Design Report

User Experience Content Report

SWIPE

User Experience Design(Content) CI7830

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Table Of Content

1. Introduction and Background

In Today's world, the mobile-commerce platform is a boost to the business industry as suggested by a study and research towards mobile apps (Ngai and Gunasekaran, 2007). Amazon is the best and apt application to cite when we discuss m-commerce and the experience of online shopping. The idea is debatable that without having an innovative design approach towards customer experience with an enhanced ease of finding the right items at the right place within the browsing session of the application user interface. It gained popularity when the small interface platform gained the potential to browse-purchase-track your favourite items from warehouse to home. But, where are the innovative ideas that helped this project the concept of selling and buying refurbished products? Used items which can be a day or month older from the purchased date is a quite established concept in today's era. When Samsung made a patent to the swipe-based user interaction in 2012 [4], the opportunities and scope of usability boosted. Tinder came with the innovative idea of to find a date and casual relationship using a mobile platform. But the hack was deep in the human minds with the simple help of tools within the interface, which was the swipe biased user navigation.

Tinder's approach was simple. You would swipe right if you liked the person or left if you do not. *"The irony of Tinder is that in some ways the lack of information, or text, is actually less superficial than having the information" (Grigoriadis, 2014)*. And it was all based on the picture you see on the profile which reflects the option to choose or not to choose. • *The paradox alerts us to a process of molarization, the in-itself of contradiction: The process of molarization as Massumi (1992), following Deleuze and Guattari, elaborates is always about turning complexity into a pragmatic "black or white of Good or Bad" so that the "complications of desire" are reduced to the "simplicity of mind or body," or an A or B.* But how do we relate person and product? In this report, the approach is to design an interface where a person can see a product picture of another person and pull out a product from its own inventory to exchange. The technical term for this trade is also called barter.

The concept of **barter** is long lost but is still used by some companies with a different approach and some valuation. This project mostly focusses on exchanging used products and some items which you enlist or keep in your stock room as a giveaway. But how will we achieve such a simple model of a user interface for a global population interest? It can be well quoted as the design aim of the project, *"Design a card biased user interface with minimal action and long-term surfing with fresh content on each screen session"* the report talks about the challenges and the iterations done to create a solution. The solution is just a layer on the existing network and model of business, this will help the user to find the right match for the need and evaluate the user's mind-set for product valuation looking at the age of the product.

1.2 Design Aim:

To design a card-based user interface with minimal action and long-term surfing with fresh content on each screen session.

1.2 Design Objective:

The user needs to self-evaluate what to exchange and what not from the listing, looking upon the display product and keeping in mind the need for product and interest towards owning the product. The user can also save the card to review it later. The user can also skip the product and look for the next product. The actions defined are swiping the product card towards the right and left to accept and reject (the actions are not defined as per any standards as the product allows the user to choose the action to accept and reject swipe direction).

1.3 Product Ergonomics:

The user interface works on the element of surprise and hence the product information will be flashed and the user will have micro information e.g. Product image, age and user name of the reciprocal user. The host user needs to look upon own inventory to look at a product to barter with the product on the card. The product matching will be achieved as the user can manually filter the category of product it wants to swap, e.g. **A** and **B** are two users where A is the **primary user** and B is the **secondary user** (reciprocal user you are trading with). Now A has a mobile phone, aviators and a leather jacket (each product is a used product) and B has a tablet, now A can decide what to trade the tablet, this is explained with certain scenarios below:

1. A can trade just the mobile phone with B for the tablet.
2. A can trade with either two or all three of the product.
3. A can also dig in the inventory for other products which are not in the home screen inventory listing (primary listing)

What will happen after A swipes?

After the action B will receive a swipe request approval and can browse the all the primary listed products with A and can ask for other products instead of the primary swiped product.

How will the swiped product disappear from the inventory listing?

Once A and B agree to the exchange products with each other in the message they can initiate the exchange action in the message with date, time and location. So there will be location pocket generated in maps. Now A & B needs to meet at the location. After they exchange the product the product will be discarded from the inventory to trash.

How to measure the quality assurance of the trade?

Once A decides to exchange an item with B at a location X. When both A & B reach X then they will receive a notification which will redirect to the respective screens and one of them will have Q&R code and other needs to scan the code before or after trade.

Note: It's not always that A will have the code and B needs to scan it's randomly generated for a trade. Further in the project report we will observe how the application is framed and what are the major changes in the design interface and user flow.

2. Project Process

The project follows design thinking process of the Design Thinking framework follows an overall flow of three main categories: understand, explore and materialize. Within these larger buckets fall the 6 phases: empathize, define, ideate, prototype, test, and implement.

IDEO Design Thinking Process – Strategy Diagram

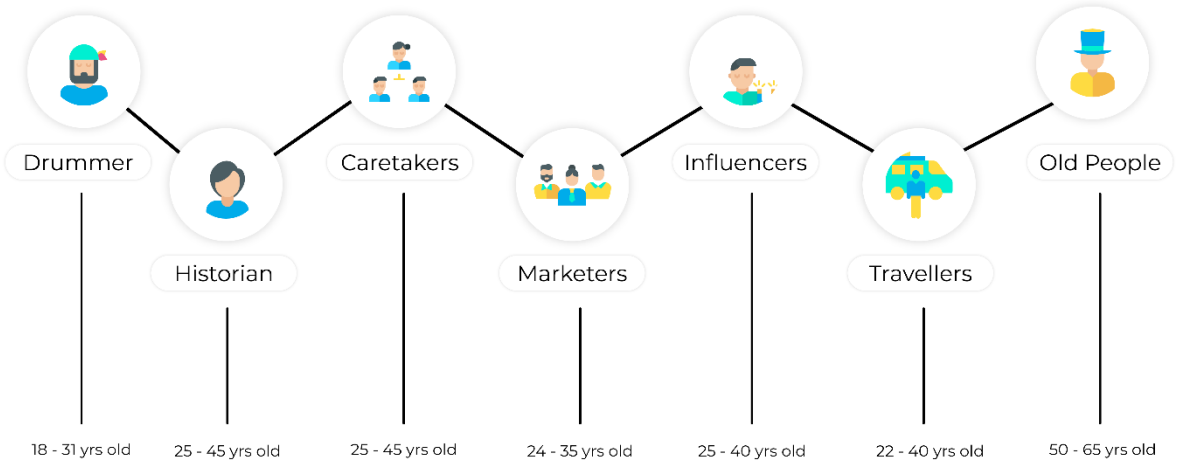
2.1. Understand:

To measure the needs and filter most relevant information to support the process. But transparency is the only factor that helps build a solution around the problem. The categorisation of the process helps the designer understand the need of design and need of action elements. It includes empathize and define which are the first two phases of design thinking.

