

# Social Q Mobile Application Final Report

**HCI 594 Capstone – Summer Quarter 2019**

Iu-Luen Jeng

Noppawan Taratiwat

Brandon Welch

Lauren Williams

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

## 1.0 Abstract

We all experience the feeling of isolation, and often have difficulty making new social connections. The Social Q (SQ) team believes that technology can provide the solution. Through our innovative platform, we aim to empower people to make new connections, by facilitating a safe and positive interactions. We developed Social Q, an application that increases users' social interaction by finding things to do with new people outside of their current friend groups.

The users can find Chicago-based events more easily utilizing Social Q's filters and then invite other users who share similar interests to join them. Users have the option of saving events, adding them to a calendar, and buying a ticket within SQ. While users discover new activities, they are automatically matched with individuals who share their interests. Users can also filter their matches further to identify who they would like to attend together. SQ also offers security features empowering users to feel comfortable and safe when using the application.

The target users are individuals over 21 years old, living in the greater Chicago area. We began our research with storyboarding. Then, we conducted a preliminary interview (n=4) to identify safety needs and motivation for socializing with strangers. We then conducted a hybrid card sort (n=8) to define the content strategy and information architecture. Simultaneously, we evaluated similar products on the market through competitive analysis to determine the strengths and selling points for SQ. A first-click testing (n=10) was conducted based on the previous results to confirm the labels and categories. We built three prototypes, one paper sketch and two interactive mid-fi screens, with two rounds of usability testing (n=11) to refine the design.

We identified five key themes and elements from the results:

(1) People enjoy the ability of browsing a wide variety of events: Our participants indicate that they would like to see the events featured on the Event Feed reflecting their interests and culture. (2) The active and passive user groups both exist on SQ: SQ provides different features for both active users and passive users. An active user is defined as someone who initiates invitations to others, and a passive user is who marks their interests and respond to requests. (3) Users agreed that they wanted to be matched based on compatibility measures. While SQ incorporates best practices, commonly found in other social applications, however, we did not get to a simplified list of compatibility questions that are effective in connecting people. (4) A sense of control and safety is a strong motivator: Participants requested that SQ takes care of users' security by implementing safety measures. SQ is expected to provide a sense of control and empowerment to keep user engaging. (5) The user wants a simple easy scheduling tool: Participants praised and had a high positive response to the scheduling tools and quick built-in messages SQ provides.

In our next step, we will design a hi-fi prototype. We want to expand our project beyond the geographic constraint to other cities so that SQ is not only for Chicago. We aim to explore

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

alternative functions by providing distinct socializing goals, such as dating or networking, or allowing users to create their events instead of just listing the public options.

## 2.0 Project Goals

**Goal 1: Create and evaluate the content strategy and information architecture for the application to ensure that it is easy to use and provide useful navigation for users.**

Measure: The number of successful completion of information-finding, the number and types of errors and slips.

**Revised Goal 2: Install a compatibility filter to increase the user's ease of use and satisfaction in finding and matching the new users and desired social events.**

*Proposed Goal 2: Install a compatibility filter to increase the user's ease of use and satisfaction in finding and matching the new friend.*

Measure: The SUS rating in usability testing and the qualitative data from the interviews.

Revisions or adjustments: We expanded this goal to include the design of event search filters along with the filters for searching users.

Explain changes: We considered the user searching filter and event search filter are equally important while creating a socializing application. Our users not only want to meet with other users with desired quality and mutual interests but also want to attend events that curated towards their tastes and schedule.

**Goal 3: Streamline the scheduling and schedule to meet up for our users.**

Measure: The number of successful completion of information-finding, the number and types of errors and slips.

**Goal 4: Improve the user's sense of safety and security by requiring photo-verification before using the app. Photo verification asks the user to submit four photos of the user making specific randomly-generated gestures or poses. Our team then reviews those photos, and the person's identity is confirmed.**

Revised Measure: The SUS rating which asks users to place on a scale their level of confidence in the safety of the application as part of the usability test for the Mid-Fi prototype. A competitive analysis to compare safety features among socializing applications on the market.

