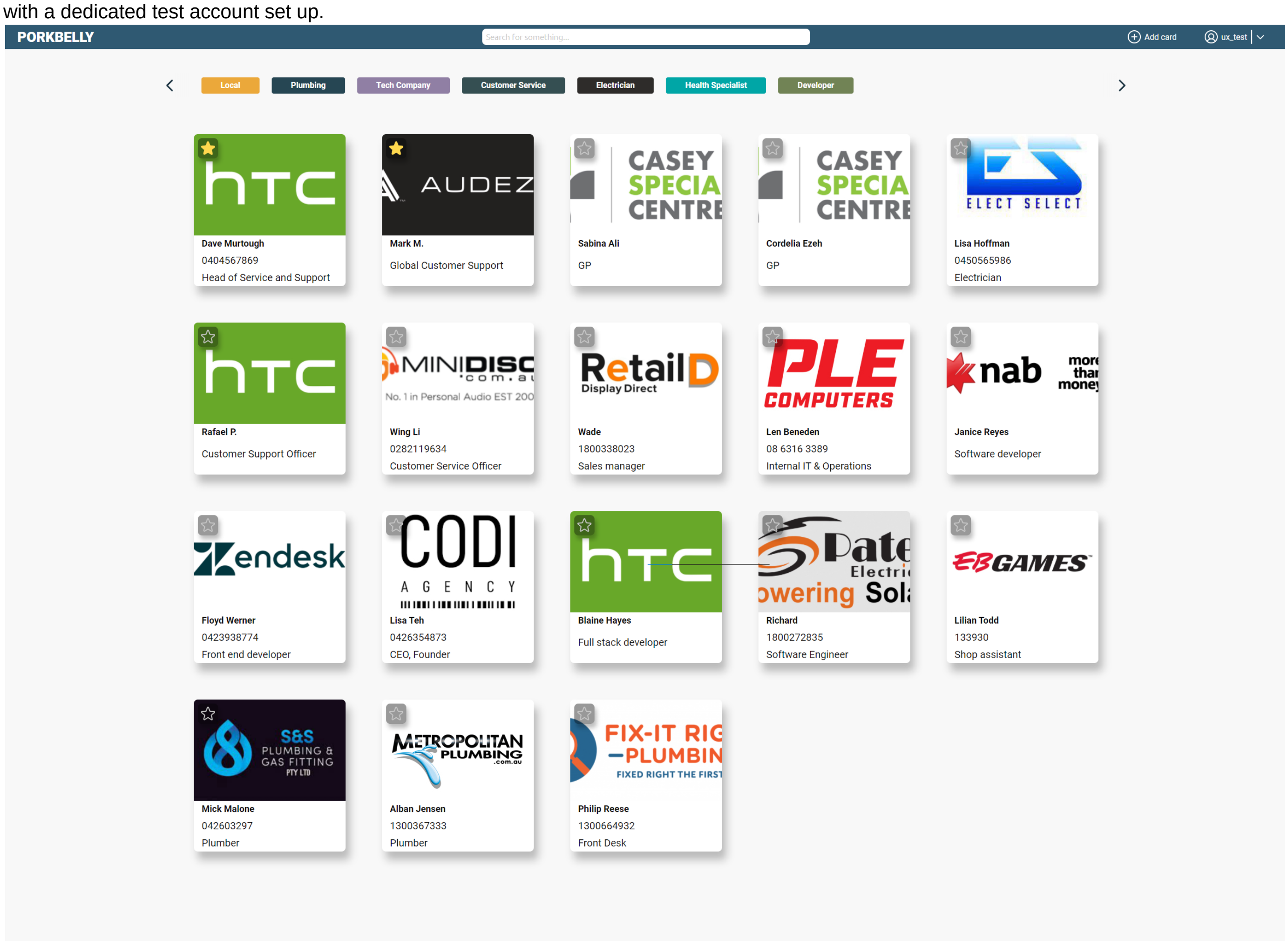