Empathize:

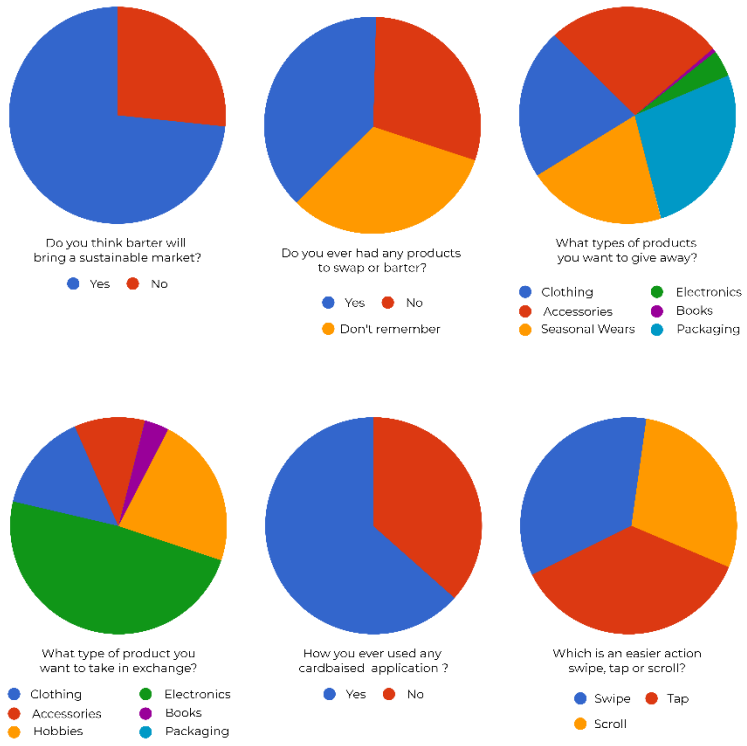
It includes understanding the user needs, and taking creative user needs and possibility (from end-user), understanding the audience, identify patterns of behaviour, pain points and finding loopholes in difficulty. This also include task analysis, observation techniques and feedback. It helped me to find out my risks towards the project, this gives statistics and feedback to pull out the user pain points for the respective project model for each session.

Target User Group



The target user group is a focused audience as they have most experience using products and items those have small life span or are aged enough to be traded to be a part of a collection. The user set is also distinct with the old people which need a better marketing with an approach to trade some good old items to make a part you their collection. The set of user are classified with different age group respective to their field.

User Survey



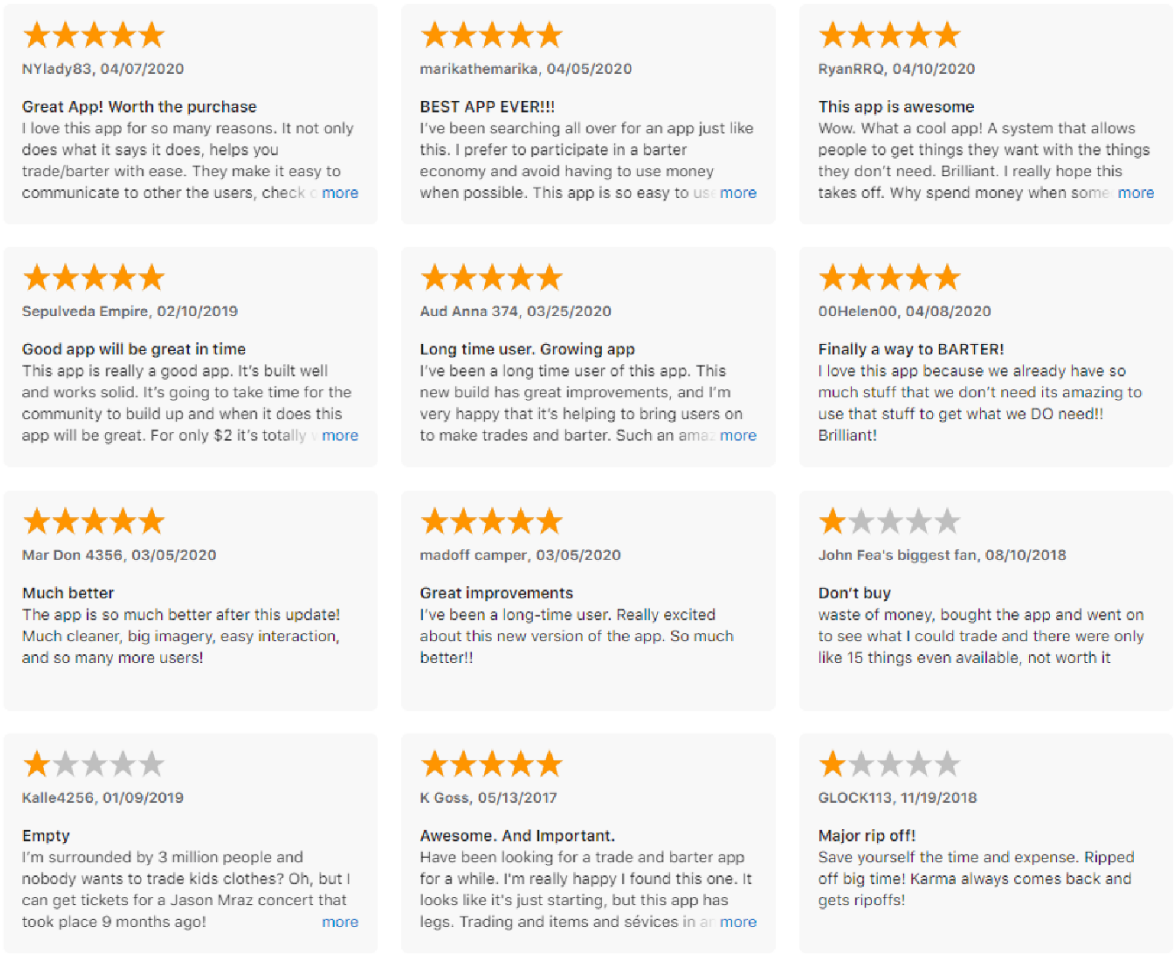
The user surveys were conducted with a set of 12 people and out of the 10 are frequent internet user from last 6 years. The survey predicts that barter can maintain a sustainable market place. The section those don't remember also accounts as a neutral section of the practice, and this accounts that majority of participants have come across some card-based UI. Along with this data to categorise the interest and keep an interest on peak number for crisis management.

And the last argument suggests that large number of users practice the tap action much voluntarily.

Affinity Mapping

This helped understand what scenario am looking at and how to overcome the problem and look at different perspectives of the problem. So sort listing the major section the map focused on Competitive Advantage, Interaction, Time, Trust, Product Category and User Behaviour.

Insights for user review of a similar platform gives us more understanding towards what we are building and how are the users are reacting towards the existing platform.



This is a application review for a compititor application, where users are more happy to share products for free as a give-away. Some comments speak of not finding a trade nearby, but most of the users followed all the changes and adaptation made by the platfrom and liked it. The application has 50K users and counting. Its an iOs mobile app.

Similar to most of the feature TradeMade is distinct with not just trading products but also services in return of products and vice versa. But the insights and analytics derived looking at the user feedbacks, most of the users have a positive review, then positive neutral. As all comments were checked using NLP for text of StanfordNLP, which was a great help.

Discussion: The empathize helped to understand the user behaviour & mind-set that people love trading for free, but when a trade practice isn't global, it makes the marketing even difficult to convince the users. But the users are more focused on products like accessories and electronics items. Though the market valuation is higher compared to product age valuation. It also helped to understand that user doesn't find the existing platform more engaging so this also accounts as pain-points. Usage saturation hasn't yet achieved because there is no such engaging factor for primary action (browsing). Also a lot of users questioned the security of the trade. There is no such layer in any competitor app for trade connection and verification of trade, rather each platform has verified users and non-verified users.

Persona

Mark is kind of reserved guy.
24 Yr Old
Carftsman

ABOUT

Mark is a craft artist and loves collecting items for his work and hobbies. But he is also a picky guy. He loves to spend times picking the best possible items online, but also needs minimal interaction on the screen.

GOALS

- Spend most of the time finding the right product to swap with something good.
- Find the best deals for a exchange.
- Make the search objective clearer while browsing items.

PAIN POINTS

- Feels bit twitchy about the scrollable application in market.
- Spends a lot of time and finds himself glued for a perfect match.

NEEDS

- Needs an application to trade items in return of items easily
- An application that has transparency for both the products on screen (like/give).

Beverly is an extremely happy person.
31 Yr Old
Travel Blogger

ABOUT

Beverly is a travel blogger who loves to travel places and so does she loves taking product place to place. And sometimes she feels dropping or exchanging items as per need of hour.

