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PROBLEM

Seniors

- tend to have less secure online habits
- are targeted by many online scams
- have difficulty adapting to new technologies



SOLUTION

Seniors

- learn by **pattern matching**
- value **simplicity**

notE is a **simple, non-invasive** online account
information management notebook

Initial Paper Prototype

Cover

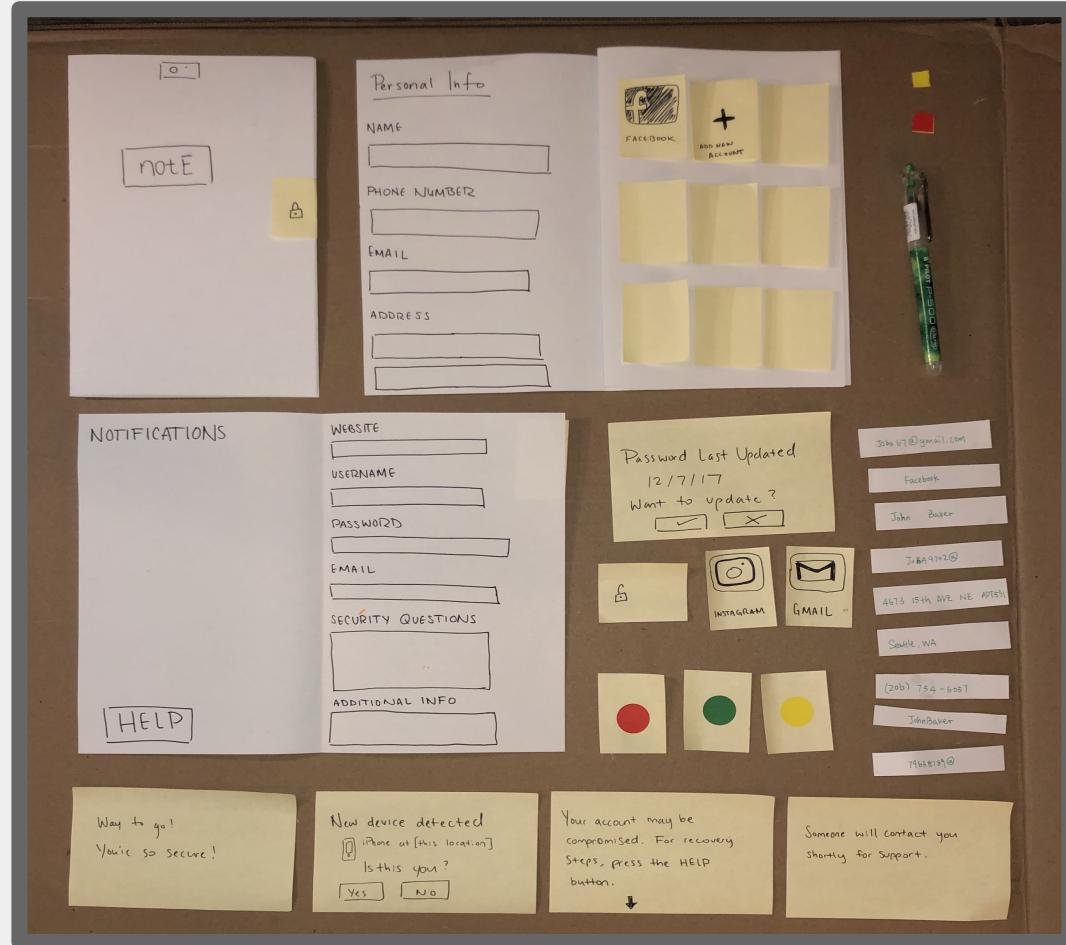
Index Page

Account Page

Notification Page

Light Notifications

Linked Pen



MAIN TASKS



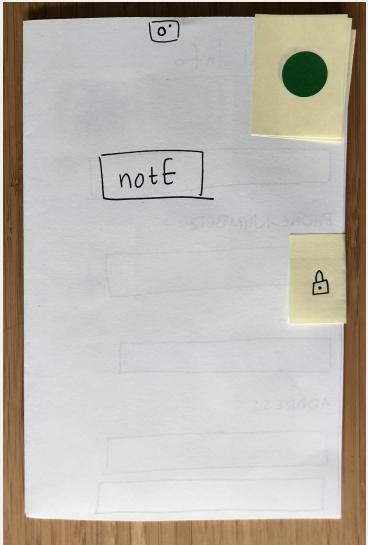
Storing, Generating, and
Updating Passwords



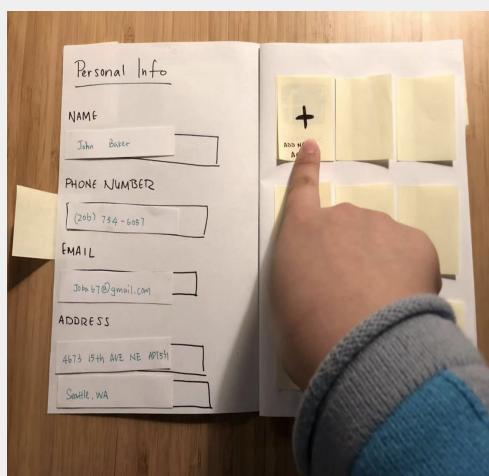
Giving Guidance After an Account
Has Been Compromised



Task 1: Storing, generating, and updating passwords



Use facial recognition
to securely unlock



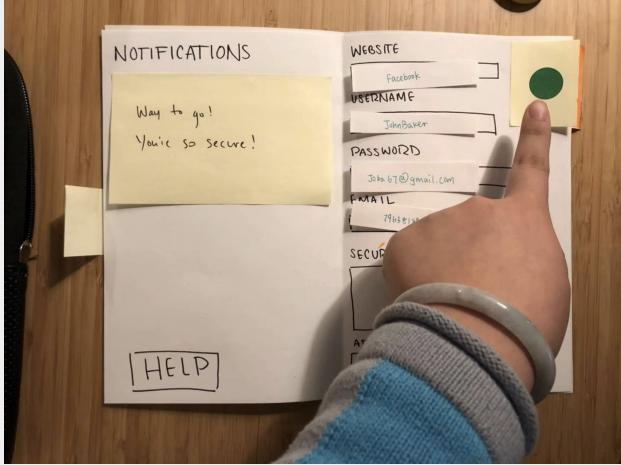
Use index page to locate
next available page