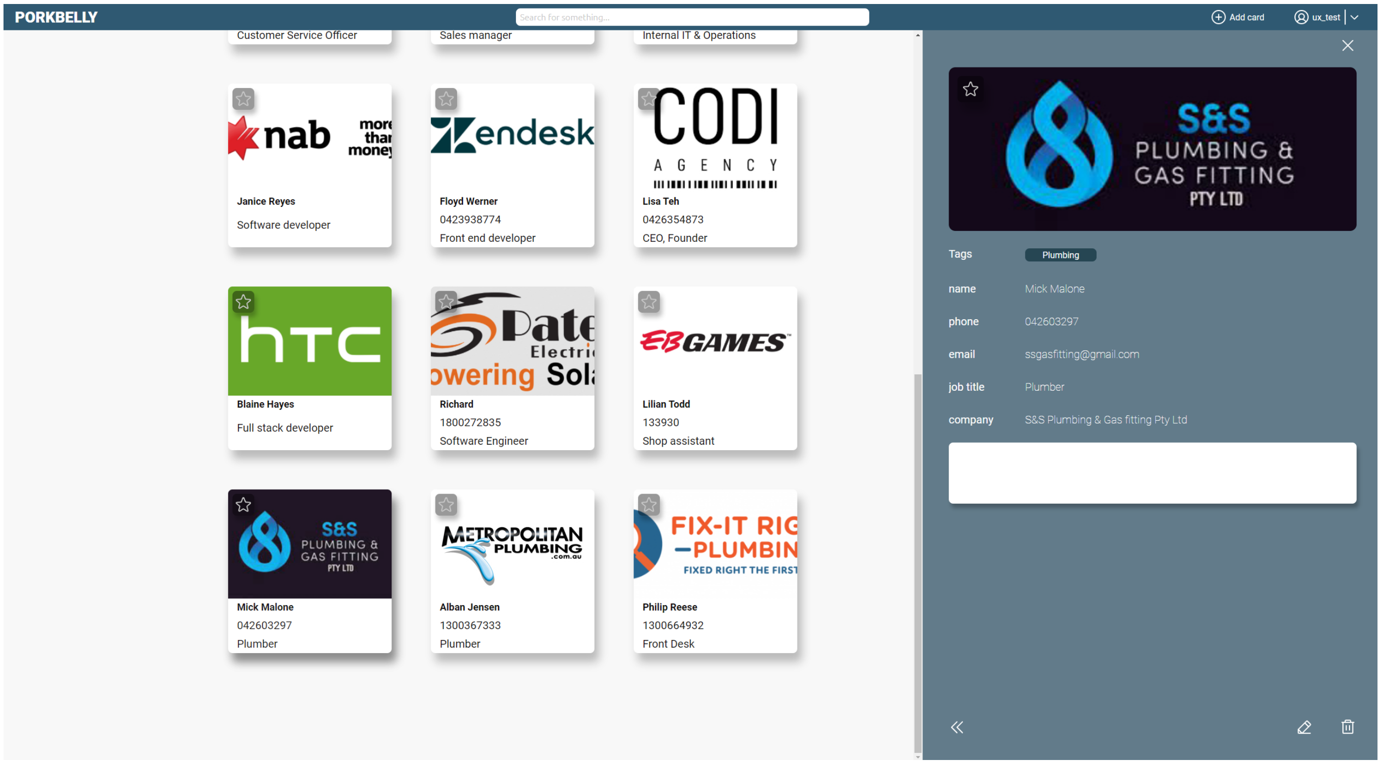
MVP UX evaluation

