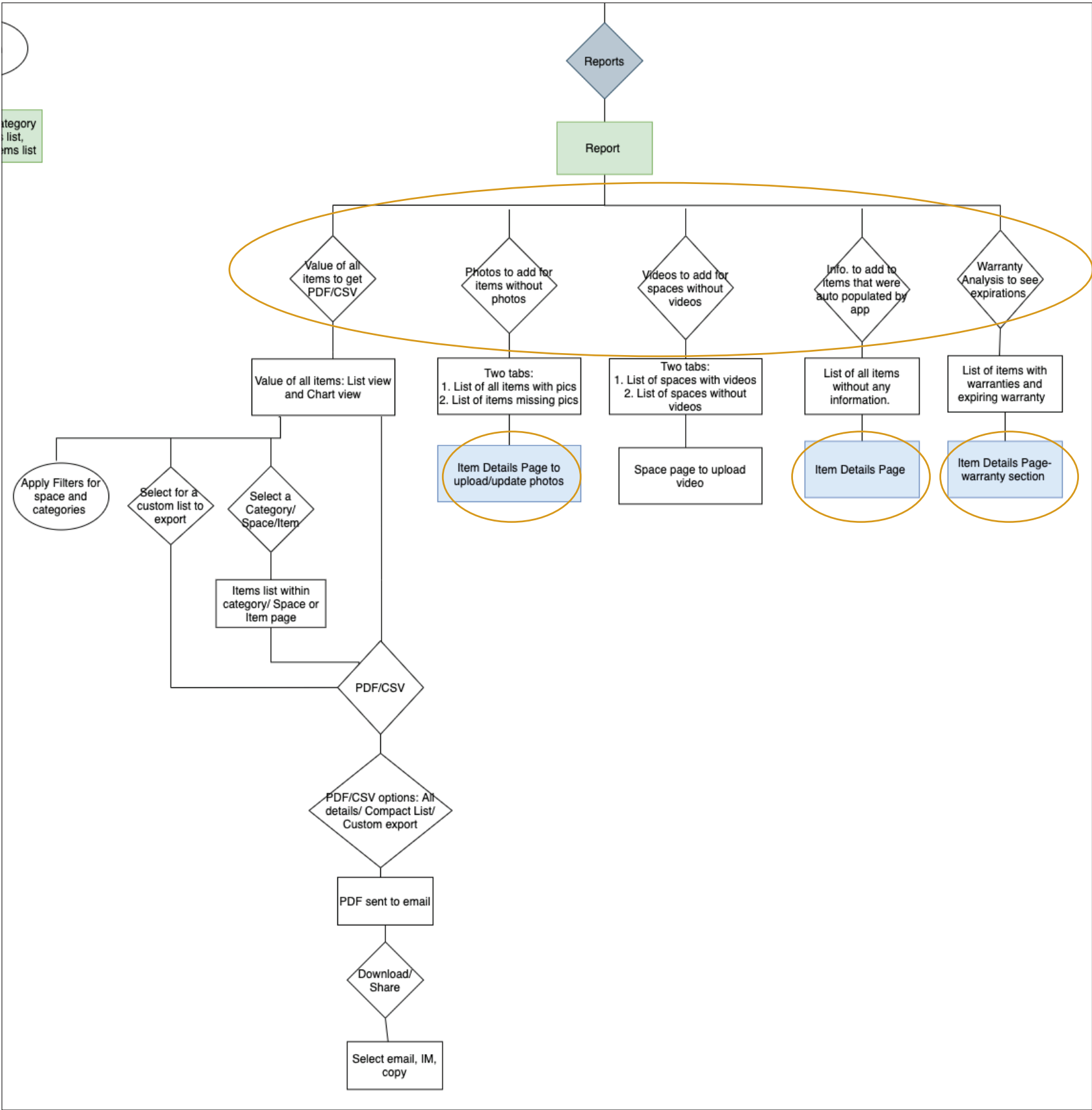
# Information Architecture Iterations

I updated the reports as I added more features to this section. I also used color to signify pages like 'Item Details' that I couldn't connect with lines but were common to the flows.

