

Professor Clark Delashmet
IACT 315: Human-Computer Interaction
Fall 2020

Team AACCQuire



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Visual Design



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UI Design
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Project Timeline

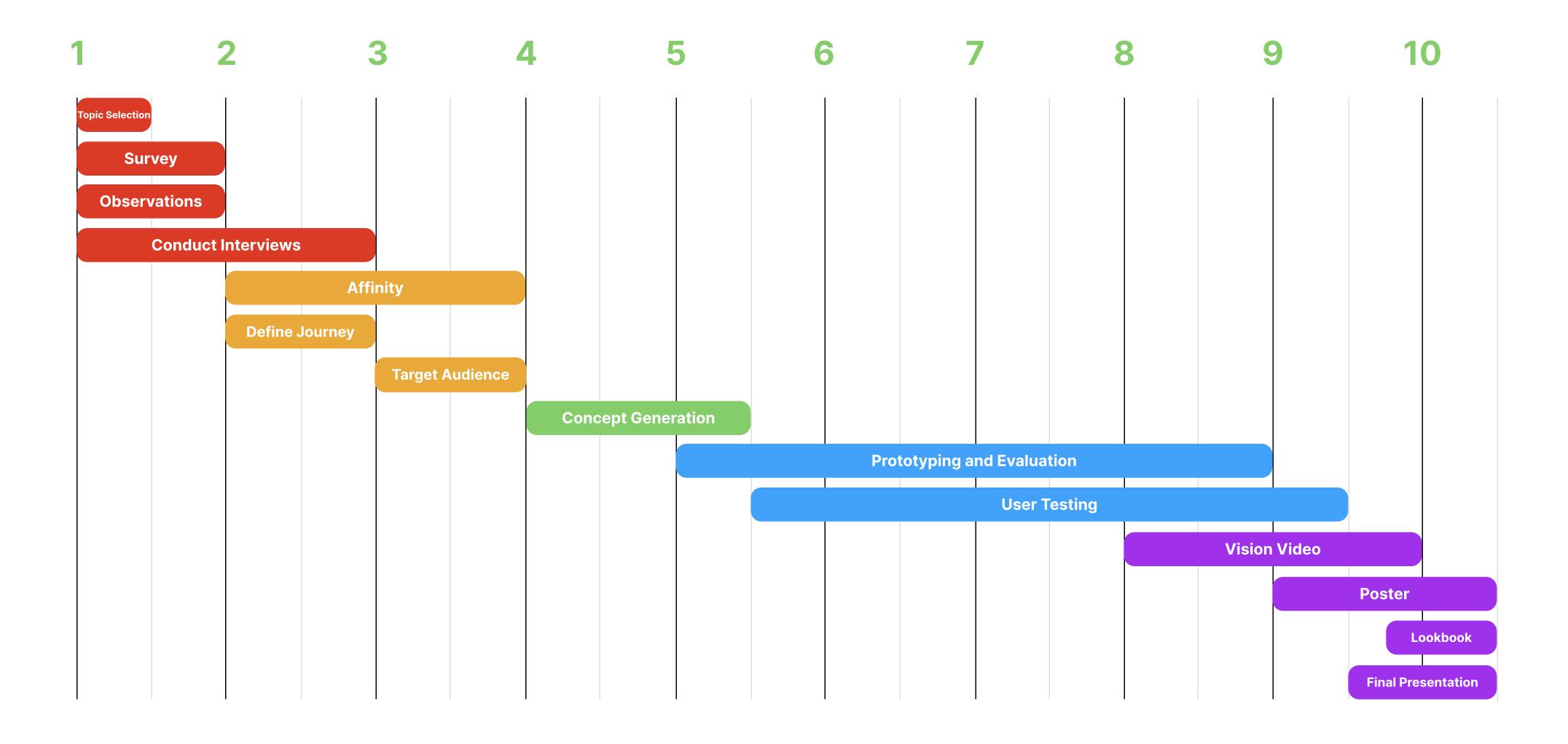


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Overview

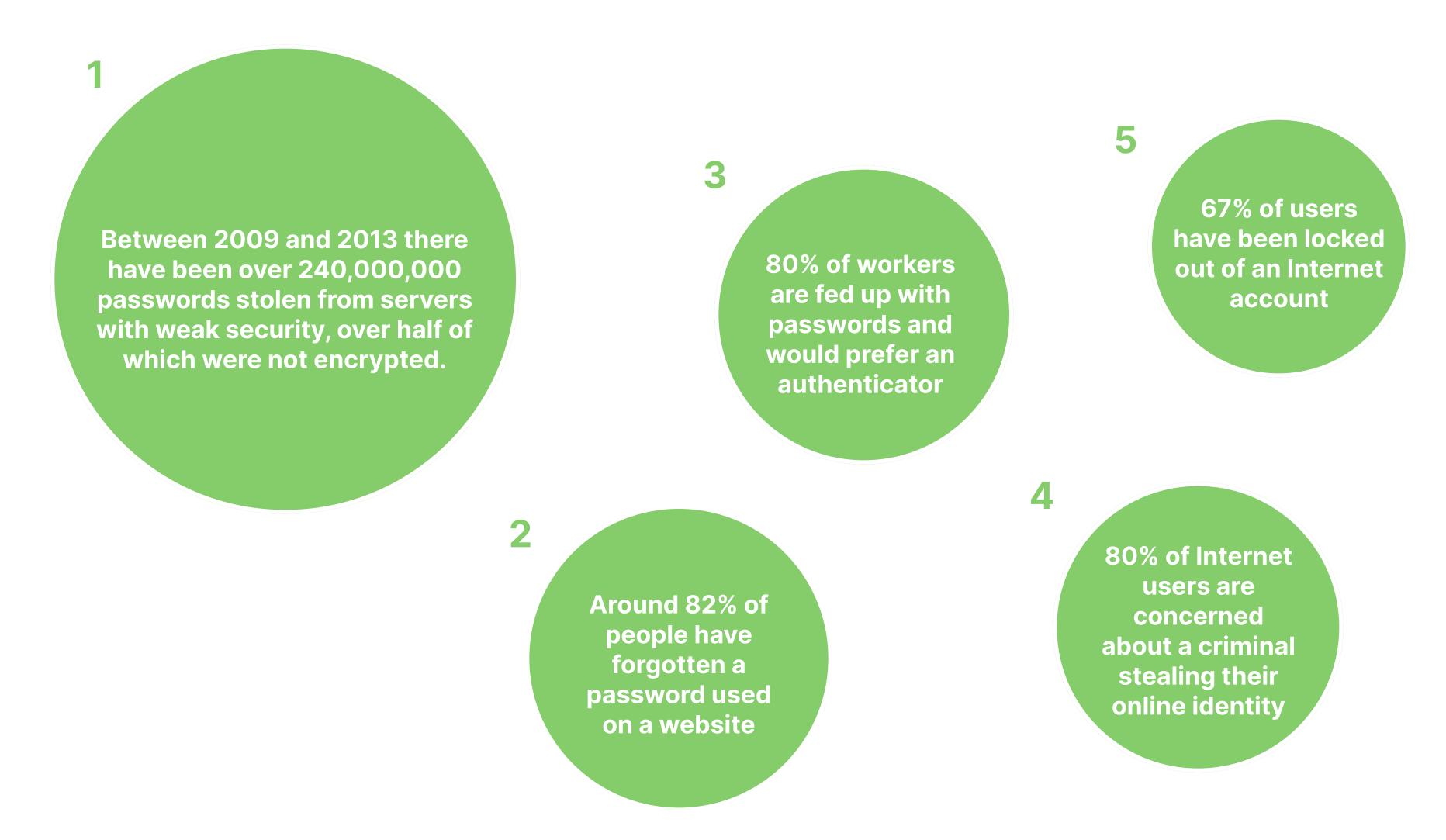
Project Brief

Create a product/service that addresses a newly defined opportunity area created by recent technology innovations.



Research

Secondary Research



Initial Competitive Analysis

YubiKey 5Ci



- USB-C& Lighting connecter supports iOS
- 2 Factor Authentication
- Portable and lightweight
- Confusing Setup
- Needs dongle for USB-C

iCloud Keychain



- Automatically detects website for login
- Suggests randomly generated passwords
- Notifies if password has been exposed
- Only works with apple devices
- No export option

Nitrokey Fido U2F



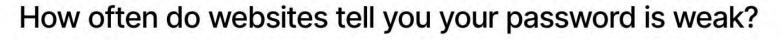
- Open source hardware & software
- Supports various methods of authentication to Google, Facebook, etc.
- Portable and lightweight
- No 2 Factor Authentication
- No wireless support

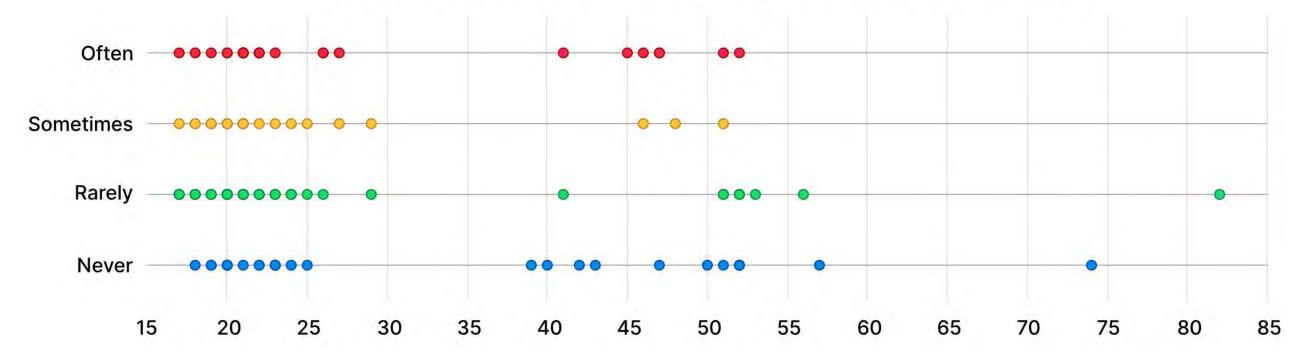
Notebook



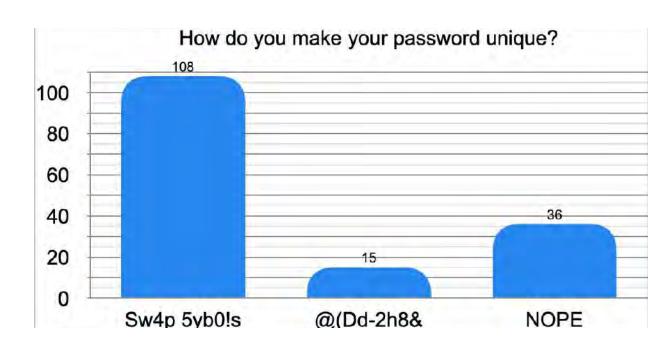
- Cheap and easily accessible
- Portable
- Familiar
- Limited web filters
- Is expensive

Survey Results: 163 Participants





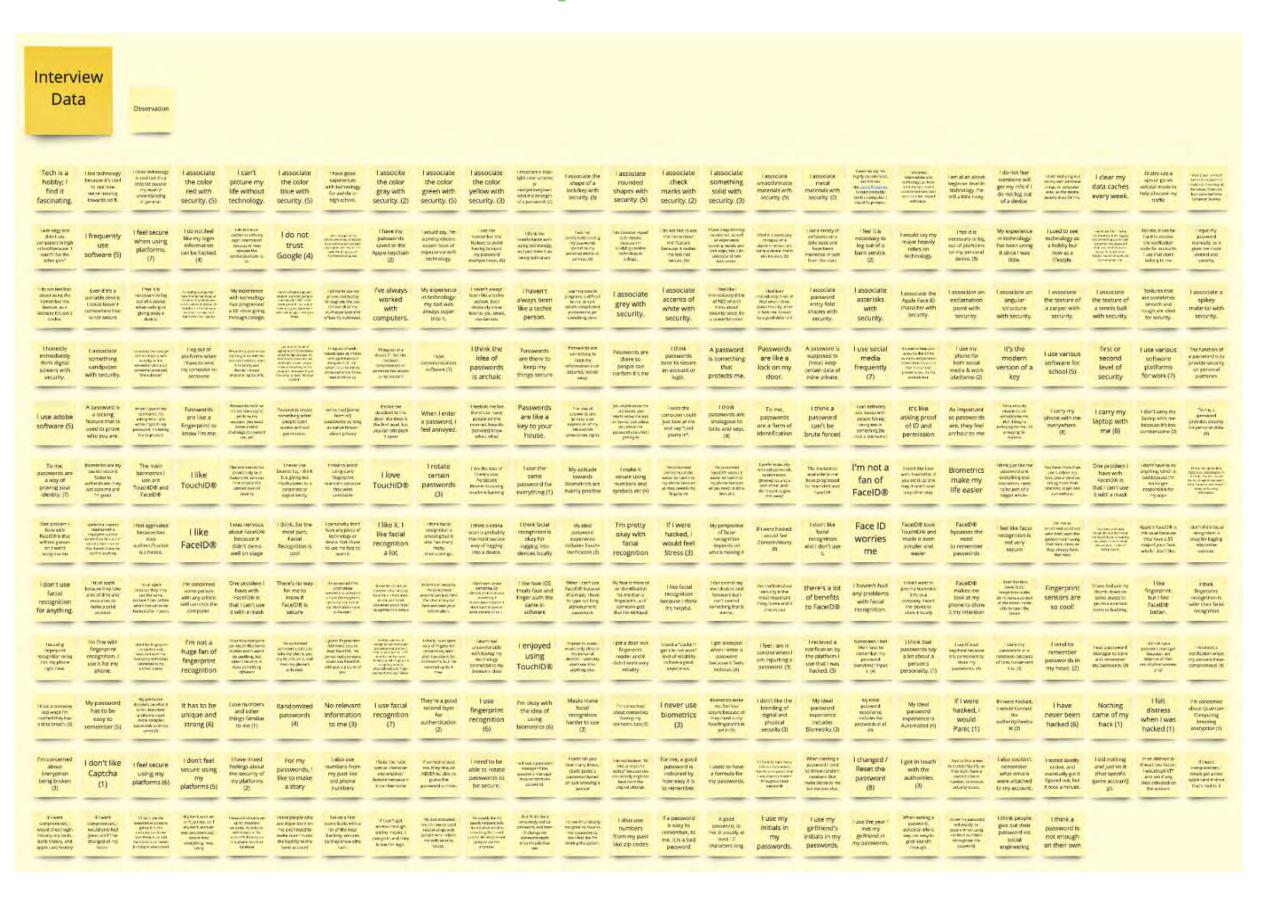
Steps taken to secure hacked account 60 45 30 15 0 Customer Support Change Password 2 Factor All of Them





Interviews

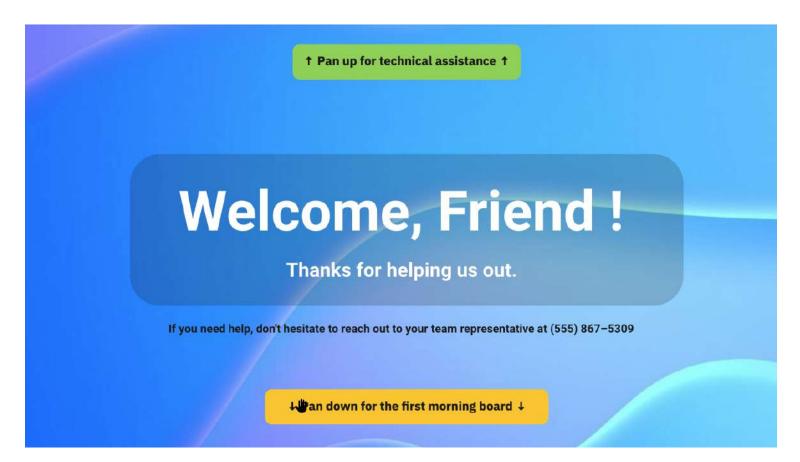
13 initial interviews (experts & students)

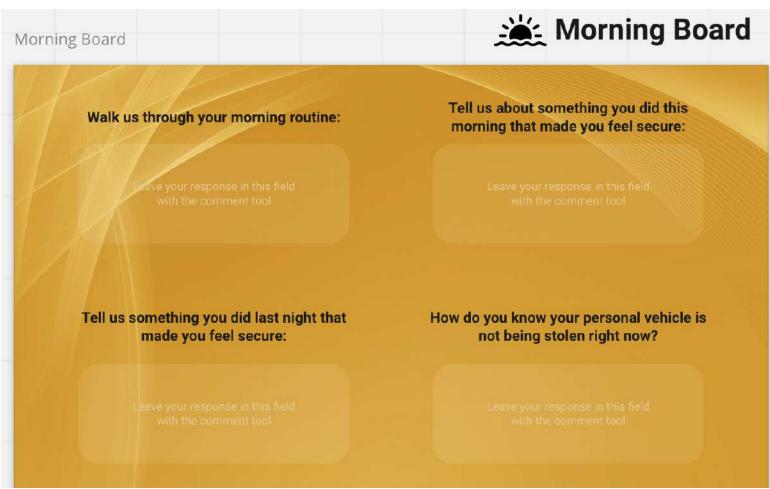


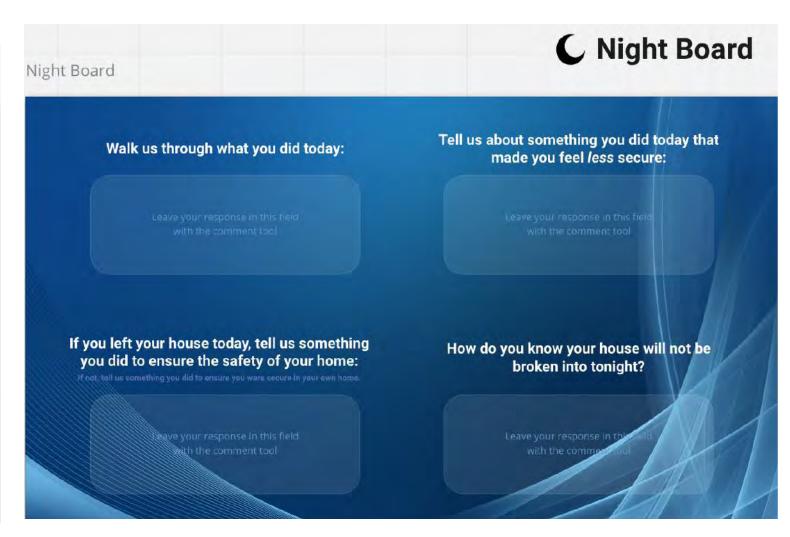
4 refined interviews (parents & teens)

Arjun's Mom Quint's Dad Caroline's Brother **Arjun's Brother**

Cultural Probe Structure







Welcome board for cultural probe



Board filled in morning



Board to be filled at night

Cultural Probe



HMW give users confidence in the security measures they've put in place

HMW draw on users' existing knowledge of physical barriers that provide safety?

