

# Peekaboo!

# **Final Report**

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# Introduction

# Value Proposition

Quickly and easily send updates to family and close friends for a **simple check in**.

# Problem/Solution Overview

People want to check in on family and friends, but they cannot do so in an easy manner without being intrusive. Peekaboo! gives users the ability to instantly share updates to all family/close friends through a simple check-in, photos, or fun in-app activities.



# Needfinding

#### Interviews

For our needfinding interviews, we aimed to satisfy **three key objectives**: Find people that 1. use a range of travel methods, 2. are diverse in age and background, and 3. are in the action of traveling. In total, we conducted eight interviews. We interviewed strangers on the Caltrain, elderly couples in San Jose gyms, and more (*Fig. 2*). Our participants ranged from teenagers to more than 70, and from never having left the area for 2+ years to 4+ international vacations per year. For each interview, we had an interviewer and a notetaker to ensure we gave enough focus to the interviewee while also recording all important information and observations. We used an iPad for recording audio and signing consent forms, and a Sony  $\alpha$ 7C for photos.

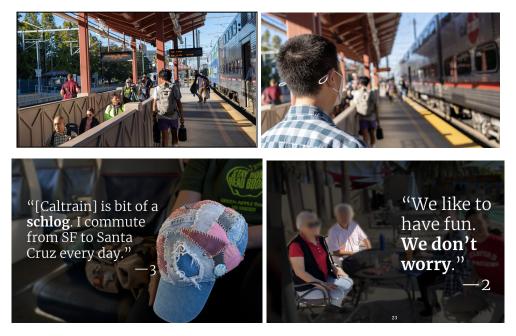


Fig. 2: Collage of misc. interview photos and selected quotes

### **Synthesis**

Our needfinding interviews contained dense and detailed insights that required extensive unpacking. We used otter.ai to transcribe interviews and highlighted key lines for synthesis. From key phrases, we created Empathy Maps for each interview.



Fig. 3: Empathy Map

Through these interviews we identified four main themes:

- **Connectivity**: When people travel, they want to stay in touch with home and friends. But they forget. (Participant 1,3,4)
- **Safety**: Is the number one concern for most travelers. (P3,4,5)
- Certainty: When traveling, people like to make a plan and stick to it. This often involves tour groups, but some consciously explore off the beaten path. (P2,3,4,6)
- **Novelty**: Frequent travelers, whether public transport or tourism, begin to enjoy traveling less when experiences resemble each other. (P1,4,6)

Additionally we were able to capture multiple insights and conclusions:

- While traveling, young participants are more connected with friends and less connected with family. This is consistent across all participants. This could reflect cultural disparities or maturity.
- Older participants prefer tour groups, reflecting a preference for structure and clear expectations.
- Regardless of demographic, all participants check in about safety while traveling. This has been aggravated especially by the pandemic. It is the inherent nature of travel that there is uncertainty, and check-ins assuage the concerns of family.

# **POVs & Experience Prototypes**

#### **POV Statements & HMWs**

After we made these early distinctions and observations, we developed user POVs to get a better picture of how we can help satisfy these stakeholders. We narrowed it down to our top three POVs and developed How Might We questions to continue the brainstorming process.

#### <u>POV #1:</u>

*WE MET*: participant 8, an infectious disease expert who lives locally and has four children who live far and travel frequently.

*WE WERE SURPRISED*: to learn that he doesn't worry much about his family's safety and status when they are traveling, but he still likes to stay in touch with them and talk at least once a week.

*WE WONDER*: if this means that he trusts his kids to be cautious and safe, or if he doesn't want to be too intrusive of their lives and appear to be a helicopter parent.

*IT WOULD BE GAME CHANGING*: if there was a quick and easy way for him to check up on family without needing to directly contact them as he says he doesn't want to be a 'helicopter parent'.

#### HOW MIGHT WE?

- How might we boil down check-ins to their core essence some form of interaction — instead of only checking in with "are you alive" sort of texts?
- How might we simplify and/or diversify methods of check-ins?
- How might we make checking in not helicopter parent-y?
- How might we show parents how to check in in a non-overbearing, helicopter-y manner?
- How might we make children perceive parent check-ins as not overbearing?
- How might we make checking in like a game, like getting your daily rewards for Temple Run?

#### <u>POV #2:</u>

WE MET: participant 3, a high school student commuting daily on the caltrain to school.

*WE WERE SURPRISED*: by how fine he was about walking through a "sketchy" route every day to take the caltrain.