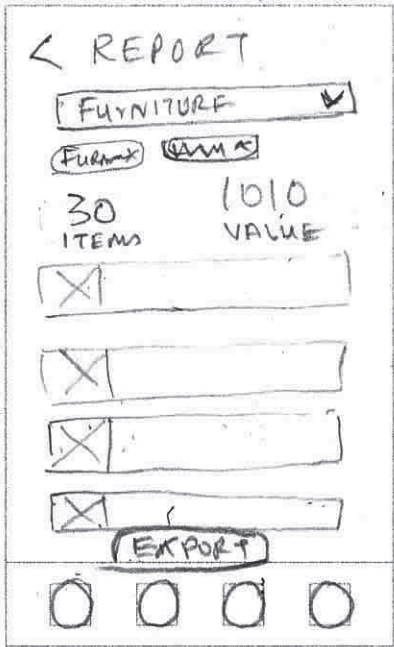
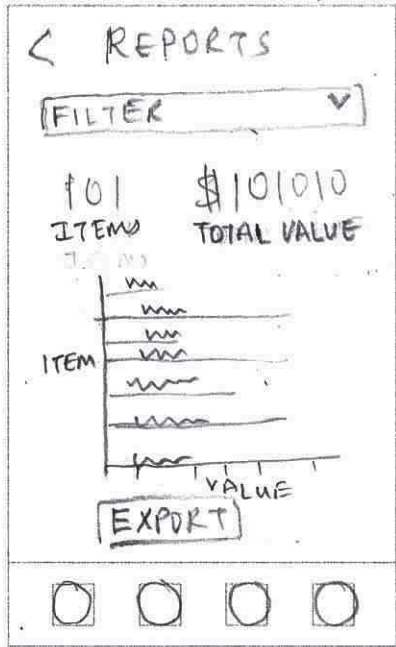
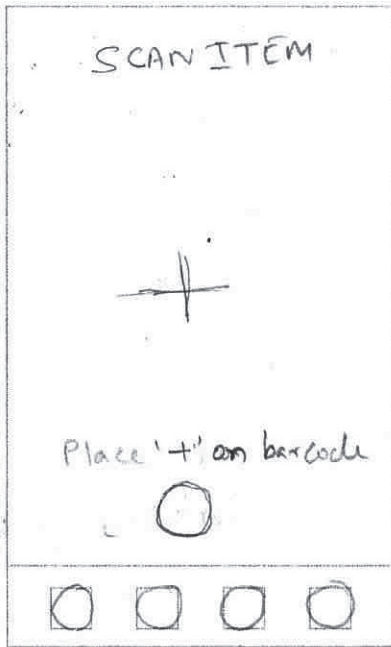
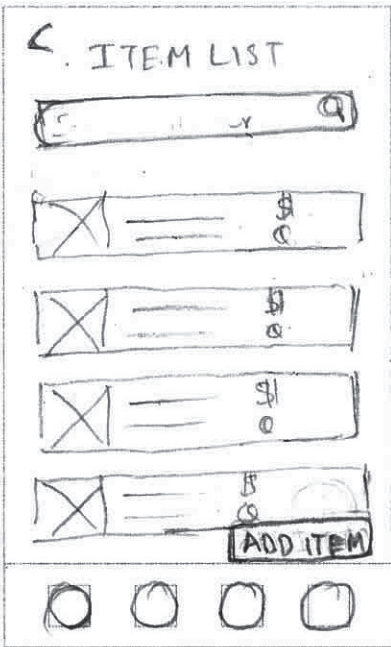
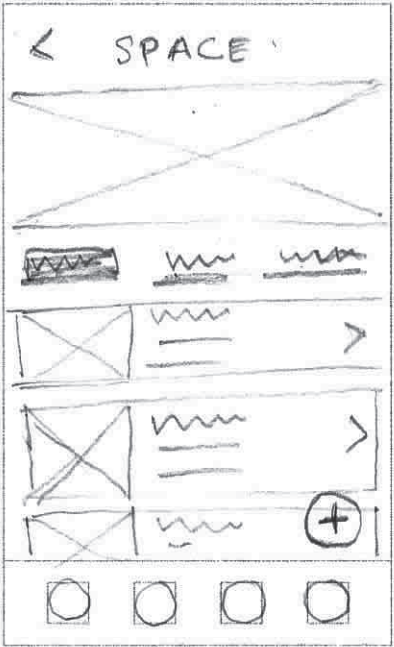