Cultural Probe Key Insights

sometimes it's something that doesn't benefit you directly but helps the whole area you're in, including you

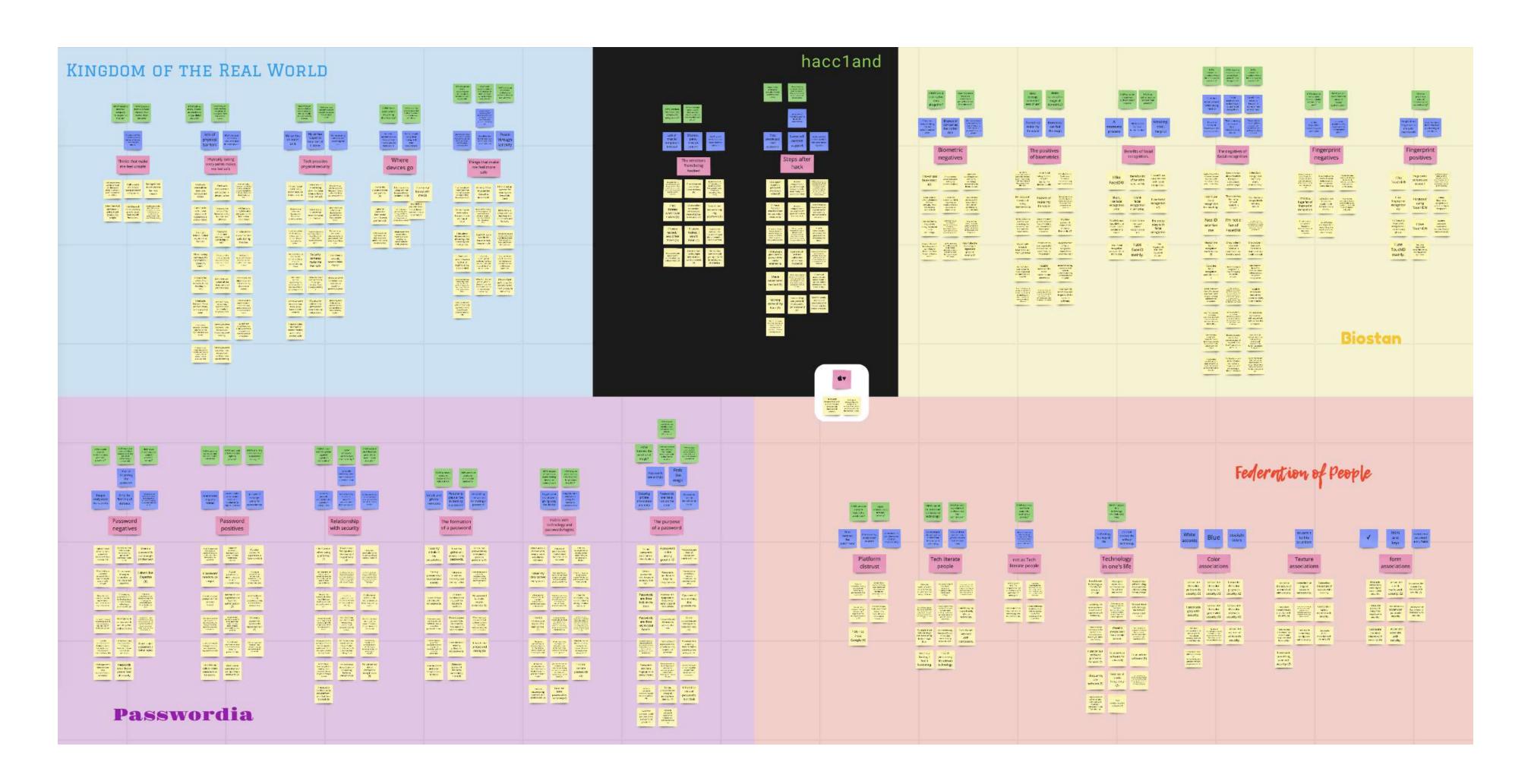
Strangers coming in close contact in my personal area make me feel unsafe

An ever-present device like a phone makes people feel secure

lots of physical barriers are used to make you feel safe

You always feel safe when someone else is there

Affinity



Key Insights

Generally speaking users see security as a vendor issue

Only the first line of defense

Biometrics can feel like magic

People really dont like captcha

Multiple door security is implemented in some places

Passwords are like a lock on the door

Storytelling is important for making a password

There are a lot of weird ideas about how passwords work (like changing 3x to avoid hacking?)

The harder it is for you to get into your account, the harder it is for hackers

Sometimes it's something that doesnt benefit you directly but helps the whole area you're in

An ever present device like a phone, makes people feel secure

Coexists with an inherent need and fundamental right to privacy

Lack of trust in company + betrayal

Requires more intention than just looking at the device

Biometric senors that read data that's a part of you and that's a little too personal for some people There's a lot of misconceptions around how FaceID works and how data is stored

Logging out is vital when giving away the device

Who watches the watchmen?

I cannot wear a mask while using FaceID

Distrust of companies having bio data

Stoplight Colors

Biometrics make my life easier Lots of physical barriers

5 Why's

1

Why do people fall for phishing scams?

They're emotionally manipulated.

2

Why are they being emotionally manipulated?

Scared people notice less details.

3

Why do they notice less details?

The scam relies on faking urgent situations.

4

Why do scams rely on faking urgent situations?

It pertains to financial credit and personal data.

5

Why does it pertain to potentially compromising details?

That's the kind of information people really care about.

Section 2: Research

How Might We's

HMW harness
the magic
users feel
when they use
biometrics?

HMW alleviate the stress that comes with being hacked?

HMW generate a secure, memorable password?



Define

Previous Personas

Pamela

₩ 25

Chicago, IL

T Helpdesk





Ugh, I don't need all this fluff. I just need to see where my data is...

Jeez, this needs an account? I guess it's another password on the pile...

Home Depot got hacked again? I'm never shopping there for anything.

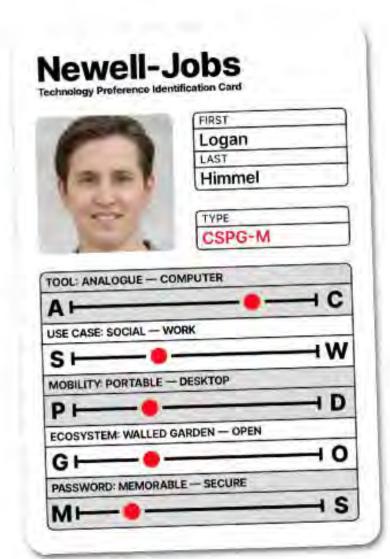
Logan

₩ 30

Providence, RI

Accountant





Another update? Why can't they just make one solid version of Quicken® and stick with it?

This new Star Wars Squadrons game looks sick! I gotta get the new Oculus.

Should I use my secure password for this? Nah, there's no financial stuff tied to it, it'll be fine.

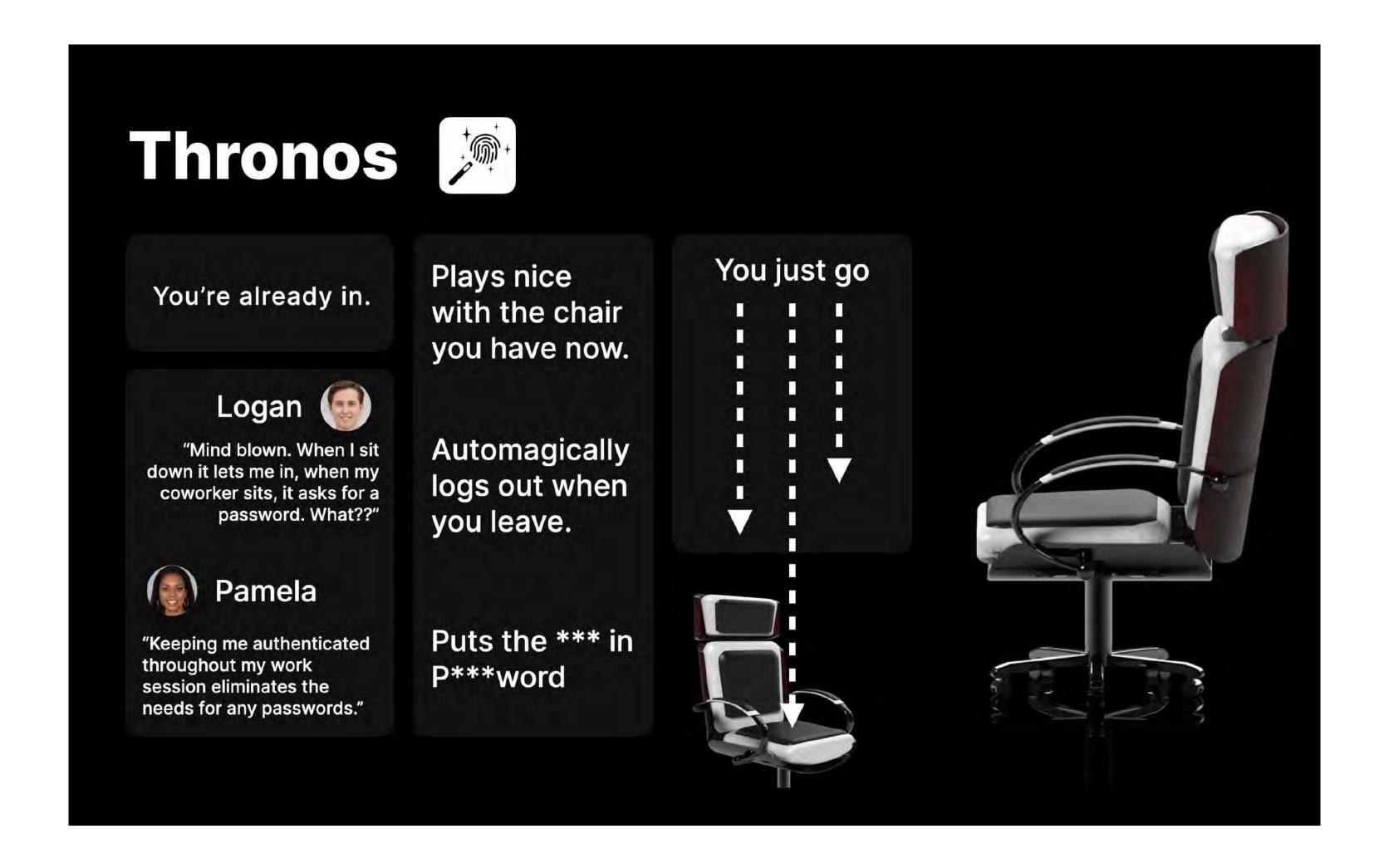
Previous Concepts



Previous Concepts



Previous Concepts



After receiving feedback, we decided to pivot into the direction of finding ways parents and children can talk about internet safety in a comfortable and non-invasive way.

Problem

Parental control applications are made to monitor, block and censor what kids do online while creating a emotional disconnect and lack of trust between the parents and the child.

Target Audience

Parents who want to protect their children's online habits while building trust and healthy communications. The target age range for children is 11-16 years old.



What is it?

Bastion is a service that allows parents and children to have healthy conversations about Internet safety, without the child feeling untrusted or watched over. It also promotes healthy security hygiene throughout the whole family.

Final Competitive Analysis

Norton Family



- Unlimited Devices
- Great web filters and monitoring
- Works with Windows and Mac
- Expensive
- No geofencing

× NO

Qustodio



- Wide feature set
- Connects to PCs, Macs and tablets
- Powerful call and text monitoring
- Expensive
- Outdated design, navigation

Net Nanny



- Great Design
- Parity between Android and iOS
- Great web filters
- Does not foster healthy communication

OurPact



- Great Design
- **Good navigation**
- **Limited web filters**
- Is expensive

Persona 1: Nick Light



13 • Student • Seattle, WA

Recently got his first phone. Wants to be independent and keep his sense of privacy.

Personality

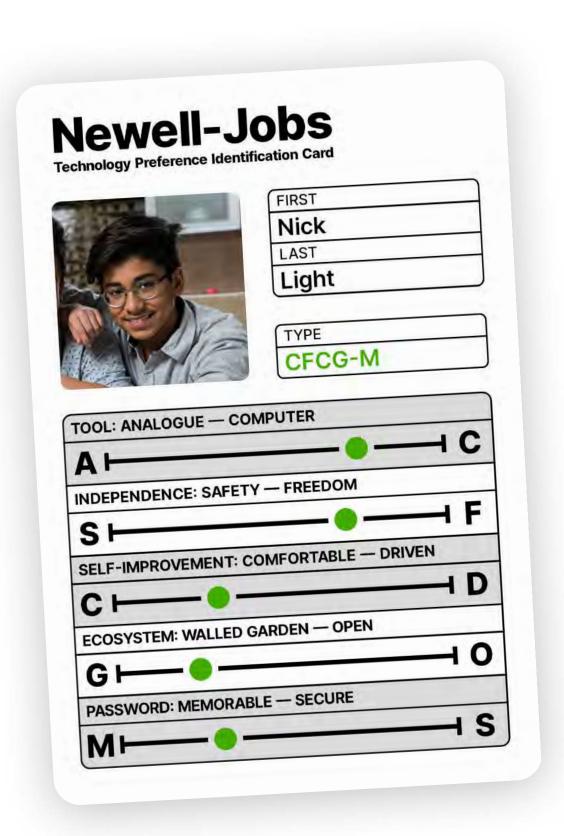
- Extroverted. Likes having fun with others. Popular.
- Wants to be independent.
- Rebellious. Naturally curious.

Frustrations

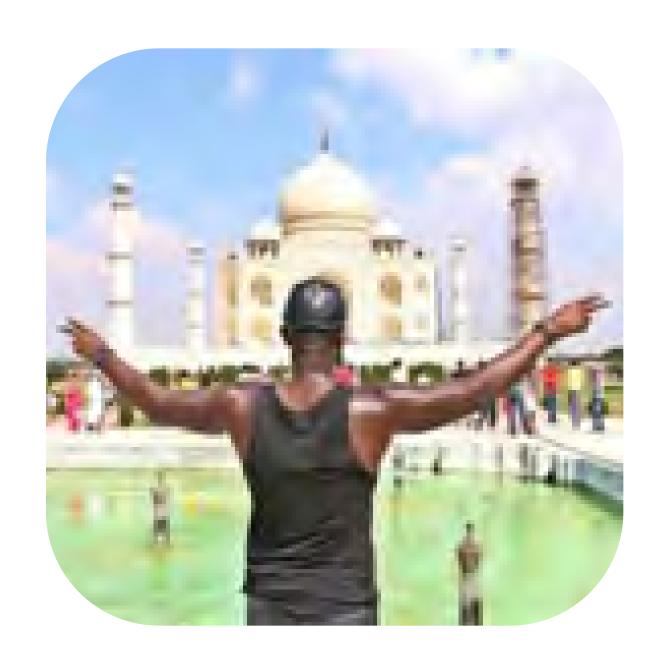
- Doesn't want to be hovered upon by family.
- With new phone, doesn't know how to navigate Internet securely.
- Wants to be independent but feels parents won't let him do his own thing.

Needs

- Wants freedom of choice and decision when it comes to his tech and real life habits.
- Wants to be able to proactively work on improving his tech habits.
- Does not want invasive restrictions placed on him.



Persona 1: Reginald Light



46 • IT Professional • Seattle, WA

Tech savvy and well informed. Wants the best for his kids.

Personality

- Calm and logical. He is understanding and rational.
- Progressive as a parent and can be fun.
- He is experienced and concerned.