WE WONDER: if this means that routine instills a sense of safety.

*IT WOULD BE GAME CHANGING*: to bring some of this sense of routine into new places.

#### HOW MIGHT WE?

- How might we encourage people to take/follow established routes and services?
- How might we lead people to take safer and easier routes
- How might we make people not need to feel a sense of routine in order to feel safe?
- How might we share routines between people?
- How might we enlist peers to help ease a newbie's way into a new routine?

#### <u>POV #3:</u>

*WE MET*: participant 7, a young actor studying at Stanford who starred in Gotham since he was a young kid and often travels for work to conventions and film shootings.

WE WERE SURPRISED: that he prefers having friends all across the world even if he doesn't speak with them for long periods of time when he's not in the same region as they are.

*WE WONDER*: if this means that professionals who travel often for work do not want all their friends to be localized in one place and would prefer seeing foreign friends once in a while.

*IT WOULD BE GAME CHANGING*: to help professionals who travel a lot meet new friends on a global scale to create non-localized friend groups.

#### HOW MIGHT WE?

- How might we have global friends easily aware if they are in the same location again?
- How might we fit in friendship given a tight work schedule?
- How might we gather like-minded professionals together?
- How might we help non-professionals approach professionals?
- How might we leverage working while traveling to help establish new relationships?
- How might we establish well known meet up locations for professionals looking to connect?

After creating 15+ HMWs for each POV, we narrowed it down to the top 3 HMWs. This helped us proceed with creating our top 3 solutions.

#### **Top 3 Solutions**

• HMW: How might we enlist peers to help ease a newbie's way into a new routine and/or area?

- <u>Solution</u>: Local Omegle b/w locals and non-locals for recommendations and directions if lost (security blanket and camaraderie)!
- HMW: How might we boil down check-ins to their core essence some form of interaction — instead of only checking in with "are you alive" sort of texts?
  - <u>Solution</u>: An app that shows a grid of photos taken that day from family members (or black and "no photo yet" if not posted yet). This grid exists as a widget, so when you open your phone, you are instantly greeted on your HOME SCREEN (so it's passive) by what your family is up to that day and where.
- HMW: How might we gather traveling professionals together?
  - <u>Solution:</u> App that allows users to create meetup events at public locations and shares the number of people attending.

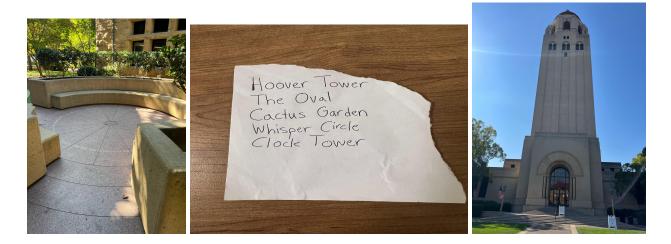
After coming up with these three solutions, we needed to test our main assumptions to better understand what solutions are most realistic and useful.

#### **Experience Prototypes**

- *Prototype 1*: For our first prototype, our main assumption was that locals would want to interact with non-locals and vice versa.
  - To test this assumption, we went around campus and looked for tourists. After finding tourists, we introduced ourselves and asked if they'd like any recommendations or help finding anything.
  - Additionally, we went up to Stanford students, posing as tourists, and handed them a piece of paper with recommendations we were "given" from someone else. We asked if they would help us find them or point us in the right direction and ask if they have any other suggestions.
  - Overall, when going up to others in search of help, we found that they were enthusiastic to chat. Also, tourists typically found

Google and Google Maps adequate for navigation and location recommendations (although one group was still interested in recommendations).

 From these observations, we found that locals and non-locals are comfortable (and enjoy) interacting. This validated our assumption.



 Prototype 2: For our second prototype, our main assumption was that people want to share photos with their family while traveling. To test this assumption, we went to the main quad and found tourists taking photos. After they would take their photo, we would ask them if they were to send this photo out, who would be the first 5 people they send it to. Finding people to test this on in their moment of intent was excellent, although it was hard to obtain some interviews. We learned that people liked sharing photos with family more than expected and that people would share different photos with family than friends. This helped us conclude that our assumption was valid and that people would want to share photos with their family while traveling.