This usability evaluation is conducted using a deployed instance of our product on Heroku [92ddc5fd291b0deb821c9e5a55ce32f739e6b784] with a dedicated test account set up.





The core purpose of the test environment is to simulate a preset of how a user may set up their CRM, with a mixture of different contacts across different industries, along with a few suitable tags.

Testing Protocol

Introduction

- Begin with an introduction of yourself if applicable, and then introduction of the project and what it aims to be.

  "Porkbelly CRM is a digital business contact manager that helps you seamlessly store contact online. It aims to replace your physical business card collection, and allow for a simple and effortless access to all of your stored contacts."
- Explain the state of the application been tested, and the purpose of this study.

  "What we have here is a Minimum Viable Product. So what it means that it is at a state where it can be released to the public if we really wanted to. And the purpose of this session is to evaluate the usability of the product."
- Let the participant know how the data is recorded, and highlight what they need for the session:
  - The session will not be video nor audio recorded. Notes will be taken. The participant will be required to share their screen.
  - Participant need a internet browser of their choice. It is recommended that they open a incognito instance.
  - For this study, the participant may need to use Search Engines to download pictures online.

  "So this session will not be recorded, but I will have to ask you to share your screen once we start and I will be taking notes as we go. For this study, we will require you to use a browser of your choice, and we recommended you open a fresh incognito instance for this. And I also want to note that as part of this session you may be required to used your search engine, such as Google."
- Explain the process of the study, assure the participant that the study is on the application not the user.

  "In a moment I will give you a link that will give you access to the application. For the test itself I will give you three scenarios each with a few tasks in which I will ask you to complete. How you want to complete the task is up to you, and it is part of the observation we like to make. Remember we are testing for the usability of the application not you, so if any difficulty arises remember that's on me not you."
- Give participant a chance to ask questions, before starting the test.

  "That's all the housekeeping. Do you have any questions before we jump into the test?"
- Give the participant the username and password for the test account [ux_test]

Post scenario questions

Some or all of these questions should be asked at the end of each tasks. The purpose to is investigate what else the participant is thinking that is not quite covered by the scenarios and tasks itself. Adapt as necessary.

- How did you feel about (all) the tasks? Was there a task that was particularly hard or difficult to do?
- Was there anything confusing about the design?
- If you could change anything, what would you consider changing?

- Anything that pop up that made you irrationally angry?
- Anything that you found funky?
- Anything we haven't talk about but you want to point out?

Scenario 1:

Imagine your kitchen sink is pumping our brown water, so you want to get a plumber as soon as possible to have a look at it. You have a few plumbers saved in the CRM.

1. Find the contact of a suitable plumber.
2. That plumber you just called told you rudely that he can't make it. While another plumber you called is on his way, you no longer want to keep the contact detail of this guy.
3. The plumber arrived, and was able to solve your problem promptly. You liked his service, so you want to mark his contact in the CRM so that he'd show up first if you need a plumber again.

Scenario 2:

You remembered that Yesterday you met a guy at a convention by chance where you guys seemed to have a lot in common and exchanged business cards. [now give the participant the business card]

1. Now you want to store his contact here
2. On top of the business contact shown here, he also wrote you his personal mobile contact. For simplistic sake we will call it 987654321. Now you want to also add this information in the CRM.
3. You remembered that he said he prefers contact through email instead of phones, so you want to make a note of that so that when you do want to make contact, you'd know it.
4. You also wanted to label him as a personal friend on the CRM, how would you do that.

Scenario 3:

You have this cool million dollar idea that will revolutionize the society as we know it, but now all you need is someone to build it. You know you have quite a few contacts who works in the tech industry.

1. You want to see all of your contacts that works in tech industries or is a software developer.
2. You remember this software developer who works in a certain electrician company who was really good. You want to double check his details to see if you didn't misremember things, and perhaps even contact him.

3. After contacting this guy, he told you that your idea is stupid but if you pay him enough he'd be in. "fair enough", you thought, So you want to label him as a potential working partner while looking into other people who may work with you.

Post test actions

- Clean up the account, making sure to:
    - Recreate deleted card
    - Delete participant created card
    - Reset tags
    - Reset favorite

Test results

Scenario 1:

Imagine your kitchen sink is pumping our brown water, so you want to get a plumber as soon as possible to have a look at it. You have a few plumbers saved in the CRM. [now give the participant the business card]