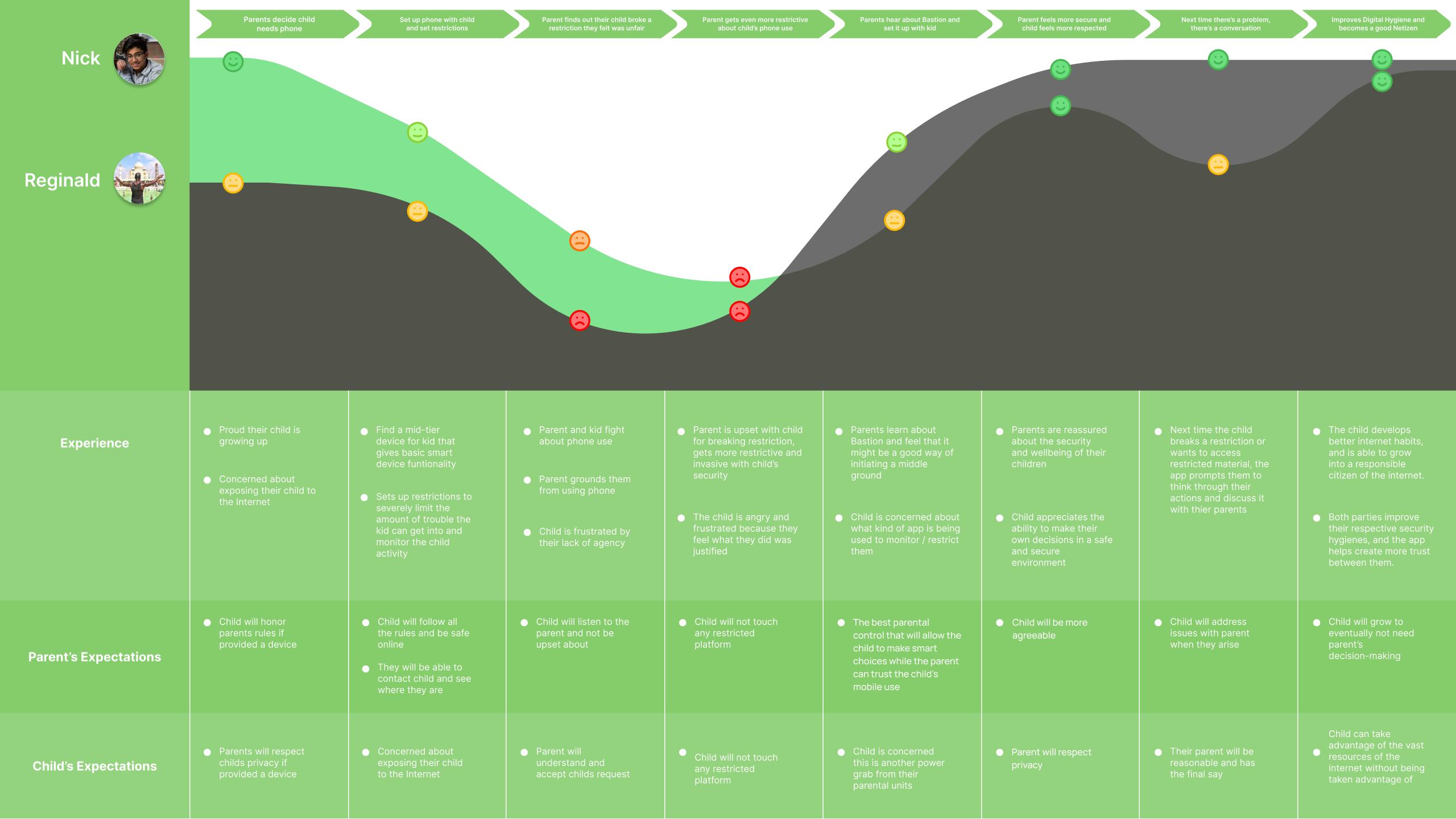
Frustrations

- Is constantly worried about what his kids might come across on the internet.
- Wants to make his kids better "netizens" but doesn't know how to without being invasive.
- Lack of security in regards to passwords, login info and data.

Needs

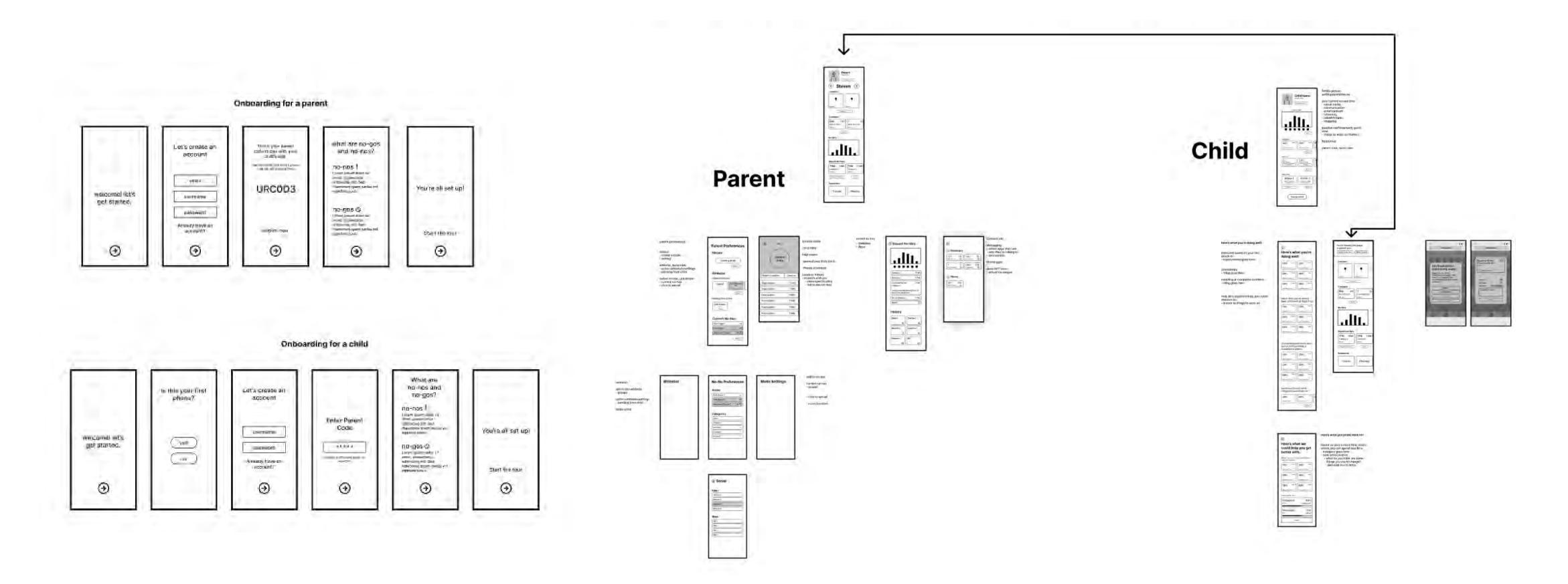
- Something that encourages healthy conversation with his kids about their security, while simultaneously reassuring him of their safety.
- Wants his kids to be well informed of their own safety, and wants to build trust with them.
- Wants a seamless approach to digital security.





Development

Low-Fidelity: Structure



Section 5: Development

Bastion > IACT 315 > Process Book

Low-Fidelity: Onboarding

Parent Onboarding

welcome! let's get started.

Let's create an account

email

username

password

Already have an account?

This is your parent code to pair with your child's app.

Get started on your child's phone until you get to this screen

URCOD3

skip for now

what are no-gos and no-nos?

no-nos!
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed maecenas quam varius vel egestas ispus.

no-gos O
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed maecenas quam varius vel egestas ispus.

You're all set up!

Start the tour

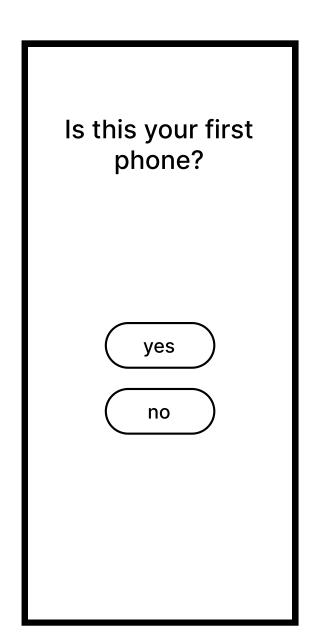
Section 5: Development

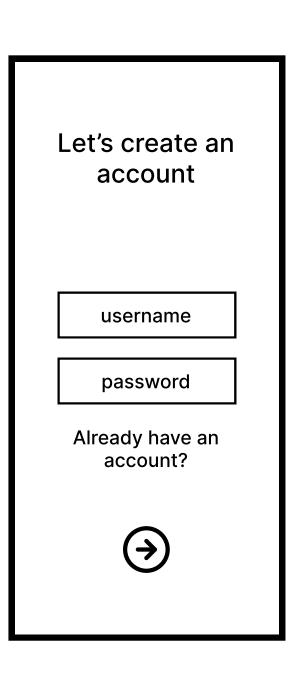
Bastion > IACT 315 > Process Book

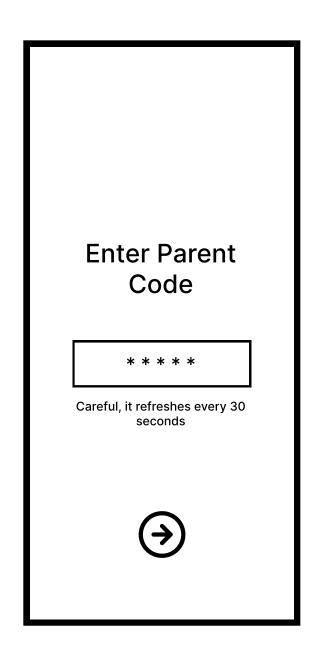
Low-Fidelity: Onboarding

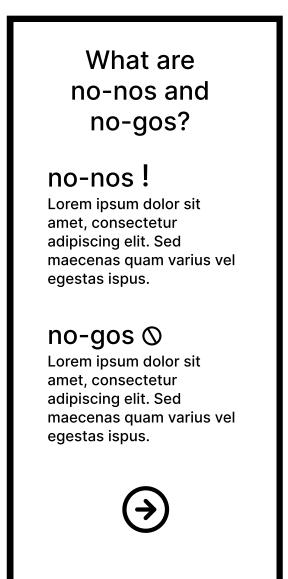
Child Onboarding

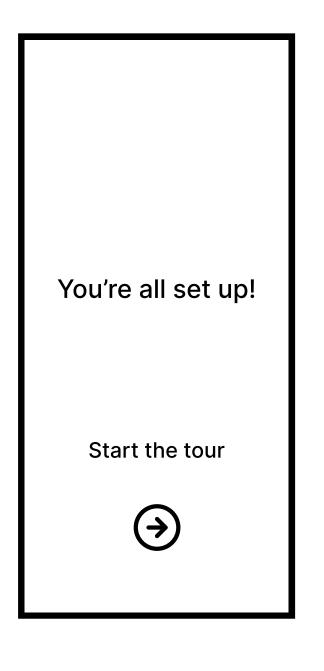
welcome! let's get started.









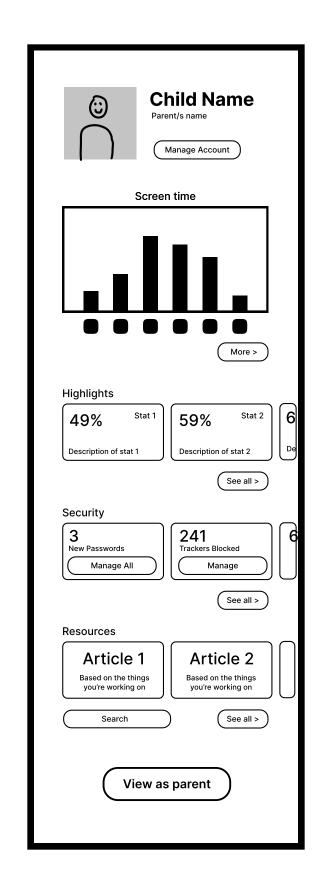


Section 5: Development

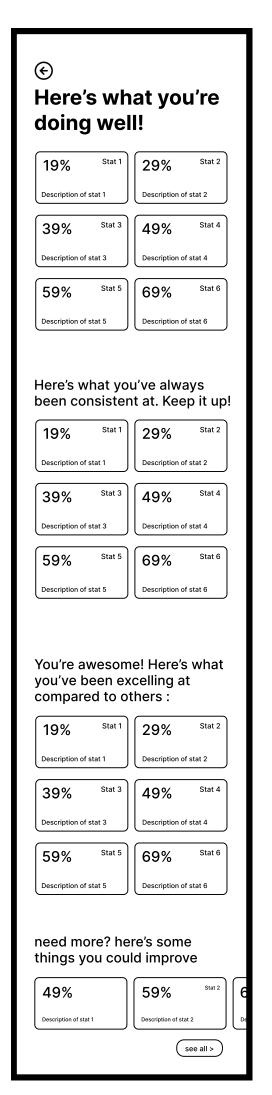
Bastion > IACT 315 > Process Book

Low-Fidelity: Child Dashboard

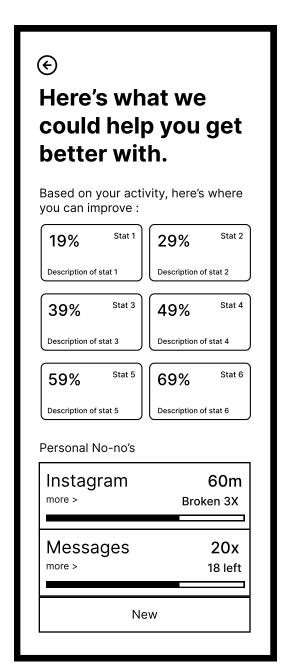
Child Positive Statistics



Child Dashboard



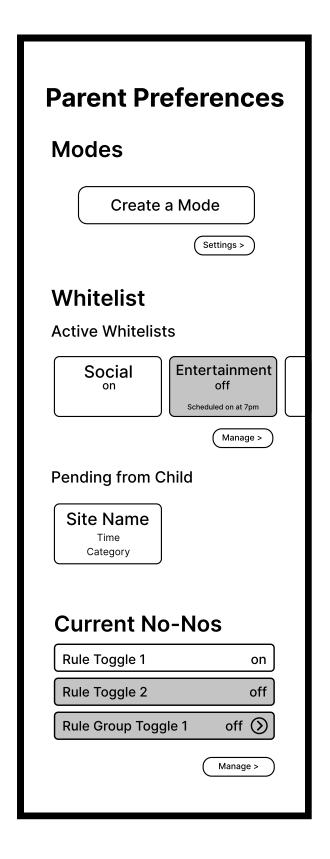
Self Improvement Statistics



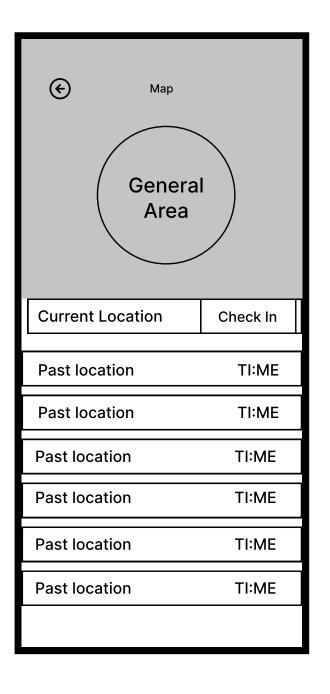
Low-Fidelity: Parent Dashboard

Parent Steven (>) Location See History > Contacts 377 Best Friend New Number See All > No-No's **Recent No-No's** Title TI:ME TI:ME Category Category See All > Manage Preferences > Resources Phishing Tutorial

Parent Dashboard

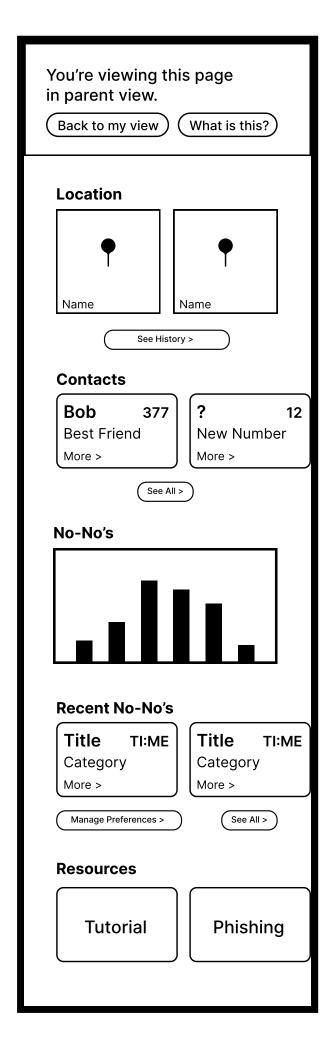


Parent Preferences



Location Tracking

Low-Fidelity: Parent View & Alerts

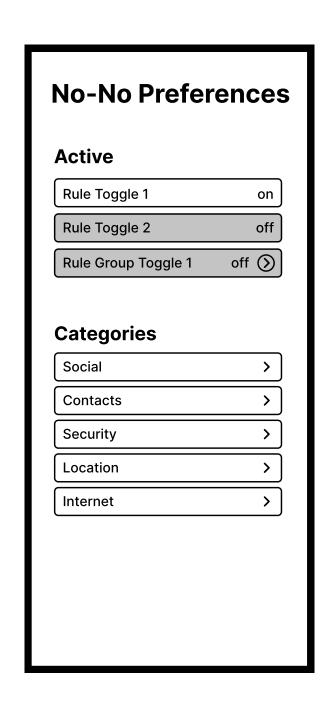


Parent View

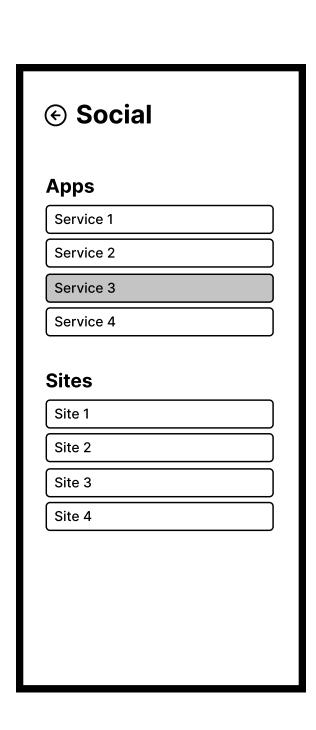
Restriction Alert website.bad Hey knucklehead, you're being stupid. Going to a site of the **Entertainment category will** result in a 7-day ban from everything except school sites and apps. Go back **Ask permission** Do it anyway Do it and send context >

Sending context website.bad **Explained No-No** 9:41 Entertainment Site Link > It's a video for school Your parent will see this Category Screenshot Auto Custom Explanation It's a video for school Send

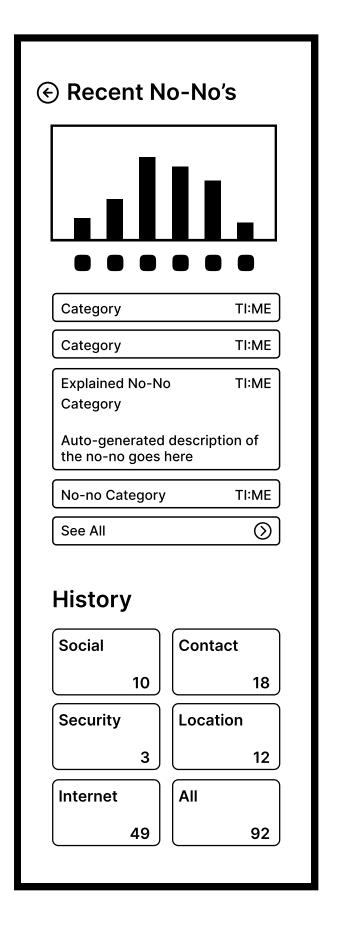
Low-Fidelity: Restriction Settings



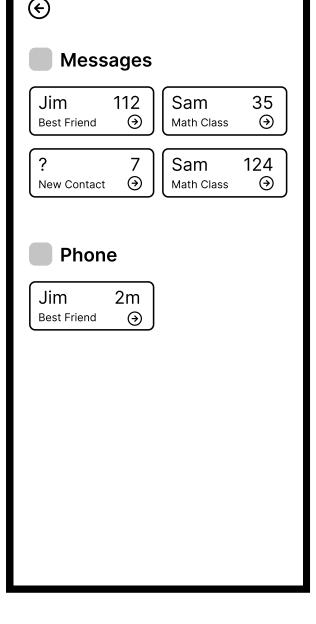
No-No Preferences



No-No Configurations



Contacts History



No-No History

Lo-Fi: Testing

User Test 2

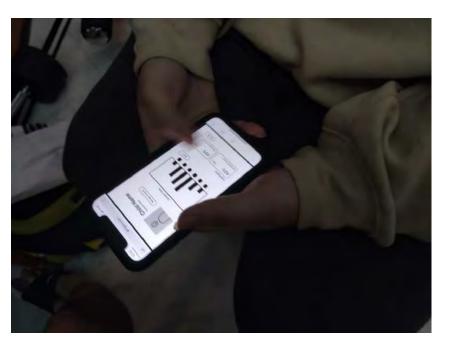
Akshat, 16

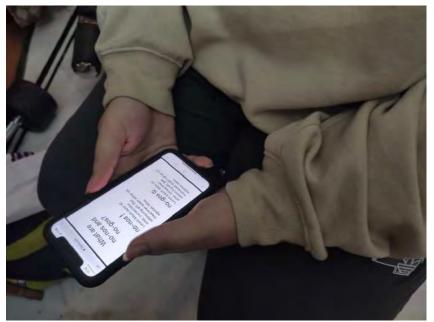
Our second User Test was run with Akshat (16). Akshat was a good fit for our user test because he is the rebellious kind of child.

