



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

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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

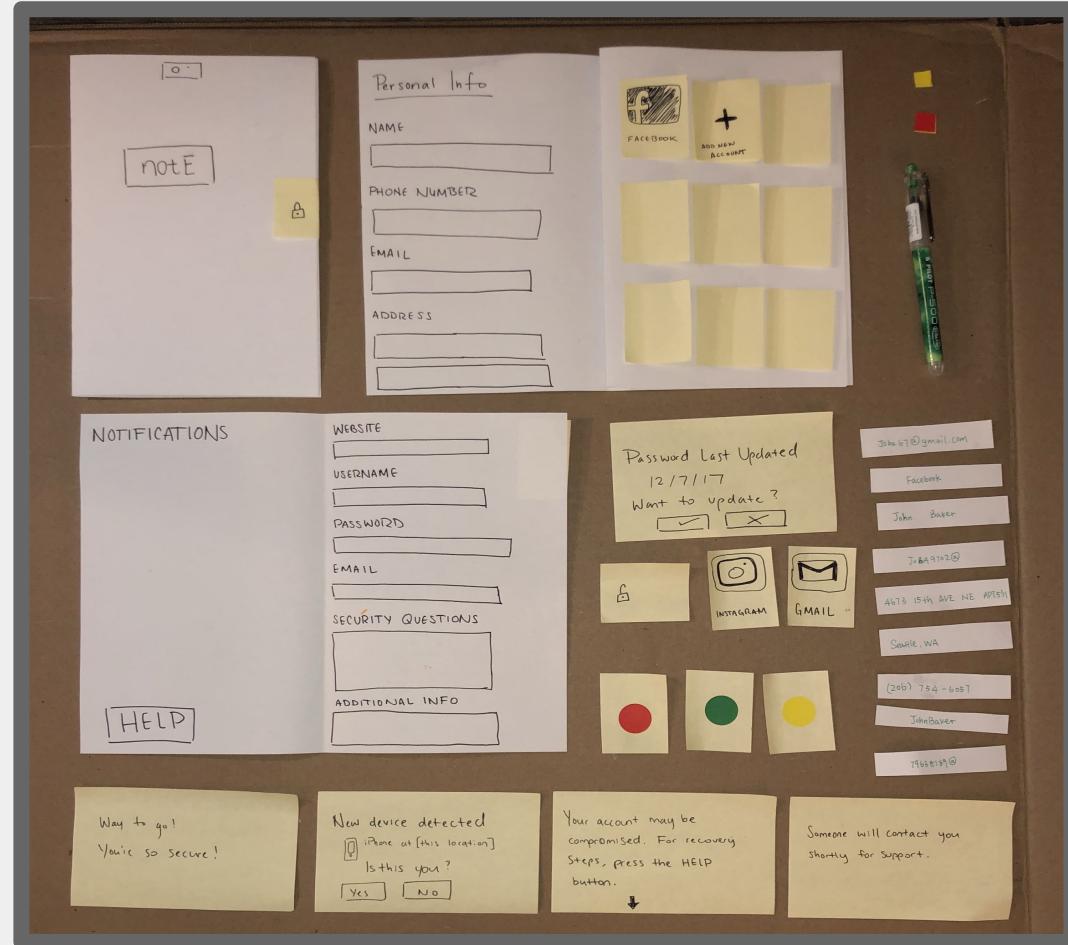
Index Page

Account Page

Notification Page

Light Notifications

Linked Pen



# MAIN TASKS

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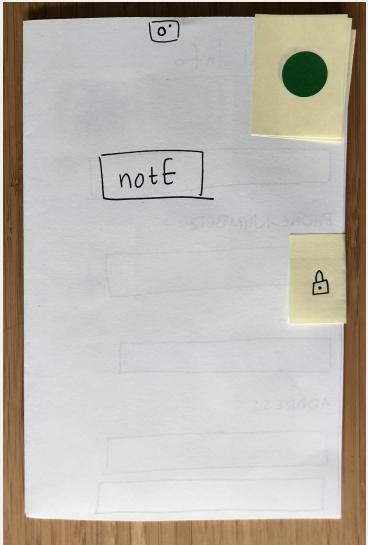
Storing, Generating, and  
Updating Passwords



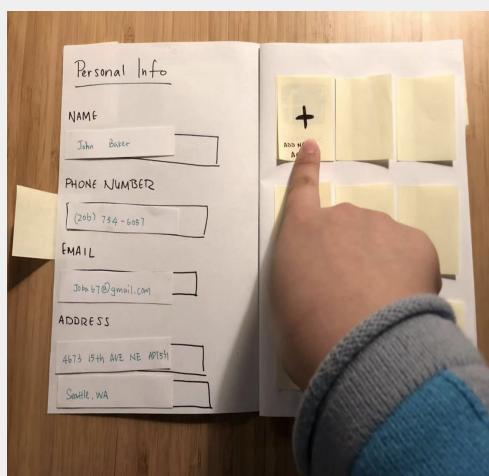
Giving Guidance After an Account  
Has Been Compromised