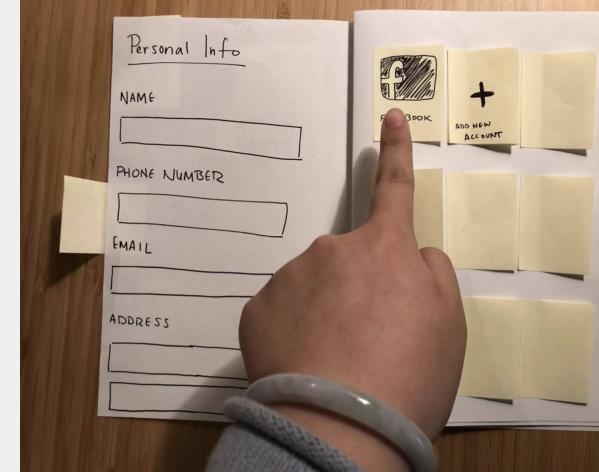
Use available page to
record account information



Task 1: Storing, generating, and updating passwords



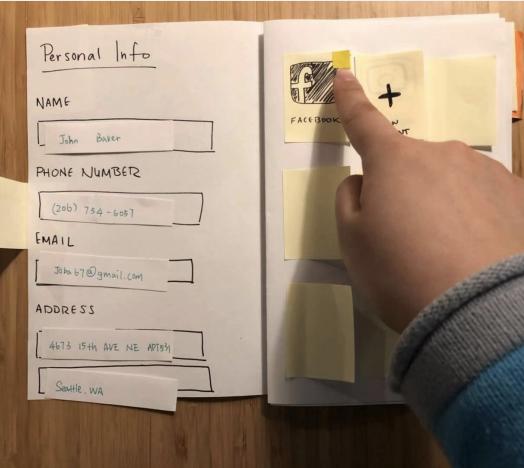
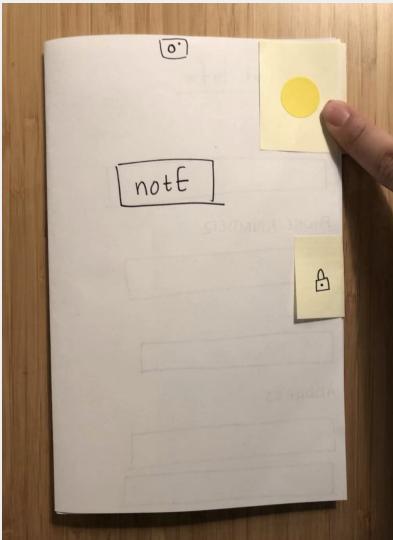
Confirmation of entry
with a green light



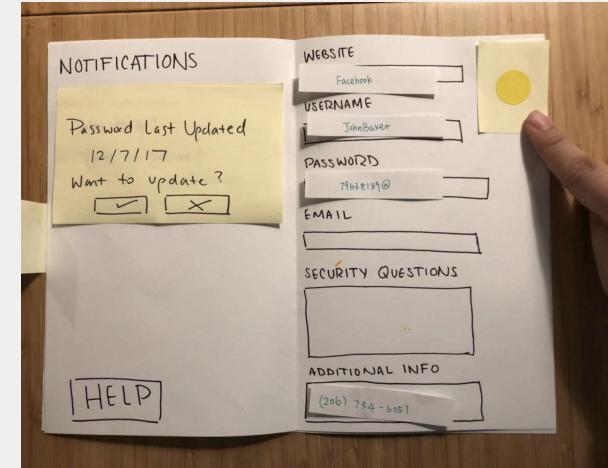
Index page automatically
updates for quick search