Prototype 3: For our third prototype, our main assumption was that professionals in the same industry want to meet up when they go to new places (both close and far) no matter the industry or the level of career experience. In order to test this assumption, one member of our team acted as the "app" that helped plan events and tell others how many people would come. This was a perfect simulation of the idea because our team member was on the east coast for job interviews with other young professionals all around. Additionally, a similar test was conducted when a team member went with one member of SWIF (Stanford Women in Finance) to an event and found people to meet up with again later. Multiple showed up to the event and enjoyed it, saying they would be interested in planning future meetups. We concluded that people seemed to be interested in going to these events even if it was spontaneous. At first it was hard to find an initial candidate that wanted to help set up an event to meet other people, making it harder for these type up events to get held. With all of this information, we determined that our assumption was somewhat valid since professionals were interested in meeting up at events but it was hard to plan them and get them started.



# **Design Evolution**

### **Solution Refinement**

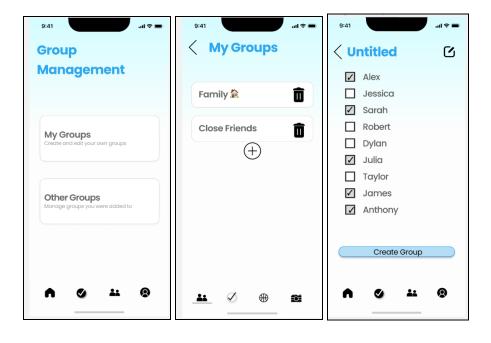
After testing these three prototypes on different users, we came to the conclusion that our second solution was the best option. That is, that people want to share photos with family and friends when traveling. Our assumption held true and we were surprised to find that people seemed much more willing to share than we initially expected. For those reasons, we decided to go ahead with developing our app idea of being able to check in with different groups of family and friends with efficiency and convenience.

#### Tasks

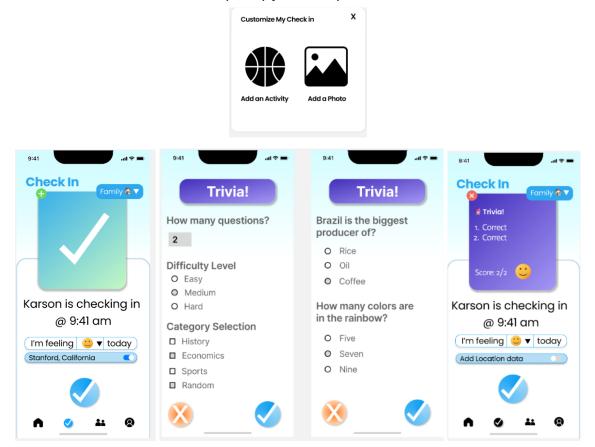
- **Task 1 (Simple)**: Check in with a group of family and/or friends.
  - Rationale: This task was chosen because it is the main purpose of our app. The idea is to be able to quickly and easily check in with family and/or friends at the bare minimum, so this is the simple task. We expect most users to perform this task (unless they strictly view content and don't post check ins).



- Task Flow: Navigate from the home screen (left image) to the check in page by clicking the blue check in button or check in button on the bottom navigation bar. On the check in page click the blue checkmark to check in.
- Task 2 (Moderate): Create and customize preferences for your groups and groups you were added to.
  - Rationale: This task is a moderate task because the complexity is slightly increased and this task will be performed less than the basic check in. Some, but not all, users will want to constantly customize their groups and adjust their preferences rather than making a group once and never changing it.
  - *Task Flow*: The user first clicks the group icon from the navigation bar at the bottom of any screen on the app. Then they are taken to the screen on the left where they can click on "My Groups". That takes them to the middle screen where they can click the plus button to create a new group. After doing so, they are taken to the screen on the right where they can choose the name of their group and who to include in the group, before pressing "Create Group" to officially create the group.



- Task 3 (Complex): Creating custom activities to add to a check in.
  - Rationale: Our group decided to have this as a complex task because most users won't go through the entire process of customizing and then playing an activity. This task is expected to be done by a power user and not the average user. We added this task to allow users to create exciting activities to share in their check in.
  - Task Flow: When the user is on the check in page, they can click the green plus button which will have the dropdown (pictured below) appear. Once they click on "Add an Activity", they are taken to the activity selection screen. They can select an activity and are taken to the customization screen. After selecting the desired customizations, they then get to play the activity and then confirm it by clicking the blue check button. After finishing the creation of the activity, the user is taken back to the check in screen but with a populated screen showing the results of the activity they just completed.