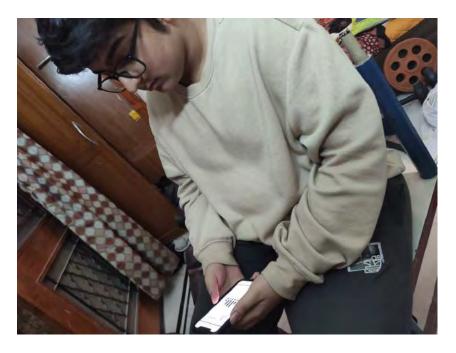
Akshat gave us some good points as feedback. Some of the key ones have been listed as follows:

- He really did not like the name No-no on the app. He felt it was childish.
- He felt that the app navigation was easy to use, but he wanted a tab bar to reduce scrolling.
- He shared Sujata's sentiments on wanting more context for certain elements.
- He wanted to be able to set his own restrictions for self improvement and monitoring.
- Wanted alternate app suggestions instead of "Resources" to be more productive. Overall feedback to concept was positive.

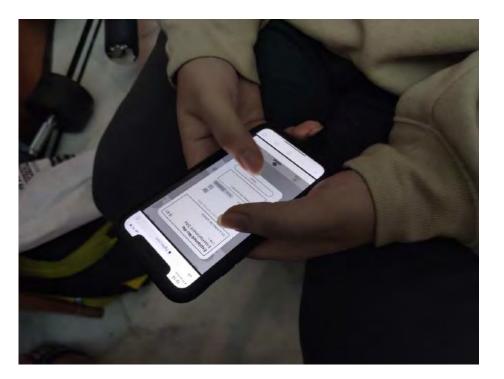
User Test 2: Akshat (Brother, 16)











Lo-Fi: Testing

User Test 1

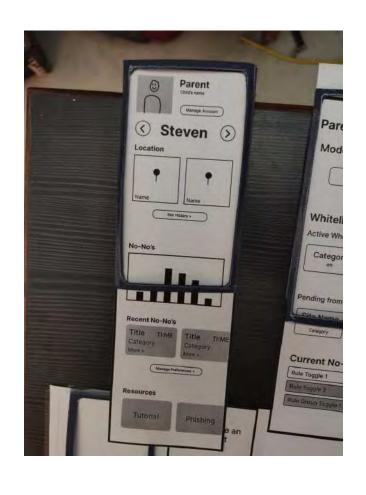
Sujata, 52

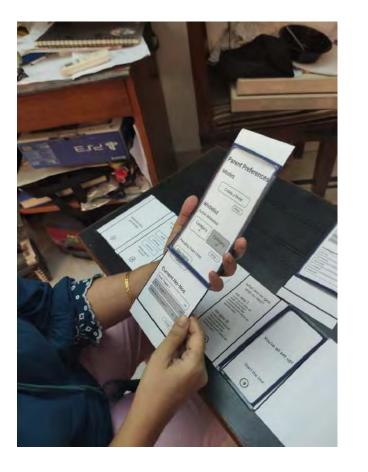
Our first Lo-Fi user test was run with Sujata (52). She has 2 children, both on the relatively rebellious side, which is why we thought she was a good person to run a user test by.

Sujata liked the concept & gave us some very good insight on our Lo-fi screens. Some of the key ones have been listed as follows:

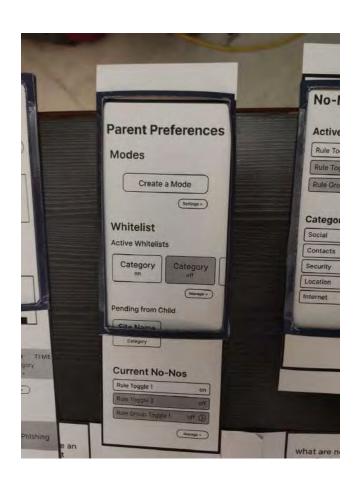
- Naming conventions for certain things were too complex. Wants more context.
- She wanted notifications but with the ability to modify the reception to her own preference.
- She doesn't want to spend too much time on the app. Wants to be able to set and forget.
- Make certain elements bigger, and lay them out more clearly. Want to be able to approve and disapprove requests on the spot. Don't make it overwhelming.

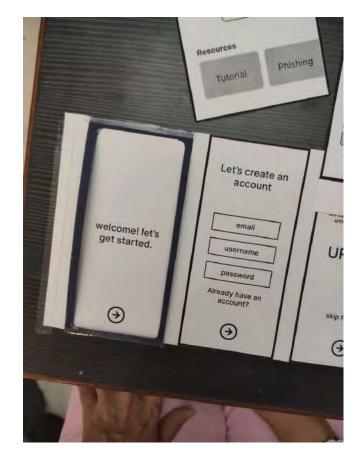
Paper mockup testing in progress

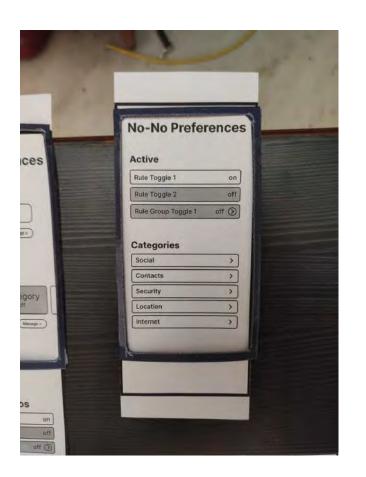












Lo-Fi: Testing



User Test 3

Christian, 16 Testing via Zoom

Christian is a student athlete with strict parents, especially when it comes to technology use. He has an iPhone and shares any other tech with his parents.

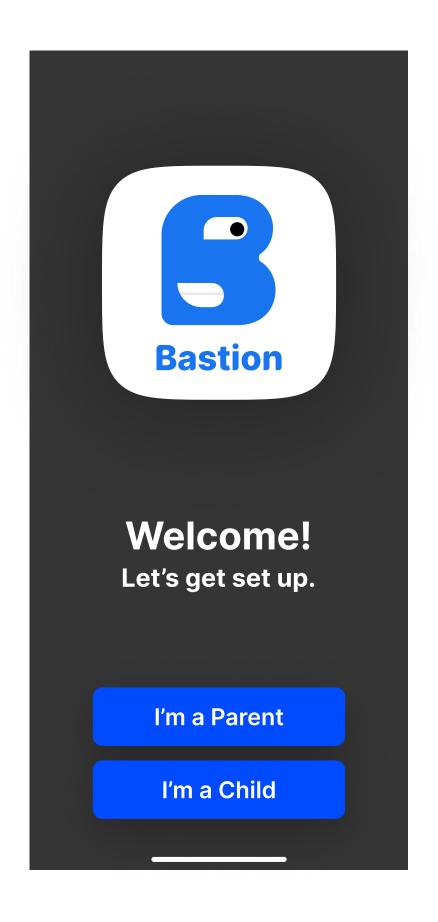
- Understands the set up & how to use it
- Doesnt understand internet safety terms and would like to have explanation in app
- Would like to see others using app
- Likes the warning feature
- Likes the language used on the lo-fi

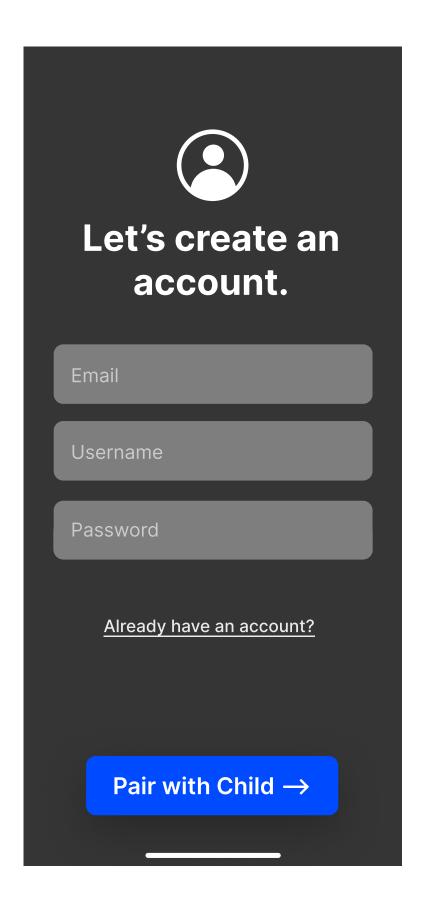
User Test 3: Christian

- Louis (bestfriend, 15) clicked on a link for a reward for halo and it said it was from xbox and his whole wifi got booted for a day
- The explanation of bad/viral things is a good idea, better than just alerting parents, gives you descriptions then telling your parents if you do view
- Here's a warning for you, maybe you didnt think this through and its not worth getting in trouble for, but you can still continue if you think it is
- change from nono my age group (16) would say it sounds childish, you
 have a kiddy version of your phone cause you cant
 use the real one. Makes you feel inferior when you're
 @ an age where all you want is to feel adult