Task 1: Storing, generating, and updating passwords



Yellow light indicates minor account issue

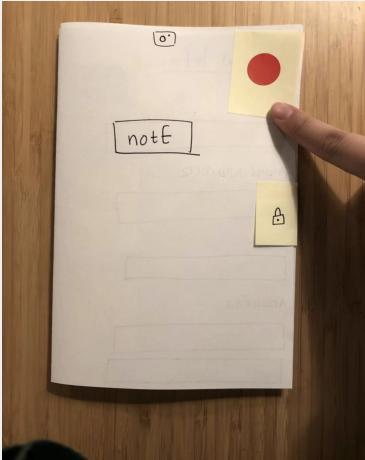


Yellow light shows on the index page

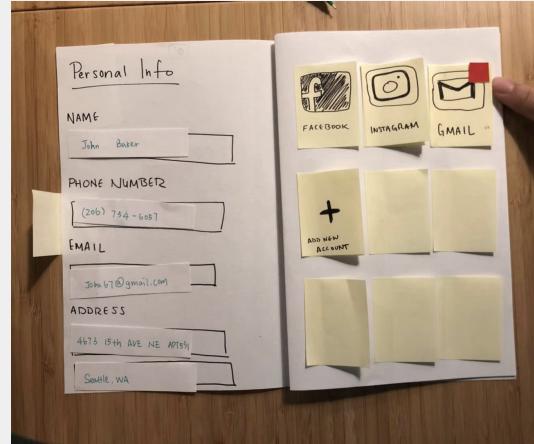
Prompt to update password



Task 2: Giving Guidance After an Account Has Been Compromised



Red light indicates severe account issue



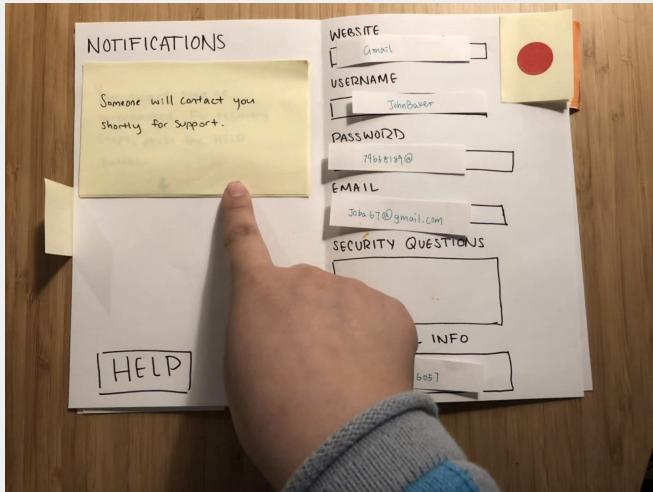
Red light shows on the index page



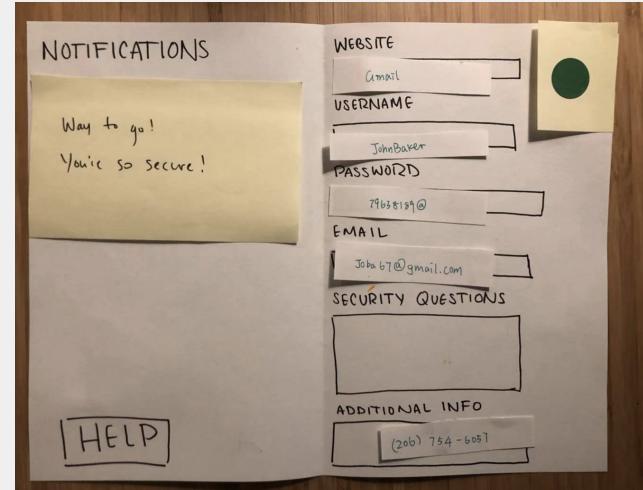
Red light shows on page and notification provides more information



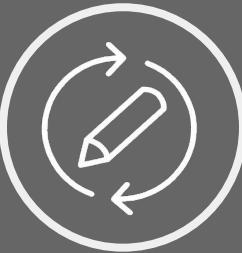
Task 2: Giving Guidance After an Account Has Been Compromised



Message shows that there will be someone to contact them later.

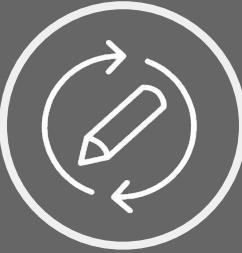


Greenlight shows on page indicating no further security issues.



TESTING PROCESS

2 heuristic evaluations + 3 usability tests



HEURISTIC EVALUATION

Identifying as many major usability issues as possible before conducting usability tests



Testing Process: Heuristic Evaluation

Participants

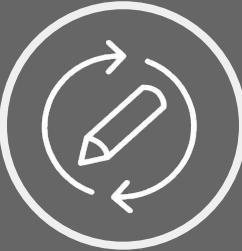
- Students currently taking CSE 440
- Conducted inside and outside of class

Method

- Brief introduction of our design
- Give them scenarios and observed
- Focused on violations of Nielsen's heuristics for interface design

Issues

- Lack of help + documentation



USABILITY TESTING

Testing the simplicity and intuitiveness of our design among our target audience



Testing Process: Usability Testing

Participants	Method	Issues
<ul style="list-style-type: none">• Seniors found in the library• Familiar with technology	<ul style="list-style-type: none">• Brief introduction of our design• Give them scenarios and observe• Focused on points of frustration and intuitiveness	<ul style="list-style-type: none">• Initially gave insufficient explanation of design• Over-corrected and gave too much



Testing Results: Main Takeaways

Heuristic Evaluation

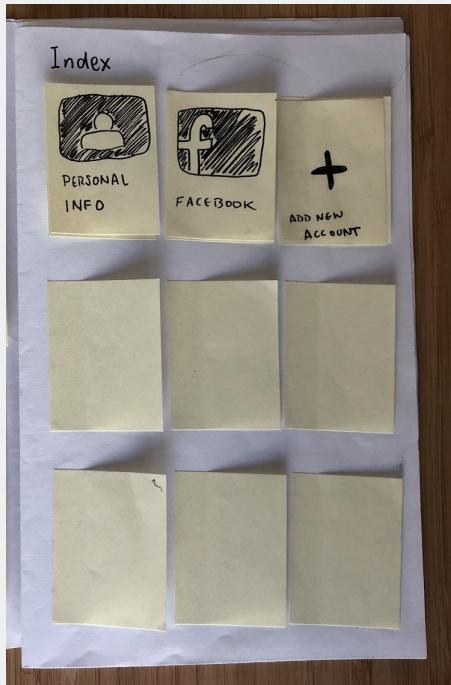
- Help and documentation
- Consistency

Usability Testing

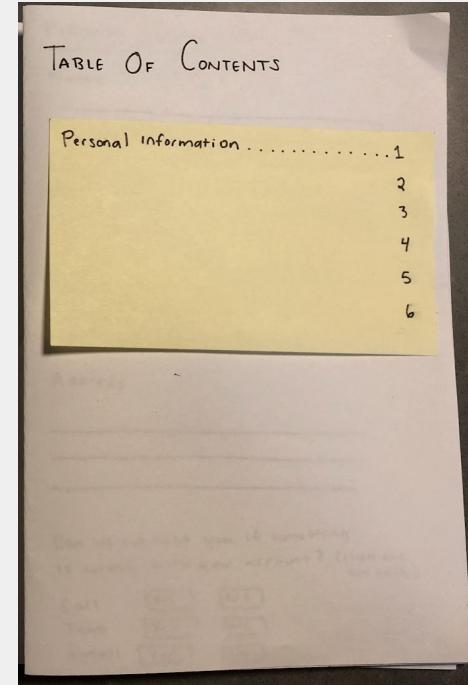
- Level of documentation and instruction
- Need more resemblance to a notebook
- Intuitiveness