### Values in Design

For our app, we placed major emphasis on efficiency of the check in process and the safety of our users. With the values of efficiency and safety as the main guiding values of our app, we also included the three values of equity, inclusion, and privacy to further guide our app. We feel that these values are effectively embedded into the design of our app in the following ways.

#### Efficiency

A major need that we found during our needfinding was that some people, especially college students or young professionals, do not have time to check in or otherwise forget to do so. In order to address this common problem, we wanted our check in process to be as fast and simple as possible. We believe that we have achieved this by creating a check in process that can be completed with just two taps of a button.

#### Safety and Privacy

We believe that for our app, the values of safety and privacy are closely intertwined with each other. We believe that in order to help ensure the safety of our users, we must ensure that their privacy is protected. Generally, this meant that we did not want the app to have to store any information that was not critically necessary for a check-in. We mainly contextualized this value by thinking about location tracking. We knew that location tracking, especially if unwanted, is a major concern for all users. Thus, in order to keep our users safe, we made location data an opt-in system and the default setting for check-ins to exclude location information. Here, users would actively choose to let our app send location information. Our app will not store any location data that is not expressly added by the user. Additionally, the app makes it very clear what data is sent before users can complete their check-in in an effort to inform users of what information the app will be using and storing.

#### Equity and Inclusion

For the values of Equity and Inclusion, we do also find that these two values are closely related. We designed our app to ensure that there is no way for the app to make any decisions outside of what users expressly tell it to do. This is best shown when we show recent check-ins on the main home feed. On this page, check-ins are ordered by time and maintain that order. Further, there are no features that our app provides that are not offered to all users. We believe that in such a way, our app does fulfill our design values of equity and inclusion.

Early in our team's discussion of values that mattered to the team and were important to our app, we identified one set of conflicting values. This is the conflict between efficiency as well as safety and privacy. In pursuit of efficiency, we decided that the app would have to continue to store and update information such as photos from a phone's local photos app and location data. However, doing so would directly conflict with our value of safety and privacy.

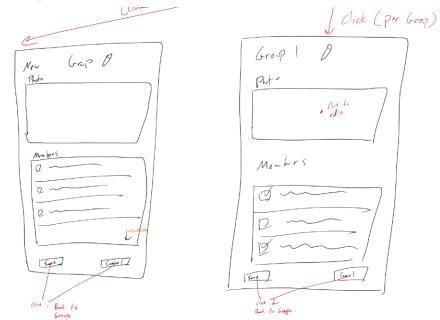
The team recognized that to provide the most streamlined experience, we would have to have many fields of the check in be filled in right as the user initiated the check in process. But we were unwilling to trade the safety and privacy of our users for this increase of efficiency. In order to provide an efficient check in process while still maintaining our users' safety and privacy, we settled on the Default Check In.

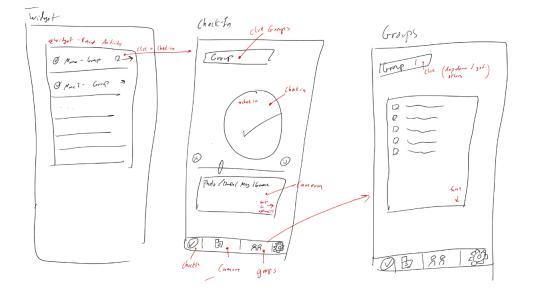
The Default Check In, which is a check in with only the user's name and time, shows our dedication to an efficient check in and dedication to safety and

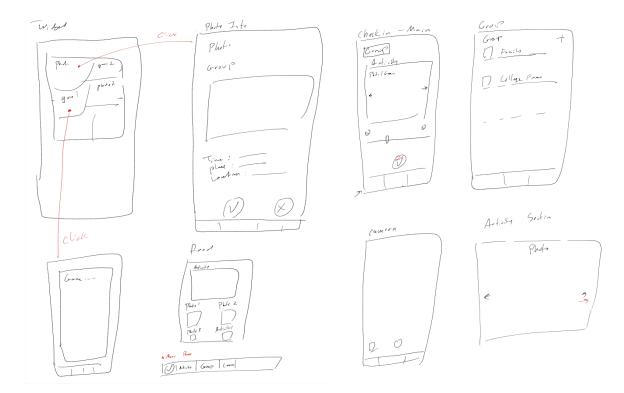
privacy. As the Default Check In can be completed with just two taps, it is fast and simple. Additionally, it does not need any extraneous information, so it also maintains safety and privacy.