*Proposed Measure: Conduct a SUS which asks users to place on a scale their level of confidence in the safety of the application as compared to other social apps they have used. SUS will be completed as part of the usability test for the Mid-Fi version of our prototype. We will screen for users who have experience using any meet up apps.*

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

Revisions or adjustments: The participants completed the SUS rating only for our prototype instead of comparing to other social applications they had used. We conducted a competitive analysis instead of asking participants to compare our applications to other socializing applications they used.

Explain changes: We want to decrease the cognitive mental load for our testing participants. Meanwhile, the competitive analysis could achieve the same goal by comparing the safety features of other products.

### 3.0 Project Methods

We used the following five methods to accomplish the four goals. The methods were listed by the chronological order as the project progressed.

#### Interview

We recruited four participants via convenience sampling. We considered participants who are in the greater Chicago area and had experienced with social applications. We chose participants who met our inclusion criteria:

- Individuals who use social application
- Individuals who are over 21 years old
- Individuals who are interested in meeting new people and attending events with people they are meeting for the first time

Participants were three men and one woman, aged 25–45.

Goal (contribution to the project): Initial interviews will enable the team to document the user’s journey. We use the interviews to understand the pain points of both meeting new people and finding events and activities within Chicago. We will also ask security questions to help us understand user’s safety needs and concerns.

Recruitment: 4 participants

Interview	Name	Race	Sex	Age	Location	Notes
p1	Mike	Caucasian	man	44	Chicago	
p2	Ben	Caucasian	man	45	Chicago	wearing glasses
p3	Kathy	Caucasian	woman	25	Chicago	
p4	Brandon	African American	man	26	Chicago	

*Table 1: Interview Participant Demographic Information*

We conducted the interviews following the protocol (see Appendix J: Interview Protocol). Each interview was recorded with hand-written notes. After a brief introduction, participants read and signed the informed consent (see Appendix I: Interview Informed Consent Form). After conducting the interviews, the results were shared with all team members to

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

identify potential themes and insights. The team then developed personas and journey map based on the interview results.

### **Card Sorts, Optimal Workshop (internal and external versions)**

We created a hybrid card sort with 51 cards and seven categories. Two team members first completed an internal card sort to test the materials and gave modification feedback. Then, we recruited eight participants by advertising the card sort link with two DePaul HCI summer classes. We chose participants who met the inclusion criteria:

- Individuals who are over 21 years old

Goal (contribution to the project): Establish a naming convention and categories for navigation and content of the application. Determine if the menu, sub-menu options, and labels are understandable by the user. Conduct card sort internally first before distributing to participants.

Recruitment: 8 participants

The team members used the external card sort results to develop information architecture and content strategy for Social Queue.

### **Competitive Analysis**

The team researched five web and mobile-based products for competitive analysis. These five products were selected because of their similarities to Social Queue. We considered the following criteria to choose the product:

- The product helps to organize and schedule events
- The product offers a platform for users to socialize and meet up in person
- The product allows users select events or services based on personal preferences

The team compared the user sign-up process and each product's initial questionnaire that determines the user's preferences and compatibility with other users or events. The team also use competitive analysis results to guide Social Q's safety and security features.

Goal (contribution to the project): We review other products and determine which security and safety features work and are reassuring to users. We also determine the sign-up process and the initial compatibility questionnaire for Social Queue

Evaluation: 5 products or services in socializing and reviewing (Meetup, Yelp, LinkedIn, Coffee Meets Bagel, and Doodle)

### **Usability tests (2)**

Goal (contribution to the project): We assess the prototype designs. This method will help the team to determine if the current design enables the user to efficiently and effectively complete the key tasks, and which design elements require revision. The SUS rating will evaluate the user's satisfaction with the app.

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

Revisions or adjustments: We proposed three rounds of testing for each prototype. However, we only conducted two rounds. We skipped the Lo-fi prototype and its usability testing.