GOALS

- To capture and make memories out of things and places.
- Fit-in with needs and trade wise.
- Find the best deal to trade items with items when needed.

PAIN POINTS

- Find herself hard to switch focus on screen & surrounding to find match items.
- Spends a lot of time and finds himself glued for a perfect match.

NEEDS

- Somethings snappy and things in packet which she can browse.
- Chain of trade that can make counts and she can revisit each interaction.

Mimosa is kind of reserved guy.
45 Yr Old
Brand Survey Analyst

ABOUT

Mimosa is a brand survey analyst who travels a lot of business deals and to keep things posted he feels nice to trade off things in aspect of showing gratitude towards people and leaving a souvenir.

GOALS

- To keep the impression with all of his deals he make more milestone.
- Be clean with all of the giveaway or exchange products and items.

PAIN POINTS

- Cannot keep up with some deals and need to have a cycle of deals and find the best.
- Not many of his traders agreed to a favourable condition of trade.

NEEDS

- Keeps the content cycle updated and give a count of each trade.
- Also use structured application to have multiple exchange with valuation.

The need of persona is to prepare an imaginary perspective of attributes that our end user will have. And derive all the pain-points needs and other dependency factors. It also helps connecting the loopholes and pain-points of the user. The loopholes of the users are the tiring approach of browsing the application which is a challenge itself. Understanding the needs of the user makes the options clear about a feature in the application (if nessecery to include). Looking at the given persona Beverly is the most relevant and resourceful choice for a customer journey and empathy mapping.

Discussion: The persona isn't much diverse compared to enlisted target users, but it covered most of the background and aspects of user-end the product is focused towards. The minimum age persona is 24 as the guy is a craftsman he will have need of raw material for craft, but he can easily swap items and get things for free. While in the other hand Mimosa is a guy who wants to use the application but don't have much time to spend on it, so he better fits to use the application.

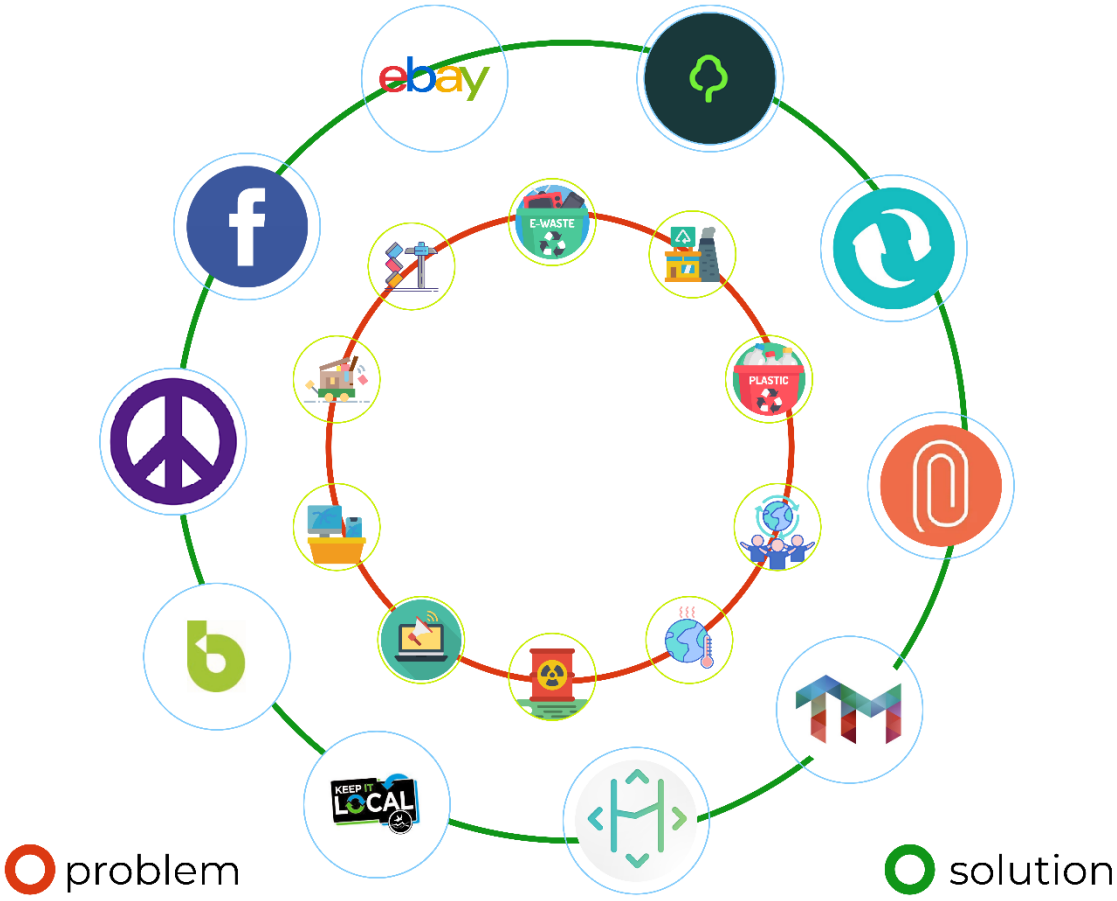
Define:

The second phase of the design thinking process is to define what problem we are looking at and how to categorise the problems. The objective is to synthesise the problem from the data gathered from the user research and observation. The process includes problem statement, user journey map, empathy map and key insights you derived from them.

Problem Statement:

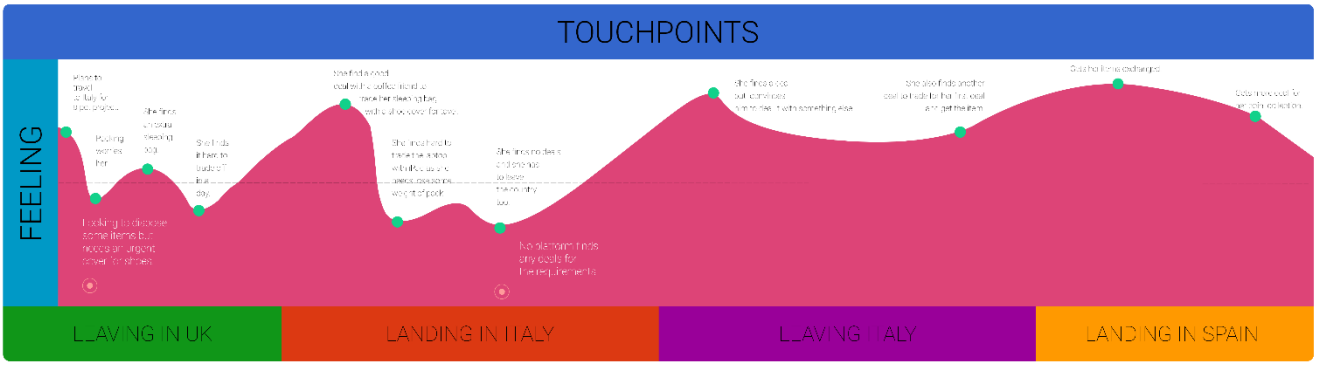
The defined problem for this report constitutes of a set of questions:

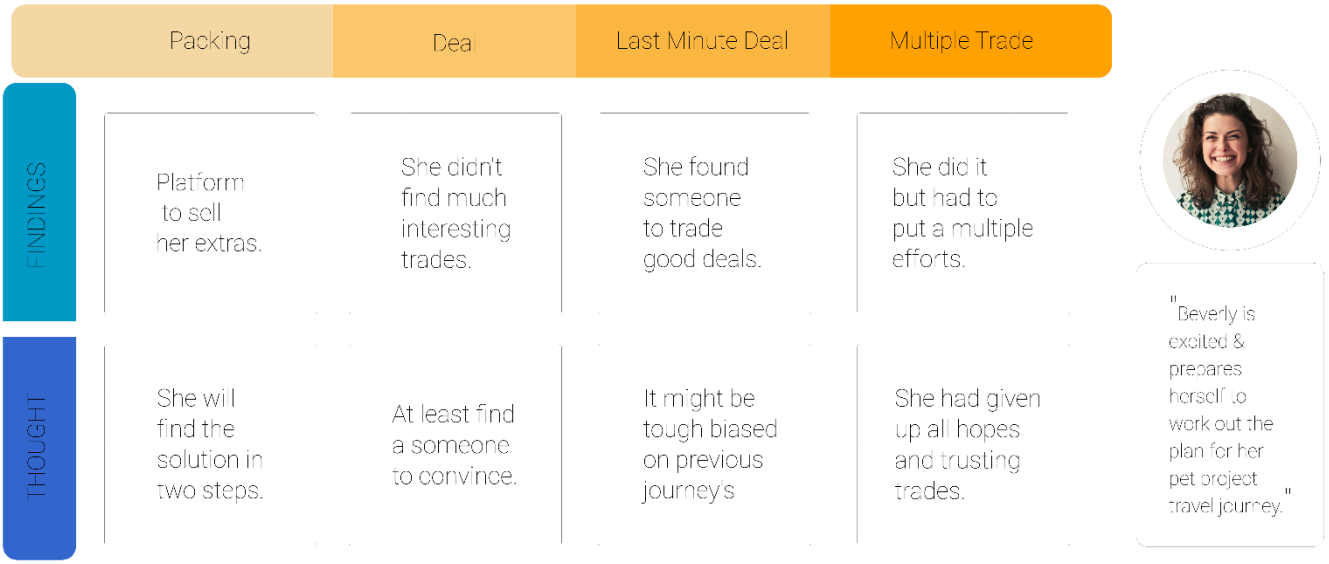
Is there a Marketplace for used item? Why isn't the existing marketplace engaging and interactive?



The question for the problem is why do we need a product alternative when already one exists in the marketplace. The prespective of the finding a solution has a lot of loop holes in the existing platform. So the approach is to minimalise the user action and increase user engagement. The principal problem for this market place is to hit market saturation for products those attain premature death or jump from person to person. The product circle also hits a tangent with other diversion and makes the application more disturbing, away from the primary action.

User Journey Map

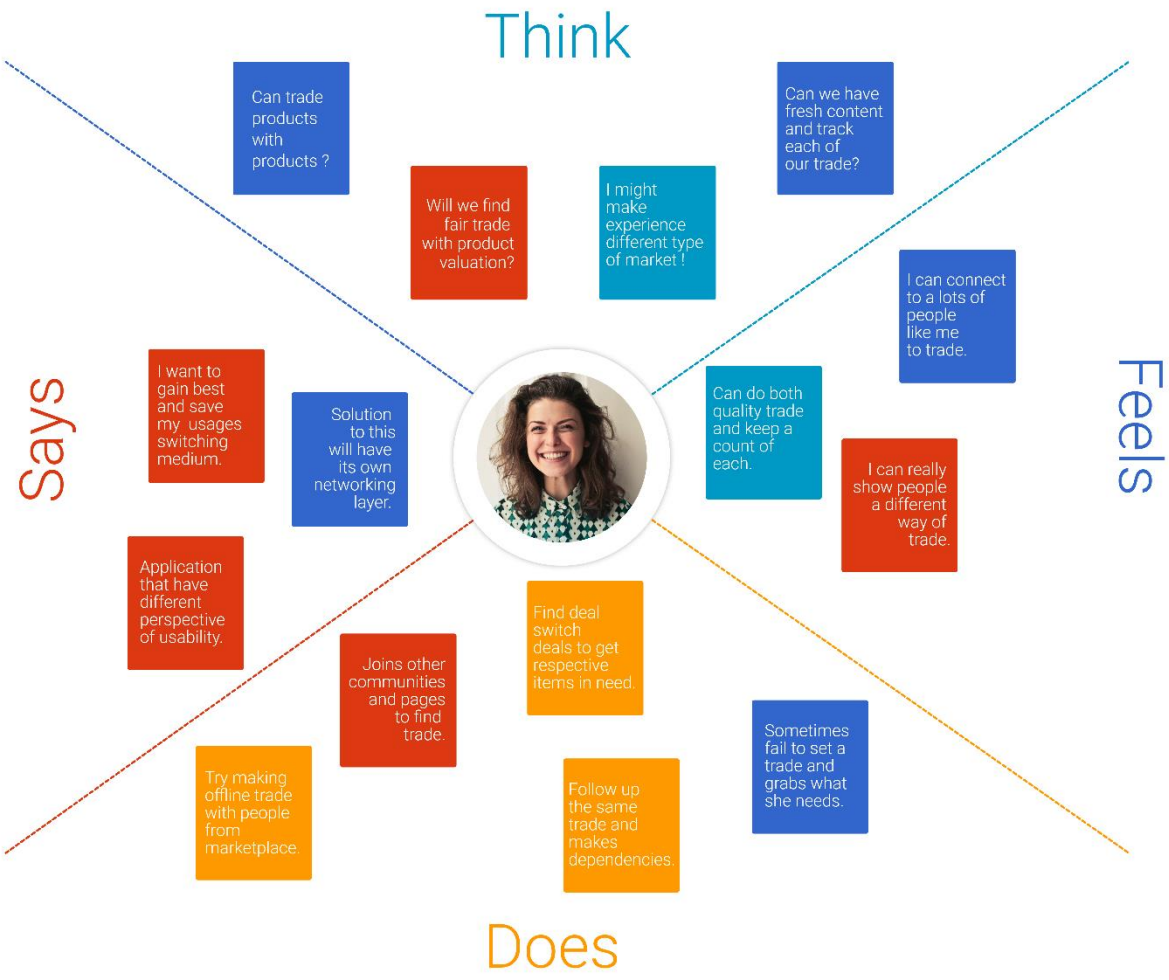




The user journey map was completely focused on Beverly and her journey of using the application of a planned scenarios, to derive the pain-points and the note all the thorough findings that support the problem solution. The above scenario was derived from a set of action scenarios wherein the user needs to plan for the trip and she has to discard a certain item before she leaves a particular place hence she has to find a problem that's suitable to her and find a solution for that, and her problem should be relevant to her day-today activity.

Discussion: The user journey map gave good insights for her pain points in four different scenarios which include Leaving UK, Landing Italy, Leaving Italy, Landing Spain. She faced problems while packing to dispose off some items where in return she needed a shoe cover. Along with that if we look at the finding and thorough insights we see she is good at cracking the last minute deals. It was clear in the thoughts for multiple trade which crushed her efforts to try more. This is a properly projected loophole discussed in the project that will help user to save time before reaching the deadline, investing bits of time to find the right solution.

Empathy Map



INSIGHTS

Application that have different perspective of usability.

Can trade products with products ?

I can really show people a different way of trade.

Joins other communities and pages to find trade.

She found someone to trade good deals.

She had given up all hopes and trusting trades.

She did it out had to put a multiple efforts.

Discussion: The empathy map allowed the research to define what exactly the user says ,thinks, feels and does. It can help the product achieve user inputs and expectations from the application functionality. But likely the user seems to have a string of information connecting the idea that the application should have a different perspective to trade product with product and she wants to expand the idea to different networks. She is trying to pull private community to keep trade go on.