## Design Evolution Visualization(s) and Rationale

After deciding to create an app that allows users to share check ins with family and friends, we had to start designing the user interface. We started off with initial concept sketches as seen below:



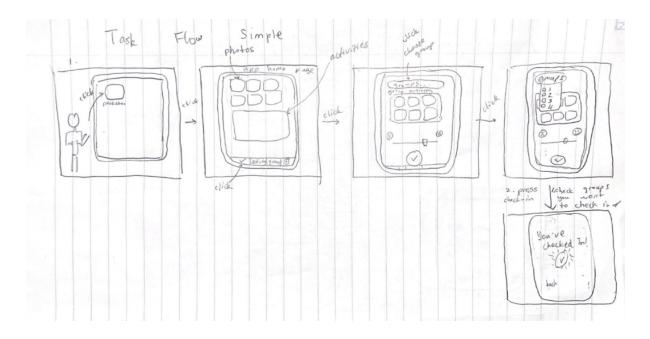




Pictured directly above is the fleshed out realization that our group decided on. We chose this because there are multiple levels of checking in and the user can see various types of content on the widget. We were worried that there were a lot of different screens to navigate through, but we thought the pros heavily outweighed the cons. To tell a bit more about the process... after creating a number of different initial concept sketches, we started narrowing down our design which helped us understand what some of the tasks on the app would be and how the user would navigate through the app. During this stage of the design process, we decided to go with the concept sketches that made the most sense from a user point of view and that had an initially aesthetic appearance. From this stage in the process we learned that it is really important to think about how much space something should take up on the screen and why. After this, we created initial task flow sketches.

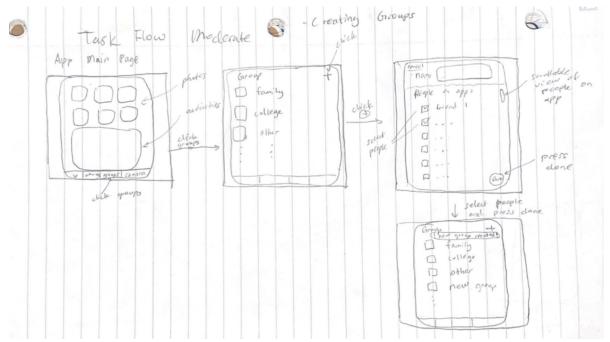
#### Simple Task

Basic check in with time and location. Simply click the check in button and the information is sent to the feed of members in the group



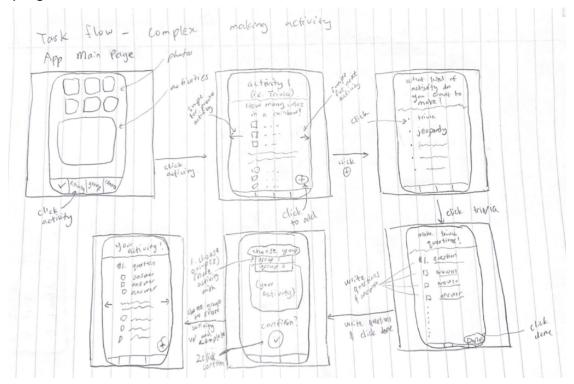
#### Moderate Task

Add and modify groups to contain select people. When checking in, you can select which group/s that you want to send the check in to.

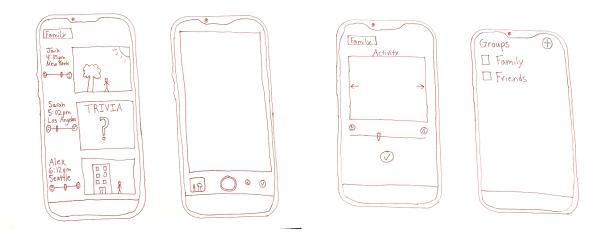


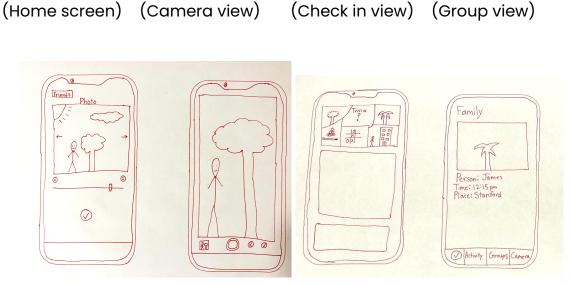
## **Complex Task**

When checking in, you have the option of adding an activity to the check-in. Activities include a photo and activity/game. The user has the option of applying either or both to their check-in status.