Task description	P1	P2	P3	P4	P5
Find the contact of a suitable plumber	• Looked through all of the card by scrolling around, only found two out of three. • Clicked the card to reveal detail view. Noticed the email, phone, and the 'local' tag • Chose S&S plumbing purely because it seemed more “legit” than the other. • Gave the correct phone.	• Selected the ‘plumber’ tag to filter, selected a plumber randomly, correctly identified the contact information • Later realized the ‘local’ tag, but the one chosen was already tagged with local so nothing was changed. • Gave the correct name and phone.	• Scrolled around to find suitable cards, found and gave the contact information of the first plumber. ◦ Read the information out from card view • Found the tag filter button later • Gave the correct phone.	• Selected the ‘plumbing’ tag to filter and reveal all plumbing companies. • Chose Metropolitan Plumbing simply because it “sounds right” • Gave the correct phone.	• Selected the ‘plumber’ tag to filter, chose the first one because the name sounds reasonable. • Hesitated a bit because participant saw the job title “Font Desk” instead of plumber, but chose this contact anyway. • Gave the correct name and phone.
That plumber you just called told you rudely that he can’t make it. While another plumber you called is on his way, you no longer want to keep the contact detail of this guy	• (while looking at the detail view) went straight for the trash can icon, clicked, and confirmed delete in the warning dialog.	• Clicked on the card to open detail view, clicked the trash can icon, and confirmed delete in the warning dialog.	• Clicked the correct card to open the detail view, clicked the trash icon, confirmed delete in the warning dialog	• Clicked the correct card to open the detail view, clicked the trash icon and confirmed the warning dialog.	• Participant was initially looking at the card grid view, and couldn’t find any delete options. • Then clicked into the card to open detail, clicked the trash icon and confirmed the warning dialog.
The plumber arrived, and was able to solve your problem promptly. You liked his service, so you want to mark his contact in the CRM so that he'd show up first if you need a plumber again.	• Favorited the card using the favorite icon on the top left of card. • When questioned why, the participant answered that because they already saw examples of favorited cards already thus it was instinctive. Otherwise it may not have been as straightforward.	• Favorited card using the favorite icon on the card. • When questioned if it was clear, participant replied “it is clear what the star does”. ◦ Later explained that it was clear because they saw the starred cards initially. But they would have checked the ‘star’ to first see what it does anyway.	• Favorited the card using the favorite icon, explained that it was simple enough to recognize	• Clicked on the favorite button to mark it.	• Participant were hesitant on the correct course of action. Eventually clicked the favorite button. • Participant: I see a favorite sign here, but I’m not sure if it does what is required for this task. I thought maybe it will appear in favorite section, but since I didn’t see a favorite section then maybe it would be pinned to the front. What the favorite button does is not very clear, because normally favorite is not to pin to the top. Maybe an instruction or something when I hover over the button.

Additional comments			• Participant suggested to have a background over the tag buttons because it might look better. Suggested a different tone of gray. • Participant: A good feature to have would be to sort the card, e.g. name. • Participant: The contract button feels like a close, because it’s sliding out so I thought it might just slide all the way out • Participant: The close button might look better if it is replaced with something like a back arrow instead of 'X'	• The participant initially assumed that the list of available cards were more like available businesses, akin to food delivery service where every vendor was presented to you when you open the app. The confusion is later cleared.	• The participant went through the whole scenarios with the assumption that the tag buttons were preset categories. • This was later clarified towards the end of the scenario 2. • Participant: For the category bar, I would be confused it it showed up in the initial screen without showing ‘plumbing’ as an option. Maybe have a label somewhere to show what it is.

Scenario 2:

You remembered that Yesterday you met a guy at a convention by chance where you guys seemed to have a lot in common and exchanged business cards.

Task description	P1	P2	P3	P4	P5

Now you want to store his contact here	• Clicked ‘add card’ button, split screen 50/50 between the CRM browser window and business card png
	• Inputted:
	    • name: correct
	    • phone: correct
	    • email: correct
	    • skipped job title
	    • company: correct
	    • job title: correct
	    • Tagged ‘tech company’
	    • Attached random picture
	• When questioned why the participant skipped the job title at first, they said it was because their English was not great, and wasn’t sure what the attribute name was asking for.
		• Clicked ‘add card’
		• Inputted:
		    • name: correct
		    • phone: correct, formatted
		    • email: correct
		    • job title: correct
		    • company: correct
		    • Tagged ‘tech company'
		    • Attached picture using the given business card png
			• Clicked ‘add card’
			• Inputted:
			    • name: correct
			    • phone: correct
			    • email: correct
			    • job title: correct
			    • company: correct
			    • skipped picture
				• Clicked ‘add card’
				• Inputted:
				    • name: correct
				    • phone: correct, formatted
				    • email: correct
				    • job title: blank
				    • company: correct
				• The participants was clicking around the ‘add field’ button, seemed to be confused.
				    • When questioned on what they think it was referring to, they thought the field was referring to what field the company was in.
				    • Participant then brought up the fact that the new field boxes looks like where you would enter phone numbers.
				    • This is issue is then clarified.
					• Search through the “category bar” (participant still thought they were preset categories) to find a suitable category. Settled on ‘tech company’.
					• Initially looked to see if the contact already appeared. After satisfied that it was not, participant clicked on ‘add card’ and inputted:
					    • name: correct
					    • phone: correct
					    • email: correct
					    • job title: correct
					    • company: correct
					    • Attached picture using the given png