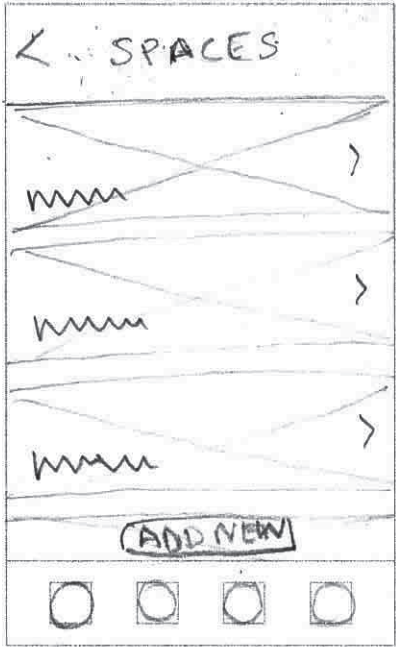
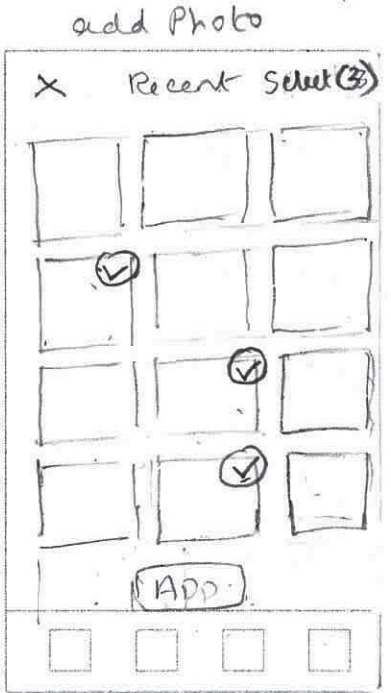
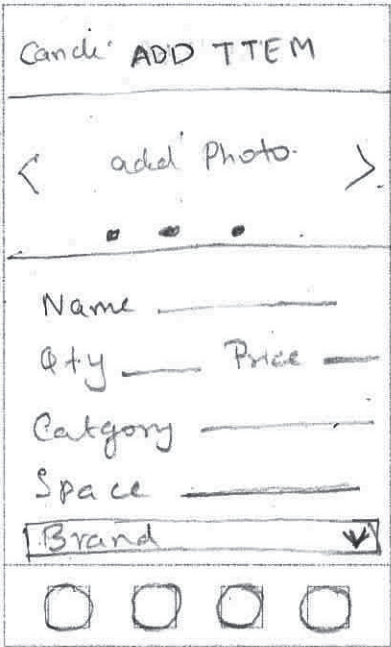
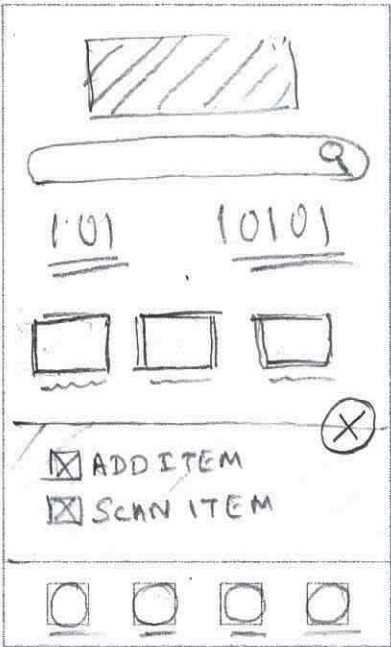
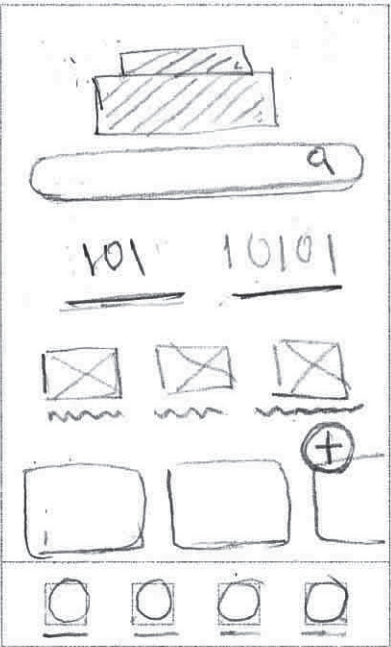
## IA version 2