# Task 1: Storing, generating, and updating passwords



Use facial recognition  
to securely unlock



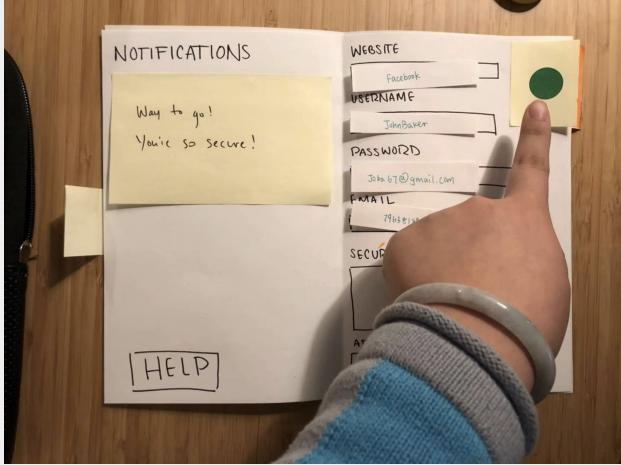
Use index page to locate  
next available page



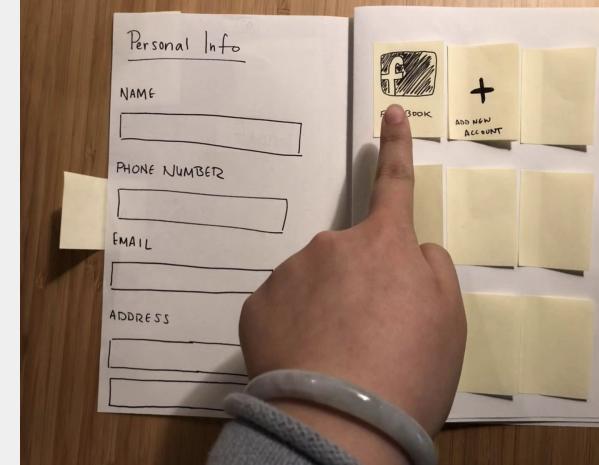
Use available page to  
record account information



# Task 1: Storing, generating, and updating passwords



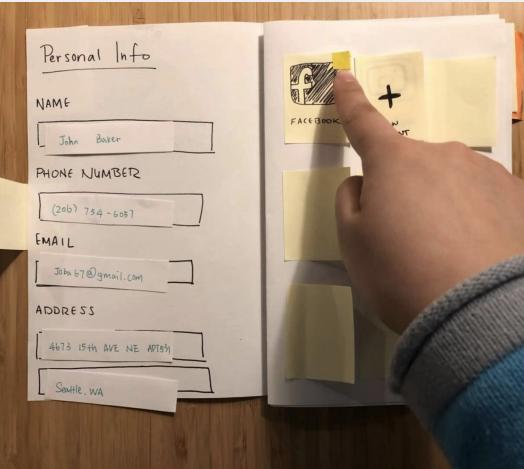
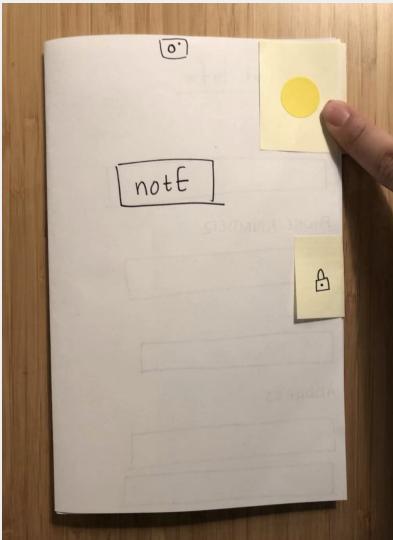
Confirmation of entry  
with a green light



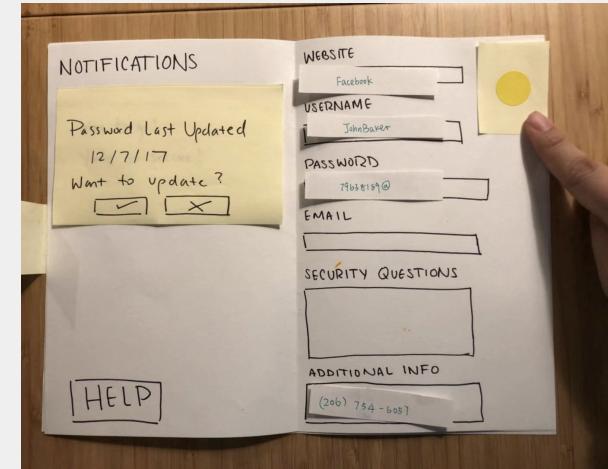
Index page automatically  
updates for quick search