On top of the business contact shown here, he also wrote you his personal mobile contact. For simplistic sake we will call it 987654321. Now you want to also add this information in the CRM.	• Chose ‘add field’, inputted:
	    • mobile number
	• Mouse instinctively moved towards the ‘minus circle’ icon which would delete the new field
	• Save.
	• When questioned why, the participant said that it was because the composition of the visual design that directed my focal point there. It was clear on what it does, but I do wonder why its not on the other fields (referring to mandatory fields) up there.
	• Participant: I’m also confused as to why I can’t delete the email field (the mandatory field) if I’m not using it. I think it is better to treat everything the same, so everything should have the ‘minus circle’ icon.
	• Participant: Usually I’d like to keep the information categorized together. So I would like to keep the phone and mobile next to each other. But I can’t change order here.
		• Chose ‘add field' inputted:
		    • personal number
		• Formatted the phone number, and explained that it was personal preference and it was easier to read.
		• Save.
		• When questioned if they felt like formatting should be enforced, participant said that probably not because it was a personal choice and it is simple enough to do it manually.
			• Replaced the contact with the new phone number
			• Save.
			• Participant: I realized that phone number was not formatted. I would prefer to have it automatically formatted for easier readability
				• Chose ‘add field’, inputted:
				    • personal number
				• Save.
					• Chose ‘add field’, inputted:
					    • personal number number
					• Save.

You remembered that he said he prefers contact through email instead of phones, so you want to make a note of that so that when you do want to make contact, you'd know it.	• Added "preferable" at the end of the email field
	• When questioned why, participant said that they were not a fan of general message because they never read it
		• Noted in the note section	• Initially a bit unsure of how to do it
			  ◦ Looked through tag, then new field, and then notes
			  ◦ noted in the note section
			• Also added 'email only' tag
				• Noted in the note field, "contact by email"
				• Participant raised the question "why does this [note field] have shadows? Looks odd… a bit random."
					• Noted in the note field.
					• Participant commented that it was apparent that it was a comment box, as it looked just a rectangle without any information.

You also wanted to label him as a personal friend on the CRM, how would you do that.	• Looked around for the best option
	• Realized they could create new tag, created new tag 'personal'
	• Wasn't sure how to edit tag, found it later by investigating around.
	• Participant: Saving the color was confusing, wasn' t certain I had to click outside to save. I'd prefer either instant feedback when I click it or a dedicated save button for it.
	  ◦ Shows example of how Microsoft Word updates formats (text color) in real time without having to click it at all
	• Participant: "remove tag" button looks like a search bar for colors
		• Edit card create new tag attach tag
		• Tried to see if there's an option to change the tag as soon as the participant created the tag. Tried to click on the tag instance.
		• Later found how to edit tag by investigating.
		• Participant: I think it creating the new tag was clunky, because you have to create it then edit it. Would prefer to have more options when I first create the tag, so like when I start creating the tag options would show up under the bar, especially when there wouldn't be anything there anyway, be good to populate it with some options.
			• Edit card new field:
			  ◦ Friend personal
				• Edit card created new default tag
				  ◦ Participant was expecting more options to become available when they clicked the plus circle button
				• Then created a new tag using 'Personal Friend' as the label.
				• Participant: I would have expected I were given the option to change the color at the creation of the tag, not after.
					• Edit card create new tag attach tag
					• Due to internet problems, the participant created the same tag twice.
					• Shortly able to find the tag edit function and delete the duplicate tag.

Additional comments	• (referring to layout of detail view) If there is a tick in place to indicate finish editing, normally the delete would be on the left, or you can have both on the right. Overall its confusing. • (tried to add new card to test something, clicked on the delete for image instead of the delete of the bottom right.) • Participant: Once I added a lot of empty fields, when I click save the system should recognize optional fields are not wanted by the user, so they should be deleted automatically when I save the card. • Participant: Better to have a dropdown or something for the Tag-Button because if I do have a lot of tags then it would be impossible to find it.		• Would prefer better overall formatting (referring to the visual elements) • Participant: The main thing is that I'm not sure if I want to mark something with tags or fields or notes; not sure which one is the right option. • Participant: Might be better to have a name for the notes fields, like some placeholder text to show what it is.	• After the card was created, the participant was confused why they couldn't see the new card. The reason was because the 'plumber' filter was left in the search box. ◦ Participant said they would appreciated a pop up (or other feedback methods) to confirm the card is create and maybe say where it is.	• Commented that the affordance of the double arrow wasn't clear, initially thought that it was for closing the tag detail. • Noted the some usability issue with not enough space to see all the information (problem with responsive design).