## IA version 3




Sketches




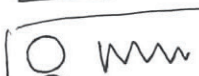


Sketches





< USERS

 wwww

 wwww

 wwww

ADD USER



< NEW USER X



NAME

REGULAR POWER

SET SPACE

SET CATEGORY



< SET SPACE X

 NAME

KITCHEN ☐

BEDROOM 1 ☒

GUEST ROOM ☐

DEN ☒


ASSIGN SPACE



< USER

 wwww

RECENTLY ADDED

☒  ☐


☒  ☒

☒  ☒


APPROVE


PREVIOUSLY ADDED


☒ 





< CATEGORIES

☐  \$





☐  \$

☐  \$


☐  \$

☐  \$


(NEW)




< ITEM LIST


☐ 


Recently Added


☒ 


☒ 





ADD ITEMS

☒ 

☒ 

☒ 

☒ 



< CATEGORY

☒ 

☒ 

☒ 

CATEGORY NAME

SPACE ☒





CANCEL ADD NEW




< EXPORT

ITEM LIST


SENT





< SPACE







LIST


☒ 

☒ 



☒  +






< SPACE







FILE


 


 +




< REPORT

☒ 

30 ITEMS 1010 VALUE





☒ 

☒ 


EXPORT


☒ PDF


☒ CSV



< REPORT

☒ 





☒ 

☒ 

ITEMS, PDF, COPY

SHARE

EMAIL ☐ ☐



8:45

Cancel

Oven

Basic Info.

^

Name

Oven

Qty.

1

↑ ↓

Price

\$596.99

Total Value

\$596.99

Category

Appliances

Space

Kitchen

Tags

Brand Info.

▼

Brand Name.

GE

Size/Capacity

4.8-cu ft

Model

Serial number


Warranty Ends

Warranty Period


Purchase Info.

▼

Purchase Date




Receipt



Store


Location

Warranty Ends



Warranty Period

Website



Alert Settings


On/Off ☒

Min. Qty.

Priority

☐ High ☐ Low

Set Alert Date



Do not Repeat 

▼

Description

▼

ADD & NEW

ADD

[illegible]


8:45

Items

Select

All Categories

Filter by Space




Item Name

Qty: 2.      Value: \$30

Space: Kitchen

Category: Food/Spices

Tags: Spices




Item Name

Qty: 2.      Value: \$30

Space: Kitchen

Category: Food/Spices

Tags: Spices




Item Name

Qty: 2.      Value: \$30

Space: Kitchen

Category: Food/Spices

Tags: Spices



Item Name


Qty: 2.      Value: \$30

Space: Kitchen


Category: Food/Spices

Tags: Spices

ADD ITEM



Enter Info. to Add



Scan Barcode to Add

The screenshot shows the 'Items' app interface. At the top, there's a status bar with the time '8:45', signal strength, and battery level. Below the status bar is a navigation bar with a back arrow on the left, the title 'Items' in the center, and a 'Select' button on the right. Under the navigation bar are two filter dropdowns: 'All Categories' and 'Filter by Space'. The main content area displays a list of items. Each item row consists of a thumbnail image placeholder on the left and a text block on the right. The text block contains the item name, quantity (Qty: 2), value (Value: \$30), space (Space: Kitchen), category (Category: Food/Spices), and tags (Tags: Spices). To the right of each item's text block is a vertical menu with four icons: a copy icon for 'Clone', a move icon for 'Move', a trash can icon for 'Delete', and a document icon for 'Export'. The bottom of the screen features a floating action button (a plus sign inside a circle) and a bottom navigation bar with icons for home, search, and other functions.

8:45

Cancel

New Item

Basic Info.

^

Name

Qty.