# Task 1: Storing, generating, and updating passwords



Yellow light indicates minor account issue

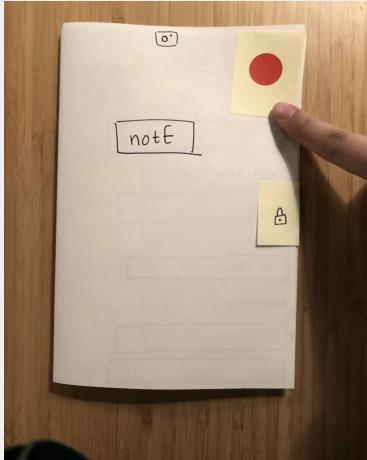


Yellow light shows on the index page

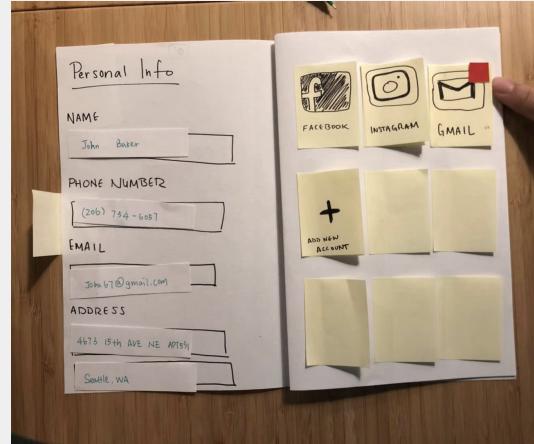
Prompt to update password



## Task 2: Giving Guidance After an Account Has Been Compromised



Red light indicates severe account issue



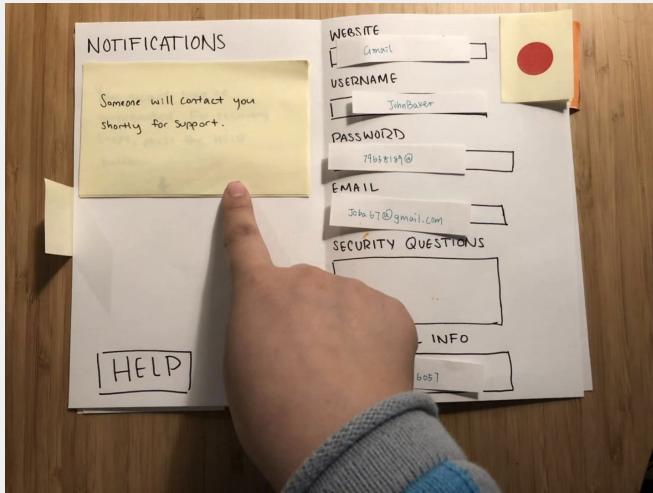
Red light shows on the index page



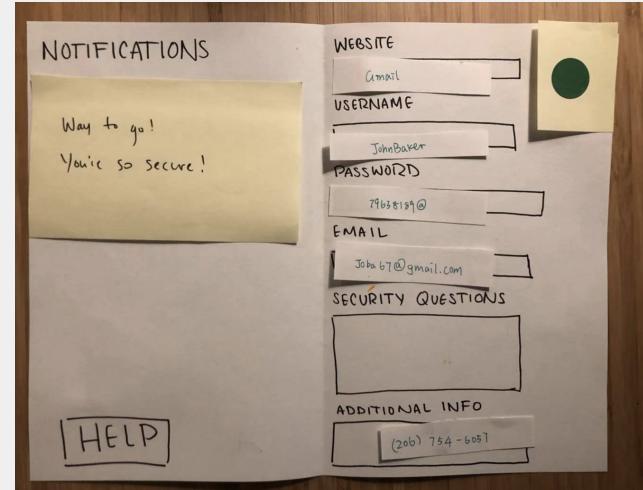
Red light shows on page and notification provides more information



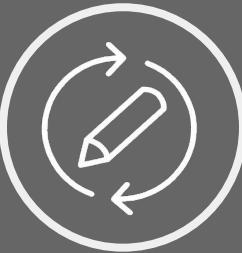
## Task 2: Giving Guidance After an Account Has Been Compromised



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



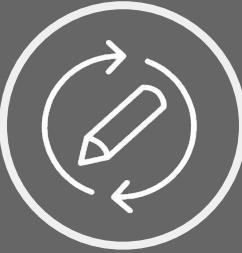
Greenlight shows on page indicating no further security issues.



# TESTING PROCESS

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2 heuristic evaluations + 3 usability tests



# HEURISTIC EVALUATION

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



# Testing Process: Heuristic Evaluation

## Participants

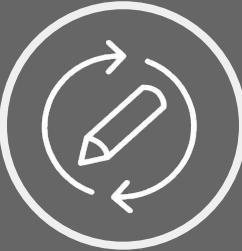
- Students currently taking CSE 440
- Conducted inside and outside of class

## 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

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



# Testing Results: Main Takeaways

## Heuristic Evaluation

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- Help and documentation
- Consistency

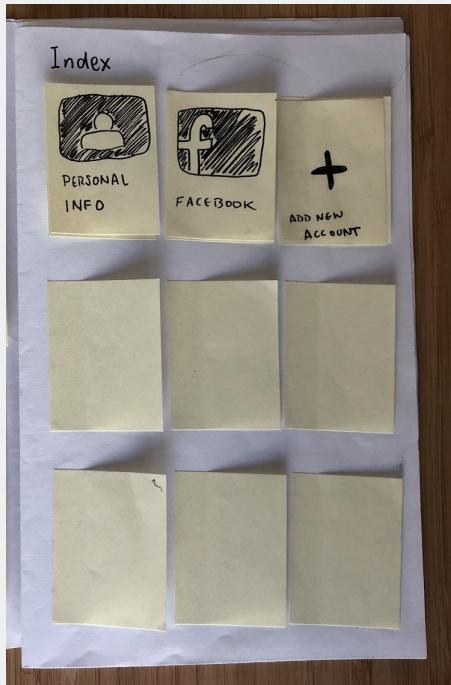
## Usability Testing

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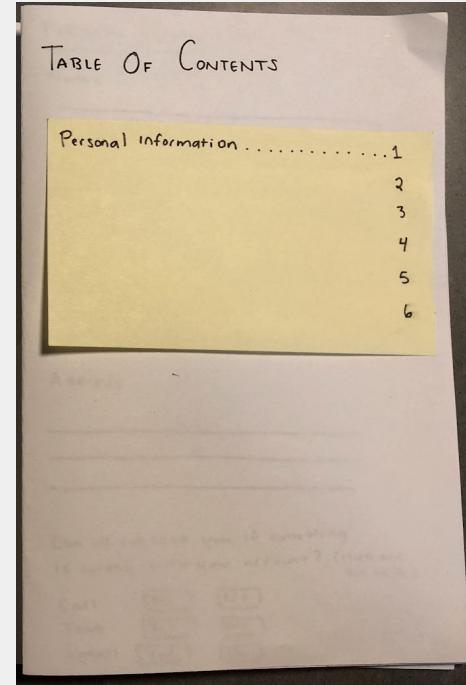
- Level of documentation and instruction
- Need more resemblance to a notebook
- Intuitiveness