Major Changes: Change Index to traditional table of contents



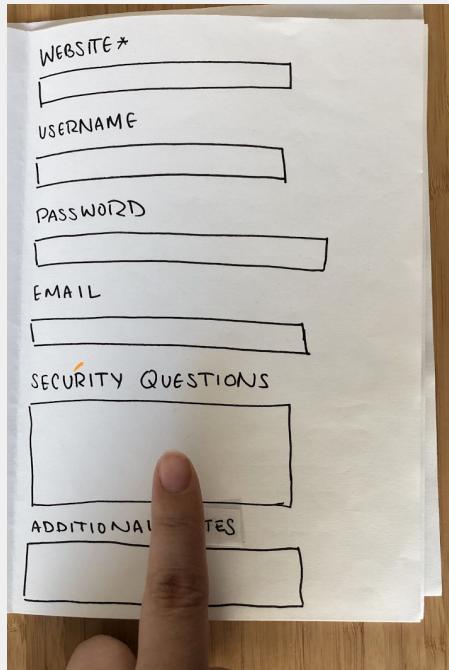
Before



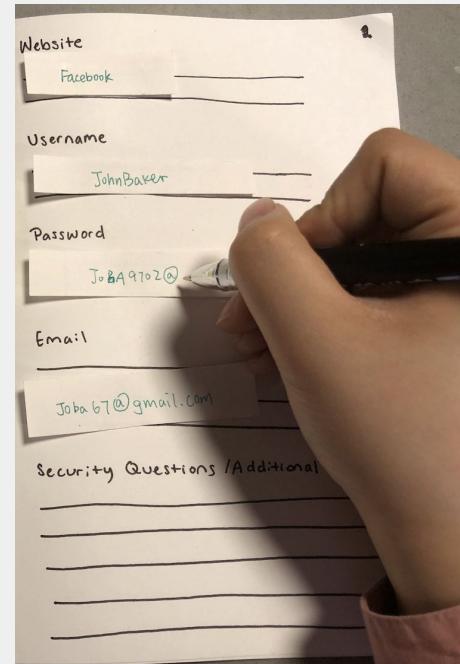
After



Major Changes: Change input boxes to regular lines



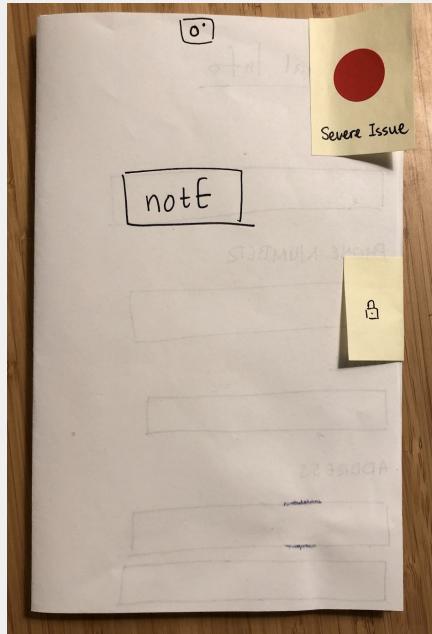
Before



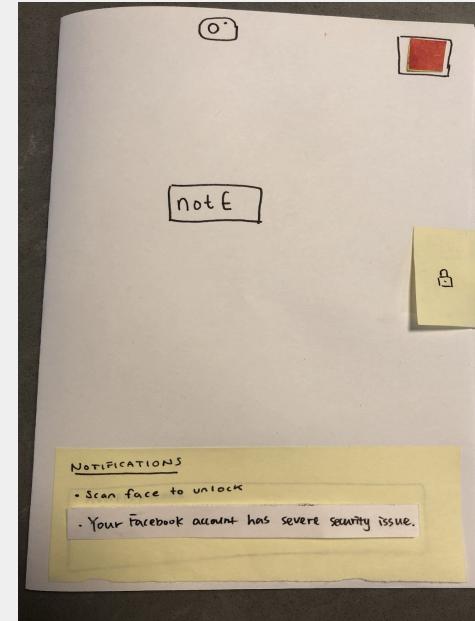
After



Major Changes: Add screen on the front cover



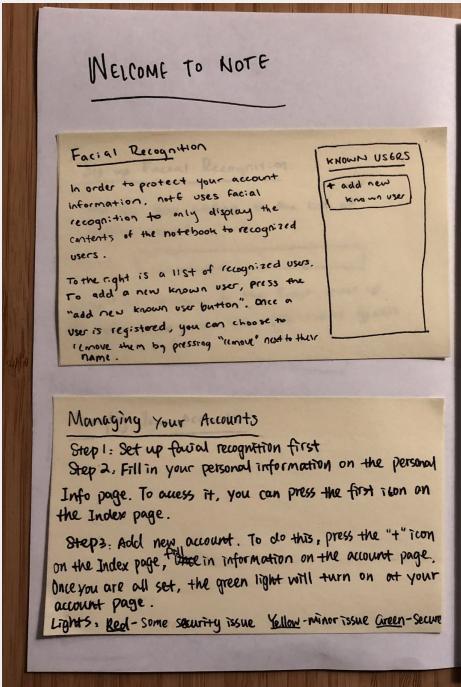
Before



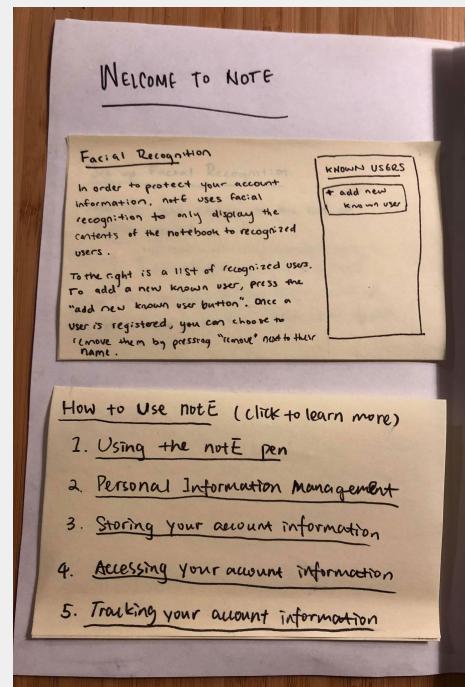
After



Major Changes: Change help section to high level topics