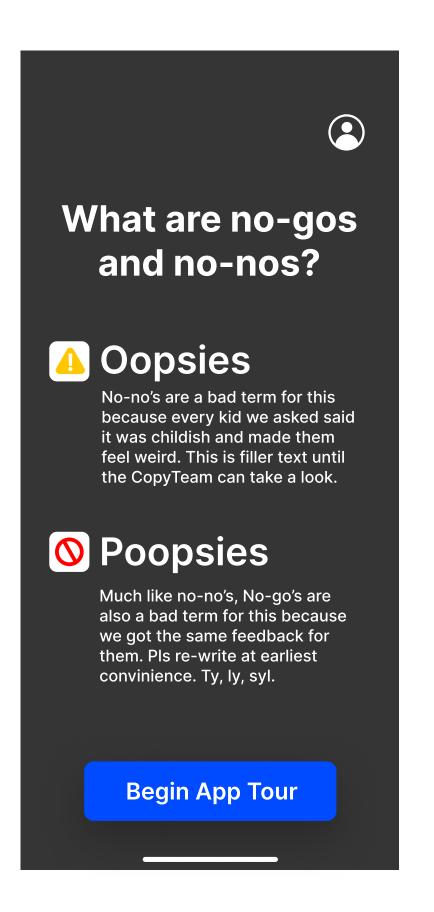
Mid-Fidelity: Onboarding

Parent Onboarding



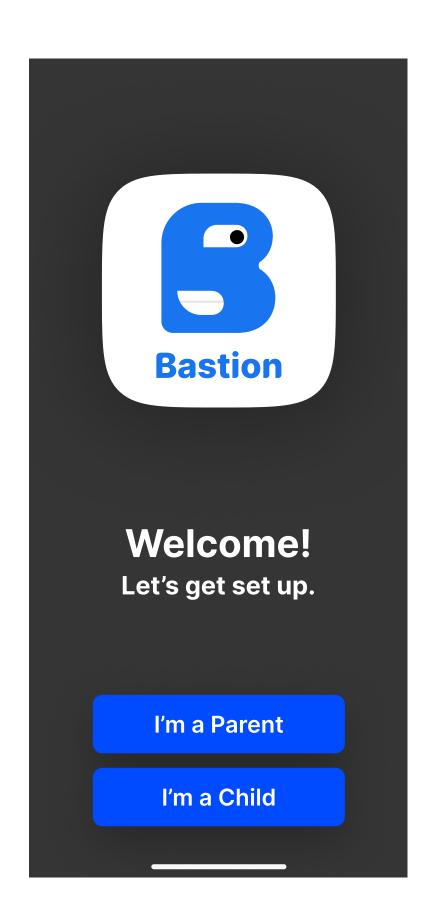


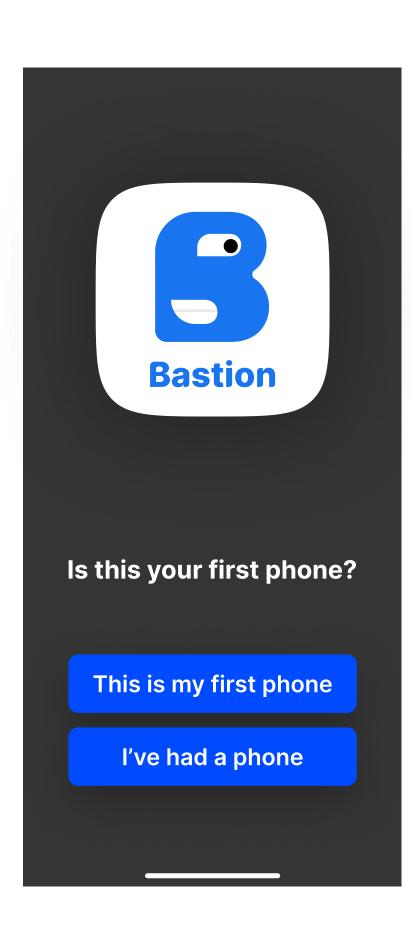


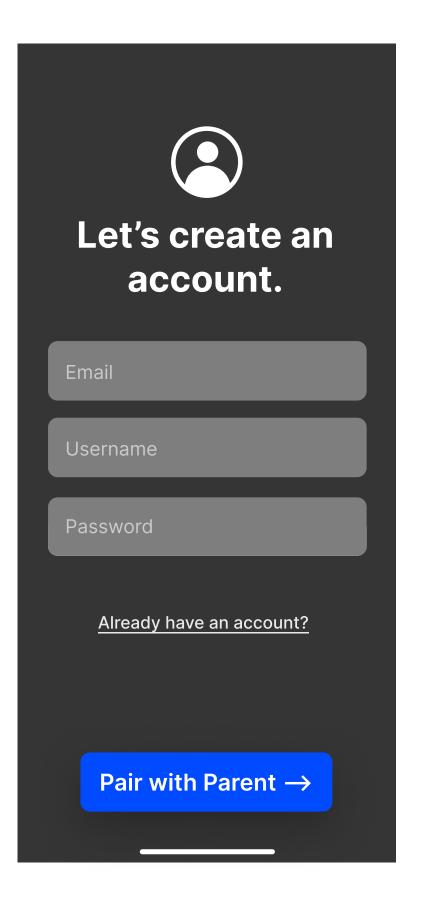


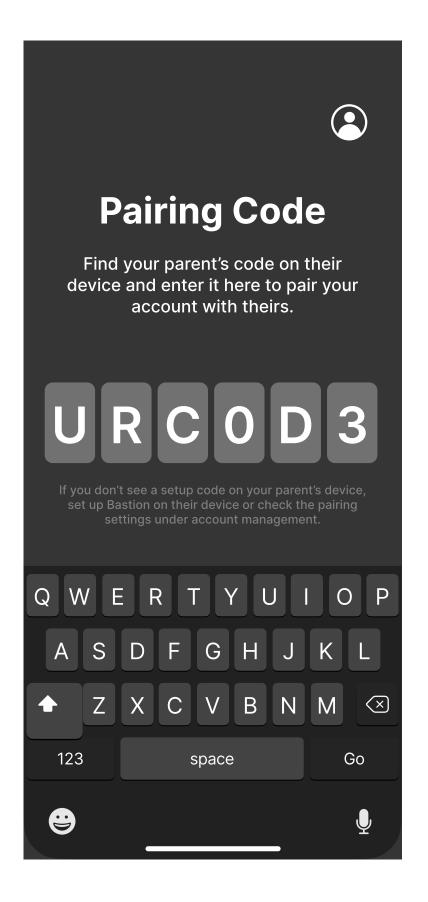
Mid-Fidelity: Onboarding

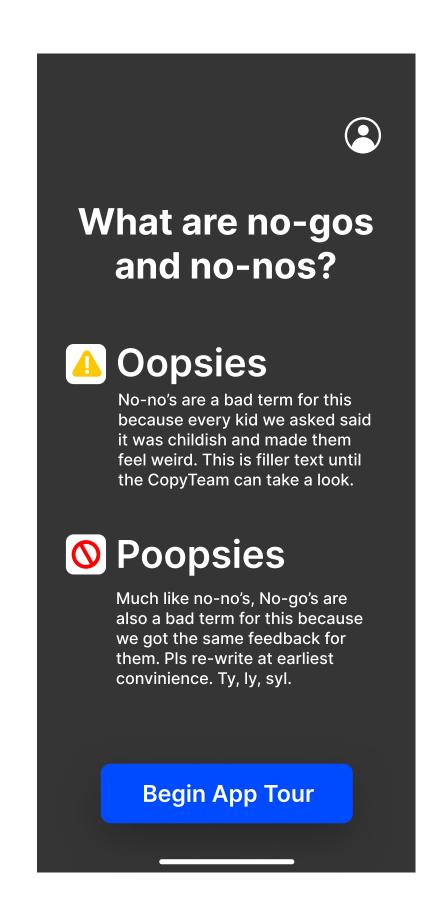
Child Onboarding





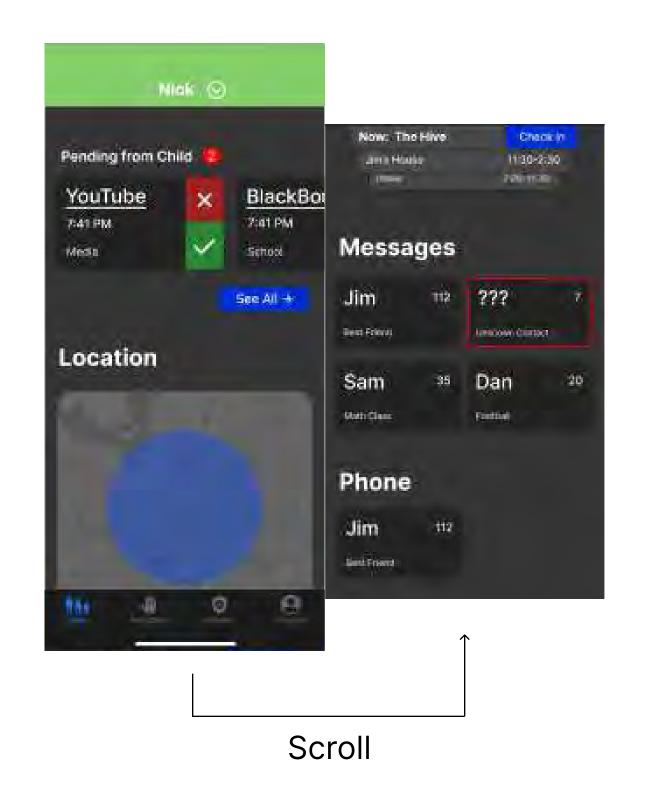






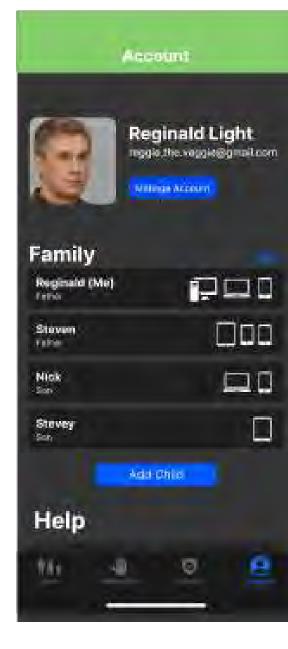
Mid-Fidelity: Child Info, Whitelists, and Security

Parent Side





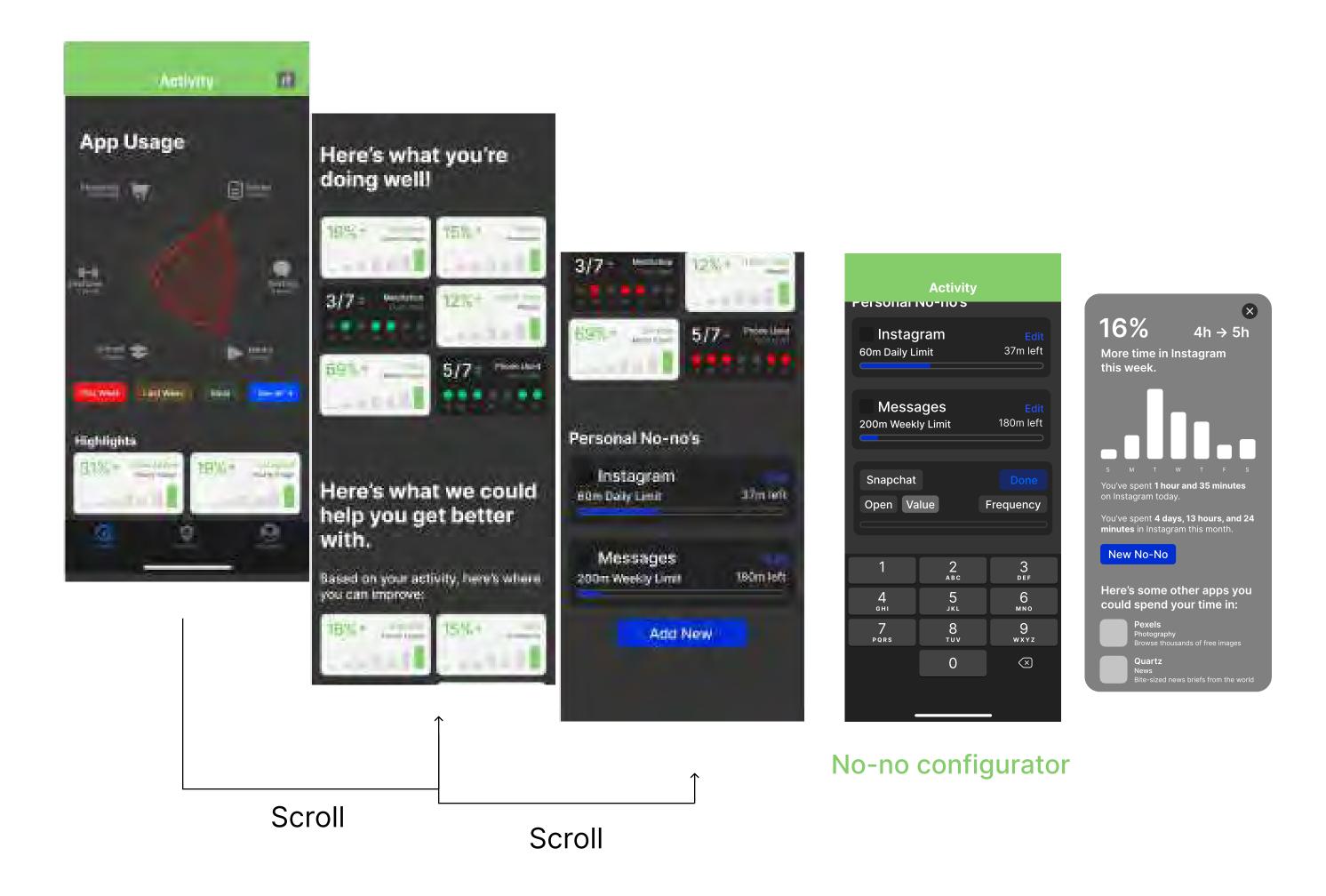


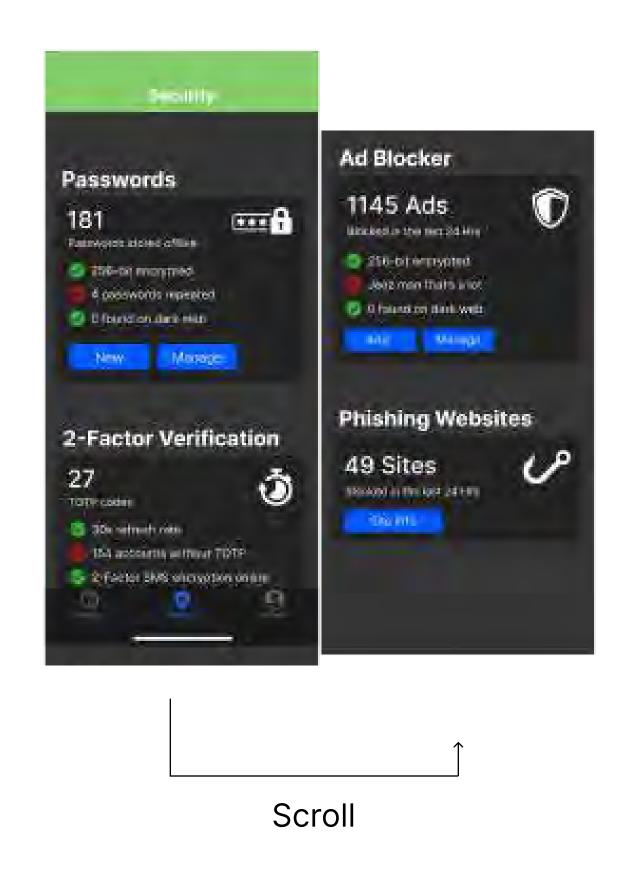


Account screen (Same on both ends)

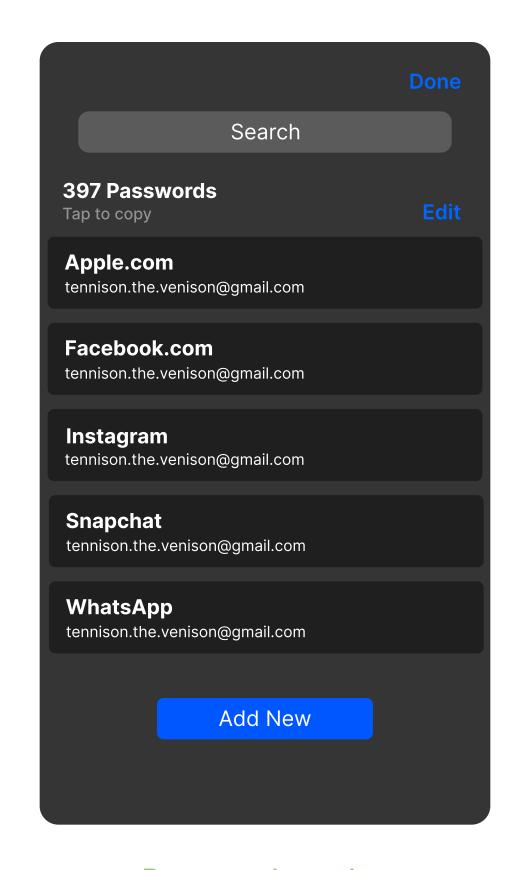
Mid-Fidelity: Child Info, Whitelists, and Security

Child Side

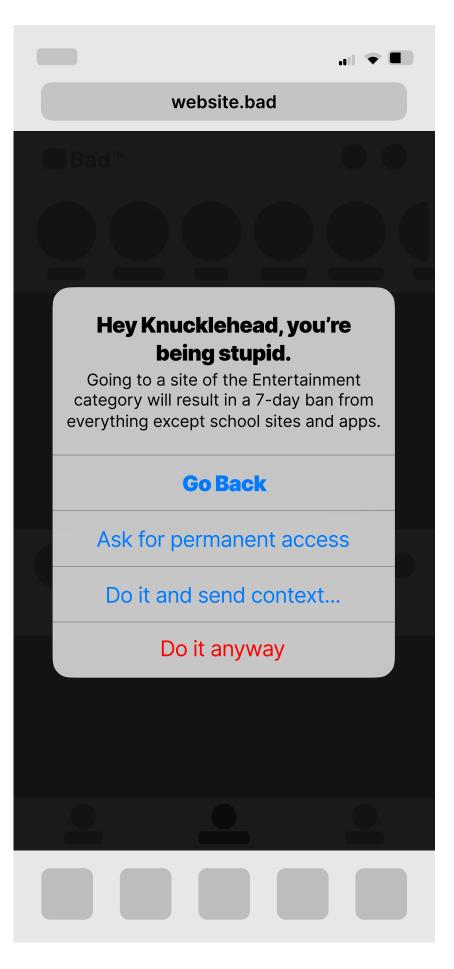




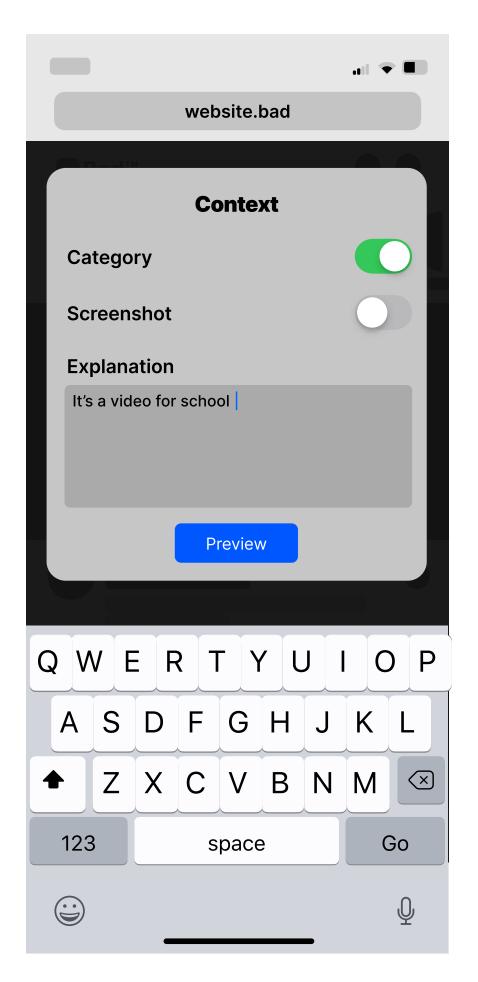
Mid-Fidelity: Password Overlay, Child Alert & Context