# Major Changes: Change Index to traditional table of contents



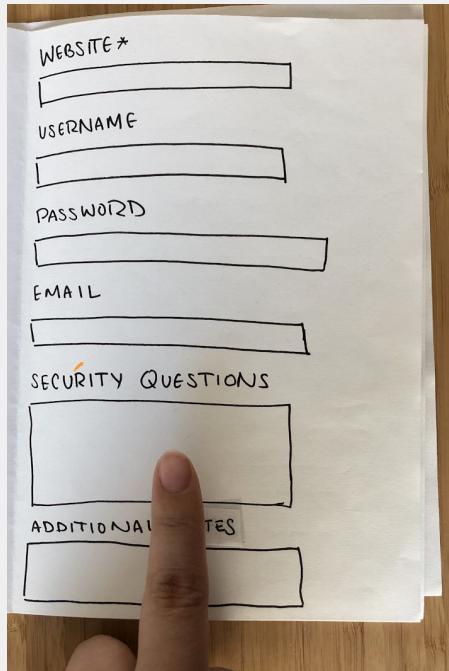
Before



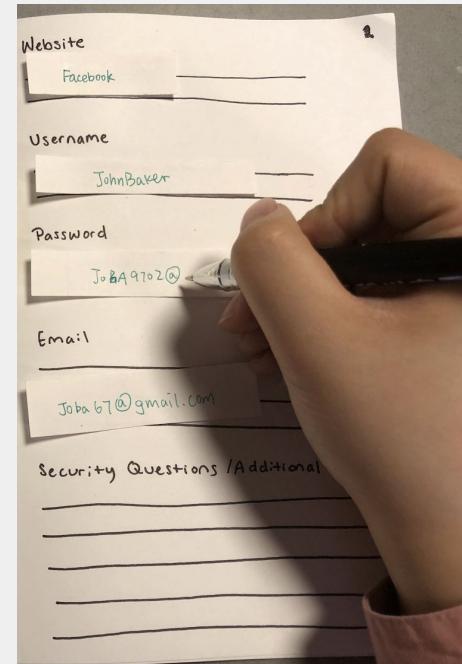
After



# Major Changes: Change input boxes to regular lines



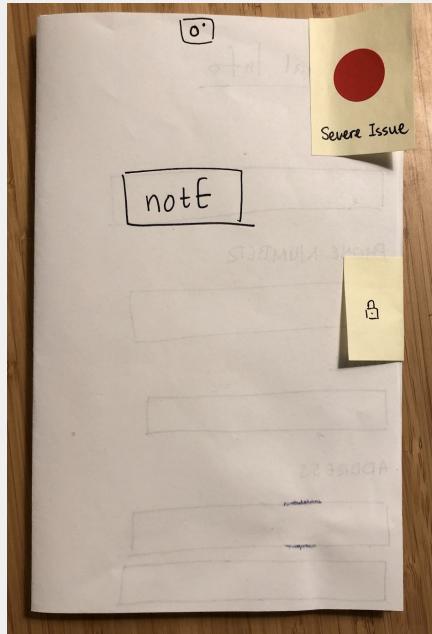
Before



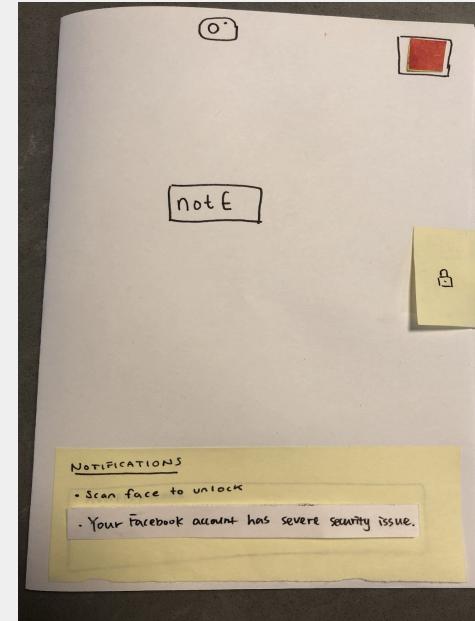
After



# Major Changes: Add screen on the front cover



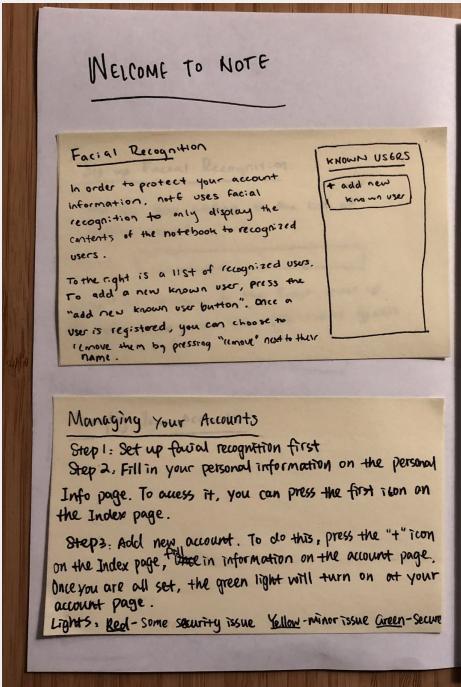
Before