Once we established a set of task flows, we created a **lo-fi prototype** that we could test on a diverse group of users.





(Filled check in)

(Camera view) (Widget view)

(Photo info view)

Untitled @ Alex Jessica Sarah Robert Dylan Julia Taylor James	TRIVIA Brazil is the biggest producer of? ORice O Oil Coffee How many colors are in the rainbow? OFive Seven Nine	Family@ X Alex Jessica Sorah Robert Dylan Julia Taylor James	Activities Trivia O Hangman O Tic Tac Tae O 8 ball pool O Custom Gane

(New group view) (Photo info view) (Set groups view) (Set activities view)

We tested this prototype on four diverse candidates and came to the conclusion that generally it was quite easy to follow and use. All of the users had no problems completing the simple or moderate tasks, but completing the complex task often induced minor errors and required our guidance. Ultimately, we saw this prototype testing as a success although we knew it would be important to consider how our activity would differ from iMessage games, how we could allow users to see past check-ins, and more. Based on

our observations and feedback from the participants, we came up with four changes and things to think about.

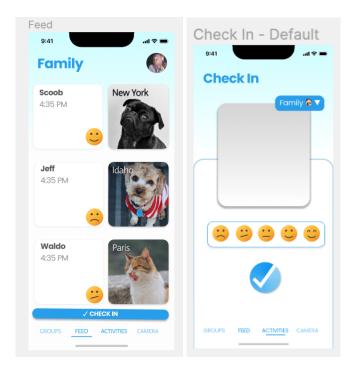
- 1. Steps to complete complex task (i.e. create a new custom activity to share) can be shortened
- 2. Easier to define emotions based on a discrete scale rather than a continuous scale
- 3. Implementation of activities must be differentiated from other similar apps such as iMessage games
- 4. Address the limitations of our test (i.e. across a broader audience and use more colors in prototype)

## Lo-fi to Med-fi Prototype

For our Medium-Fi prototype, there were a couple clear changes that we wanted to make based on the feedback we received and observations we made.

- The UI of the feed page was adjusted to include an emoji representing the mood rather than a sliding scale. Additionally, a check-in button at the bottom of the page was added.
- The check-in page was changed so that the user can select an emoji to represent their mood rather than a slider.

The simple task flow remained the same, where the user can simply navigate from the feed page to the check in page and then click on the check button to check-in with a group of choice



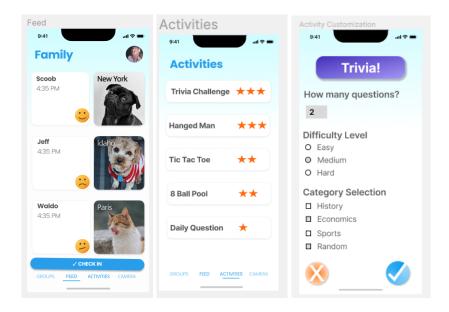
For the moderate task, there weren't many UI changes. The plus button to create a new group was moved to a different location and a button to confirm the creation of the group was added.

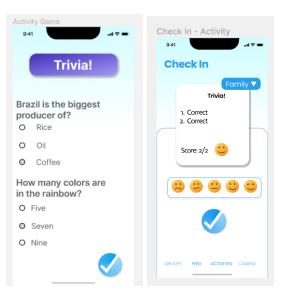
Feed		Groups		Group Creation
9:41	.at 🗢 🖿	9:41	al 🗢 🖿	9:41II 🗢 🖿
Family		Groups	<b>*</b> 225	Work Friends
Scoob N 4:35 PM	ew York	Family & Home sweat home	15 PT 20	Alex Jessica Sarah
Jeff 4:35 PM	aho		PTS	Robert Dylan Julia Taylor James
Waldo 4:35 PM	aris			Anthony
GROUPS FEED ACTIVIT	IES CAMERA	GROUPS FEED ACTIVITIE	S CAMERA	GROUPS FEED ACTIVITIES CAMERA

We created a new screen to further illustrate how a user can create an activity, play it, and send it with their check in.

The complex task concept was not changed, however we did implement more screens to provide further insight into the entire process of checking in with an activity.

For the complex task flow, the user can click the "ACTIVITIES" button in the bottom navigation bar. That will take them to an activities page where they can select what activity they would like to do. After choosing an activity, they are able to customize it and then play the game. After completing the game, the user is taken back to the check in page with the activity being populated with the game they just played.