↑ ↓

Price

Total Value

\$

Category

Space

Tags

Add More Details

v

ADD & NEW

ADD

8:45

Spaces

All

Basement

D

Den

Dinning room

ADD NEW

X

CANCEL

ADD

QWERTYUIOP

ASDFGHJKL

ZXC

VBNM

123

space

return

The screenshot shows the 'Spaces' app interface. At the top, the status bar displays the time '8:45', signal strength, Wi-Fi, and battery levels. Below the status bar is a navigation bar with a back arrow on the left, the title 'Spaces' in the center, and a 'Select' button on the right. A search bar is positioned below the navigation bar, containing the text 'Search' and a dropdown arrow. The main content area is a list of five rooms: 'Basement', 'Bedroom 2', 'Guest room', 'Kitchen', and 'Master Bedroom'. Each room entry consists of a placeholder image icon (a square with a circle and a triangle), the room name, and a three-dot menu icon on the right. At the bottom right of the screen, there is a large circular button with a plus sign and a right-pointing arrow.

8:45

Cancel

Items

All Categories

Filter by Space

✓

Item Name

Qty: 2. Value: \$30

Space: Kitchen

Category: Food/Spices

Tags: Spices

Item Name

Qty: 2. Value: \$30

Space: Kitchen

Category: Food/Spices

Tags: Spices

Item Name

Qty: 2. Value: \$30

Space: Kitchen

Category: Food/Spices

Tags: Spices

Item Name

Qty: 2. Value: \$30

Space: Kitchen

Category: Food/Spices

Tags: Spices

Item Name

Qty: 2. Value: \$30

Space: Kitchen

Category: Food/Spices

Tags: Spices

Delete

Clone

Move

Export



Additional Wireframes

8:45

Reports

Select

600

ITEM TYPES

\$53,500

TOTAL VALUE

350

PHOTOS

9

VIDEOS

Generate Report

Value

Get value of all items, filter by categories and spaces or select items to get report as pdf or CSV.

Photos

List of items that have photos and items that have information added but need photos to be added.

Videos

Spaces that have videos and spaces that need videos to be added.

Information Needed

Get a list of items that need information to be added.

Warranty Analysis

All items with a valid purchase date and one or more warranty entries.

Home

Reports

Alerts

Users

Settings

8:45

Value

Select

Filter

List

Chart

<div></div>	Art	40	\$2000
<div></div>	Appliances	8	\$13,390
<div></div>	Clothing	200	\$6000
<div></div>	Decorative	40	\$1000
<div></div>	Electronics	20	\$10,000
<div></div>	Equipments	4	\$2000

Export PDF

Basic List

Basic information in a compact list format that includes name, quantity, serial number and value of each item on a single line.

All Details

All details of an item along with photos

Custom List

Choose fields that you want as part of the report

1400

TOTAL ITEMS

\$53,500

TOTAL VALUE

PDF

CSV

8:45

Appliances

Select

Filter

Appliances

List

Chart

<div></div>	Air Conditioner	\$2000
<div></div>	Dishwasher	\$900
<div></div>	Dryer	\$400
<div></div>	Refrigerator	\$1500
<div></div>	Stove	\$400
<div></div>	Water Heater	\$8000
<div></div>	Washing Machine	\$400
<div></div>	Oven	\$600

8

TOTAL ITEMS

\$13,390

TOTAL VALUE

PDF

CSV

8:45

Reports

Select

Filter

Art

Appliances

Clothing

Decorative

Electronics

Equipments

Furniture

Fixed Items

Tools

Spaces

<div></div>	Equipments	4	\$2000
<div></div>	Furniture	26	\$11,000
<div></div>	Fixed Items	12	\$9000

1400

TOTAL ITEMS

\$53,500

TOTAL VALUE

PDF

CSV

8:45

Reports

Select

All Categories

All Spaces

List

Chart

<div></div>	Basement	\$2000
<div></div>	Bathroom	\$900
<div></div>	Den	\$400
<div></div>	Dining room	\$1500
<div></div>	Guest room	\$400
<div></div>	Kitchen	\$8000

Export PDF

Basic List

Basic information in a compact list format that includes name, quantity, serial number and value of each item on a single line.