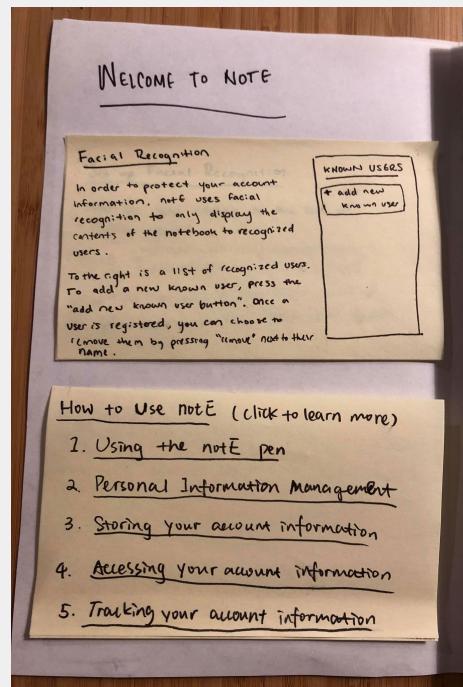
After



# Major Changes: Change help section to high level topics



Before



After

# Final Paper Prototype

Cover

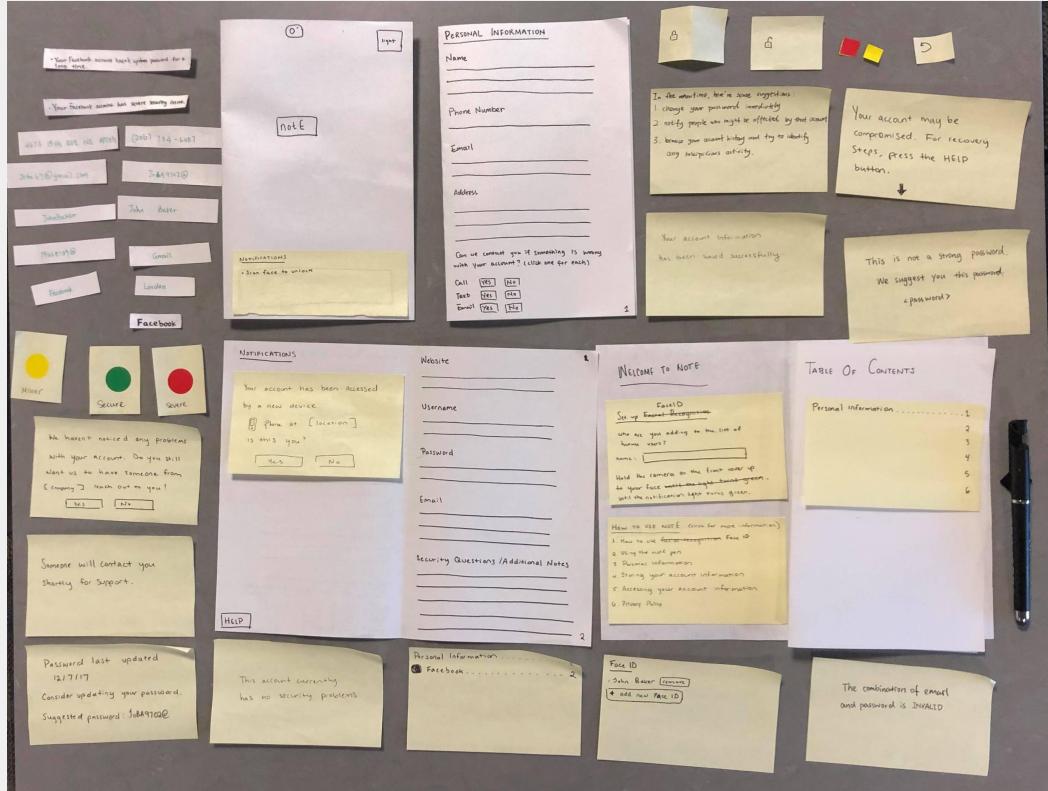
Index Page

Account Page

Notification Page

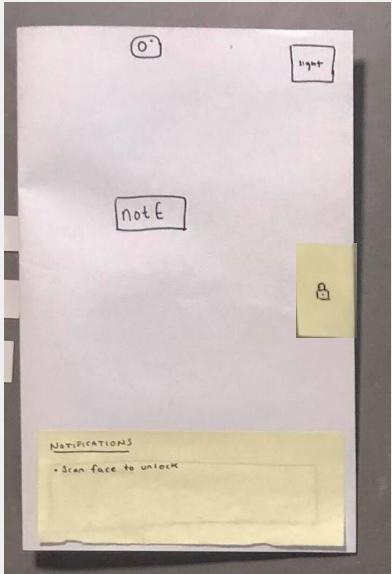
Light Notifications

Linked Pen

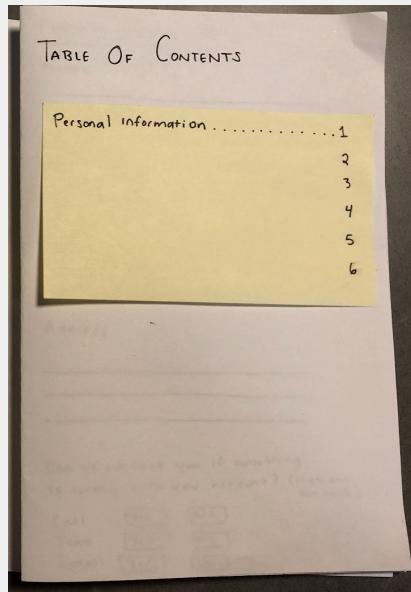




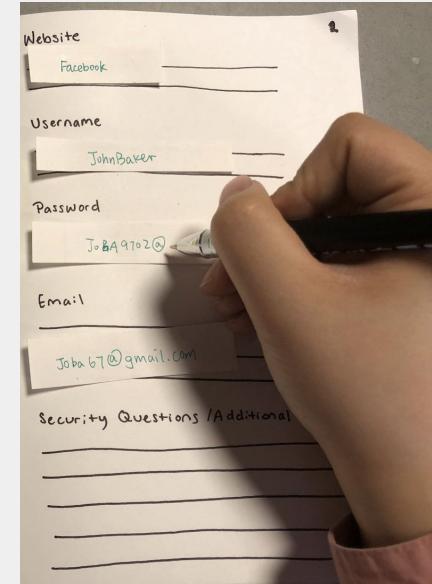
# Task 1: Storing, generating, and updating passwords



Use facial recognition to secure and unlock