Comparision Analysis			
Trade products against Product	✓	✓	✓
Trade service against service	✓	✗	✗
Scrolling interface design	✓	✗	✓
Multiple action element is needed for a trade	✓	✗	✓
Profile Vurnarablity	✓	✓	✓
Trade history	✗	✓	✗
Trade authenticity	✗	✓	✗

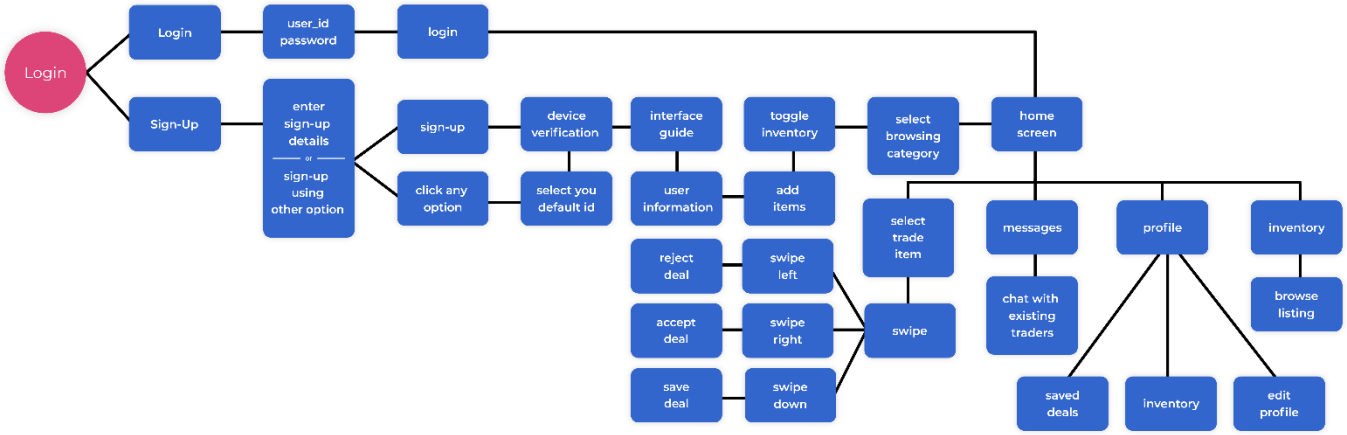
2.1. Explore:

As per the research data and insights we decided to draw some user flow and solution architecture. This will help frame the application navigation to revise and frame each nodes of the application screen. Evaluating action, buttons, entity relation to devise a solution to the existing problem. And looking at framing a solution we need to look at a similar existing model to create a seamless one.

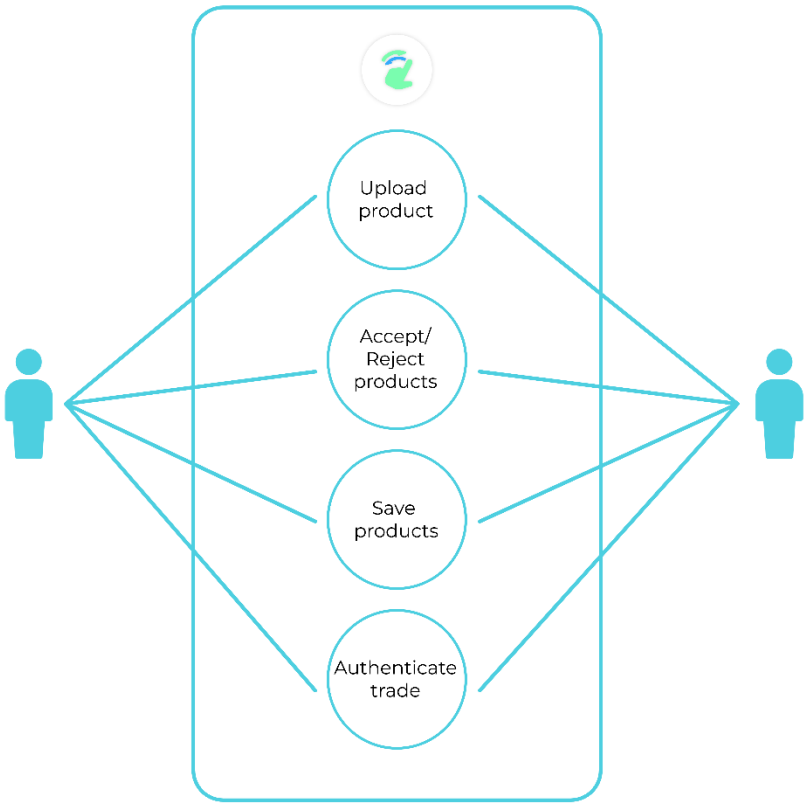
Ideate:

it becomes necessary to find out meaningful ideas and tip for each element of solution. For which need insights by brainstorming with three major approaches like brain-netting, figuring storming and Rapid Iteration.