Scenario 3:

You have this cool million dollar idea that will revolutionize the society as we know it, but now all you need is someone to build it. You know you have quite a few contacts who works in the tech industry.

Task description	P1	P2	P3	P4	P5
You want to see all of your contacts that works in tech industries or is a software developer.	• Clicked on 'tech company' and 'developer' tag filter to and narrowed down to the one available card	• Filtered result using 'developer' tag	• Filtered using 'tech company' and 'developer'. • Then removed 'tech company' from the search to show more people.	• Filtered using 'tech company' ◦ Went through each card entry, and found the individual with the 'developer tag' • Then found and selected the 'Developer' tag as well. • Settled on the only card shown, Blaine Hayes.	• Participant commented that they know we have a 'tech company' tag, but also a 'developer' tag which was more so what we need. • Filtered using 'developer' tag.

You remember this software developer who works in a certain electrician company who was really good. You want to double check his details to see if you didn't misremember things, and perhaps even contact him.	• Looked for electrician company using 'electrician' tag to filter, found the and chose the only card that was available. • Did not pay close attention to the job title for this card, which was 'electrician'. • Task failed	• Choose the correct card by visually inspecting the picture to find the one that was mostly likely an electrician company.	• Filtered using 'electrician' to reveal the only options, and chose that for the contact. • Task successfully fail. • When the participant was informed explained that it was not the correct card, they tried to search using keyword "developer" and the correct card with job title "software engineer" did not show up. • The participant assumed search will also search through tags as well.	• Filtered using 'Electrician tag', chose the only card because it was the only option. • Failed to realized the job title for the card. • Task failed.	• Given all the developers, the participant chose the correct card by judging based on the pictures of the cards provided. • Participant confirmed the card by examining through the card detail, confirming that the job title is related to a developer and the company is an electrician. • Chose the correct card.
After contacting this guy, he told you that your idea is stupid but if you pay him enough he'd be in. "fair enough", you thought, So you want to label him as a potential working partner while looking into other people who may work with you.	• Created new tag 'potential working partner' and tagged the card. • Participant: I would contact by email because it'd be more formal and polite.	• Created new tag 'potential partner' and associated with the correct card	• Began with trying to add a new tag, stopped and added the information into the note field instead. • When questioned why, the participant didn't give a particular reason.	• Clicked card to open details, added "Potential partner" in the notes section	• Created a new tag "potential partner", attached and then changed color. ◦ Commented that they think tags were useful. • Also Showcased the other way they would complete this task, which was to favorite the card.
Additional comments					

Post Scenario

Task Description	P1	P2	P3	P4	P5

Other comments	• Found issues in responsive design regarding to smaller view ports.	• For logging, the participant noticed that there wasn't a indicator for caps lock.	• The search bar wasn't clear that it searches all fields to the participant, and they were not sure if putting information in fields of the card detail would allow for searching.
			• Participant: The list of tags and the cards can benefit from having more options such as sorting to make them more usable. Ideally maybe even sorting by card fields e.g. alphabetical of job titles.
			• Could be nice to have a favorite tag that is associated with the actual function.
			• Participant, in terms of tags:
			  ◦ The available options to manipulate the tags wasn't clear
			  ◦ Deleting and editing tags has too much steps involved.
			  ◦ Not enough color choices, would prefer to have the option to choose freely.
				• Participant thought a 'clear all' button to clear all search queries and tags would be nice to have.
				  ◦ When asked where they would like to see, participant said maybe in the front, outside and just left of the search box.
				• Commented that they thought it was good to have minimal details in the card view.
					• Participant, in terms of tags:
					  ◦ How to use tags wasn't clear to me so I was confused on what it does.
					  ◦ Part of the reason may be because I am more familiar with the tags with Mac OS, which is represented differently.
					  ◦ The tag list came to me as more like menu bar instead. For many apps the top bar is a category, which was why I was confused.
					  ◦ Since tagging is a sub-category, I still think putting a label in the main (tag button list in home) is a good idea to show the user the correlation between the two.
					• Participant: Now that I know what favorite does, I still think it should have a favorite section, accessed from either another button in the navigation bar, or part of the user option dropdown

View port			• 13.3 inch 1920x1080 • Broken tag picker component, maximum height to high		• 13.3inch 2560x1600 • Windowed mode taking ~90% of screen • Margin for card detail were way too big.