Med-fi to Hi-fi Prototype

## Heuristic Violations from Med-fi Prototype

- H4 Consistency and Standards / Severity: 4
  - Issue: When you enter the app, you land on the feed page which is under the check in tab, but if you move to a different tab and enter the check tab again, you see the check in screen instead of the feed page.
  - Solution: This issue arose because we failed to update the line on the navigation bar that indicates what page the user is on
- H4 Consistency and standards / Severity: 3
  - Issue: When you make groups, there is no indication to add a photo. However, when you click on your profile, the groups tab showcases photos.
  - Solution: We removed the option to add images to groups and deleted the images from the profile page.
- H3 User Control and Freedom / Severity: 3
  - Issue: You can add your location when checking in, but you can't remove it.

- Solution: We added a switch so the user could turn their location on or off.
- H3 User Control and Freedom / Severity: 4
  - Issue: It is impossible to change the feed page to view a different group.
  - Solution: We had a button to do so, but hadn't implemented functionality until the Hi-fi prototype.
- H3 User Control and Freedom / Severity: 4
  - Issue: It is impossible to add new friends to a user's list of existing friends.
  - Solution: This is a Wizard of Oz feature, since we decided not to implement the ability to create an account and add friends.
- H3 User Control and Freedom / Severity: 3
  - Issue: There is no way to change who is in a group after it's been made.
  - Solution: We added an ability for users to edit their groups to remove people from it.
- H11 Accessible Design / Severity: 3
  - Issue: Every medium used to check in and communicate with others in your application is entirely visually based (i.e. emojis, photos, etc..)
  - Solution: We never directly addressed this by adding audio to our app. We decided not to add an option to add audio to the check-in for accessibility because the screens were going to become clustered and so we increased font size to increase readability.
- H3 User Control and Freedom/ Severity: 3
  - Issue: There is no way to retake a picture without having to click the camera tab and start the entire check in process over again.
  - Solution: We added a back button so if they don't like the image they can retake it.

- H7 Flexibility and Efficiency of Use / Severity: 3
  - Issue: There is no way to send the same update to multiple groups.
  - Solution: We didn't add this feature because we wanted to keep the experience unique to different groups.
- H5 Error prevention/ Severity: 4
  - Issue: There is no way to remove yourself from groups you do not want to be in.
  - Solution: We created an option for people to remove themselves from a group entirely.
- H5 Error prevention/ Severity: 4
  - Issue: There is no way to accept or reject being in a group that has just been created.
  - Solution: We added the option for users to remove themselves from a group entirely or to adjust viewing preferences to only see content from certain people in a group.
- H7 Flexibility and Efficiency of Use / Severity: 4
  - Issue: The home page (feed page) should be accessible from anywhere in your app most of the time (except when in the middle of a different activity), but is only accessible after entering the app for the first time or after checking in.
  - Solution: We adjusted our navigation bar to include a feed page button so that it can be accessed from any screen.
- H2 Match Between System and the Real World / Severity: 3
  - Issue: There is no way to flip the camera or change other very basic camera settings.
  - Solution: We didn't add any additional camera settings because we wanted to keep our content original and unfiltered.
- H7 Flexibility and Efficiency of Use / Severity: 4

- Issue: The navigation tab is confusing because three of the separate tabs all lead to the same action (checking in), so there are 3 ways to do the same action instead of one.
- Solution: We changed the navigation bar to have a feed page, check in page, groups page, and profile page.
- H7 Flexibility and efficiency of use / Severity: 3
  - Issue: Upon clicking on the check-in page, there is no back-button/way to exit without taking a photo.
  - Solution: We implemented a back button.
- H6 Recognition rather than Recall / Severity: 4
  - Issue: Once clicking the check mark to check-in and take a photo, there is no indication if the user is checking in for their family or friends.
  - Solution: We didn't add a visualization while taking the picture, but we do have a clear reminder of what group the check in will be sent to after taking the picture.
- H10 Help and documentation / Severity: 3
  - Issue: Do not understand what different symbols mean and what each grid corresponds to
  - Solution: We removed the widget feature

After receiving all of the feedback from the heuristic evaluation, we decided to make some changes.

• The groups page was adjusted to have a "My Groups" and "Other Groups" button, so that people can separately edit/delete the groups they made and the groups that were made by others. For groups that users were added to, they have the option to remove themselves from the group entirely or edit their viewing preferences to choose whose content they wish to see.