Application Architecture

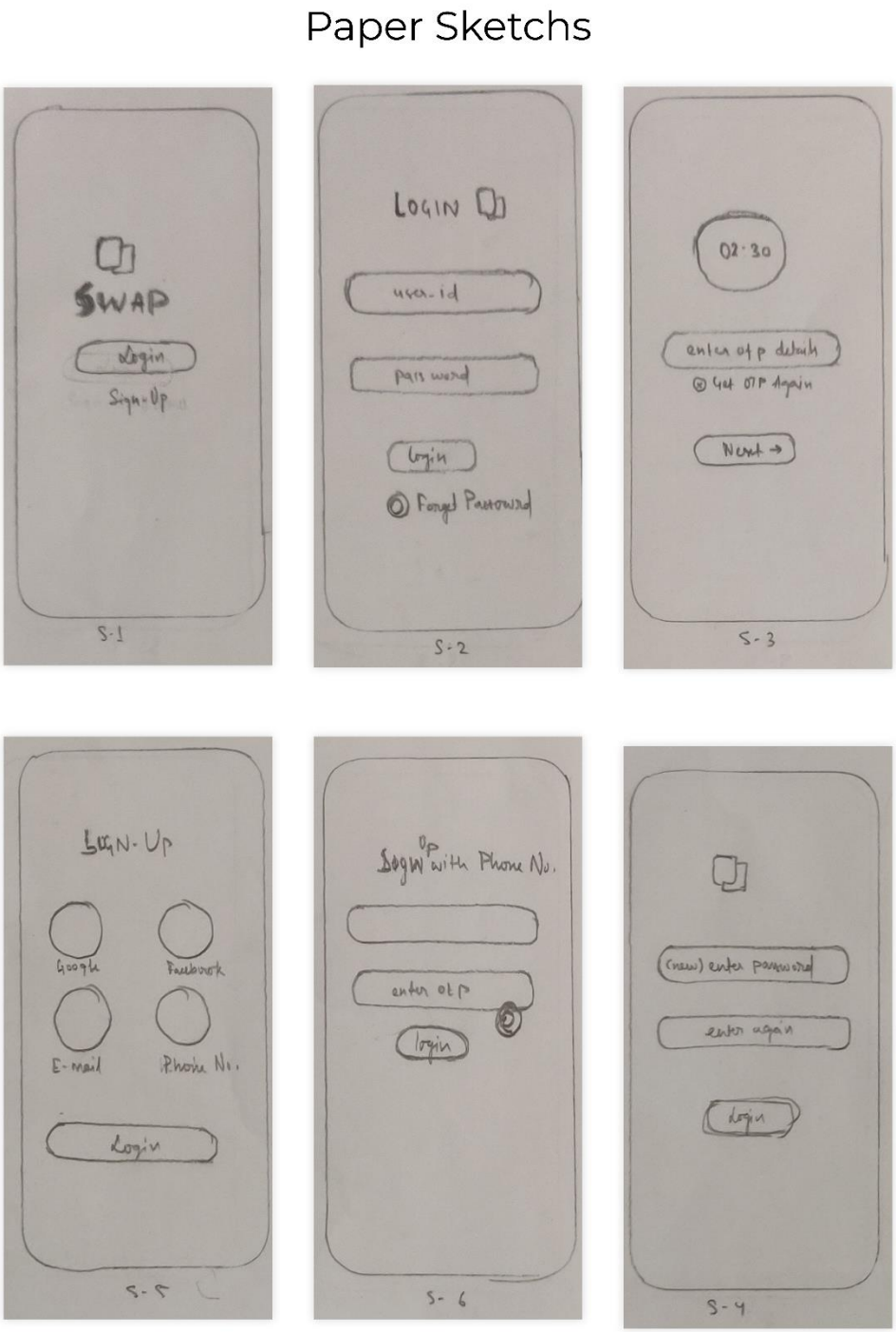


Use Case Diagram

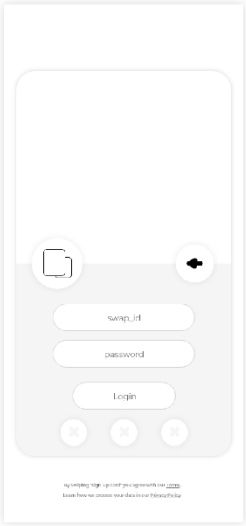


Low-Fidelity Design:

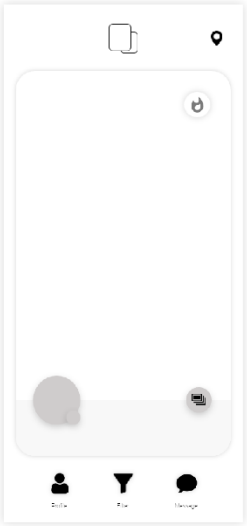
The architecture design helps to frame the application in a more structured manner where the first steps suggests to draw a sketch of the application and proceed further.



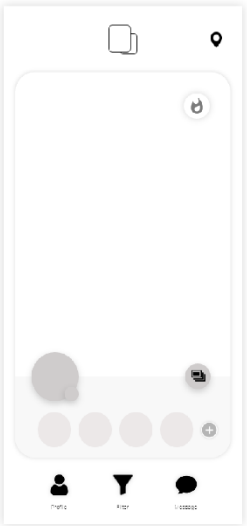
Mo-fidelity Wireframe



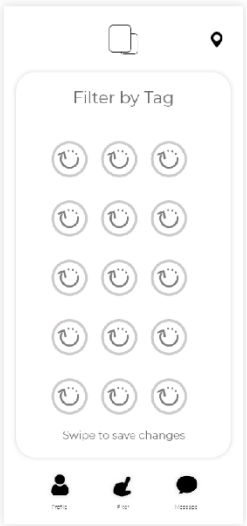
Login/Sign-up



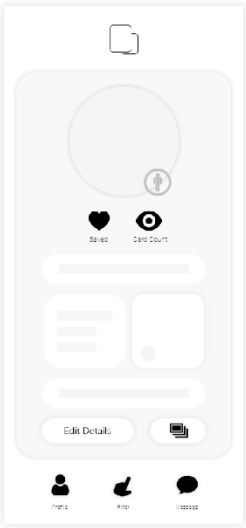
Home



Inventory

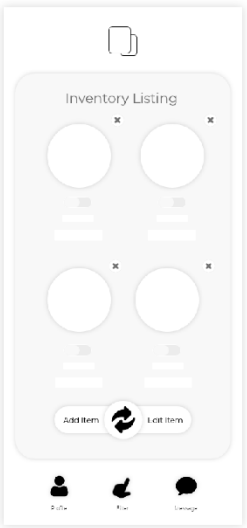


Filter

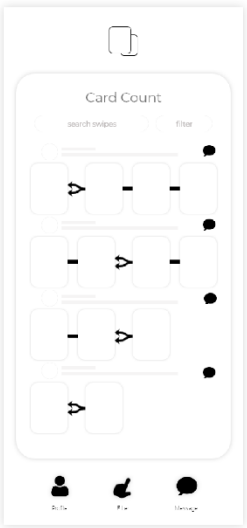


Profile

Add Item



Inventory List



Saved Card

After the completion the wireframe was prototyped and set for a usability testing. Which will help to find the iterated loophole carried till design stage. There are also design flaws in certain screens like Add item screen and others each of them are discussed in the post interview discussions below. The above designed screens are revised design screens achieved after iteration.

Usability Testing for Low Fidelity Design:

Aim:

To use the designed interface for Swipe which is a platform to trade/exchange products with products.

Objective:

- To achieve all the flaws in design and navigation.
- To find the action elements, placement feedback.
- To understand the users, struggle to complete tasks and understand the user flow in real-time monitoring.

Instructions:

- Explore the application from the initial screen (sign-up/login).
- Feedback on using the action buttons on screen.
- Feedback on using the swipe function for most of the actions.
- User has no time limits.
- User can ask for tips but not help.

Observations & Findings

Onboarding & First Impression	User was agitated for swiping each card to confirm an action. User was questioned for long onboarding session. User was happy with the home page.	User tried to swipe and paused for any response. User didn't noticed the inventory icon. User tried taping on inventory items but there was not action.	User tried to swipe the cards in every possible direction. User was happy with the down swipe to save items.
Adding Items, Inventory & Profile	User was confused while filling profile details. User was confused with location screen. User was happy to fill less information.	User was confused with inventory listing. User was confused with edit inventory items. Couldn't figure out how to enlist items in home screen.	User appreciated post test about the feature of showing and hiding items. User was happy to see minimal information in most of the screen.
Trade Experience & Navigation.	User swiped right to a product and found match. User opened the message for trade confirmation. User was satisfied to put minimal efforts.	User was bit confused with the primary action icons as they didn't changed per screen. User was stuck with the saved card screen as there was no icon to navigate back to home.	User rated the design approach 8/10. User rated the navigation approach 7/10. User rated the trade approach 9/10.

Discussion:

The testing session was shuffled into sections to break down the process and understand the problems in each time frame of user experience. The findings suggested minor changes with on boarding, adding items, inventory, profile screen & navigation.

Boarding Experience:

- Swipe action to confirm primary actions like submit, next, back is to be removed with normal buttons.
- Long session of on boarding was reduced to two step verification by primary mail of mobile OS.
- Loading screens were placed after actions like login and verification.

Adding Items:

- Edit items screen needs a complete redesign.
- Product tag needs to be unit button than enlisting in a dropdown.

Inventory:

- Individual items need to be highlighted.
- Animation to use the inventory listing both primary & secondary.
- Description section needs to be introduced.

Profile Screen:

- Mini-map for location of the user was unnecessary and should be removed.
- Male & Female icon must be removed.

Navigation:

- Home icon should be introduced in many screens as navigation from Add Item screen and filter screen.

The overall experience of the participant was good, but the participant was confident that the high design will do justice to the usability. The screens were further worked on and necessary changes were made. The design screen comparison helped achieve usability.

User Journey without the application vs User Journey with the application solution. The findings helped the participant understand the pain-points of previous participant during research and survey. The testing participant agreed to all the findings and pain-points and discussed how the application will help to cut efforts like creative private communities, groups or had a bad user experience using other products.

Design Rational:

The two major issued with the design and usability were:

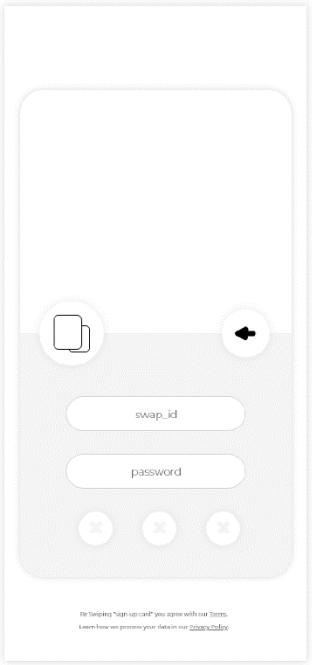
Issue #1: The first design issue was there was, no login button for the landing screen. And all the primary accept and reject function were focused on right and left swipe.