Password overlay



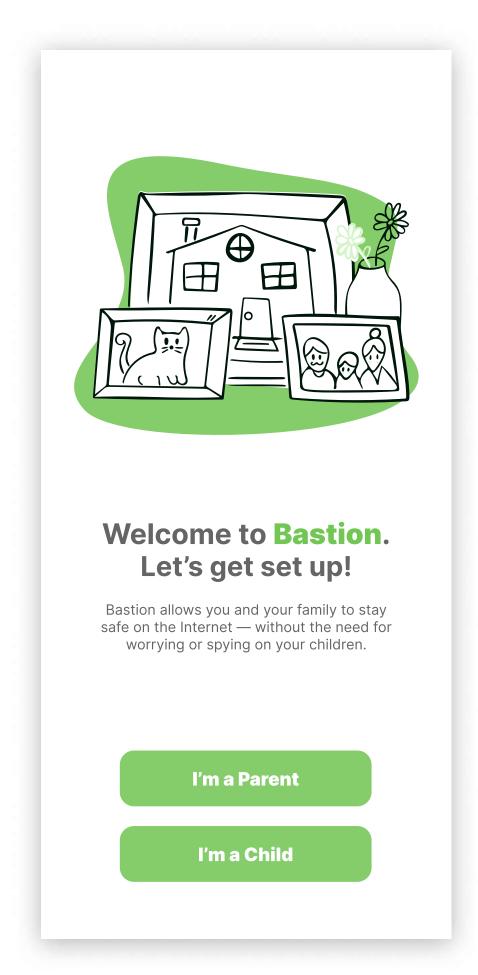
Restriction violation overlay

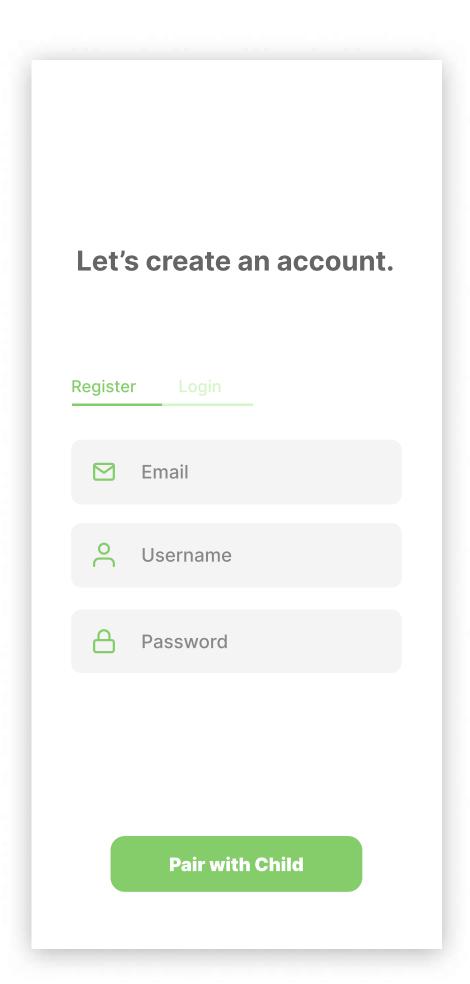


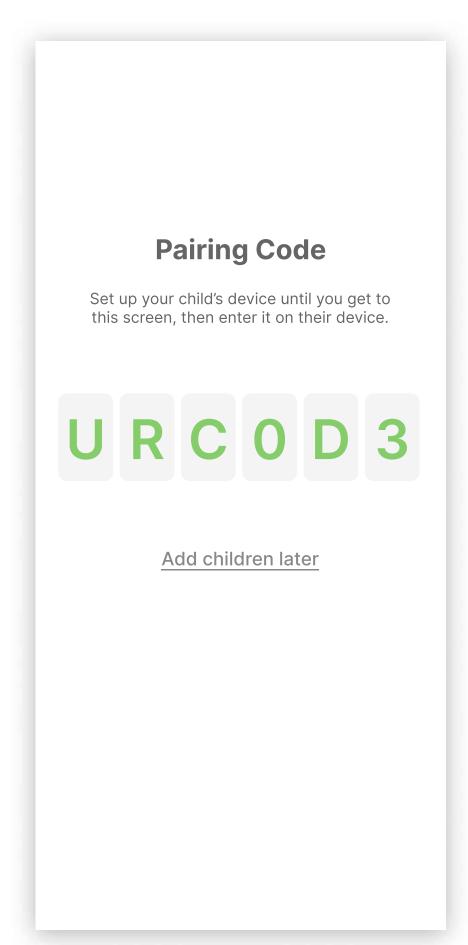
Send context overlay

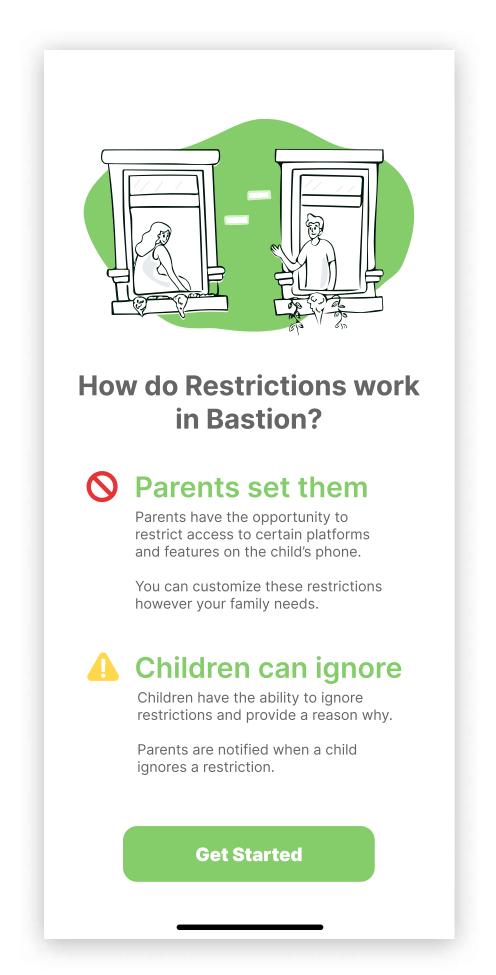
High-Fidelity: Onboarding

Parent side



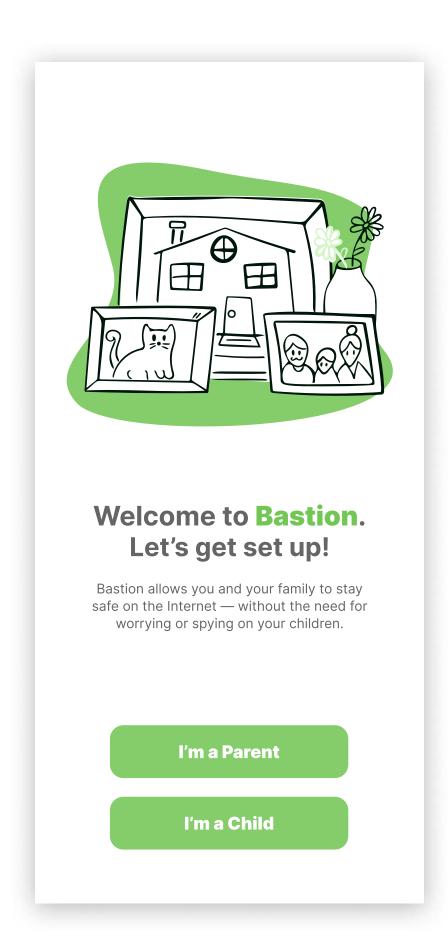


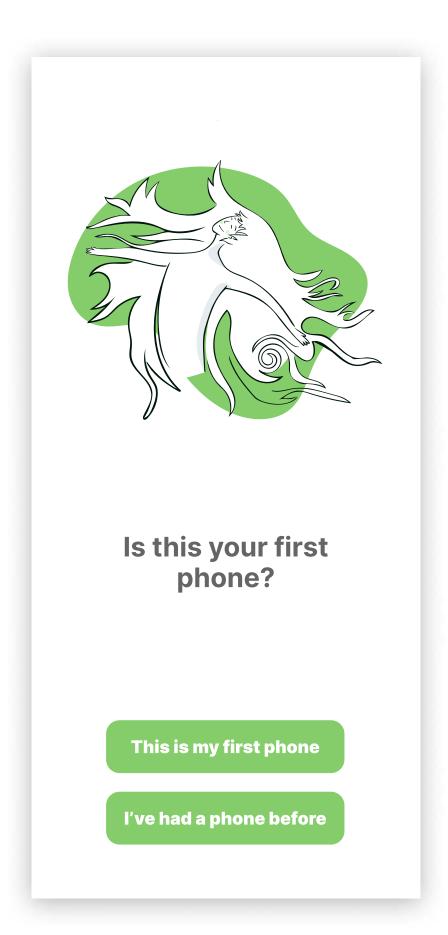


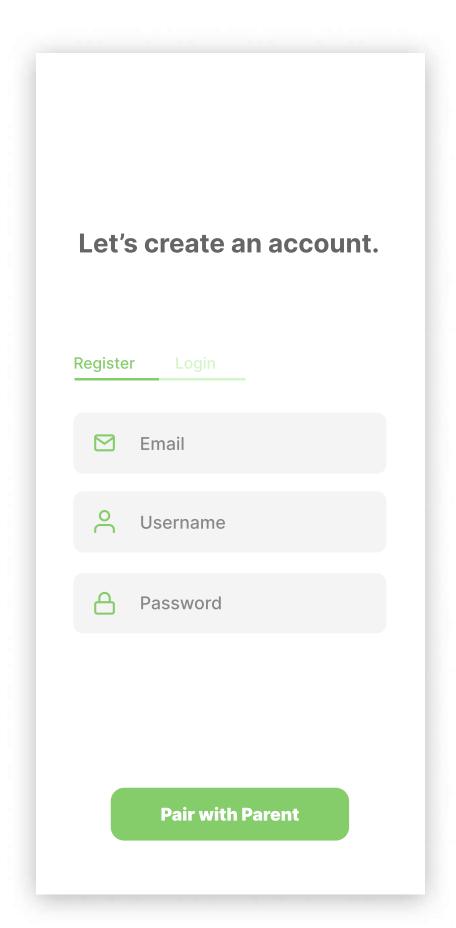


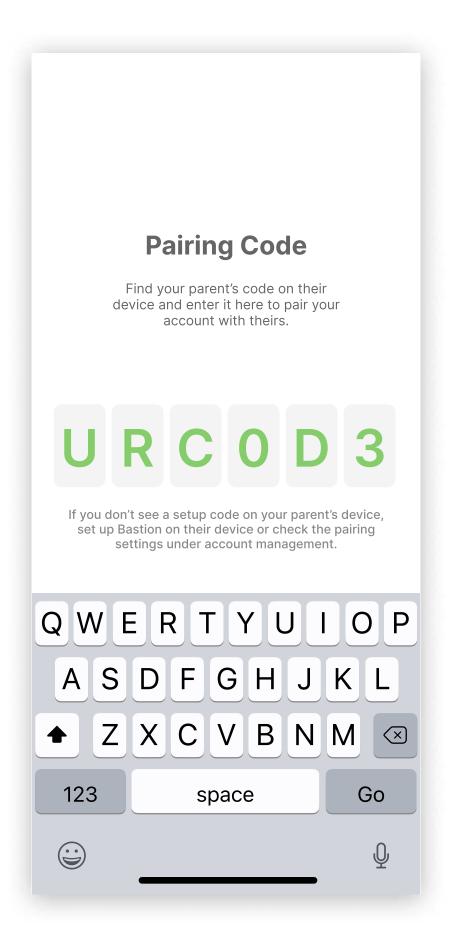
High-Fidelity: Child Onboarding

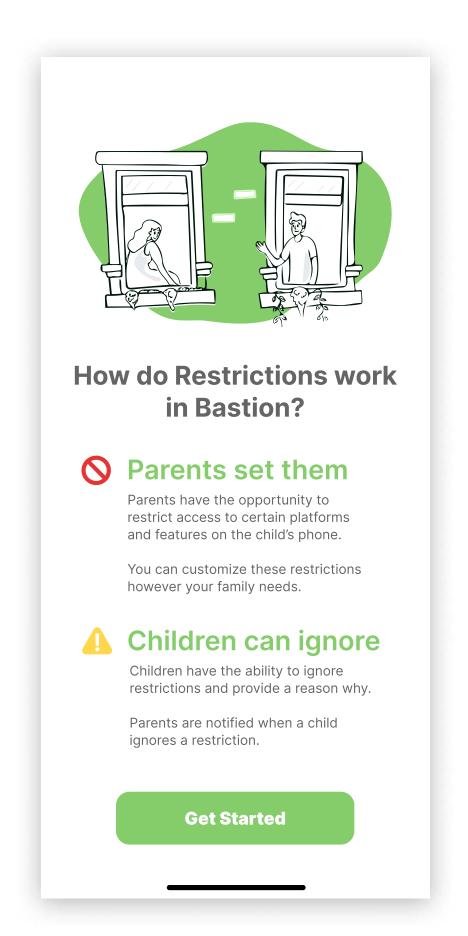
Child Side











Mid-Fi: Testing Results



User Test 4

Caroline brother, 16 Testing via Zoom

Christian is a student athlete with strict parents, especially when it comes to technology use. He has an iPhone and shares any other tech with his parents.

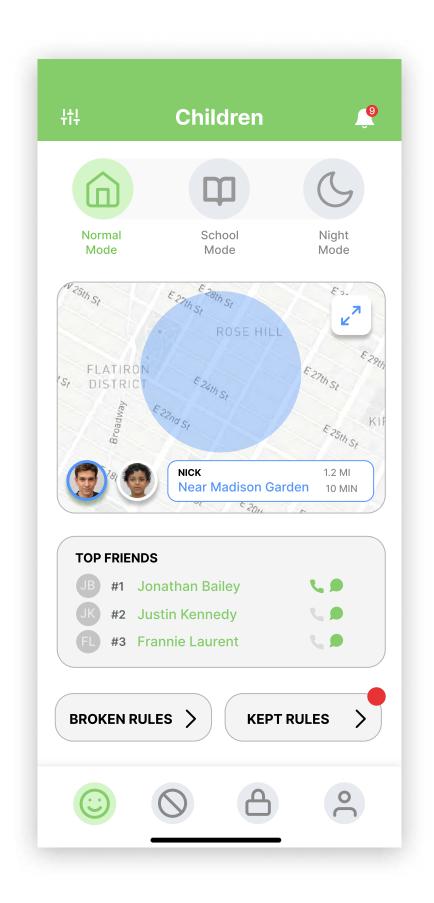
- He was confused by the activity app usage map and how to understand it.
- He liked the encouraging "Here's what you're doing well"
- He suggested themes/customization abilities
- The improvements from low-fi to mid-fi were understood and recieved well
- He navigated the app easily and discussed how he felt that his peers would also be able to navigate the app easily

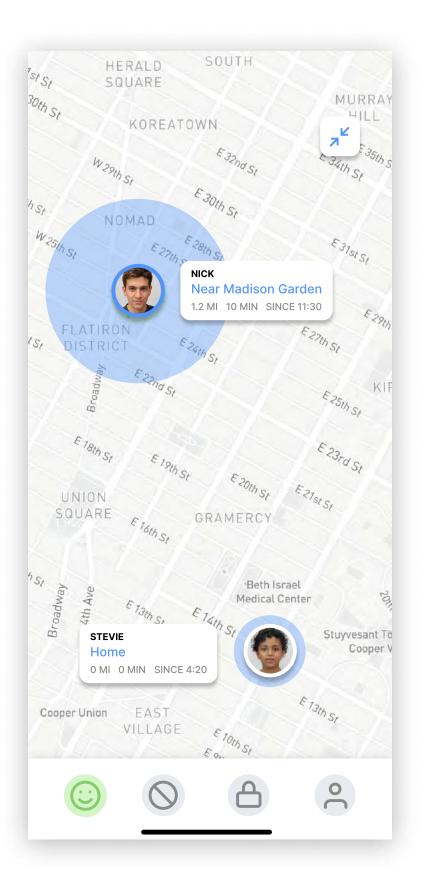
- He appreciated the updated copy and language used throughout
- He enjoyed being able to store & manage passwords because that is something he frequently forgets/struggles with