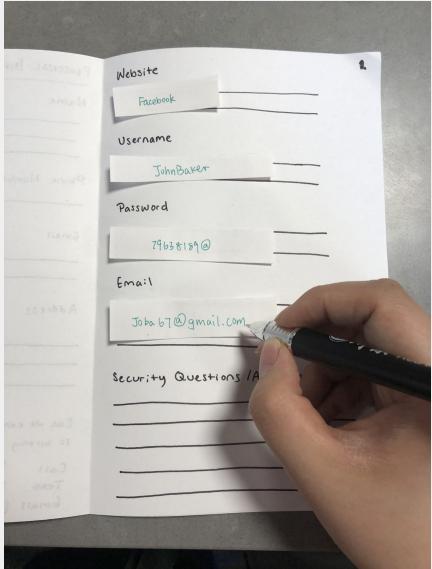
Use index page to locate next available page



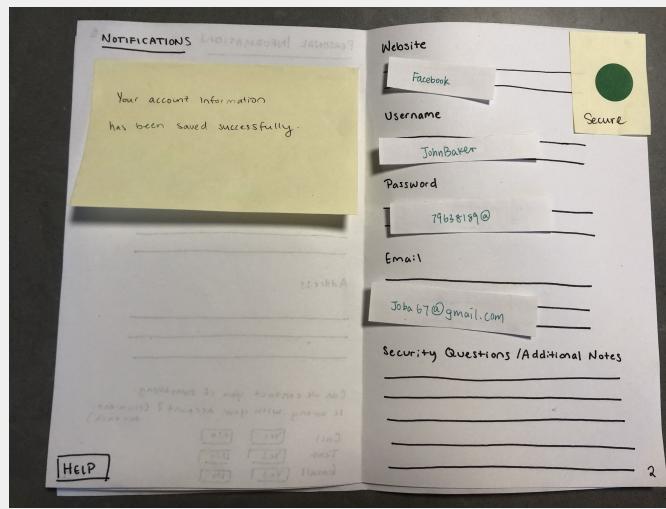
Use available page to record account information



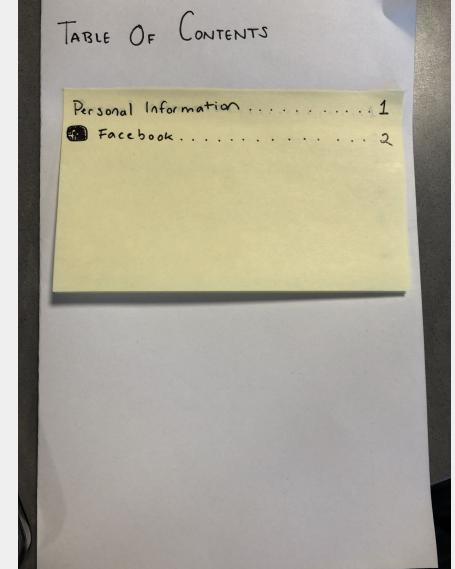
# Task 1: Storing, generating, and updating passwords



Offer password suggestions



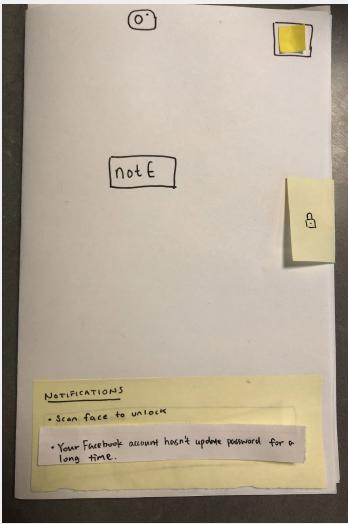
Confirmation of entry  
with a green light