1:03 ÷ = Group Management	1:04 <b>&lt; My Groups</b>	🗢 🖿	1:04
	Hi my name	۵	Edit Members
My Groups Create and edit your own groups Family	Close Friends	٦	Jessica
	Family	٦	Julia Robert
Other Groups Manage groups you were added to	C\$147	٦	Dylan Anthony Taylor
	Hey, Winston Here	۵	James
Stanford Childrain Chicking Ibm Chicking Ch	Home CheckinScreen Groups	Profile	Horre CheckinScreen Croups Profile

- As mentioned earlier, we updated the navigation bar and instead have one button to take the user to the check in page.
- We combined the three different check in pages into one. The user can click the green plus button in the top left to add a photo or activity to their check in if they don't want to do a default check in.



There were other minor changes that were made from our Med-fi to Hi-fi prototype such as minor changes to fonts, buttons, and colors, that can be

seen in the group of images above. However, it is important to point out that we focused on addressing all of the violations that were raised from our previous implementation to ensure a smooth user experience.

# **Final Prototype Implementation**

### Tools Used; Pros and Cons of these Tools

We used a couple of different tools to implement Peekaboo! We used EXPO CLI for building out and running our Hi-fi prototype. Some Pros are that it is extremely user friendly, it makes it easier to get boilerplate app development aspects going for the developer, and it allows us to be able to view the prototype on our phones. Some cons with using EXPO CLI are that it added some more bulkiness to the tech stack and if we were to publish the application it would be more difficult. Additionally, we used Supabase. Some pros are that it's faster, it's better for scalability, and there is built in security and monitoring which is useful if we were to publish this application. Some cons are that it's not as easy to use as Firebase, it's a SQL database, and alternative options include hosting.

### Wizard of Oz Techniques

In order to create the experience of a fully functioning app, there are several experiences that had to be simulated.

- 1. There is no functioning camera, so the camera functionality had to be simulated.
- 2. There is no system to generate custom trivia questions, so the generation of custom trivia questions had to be simulated.
- 3. There are no other users, as Peekaboo! is still a prototype, so group members had to be simulated.

- 4. There are no other users, so visibility controls in Group Management had to be simulated
- 5. Other check-ins on the home feed page are simulated

#### Hard-coded techniques used

In order to create the experience of a fully functioning app, there are several parts of the app that are hard coded.

- 1. The logged in user (Karson) cannot be changed.
- 2. The Check in location is always set to Stanford, California.
- 3. The number of trivia questions for the trivia activity is always set to 2 regardless of number input.
- 4. The image that corresponds to activity always displays a fully correct trivia response.
- 5. Profile page is hard-coded.

# **Reflection and Next Steps**

Over the past 10 weeks, our team went through the entire process of designing an application, starting off with our needfinding interviews. After interviewing a number of different people, we found that many people don't check up on their family and friends when they are traveling. It can be hard to remember and a burden to send multiple messages to different people. With this issue in mind, we came to the eventual decision of creating an application for people to check in and check up with family and friends. This was made possible through a rigorous design process that involved multiple stages of interviews, designing, testing, and prototyping. This engaging process taught our team a lot. Here are our key takeaways:

1. **Listening to the user**... throughout the entire process we interviewed people, from needfinding to testing. This stage in the design process

was one of the most important, as we were still developing the key idea and designs. The observations we made and the feedback we received helped guide us to our final application. Without input from our stakeholders, we wouldn't have had the guidance required to build what we built. Ultimately, we were looking for a need or an issue. We identified that need and issue from our interviews and used feedback we received to meet this need with the best and most efficient solution possible.

2. Focusing on feedback and change... was a huge part of improving throughout the process. Throughout these past 10 weeks, our team was receiving feedback from stakeholders, TAs, and classmates each and every week to constantly change and improve our product. When designing something that is being used by others, it is important to take all input from others and use that to best improve and adapt. Throughout our design process, we were constantly changing our user interface whether it was colors, fonts, buttons, or functionality. Staying open minded and willing to change and adapt our project helped lead us to develop the best possible application.

For our next steps, we would like to work out all of the hard-coded and Wizard of Oz aspects to create a fully functional application. Doing so would allow for expansion to a broader range of users through publication of our app. Publishing our app would create the opportunity for us to truly test how our idea works as we would be able to see how people interact with it on a daily basis. Doing so would open up the ability for us to adapt and change our app as needed, based on the results we see and observations we make. Our goal was to transform our idea into a working application where people are able to check in and check up on family and close friends and it would be fulfilling to release it for people to use, in hopes that we succeeded in meeting this need and issue.