Before



After

Final Paper Prototype

Cover

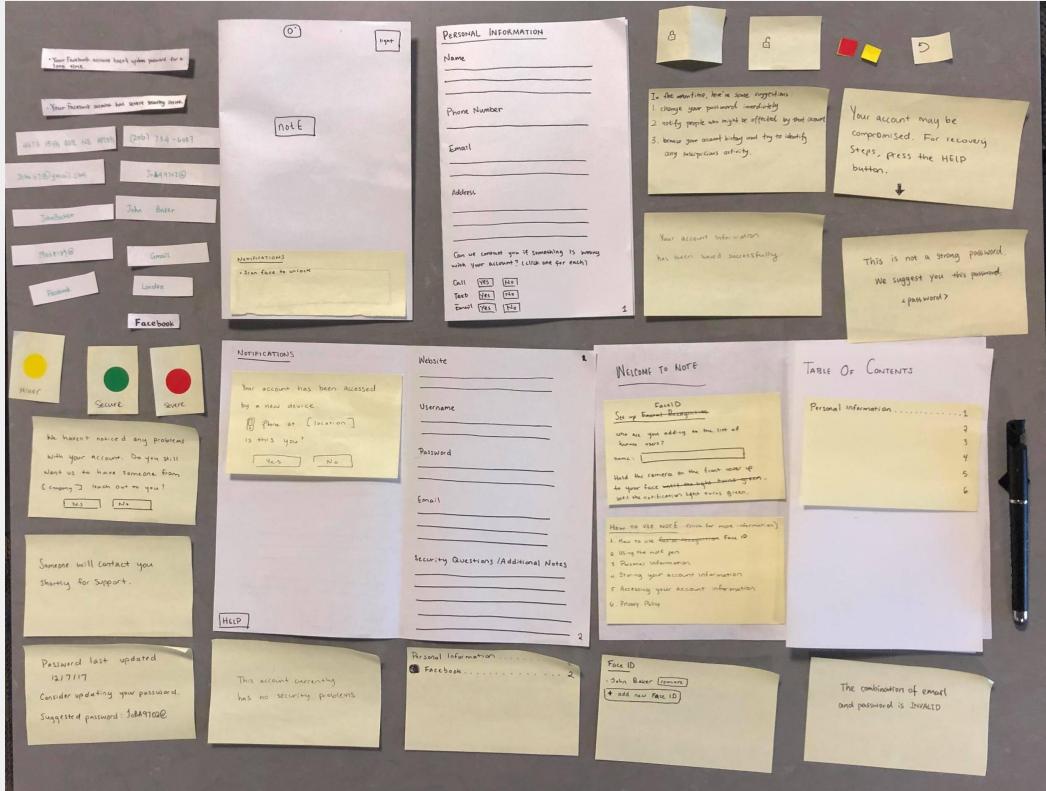
Index Page

Account Page

Notification Page

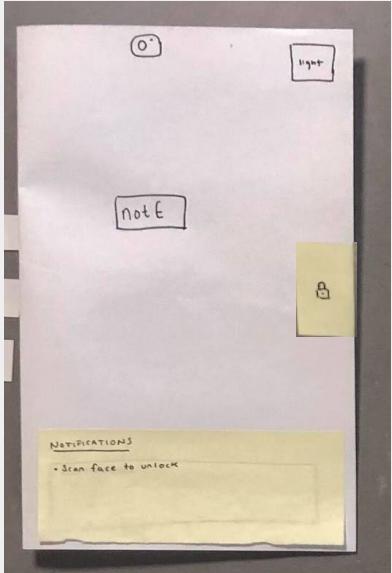
Light Notifications

Linked Pen

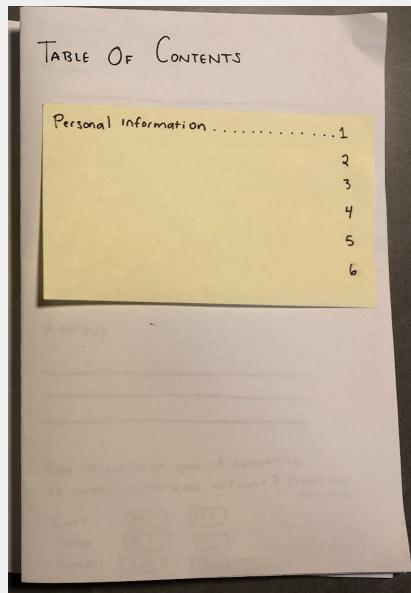




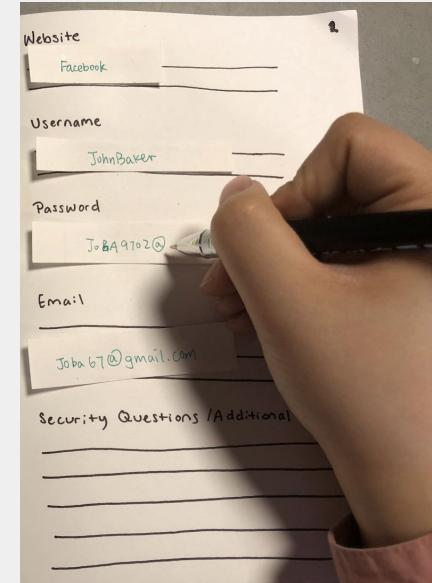
Task 1: Storing, generating, and updating passwords



Use facial recognition to secure and unlock



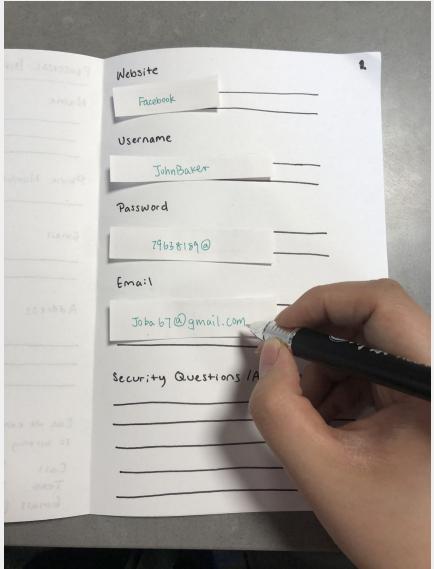
Use index page to locate next available page