All Details

All details of an item along with photos

Custom List

Choose fields that you want as part of the report

8:45

Reports

Select

All Categories

All Spaces

List

Chart

<div></div>	Basement	\$2000
<div></div>	Bathroom	\$900
<div></div>	Den	\$400
<div></div>	Dining room	\$1500
<div></div>	Guest room	\$400
<div></div>	Kitchen	\$8000
<div></div>	Living room	\$400
<div></div>	Master bedroom	\$600

1400

TOTAL ITEMS

\$53,500

TOTAL VALUE

PDF

CSV

8:45

Value

Select

Filter

List

Chart

<div></div>	Art	\$2000
<div></div>	Appliances	\$8000
<div></div>	Clothing	\$9000
<div></div>	Decorative	\$1000
<div></div>	Electronics	\$10,000
<div></div>	Equipments	\$2000
<div></div>	Furniture	\$11,000
<div></div>	Fixed Items	\$9000
<div></div>	Pantry	\$1000
<div></div>	Tools	\$500
<div></div>	Art	\$11,000
<div></div>	Appliances	\$9000
<div></div>	Clothing	\$1000
<div></div>	Decorative	\$500
<div></div>	Art	\$2000
<div></div>	Appliances	\$8000
<div></div>	Clothing	\$9000

1400

TOTAL ITEMS

\$53,500

TOTAL VALUE

PDF

CSV

8:45

Value

Select

Filter

List

Chart

<div></div>	Art	40	\$2000
<div></div>	Appliances	8	\$13,390
<div></div>	Clothing	200	\$6000
<div></div>	Decorative	40	\$1000
<div></div>	Electronics	20	\$10,000
<div></div>	Equipments	4	\$2000
<div></div>	Furniture	26	\$11,000
<div></div>	Fixed Items	12	\$9000
<div></div>	Fixed Items	40	\$9000

1400

TOTAL ITEMS

\$53,500

TOTAL VALUE

PDF

CSV

8:45

Report Exported

Select

appliances.pdf file has been sent to name@email.com

Share

CLOSE

8:45

Spaces

Select

Search

Attic

Basement

Bathroom

Den

Dining room

Family room

Foyer

Game room

CANCEL

ADD

Q

W

E

R

T

Y

U

I

O

P

A

S

D

F

G

H

J

K

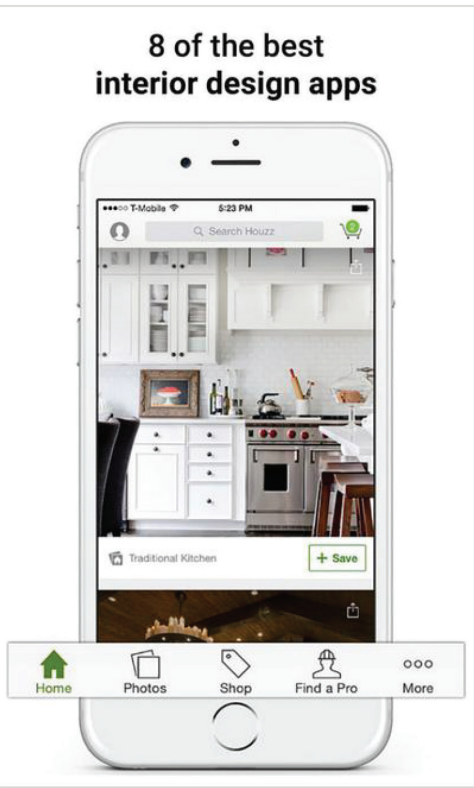
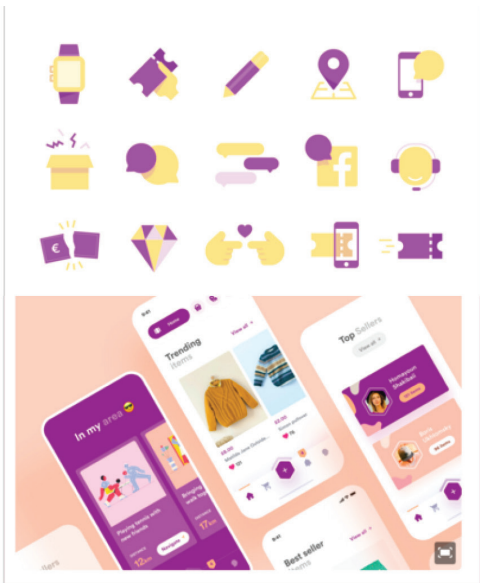
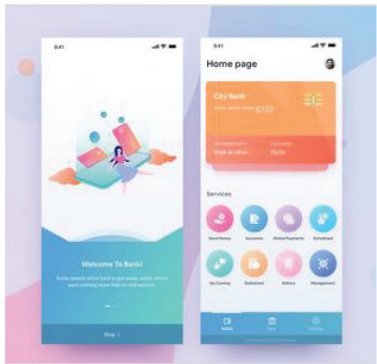
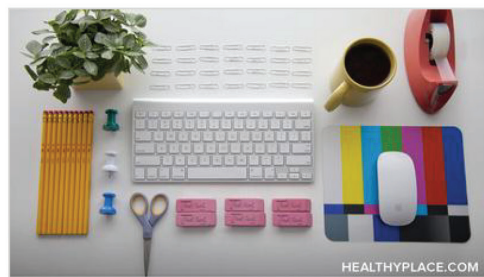
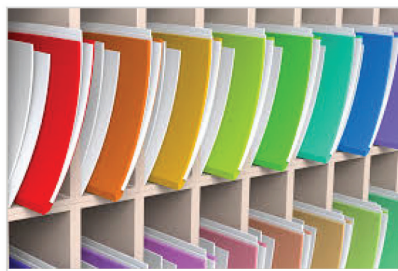
L