Conclusion

This usability testing is conducted using direct observational over discord with all participants. The scenarios and tasks are designed to examine how potential users may make use of our product given a context and goal, and thus all tasks descriptions were intentionally vague and avoided giving hints to what functions and features to use. As a result, this tests has not thoroughly inspected every elements in the products (e.g. login and register, logout) and participant's actions may have a greater degree of variations in their decision making, but part of that is what we want to observe.

Overall all of the task was well done, almost all of the task were completed without much problems. The only exception will be Scenario 3 Task 2 where P1 and P4 failed to correctly complete the task, but in retrospect a major reason is likely to due the poor phrasing and set up of the task itself. For the most part all functional features, including card detail, favorites, extra fields, notes, tag filters, were utilized by the participant to complete the task in the way we envisioned it, and no critical usability issues were encountered.

On the other hand, our user feedbacks does highlights four major areas where improvements could be made to our product to allow for a better overall user experience.

Lack of instructions for functional components

While the participants understood the functionality of almost all buttons and features, some were immediately clear (i.e. add card, delete card) and some elements required some investigation by the user to fully comprehend its function. An example of coherent button but unclear functionality can be found in Scenario 1 Task 3, where the all of the participant more or less understood that favorite is the correct course of action and completed the task, but what that button does wasn't clear-cut when they were questioned after the the fact. P1 and P2 both attributed their decision to the fact that they saw examples of favorited cards at the beginning of the study, which means that the function of favorite button in isolation may not be apparent to them. P5 explained that their mental model of "favorite" does not equate to being pinned to the top which caused initial confusion. A suggestion was also made by P5 to provide a instructions when the user hover over the favorite button, and this particular solution may be applied anywhere.

A similar phenomenon can be found in participants' initial encounter with the tag picker element.

Card detail visual layout

The first concern can be found in the card detail view, where its visual layout can be improved to be more consistent and allow for more customizations. Participants P4 and P5 both encountered confusion over the note field, where its functional wasn't initially apparent due to the lack of labels. P5 also found the shadow of the note field to be "odd" and "random".

P1 commented on that they found it weird that 'extra field' has the minus circle icons while the initial fields did not. While we, as the dev team, know that it is due to the fact the initial fields are mandatory fields, the users simply does not care for that. Thus it make a good point to normalize it. P1 also noted the lack of manipulability of the position of the different fields, arguing that they would much prefer to have same categories of fields next to each other.

Tag button composition

The tag button feature performed well during the study, with all participant understood its function of filtering card by the selected tag (as seen from Scenario 1 Task 1, and Scenario 3 Task 1). However both P1 and P3 raised valid concerns over the need to better sort and display the tags, especially when the user does an enormous library of tags to work with. The suggestions given by P1 and P3 were drop down and sorting respectively, while both are possible solutions the exact resolution will require further testing.

Tag Picker element

The Tag Picker element exhibited multiple usability issues that can be addressed, it is found to be the biggest pain point for the whole study. Most participants (P1, P2, P3, P5) found issues the fact that they were not given the more options in the process of the initial creation of the tag, and wished for the ability to change color while creating the tag instead of receiving the default black.

P3 raised the problem in which that manipulating the tags were far to complicated, involving 4 or 5 steps before you can even change a color. P1 echoed the same sentiment regarding the fact that you have to move back and forth to create and edit tags.

P1 voiced their dismay over the lack of feed back on edit cards, particularly in changing the color where the feedback is not instantaneously. When ask for clarification of how they would prefer it, they quoted the Microsoft word format changing implementation where the new color would be reflected instantly just by hovering over the desired color. While no other participants notably mentioned this issue, their initial interactions with changing the colors were overall indecisive and confused over the fact they did not instantly perceive the change in colors. P1 also provided another suggestion of having ta dedicated save button on the tag edit component to save the changes.

Version	Date	Comment
Current Version (v. 6)	**Oct 21, 2021 06:41**	**Walter Van**
v. 5	Oct 21, 2021 06:05	Yujian Wang

v. 4	Oct 21, 2021 05:45	Yujian Wang
v. 3	Oct 20, 2021 11:16	Yujian Wang
v. 2	Oct 20, 2021 11:14	Yujian Wang
v. 1	Oct 20, 2021 11:12	Yujian Wang