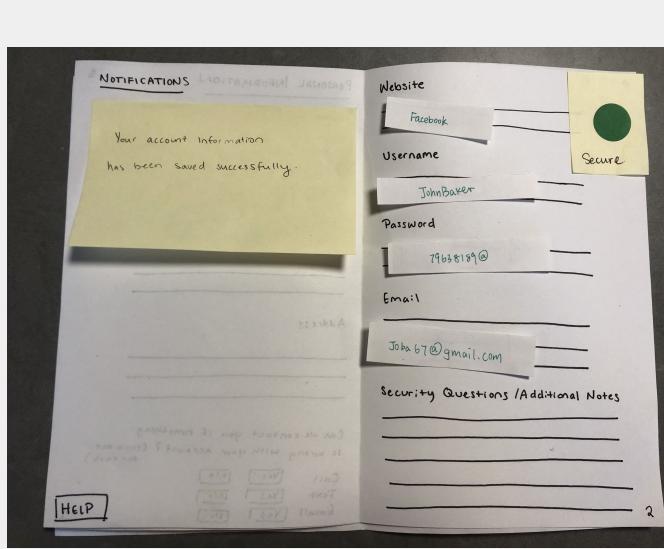
Use available page to record account information



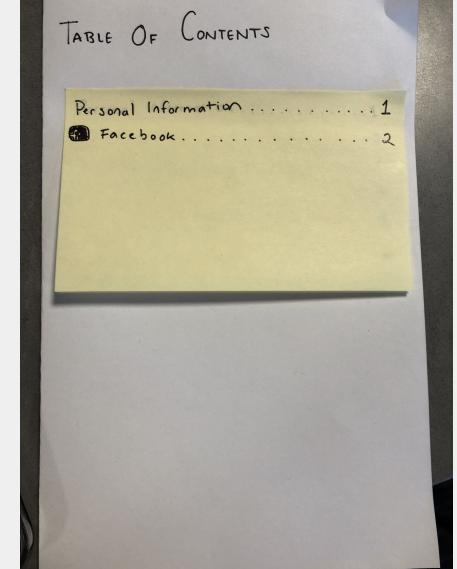
Task 1: Storing, generating, and updating passwords



Offer password suggestions



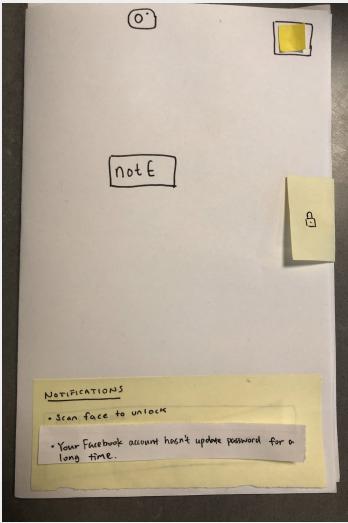
Confirmation of entry
with a green light



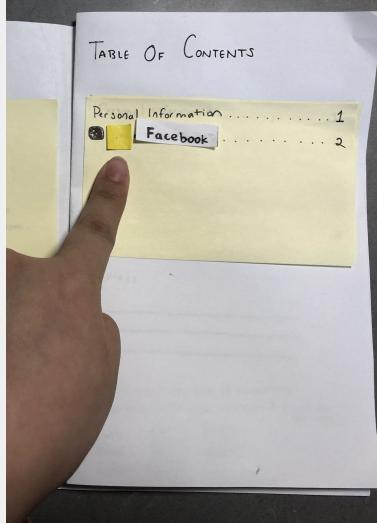
Index page automatically
updates for quick search



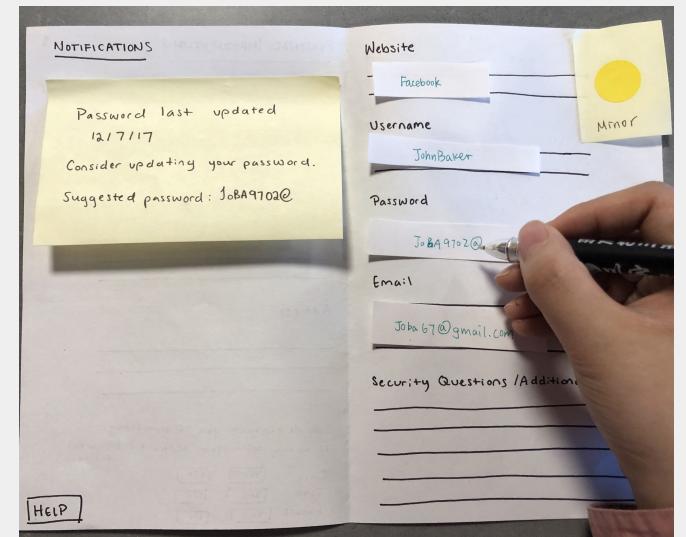
Task 1: Storing, generating, and updating passwords