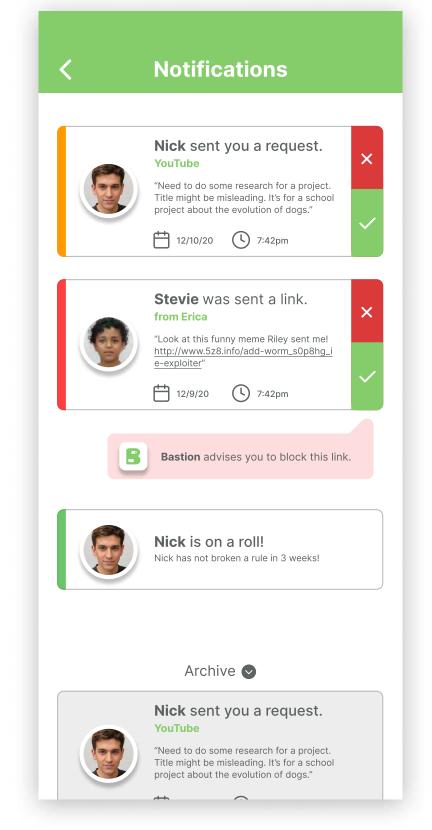


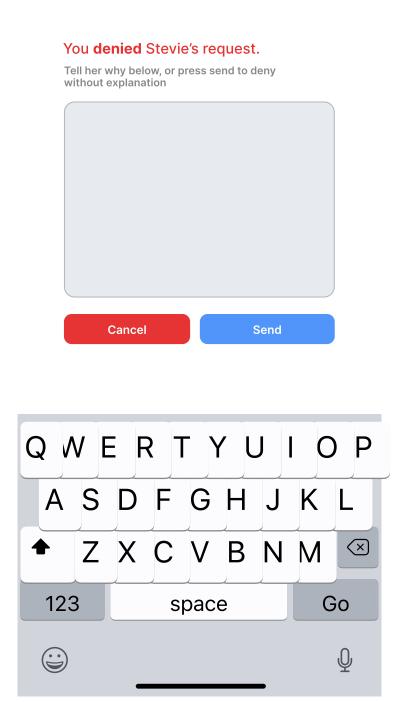
High-Fidelity: Parent, Child, Map

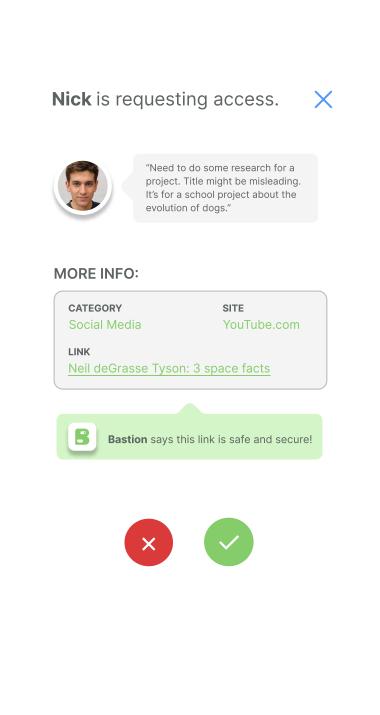
Parent Side





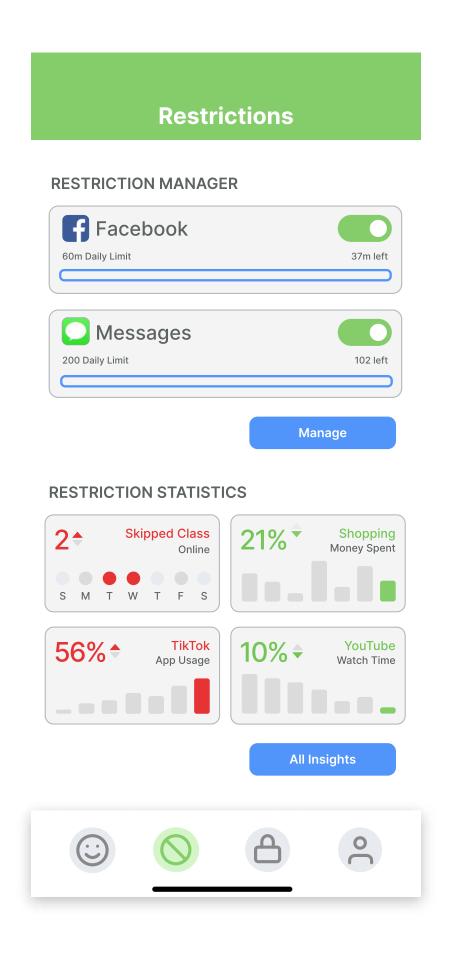


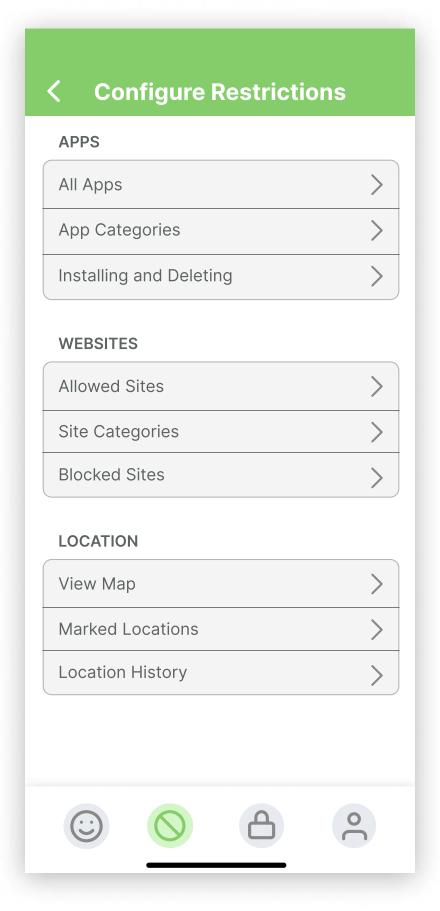


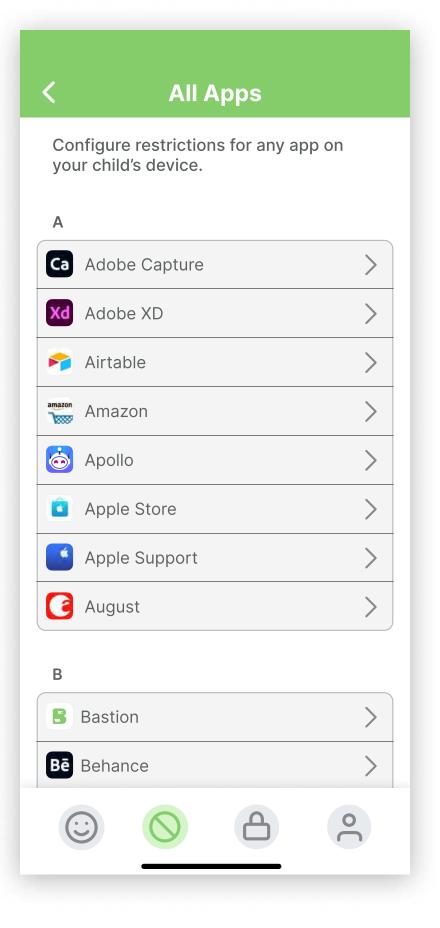


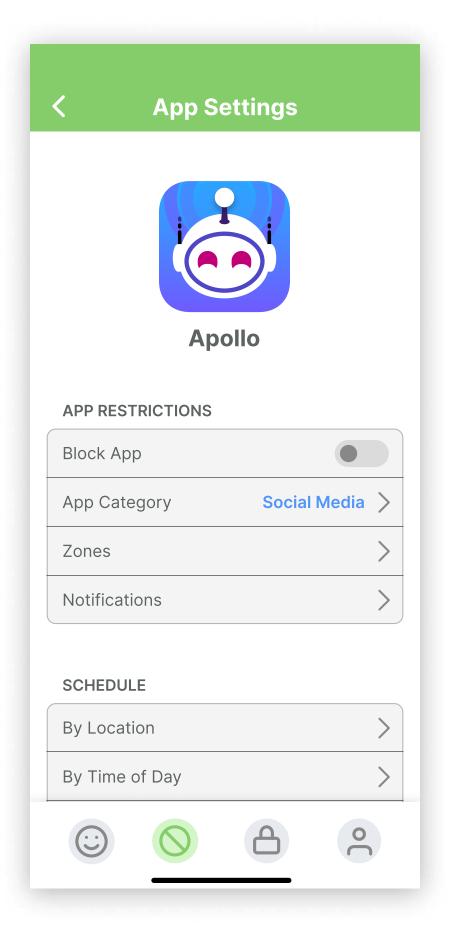
High-Fidelity: Parent, Restrictions

Parent Side



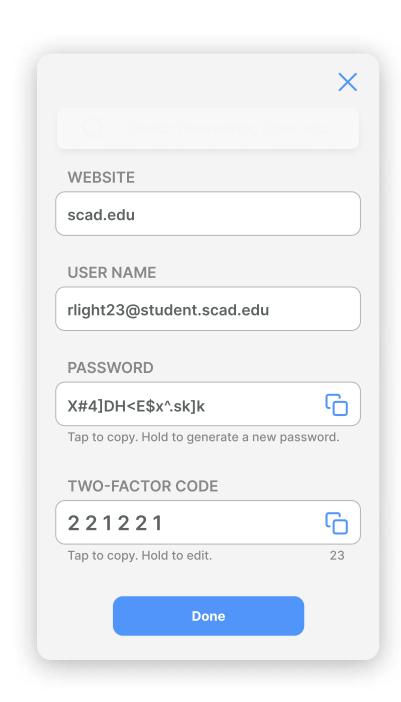


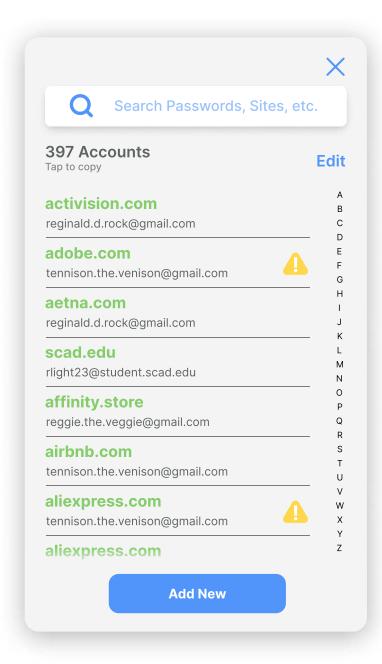


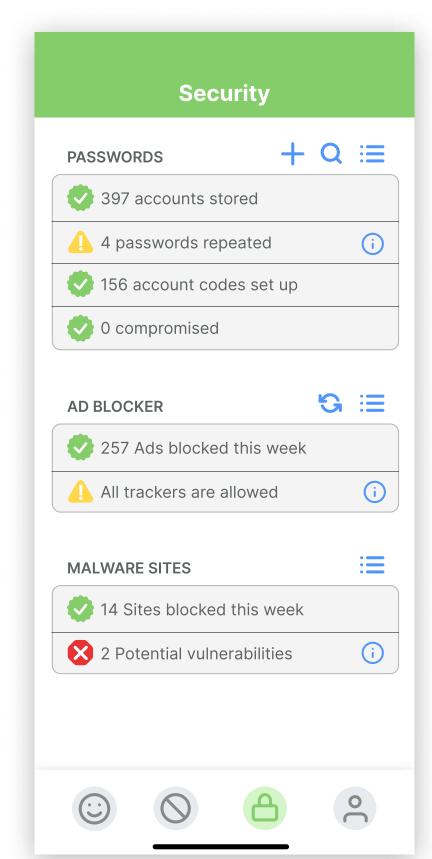


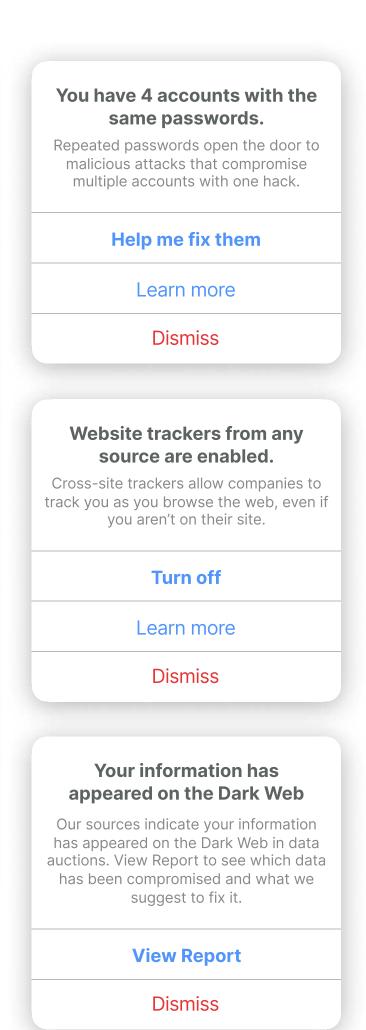
High-Fidelity: Parent, Account, Security

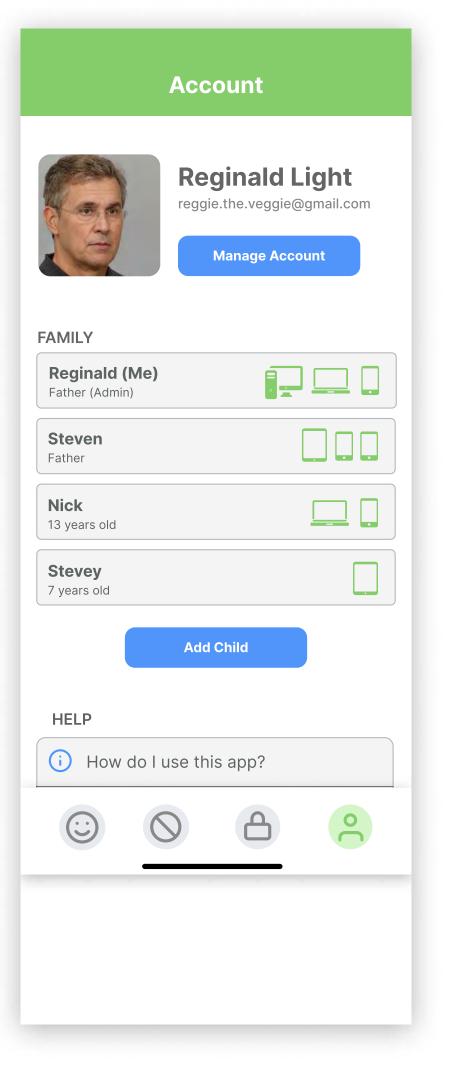
Parent Side





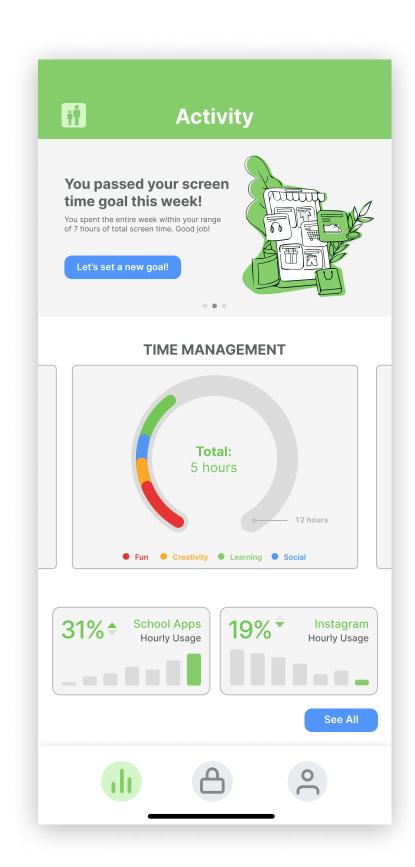


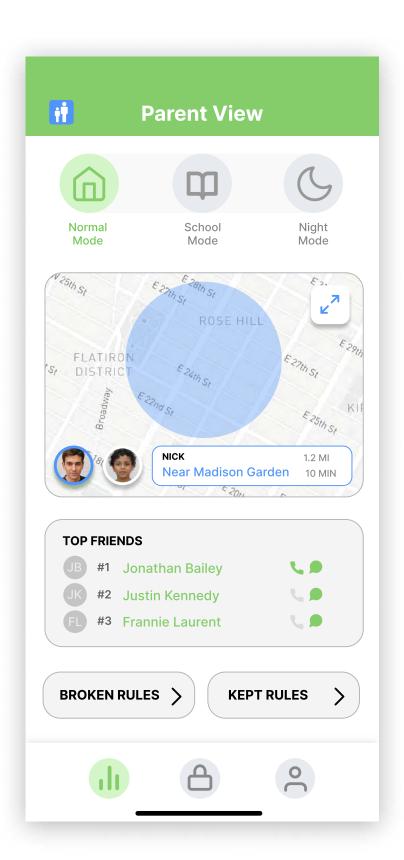


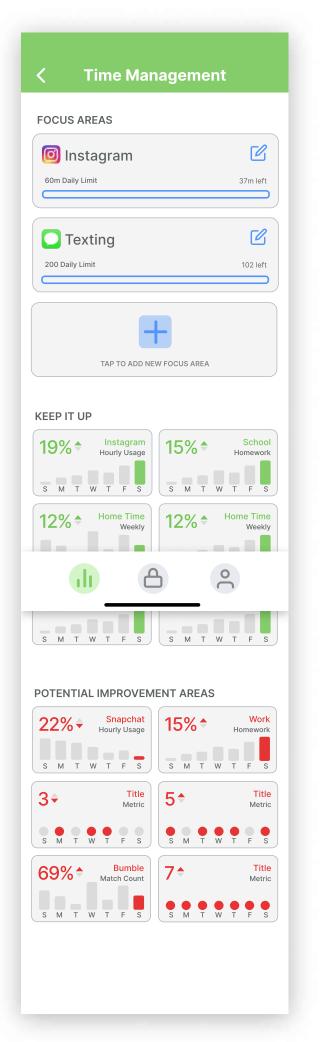


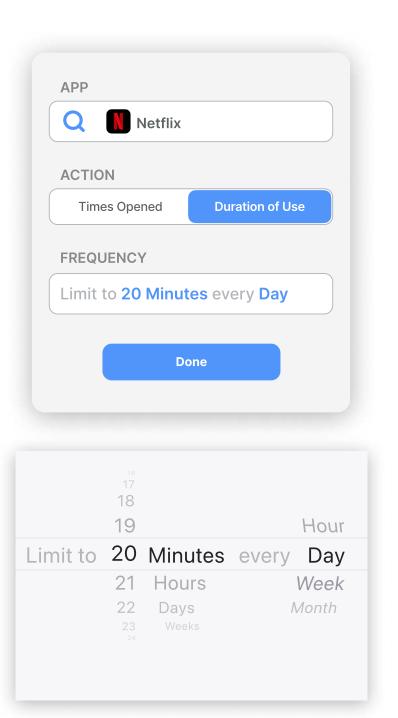
High-Fidelity: Activity, Parent View

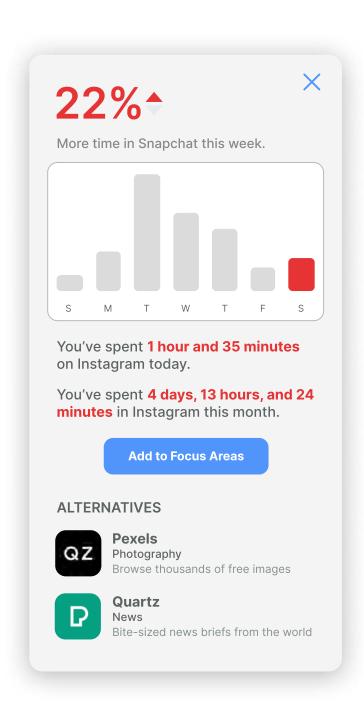
Child Side





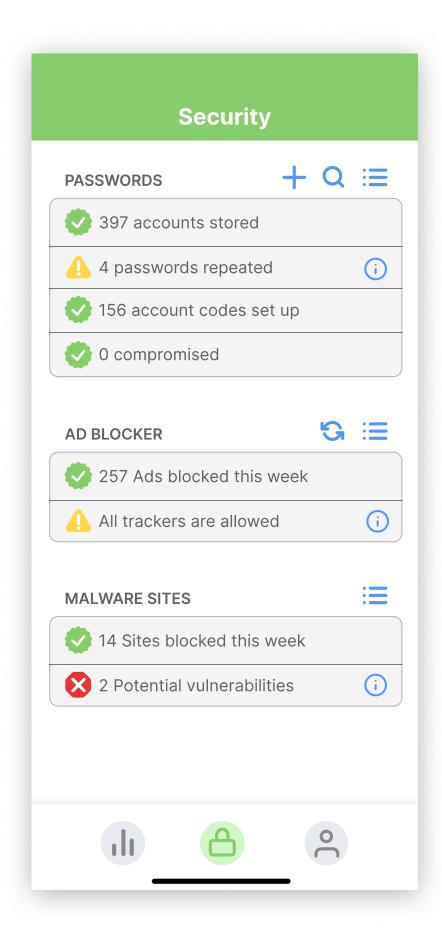


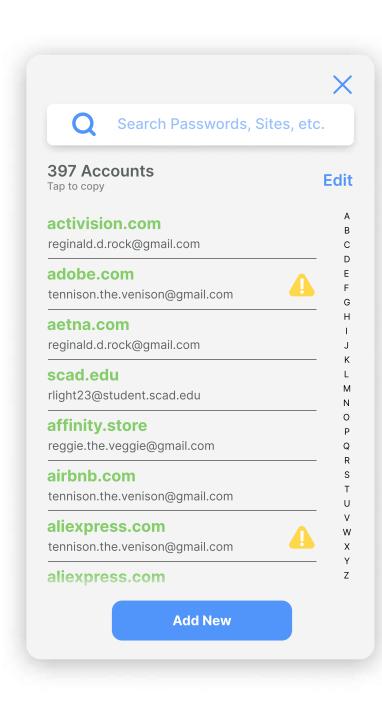


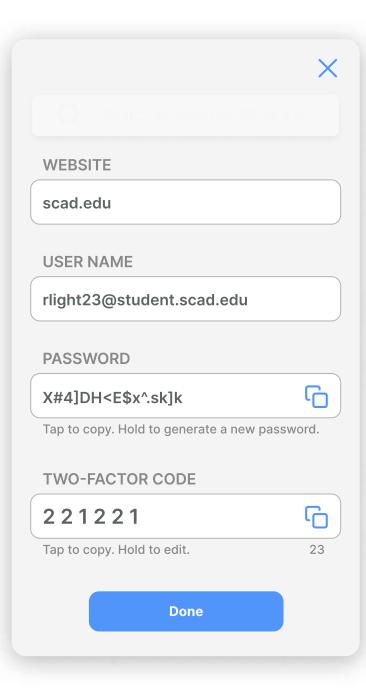


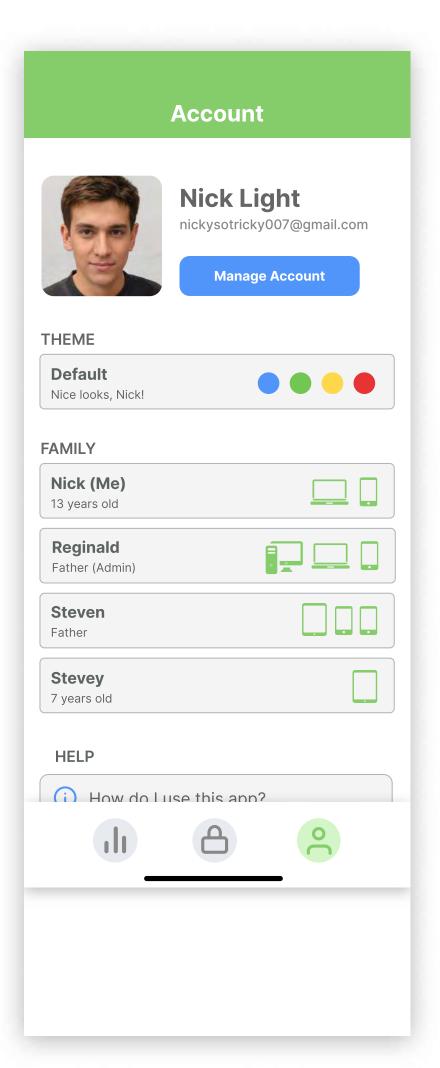
High-Fidelity: Account, Security

Child Side



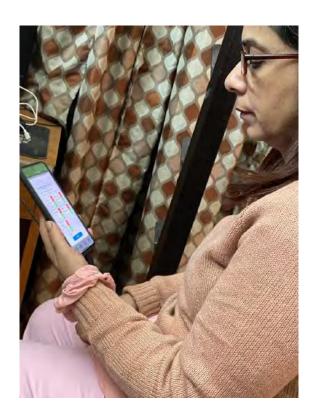






Hi-Fi: Testing

User Test 1: Sujata (Mother, 52)







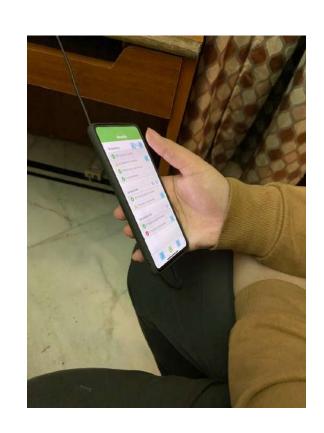
Our final user tests were conducted with Sujata and Akshat. These were the same people we conducted Lo-Fi testing with, and thought it might be interesting to see how they would react to the changes made based on their feedback.