Issue #2: The second design issue was there was no home buttons for some screens so the user navigation was confusing.

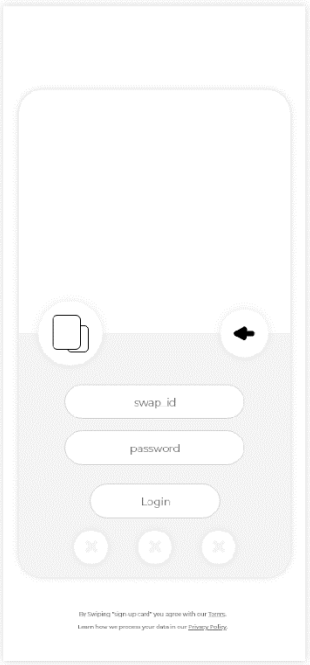
In the above discussion it's clear that those issue are being resolved. But the issues were the general design issues. It needs a description for technically insights. This issues refers to the Human Interface Guidelines by Apple.

Suggested Changes:

Login Screen

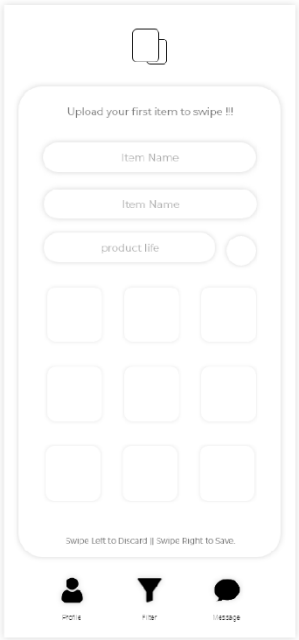


Before



After

Add Item Screen



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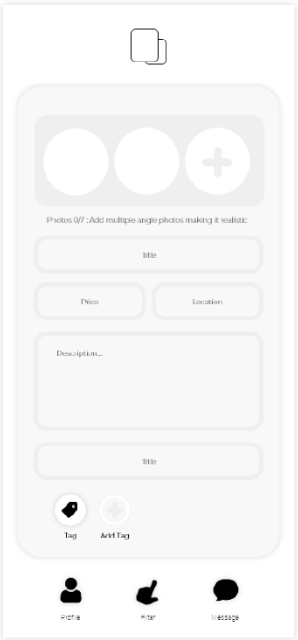
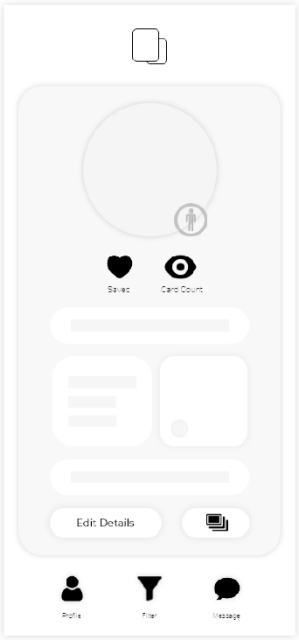


After

Profile Screen



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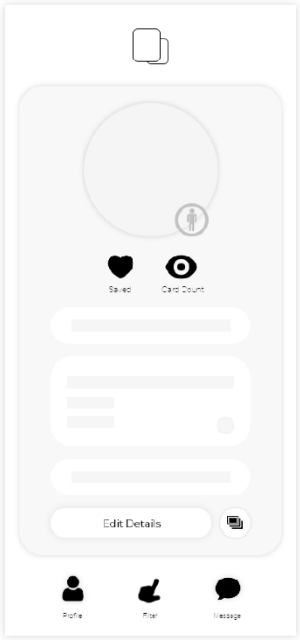
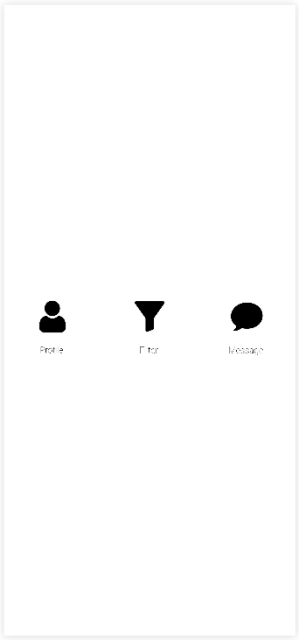
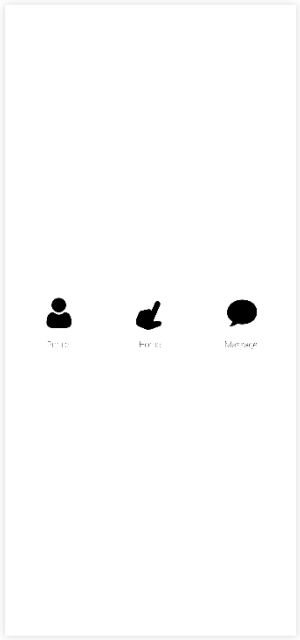


After

Primary Icon Changes



Before



After

All the discussed changes are reflected above with the segments of before and after screen. Necessary changes are listed in a table below.

Design Screens	Before	After
Login Screen	The user input section had 39px padding between other login option and input field.	The section was pushed 15px up and a login button was introduced.
Add Item Screen	There was no product description section.	Product description section was introduced, changes in product image section and added a tag icon to select product category.
Profile Screen	Mini-map and location information section were in a same row	Just the location information section was placed with same height and covered the whole row with a small button at the bottom right corner to open google maps and retrieve user location.
Primary Icons	There was no home icon in any screen.	Any secondary screen will have home icon, which will replace the filter icon most of the screens.

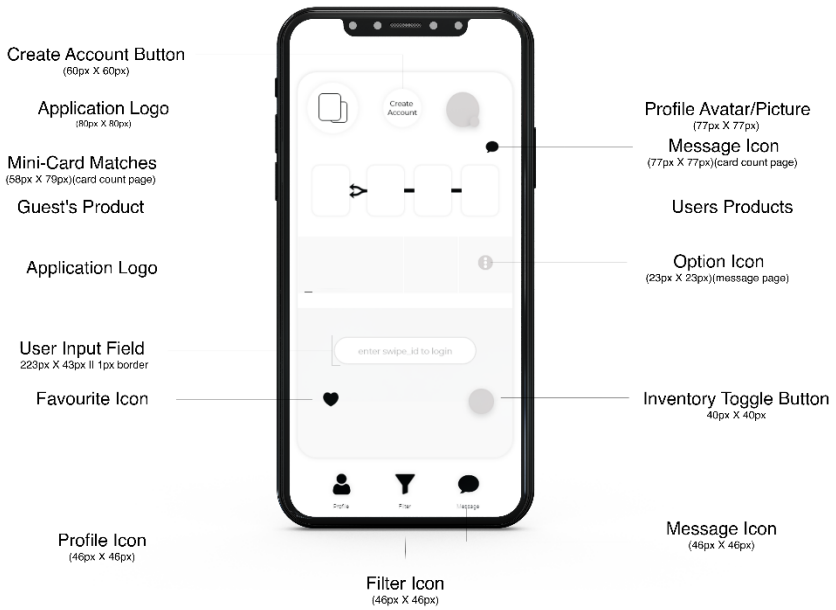
Discussion:

All the necessary changes are done with the low-fidelity design according to the findings and insights. Further design of high-fidelity will present other scenarios and new challenges. But the exoskeleton will remain the same for the application which is shown for the Low-Fidelity Design until the flaw isn't disrupting the application navigation or design aesthetics.