Yellow light indicates minor issue with an account



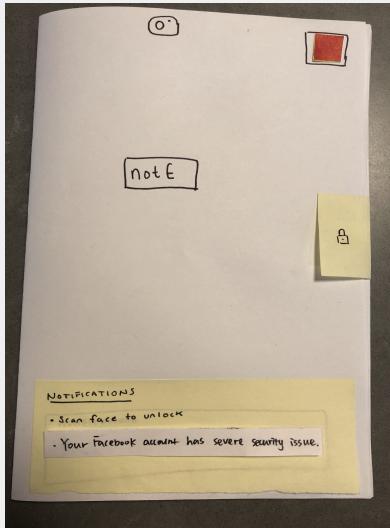
Yellow light shows affected account



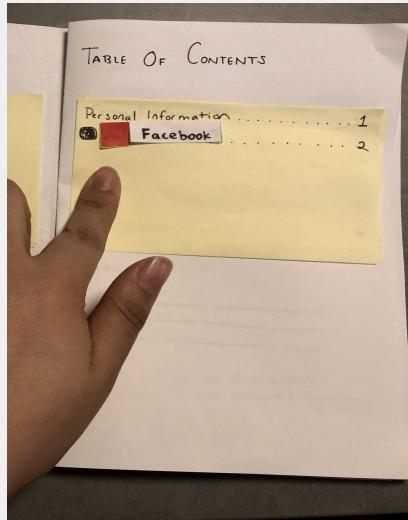
Offer suggested password for the update



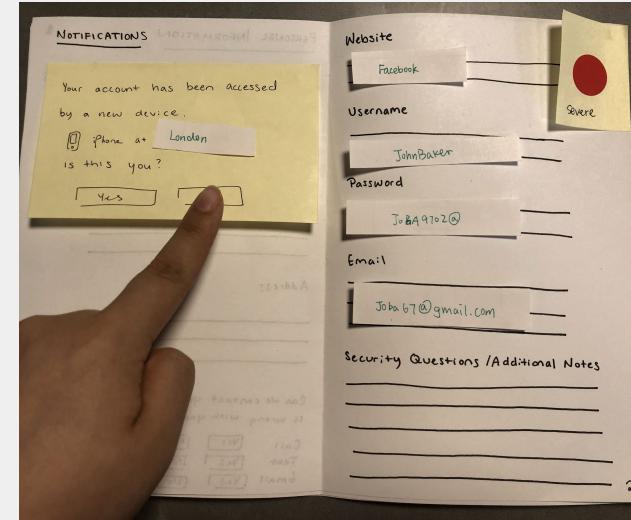
Task 2: Giving Guidance After an Account Has Been Compromised



Red light indicates major account issues



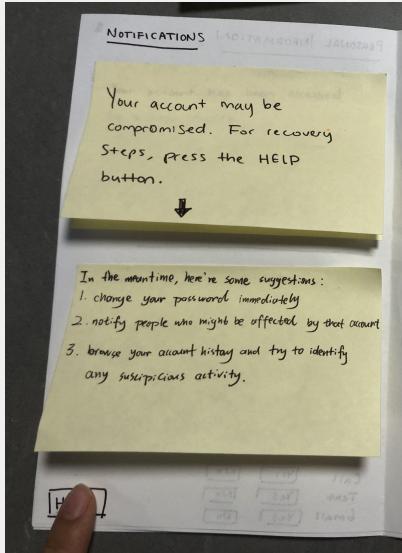
Red light shows on index page



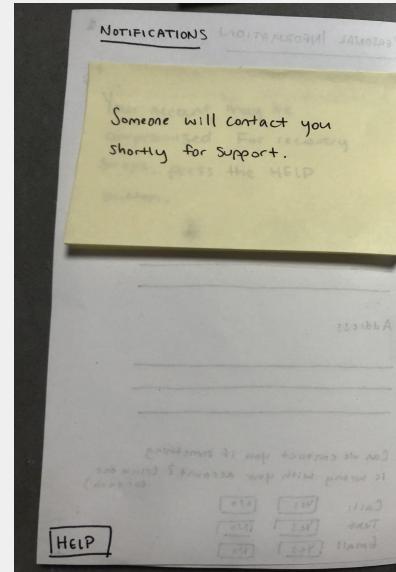
Red light shows on page.
Notification provides more information



Task 2: Giving Guidance After an Account Has Been Compromised



Red light shows on page. Notification provides more information



Notebook will contact help and suggests other steps

Digital Mockup: Overview

The digital mockup illustrates a user interface design for a mobile application, showing how it maps onto a desktop environment. The mobile screens are arranged in two rows of three, each displaying a 'NOTIFICATIONS' screen with a lock icon and a 'hotE' logo. The desktop versions are arranged in a grid below them.

- Mobile Screens:**
 - Row 1, Col 1: Notifications (lock icon, lock icon)
 - Row 1, Col 2: Notifications (lock icon, lock icon)
 - Row 1, Col 3: Notifications (lock icon, lock icon)
 - Row 2, Col 1: Notifications (lock icon, lock icon)
 - Row 2, Col 2: Notifications (lock icon, lock icon)
 - Row 2, Col 3: Notifications (lock icon, lock icon)
- Desktop Versions:**
 - Row 1, Col 1: Contact Settings (Contact Information, Personal Information, Welcome to Note, Table of Contents, Table of Contents)
 - Row 1, Col 2: Personal Information (Personal Information, Welcome to Note, Table of Contents, Table of Contents, Table of Contents)
 - Row 1, Col 3: Welcome to Note (Facial Recognition, Table of Contents, Notifications, Help)
 - Row 2, Col 1: Personal Information (Personal Information, Welcome to Note, Table of Contents, Table of Contents, Table of Contents)
 - Row 2, Col 2: Welcome to Note (Facial Recognition, Table of Contents, Notifications, Help)
 - Row 2, Col 3: Notifications (Notifications, Website, Notifications, Help)

This section provides a detailed look at the desktop version of the application, specifically the 'NOTIFICATIONS' and 'WELCOME TO NOTE' sections.

- NOTIFICATIONS:** This section contains fields for 'WEBSITE', 'USERNAME', 'PASSWORD', 'EMAIL', and 'SECURITY QUESTION AND ADDITIONAL NOTES'. It also includes a 'HELP' button and a note about account verification.
- WELCOME TO NOTE:** This section includes:
 - Facial Recognition:** Displays a placeholder image and a 'Personal Information' table.
 - Table of Contents:** A table showing 'Personal Information' (1) and 'Facebook' (2).
 - How to Use Note (Click to Learn More):** A list of 6 items related to note management.
- Notifications:** This section contains fields for 'WEBSITE', 'USERNAME', 'PASSWORD', 'EMAIL', and 'SECURITY QUESTION AND ADDITIONAL NOTES'. It also includes a 'HELP' button and a note about account verification.
- Help:** A standard help section with a 'HELP' button.