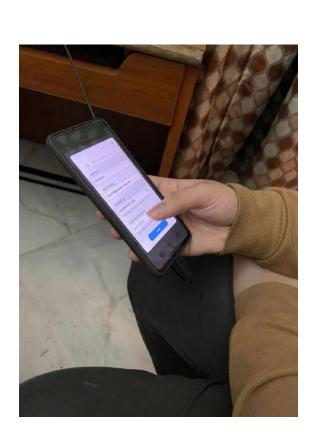
Feedback from both tests was positive. Akshat appreciated the inclusion of the tab bar, and both users liked the visual design and general layout/flow of the UI. They suggested some changes in copywriting, and changing the layouts of certain elements on a few pages, but most of these were quite minimal.

User Test 2: Akshat (Brother, 16)





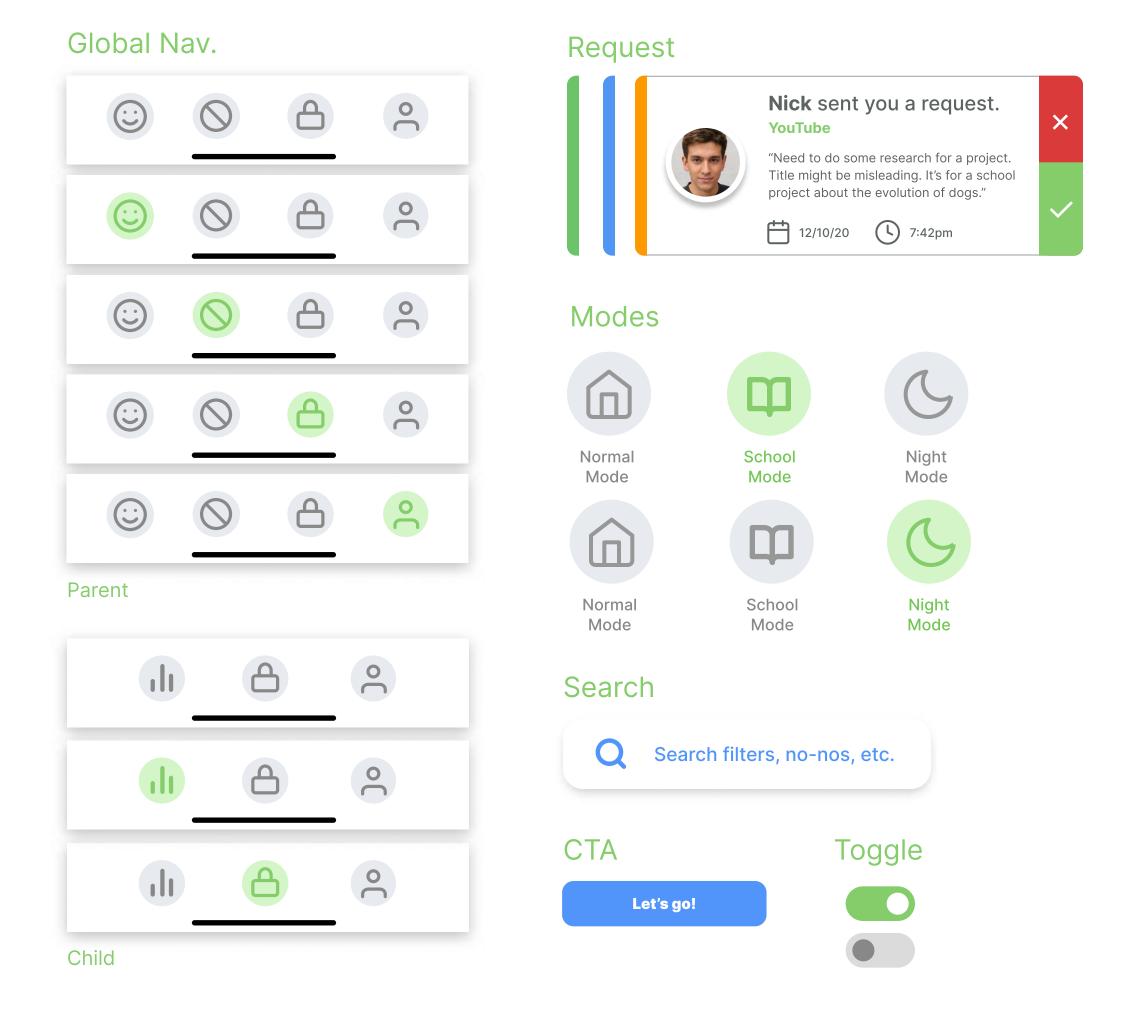






Final Visual System

Interface Assets



Typefaces Color Inter **ABCDEFGHIJKLM NOPQRSTUVWXYZ** abcdefghijklmn White opqrstuvwxyz **ABCDEFGHIJKLM** NOPQRSTUVWXYZ abcdefghijklmn opqrstuvwxyz **Light Green Dark Green** Iconography Illustrations

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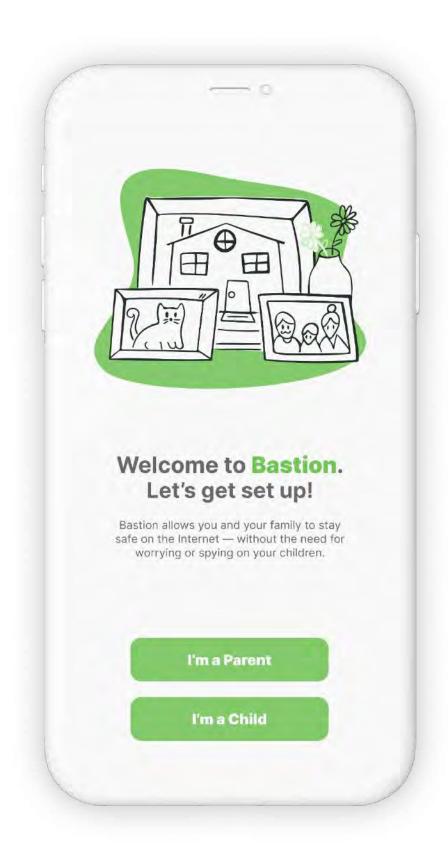
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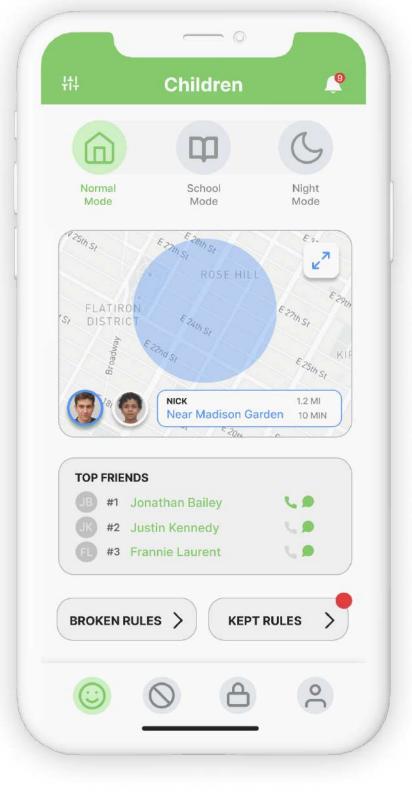
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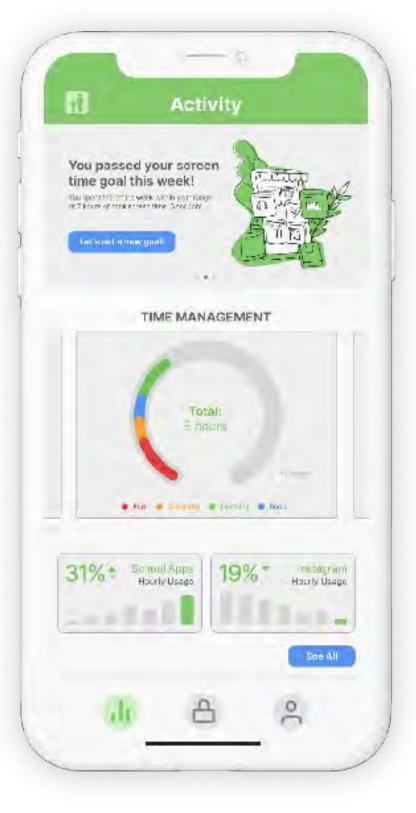
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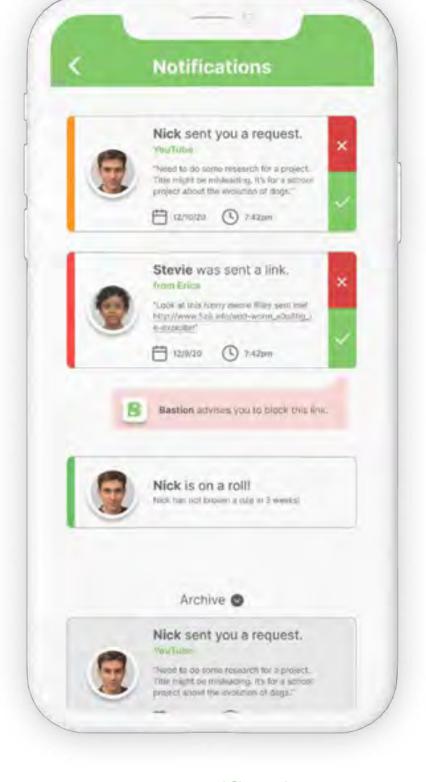


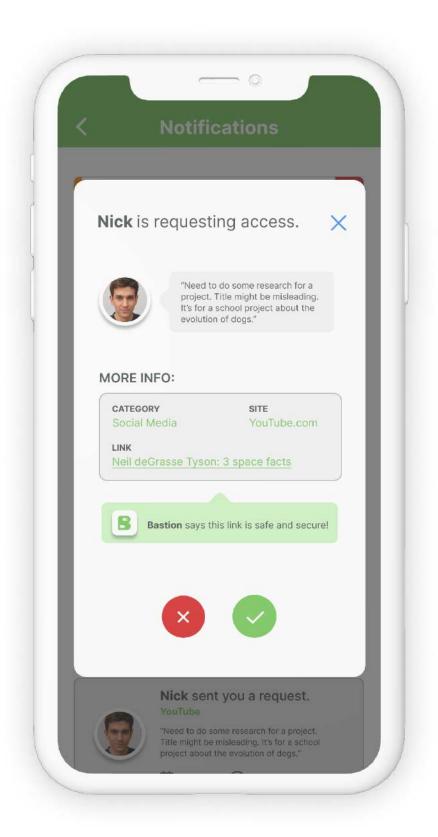
Featured Screens











Onboarding

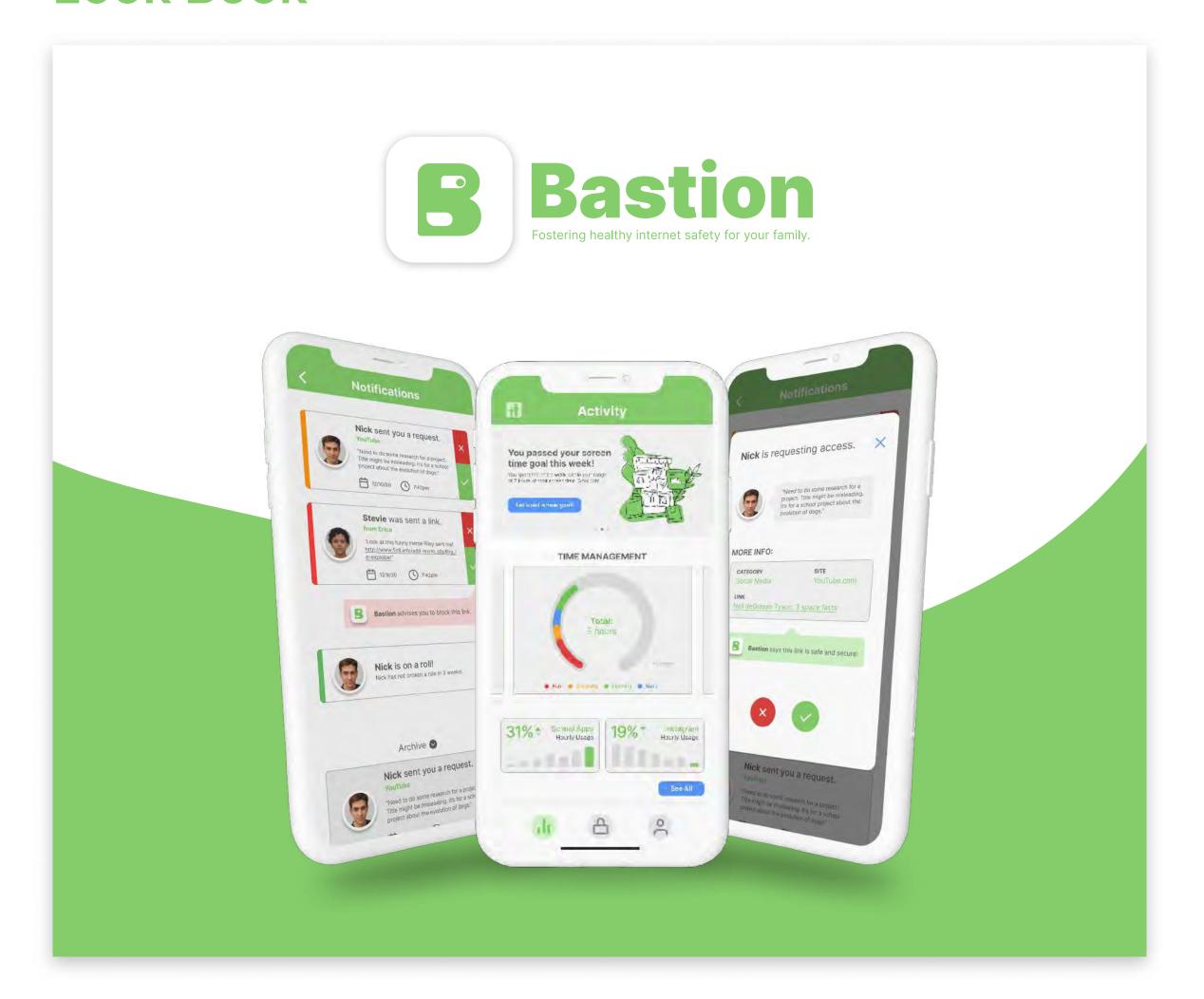
Parent Dashboard

Child activity dashboard

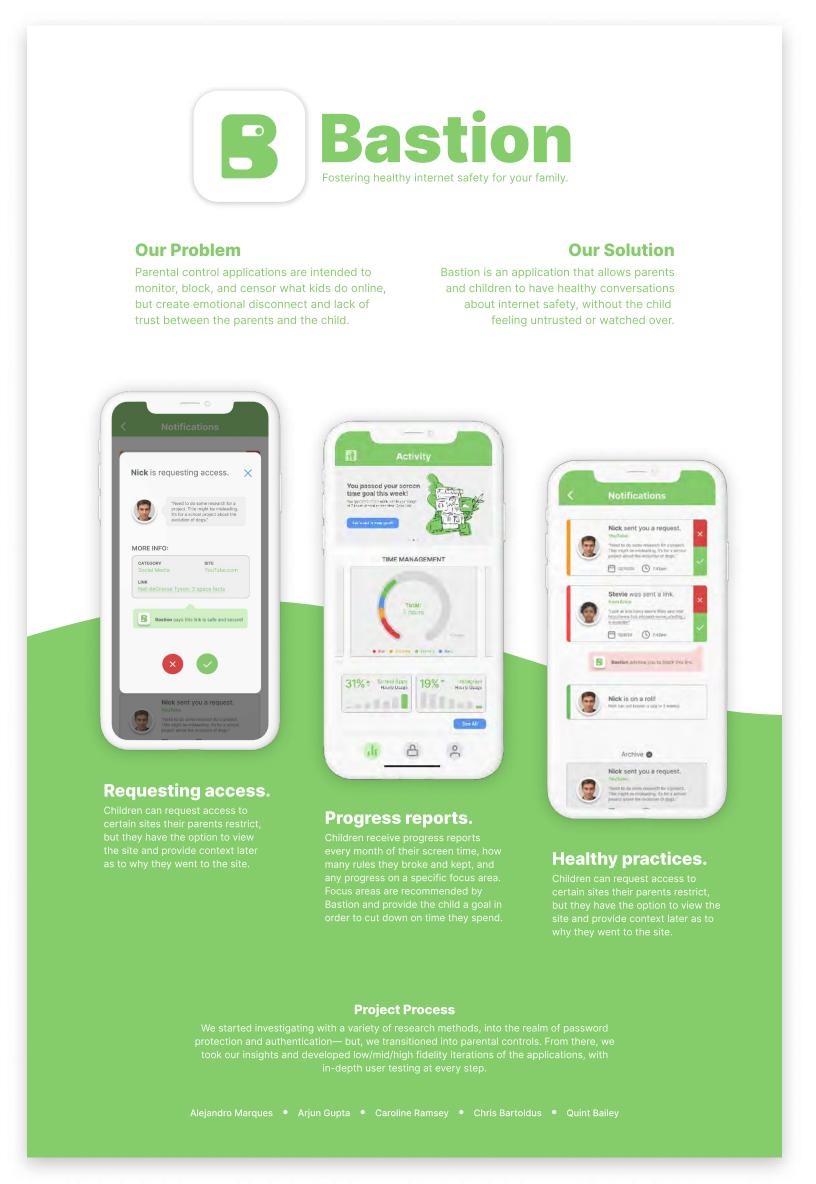
Parent notifications

Request from child

Look Book



Final Poster



Bastion