Interface Design Guide:

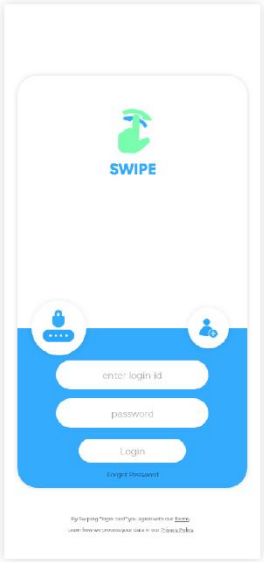
Layout Diagram

Layout Diagram - 2

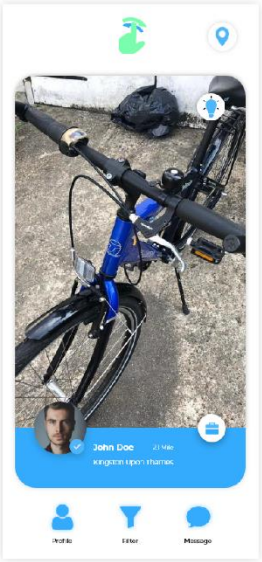


High Fidelity Design:

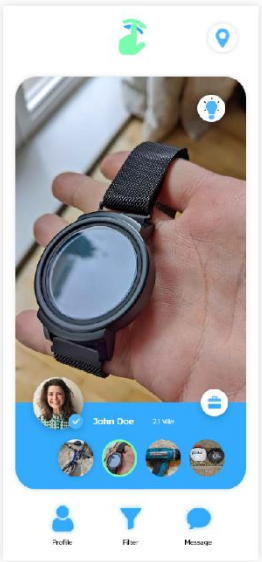
High-fidelity Wireframe



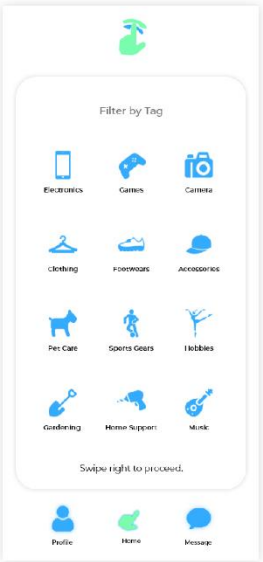
Login/Sign-up



Home

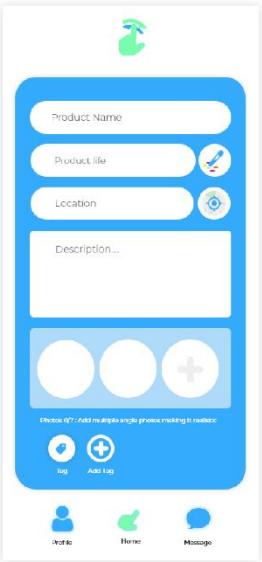


Inventory

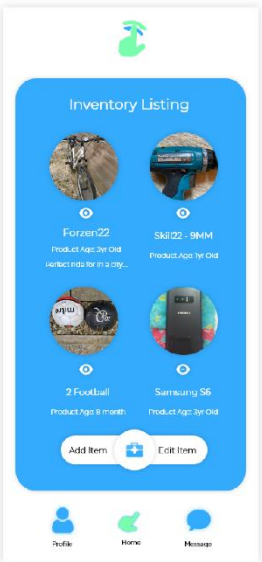


Filter

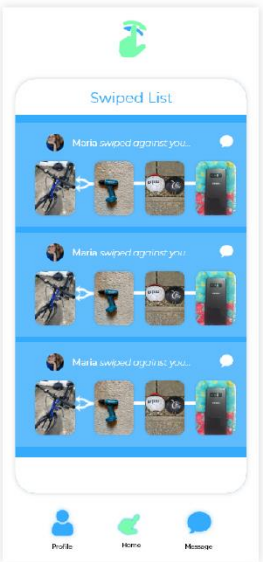
Profile



Add Item



Inventory List



Saved Card

The high fidelity design includes all the screen design so the design was prototyped linking each action element with other screen and hence to create a product scenario.

Product Usability Testing:

Aim:

To perform certain tasks with the existing application prototype and explore the application.

Objective:

- To achieve all the flaws in design and navigation.
- To find the action elements, placement feedback.
- To understand the users, struggle to complete tasks and understand the user flow in real-time monitoring.

Tasks:

The tasks are categorised to perform certain derived objective in a timeline. The participant will be assigned with certain tasks and observed.

Task 1. To login to the application using G-Mail and Explore the product

Task 2. Try finding a trade deal swiping some cards.

Observations & Findings

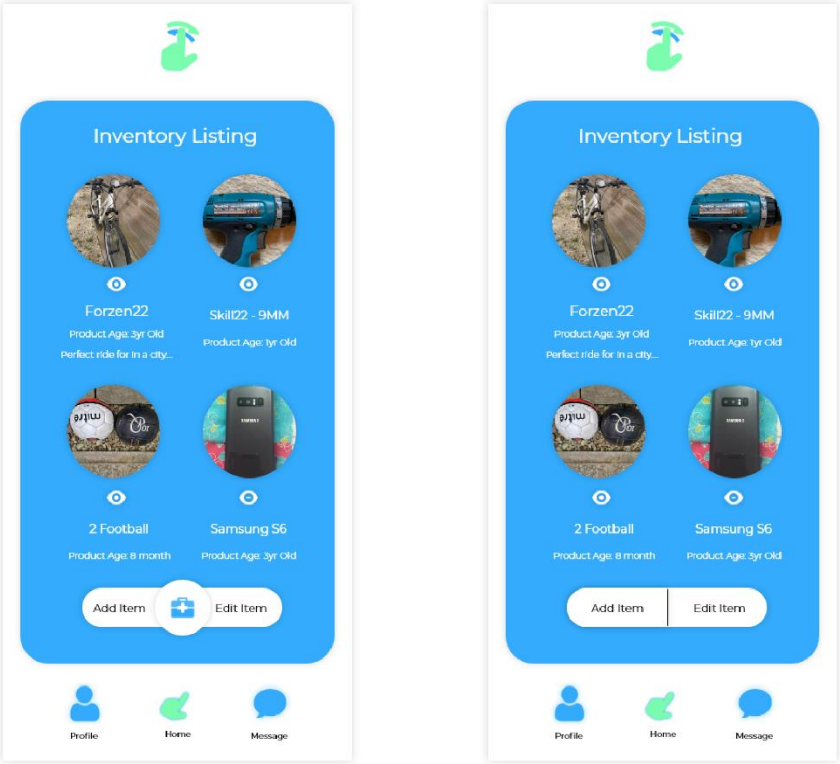
Task 1	Login was smooth with user sign-up. User followed the instruction with clean animation.	User tried to understand the icons and toggled around. User tried adding items to inventory.	User suggested the confusion with the Add/Edit button in inventory listing. User followed the notifications to fill the details.
Task 2	User successfully swiped various product's and found a match. User was happy with the deal acceptance.	User was a bit confused when the trade notification popped. User quoted the action is bit uneasy for the first timers but found it the most relevant feature of a trade.	User rated 9/10 for the design aesthetics.

Discussion:

The participant (user) found the product seamless and handy to use when in need. Also the user had insights about two previous users and later the discussion conclude the application can be better and hence with time needs to update and add feature where people can trade service with service or service with product and vice versa.

This suggest the only design change in the above testing is change in the inventory listing screen.

Add/Edit Button Changes



Before After

The button was changed as per the finding and suggestion. Hence the final phase was completed.

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