123

space

return

# Mood Board





# Style Guide

## LOGO



Reverse Version

## FONTS

Gelasio

Roboto

Sub-Headings and Copy

## COLORS

Primary



#138988



#EDAC00

Secondary



#696156



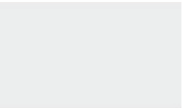
#555555



#887F74



#CECBC6



#EBEBEB

Gradient Background



#138988

## BUTTONS

Home Buttons with Icons



Other Action Buttons



## ICONS



## ILLUSTRATIONS



# Usability Test Plan

---

## **Objective**

- Initial impressions of specific screens
- Content on specific screens
- Testing red routes for usability issues

## **Tasks**

- How do participants respond to the organization of the home screen UI?
- Can users add an item from the home screen?
- Can users navigate to a space?
- Can users get the value of all their items, use filters to get a value/list of specific sets of items and then get a pdf report?

## **Testing methods**

Moderated remote usability tests with 5 participants using Zoom.

## **Participant characteristics**

I will recruit homeowners of mid-to large size homes.

[Usability Test Script & Notes](#)

# Usability Test Report

I created a detailed usability test report after the testing and categorized the issues in terms of priority.

## Round 1 issues

Priority	Issue	Recommendation
Critical	Alerts was ambiguous	Remove Alerts as part of MVP
Critical	Users wanted to add custom content in Basic Info. for items	Make 'Description' part of 'Basic Info.' section.
Critical	Item Types on Reports page was confusing.	Change 'Item Types' to 'Total Items'
Major	Recently added didn't covey time frame well	Change 'Recently Added' to 'Last Added'
Major	Users preferred List view whenever they saw a list of items.	Remove 'Tile' view and have 'List' view as default with 'Details' as the second tab.
Major	Tab bar access from 2nd level	Have Tab bar appear on scroll so users have access to home page from 2 or more page levels.
Minor	Add a photo for receipt and not just link.	Add photo upload option to receipt.

## Round 2 issues

Priority	Issue	Recommendation
Critical	A level of security is needed as the app has sensitive information.	<ul style="list-style-type: none"><li>Add a pin or password for access.</li><li>Admin can set privileges for users for the 'Reports' section</li></ul>
Critical	'Add info' in Reports is confusing as it looks like it is the same as the home page 'Add item'.	Change 'Add info.' to 'Add Details' and remove the 'Information needed' section.
Minor	First impression of spaces is the layout of a house.	Tweak the icon to show uneven blocks instead of 4 equal squares to reflect floor plan.