Task 1: Storing, generating, and updating passwords



Use facial recognition to secure and unlock

FACIAL RECOGNITION
In order to protect your account information, notE uses facial recognition to only display the contents of the notebook to authorized users.

To authorize a user, To add a new authorized user, press the "add new user" button.

HOW TO USE NOTE (CLICK TO LEARN MORE)

1. Using the notE pen
2. Personal information management
3. Storing account information
4. Accessing account information
5. Tracking account information

Use index page to locate next available page

NOTIFICATIONS

WEBSITE _____

USERNAME _____

PASSWORD _____

EMAIL _____

SECURITY QUESTION AND ADDITIONAL NOTES

HELP

Enter information on the available page



Task 1: Storing, generating, and updating passwords

NOTIFICATIONS

Suggested Password: 7983423@

WEBSITE
Facebook

USERNAME
johnbaker

PASSWORD

EMAIL

SECURITY QUESTION AND ADDITIONAL NOTES

HELP

2

NOTIFICATIONS

This account currently has no security issues.

WEBSITE
Facebook

Secure

USERNAME
johnbaker

PASSWORD
ASa1B9ut

EMAIL
johnbaker@gmail.com

SECURITY QUESTION AND ADDITIONAL NOTES

HELP

2

TABLE OF CONTENTS

NoteE will automatically update your table of contents as you fill in new pages.

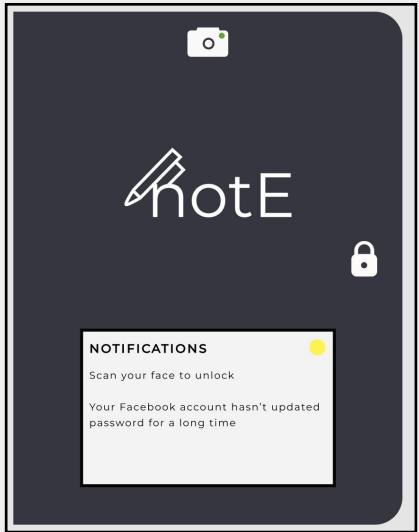
Personal Information.....	1
Facebook.....	2

Offer password suggestions

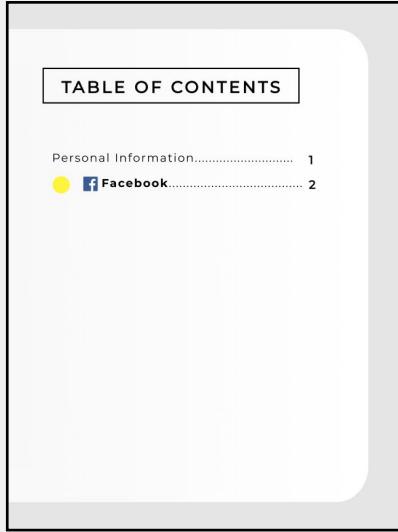
Confirmation of entry with a green light

Index page automatically updates for quick search

Task 1: Storing, generating, and updating passwords



Remind to change
password



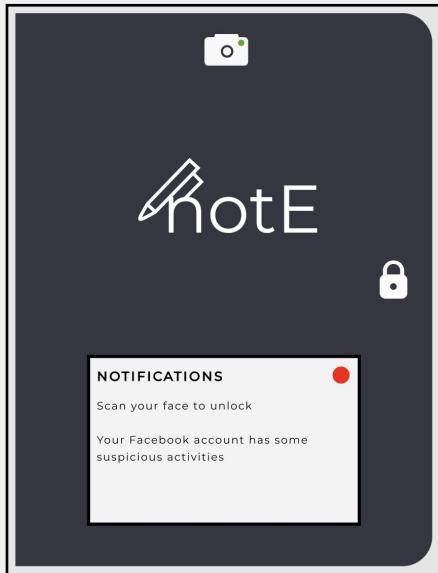
Yellow light shows on
index page

WEBSITE	Facebook
USERNAME	johnbaker
PASSWORD	ASal!\$Put
EMAIL	johnbaker@gmail.com
SECURITY QUESTION AND ADDITIONAL NOTES	

Offer suggested password
for the update



Task 2: Giving Guidance After an Account Has Been Compromised



Red light indicates
severe account issues

WELCOME TO NOTE

FACIAL RECOGNITION

In order to protect your account information, note uses facial recognition to only display the contents of the notebook to authorized users.

To the right is a authorized user. To add a new authorized user, press the "add new user" button.

TABLE OF CONTENTS

Personal Information.....	1
● F Facebook.....	2

HOW TO USE NOTE (CLICK TO LEARN MORE)

1. [Using the notE pen](#)
2. [Personal information management](#)
3. [Storing account information](#)
4. [Accessing account information](#)
5. [Tracking account information](#)

Red light shows on index
page

Task 2: Giving Guidance After an Account Has Been Compromised



NOTIFICATIONS

Your account has been accessed by a new device

Time of incident: **Today at 5:38 pm**
Location: **Sydney, NS, AU**
Device Type: **Samsung Galaxy Fold**

Is this you?

HELP

WEBSITE
Facebook Severe Issue

USERNAME
johnbaker

PASSWORD
1983423@

EMAIL
johnbaker@gmail.com

SECURITY QUESTION AND ADDITIONAL NOTES

2

Red light shows on page.
Notification provides more information

NOTIFICATIONS

Your account may be compromised. To have a representative contact you to assist you with account recovery, press the "help" button below.

Other suggested steps:

1. **Change** your password immediately
2. **Notify** people who may be contacted by that account
3. **Browse your account activity** and identify any other suspicious activity

HELP

Notebook will contact help and suggests other steps

NOTIFICATIONS

Thanks for confirming the issue. Someone from the company will contact you shortly.

HELP

Notebook will contact help and suggests other steps



SUMMARY

For Process

- Iterative refinement and revision
- Focus on Participants' wants and needs
- Different testing processes and their purposes
- Simplicity is key

THANK YOU

Q&A