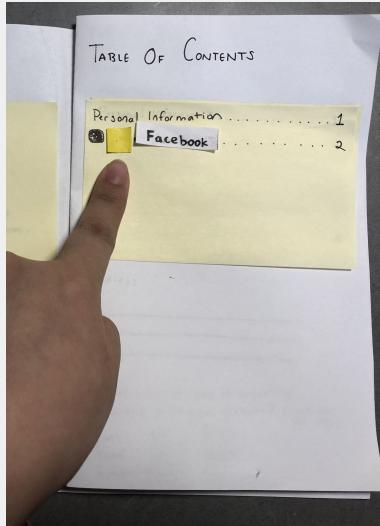
Index page automatically  
updates for quick search



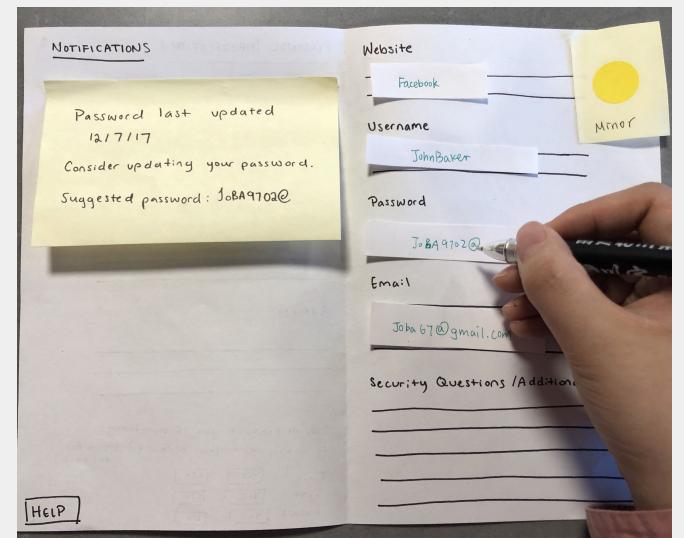
# Task 1: Storing, generating, and updating passwords



Yellow light indicates minor issue with an account



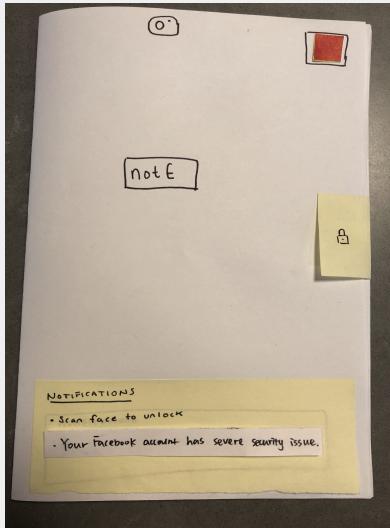
Yellow light shows affected account



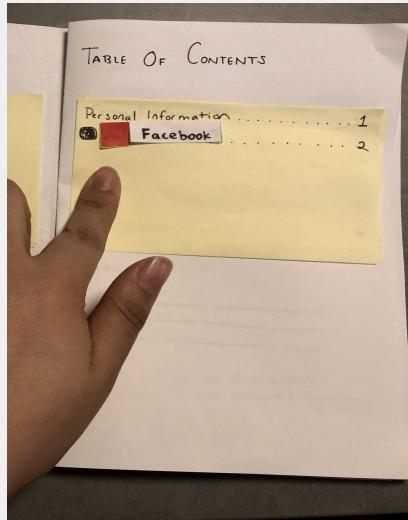
Offer suggested password for the update



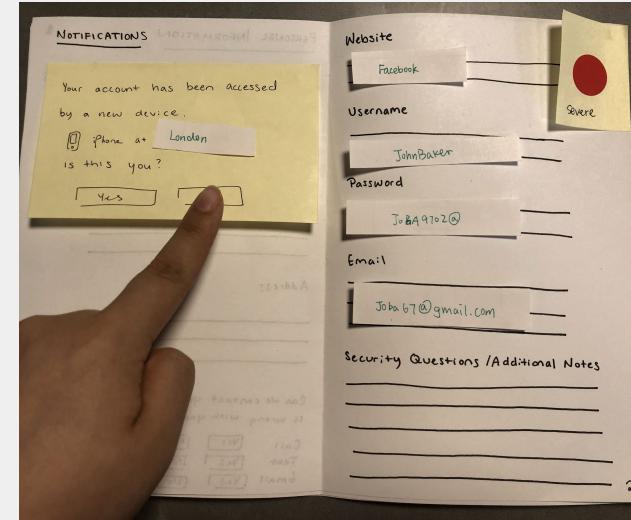
## Task 2: Giving Guidance After an Account Has Been Compromised



Red light indicates major account issues



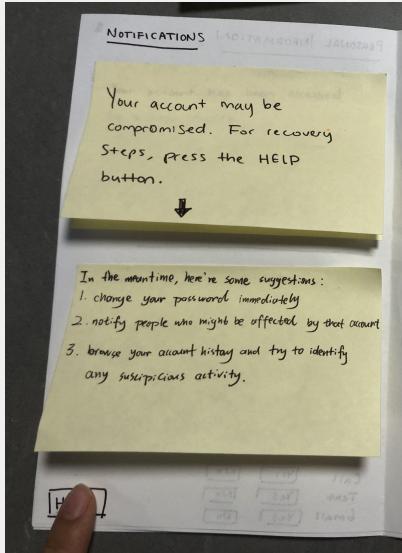
Red light shows on index page



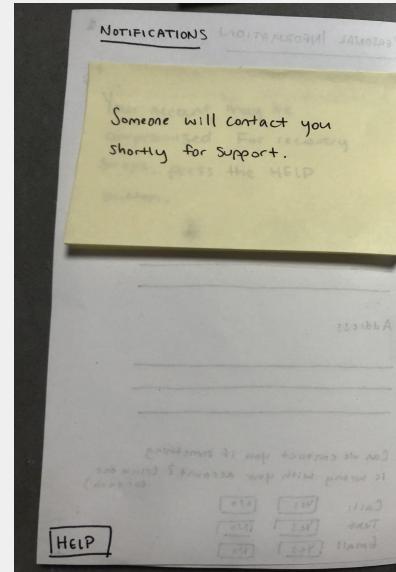
Red light shows on page.  
Notification provides more information



## 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, while the desktop screens are arranged in a single row of six.

**Mobile Screens:**

- Top Row:** Shows notifications for "HotE" asking for a face unlock. The second screen shows a lock icon indicating the device is locked.
- Bottom Row:** Shows notifications for "HotE" asking for a face unlock. The second screen shows a lock icon indicating the device is locked.

**Desktop Screens:**

- Row 1:** Displays a "NOTIFICATIONS" section with a lock icon, followed by two "NOTIFICATIONS" sections for "HotE" asking for a face unlock.
- Row 2:** Displays a "CONTACT SETTINGS" section, a "PERSONAL INFORMATION" section, a "WELCOME TO NOTE" section, a "TABLE OF CONTENTS" section, a "WELCOME TO NOTE" section, and a "TABLE OF CONTENTS" section.
- Row 3:** Displays a "NOTIFICATIONS" section for "HotE" asking for a face unlock, followed by two "NOTIFICATIONS" sections for "HotE" asking for a face unlock.

The digital mockup illustrates a user interface design for a desktop application, showing various sections and their interactions.

**Desktop Screens:**

- Row 1:** Displays a "NOTIFICATIONS" section for "HotE" asking for a face unlock, followed by two "NOTIFICATIONS" sections for "HotE" asking for a face unlock.
- Row 2:** Displays a "NOTIFICATIONS" section for "HotE" asking for a face unlock, followed by two "NOTIFICATIONS" sections for "HotE" asking for a face unlock.
- Row 3:** Displays a "NOTIFICATIONS" section for "HotE" asking for a face unlock, followed by two "NOTIFICATIONS" sections for "HotE" asking for a face unlock.



# 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  
\_\_\_\_\_

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.

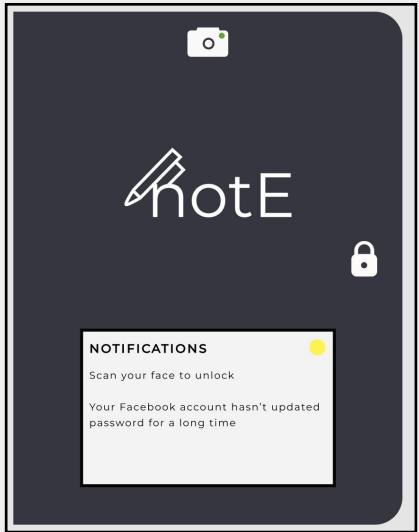
Personal Information.....	1
Facebook.....	2

Offer password suggestions

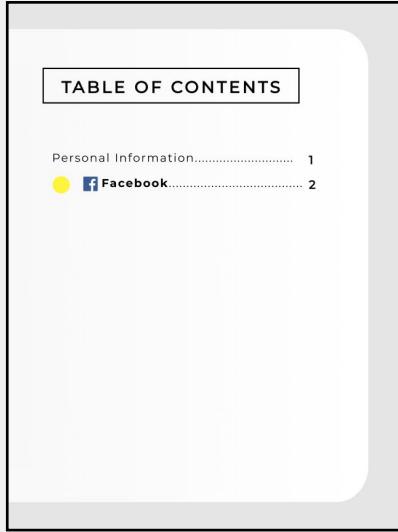
Confirmation of entry with a green light

Index page automatically updates for quick search

# Task 1: Storing, generating, and updating passwords



Remind to change  
password



Yellow light shows on  
index page

Minor Issue

WEBSITE  
Facebook

USERNAME  
johnbaker

PASSWORD  
ASal!\$Put

EMAIL  
johnbaker@gmail.com

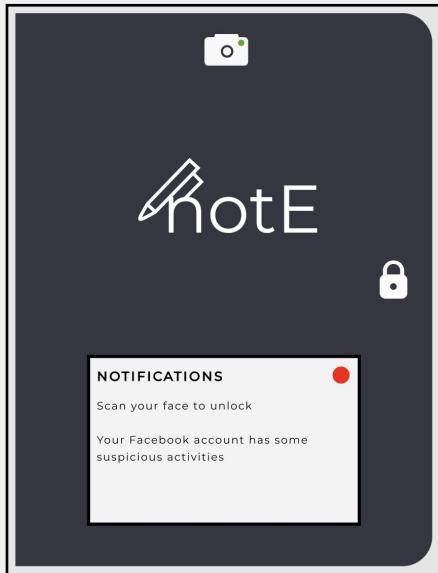
SECURITY QUESTION AND ADDITIONAL NOTES

HELP

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

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### 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

Celeste: 33%, designed slides, wrote half of slides, formatted pictures, made minor revisions on the entire document

Ethan: 0%,

Bill: 33%, wrote some slides

Augustina: 33%, refined the slides, helped to write some elements/ task walk through, worked on some style things, and participated in the discussion, edited some minor changes