Explain changes: The results from the paper sketches were sufficient enough to design an interactive Mid-fi prototype. Meanwhile, due to the project time constraint, two rounds were time efficient and appropriate.

### 1. Lo-fi Prototype, paper sketches

We recruited four participants via convenience sampling. We considered participants who are in the greater Chicago area and had experienced with social applications. We chose participants who met the same inclusion criteria as the interview. Participants were two men and two women, aged 29–45.

Goal: Collect ideas and create rough sketches to develop our initial concept about Social Queue.

Recruitment: 4 participants

Lo-Fi	Name	Race	Sex	Age	Location	Notes
p1	Sarah	South East Asian	woman	37	Chicago	hearing sensitivity
p2	Mark	Caucasian	man	44	Chicago	
p3	Sally	Latina	woman	45	Chicago	
p4	William	Caucasian	man	29	Chicago	

Table 2: Lo-Fi Prototype Participant Demographic Information

We conducted the testing following the protocol (see Appendix L: Paper Sketch Protocol). Each interview was recorded with hand-written notes. After conducting the testing, the results were shared with all team members to identify errors and pain points. The team then evaluated the severity level of each problem to create the Mid-fi prototype. Usability results are defined and presented below for each screen of the prototype. The results consist of (a) Problem Description – What is the problem?; (b) Problem Justification – Why is this a problem? How does it impact users?; and (c) Actionable Recommendations – How can we fix the problem? Positive findings about each screen are also noted. Team members then compiled their individual ratings for each identified problem by using the severity rating below and the average of those ratings, rounded to the nearest whole number, was added to each reported problem.

### 2. Proposed Lo-fi Prototype, Axure RP (non-interactive)

Goal: Create a lo-Fi prototype and test with participants to gather feedback. Revise design features based on testing results.

Revisions or adjustments: We did not complete a lo-fi prototype (non-interactive)

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

Explain changes: we excluded the lo-fi prototype (non-interactive) because we had enough data from our paper sketches usability testing to design the interactive prototype. Meanwhile, An interactive prototype was more convenient for our participants to navigate and conduct testing through the application.

### 3. Mid-fi Prototype version 1, Axure RP (interactive)

We recruited seven participants via convenience sampling. We considered participants who are in the greater Chicago area and had experienced with social applications. We chose participants who met the same inclusion criteria as the interview and the paper sketch testing. Participants were five men and two women, aged 22-54.

Goal: Create an interactive mid-Fi prototype and test with both remote and in-person participants to gather feedback. Revise design features based on testing results. This prototype continues to support our design decisions and refine hi-fi prototypes to finalize the product.

Recruitment: 7 participants

Axure	Name	Race	Sex	Age	Location	Notes	Remote/ In person
p1	Molly	Caucasian	woman	25	Chicago		in person
p2	Shawn	Asian	man	28	Chicago		in person
p3	Nina	African American	woman	54	Chicago		in person
p4	Paul	Caucasian	man	29	Chicago		remote
p5	Jake	Latino	man	22	Chicago	physical disability	remote
p6	Frank	Caucasian	man	35	Chicago		remote
p7	Mark	Caucasian	man	28	Chicago		In Person

*Table 3: Mid-Fi Prototype Participant Demographic Information*

We conducted the testing following the protocol (see Appendix M: Axure Protocol). Each interview was recorded with hand-written notes. The testing consisted of 17 screens and 5 tasks. Participants are requested to provide three SUS ratings for the compatibility filter, the event filter and the safety features. Each participant also answered specific questions of designed labels and icons. After conducting the testing, the results were shared with all team members to identify errors and pain points. The team then evaluated the severity level of each problem following the same rating scale of the paper sketch prototype testing to create the Mid-fi prototype version 2.

### 4. Mid-fi Prototype version 2, Axure RP (interactive)

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

The team combined the mid-fi testing results and integrated the suggestions into the latest iteration.

Goal: Create a modified version of mid-Fi prototype for the next round of testing. Revise design features based on first mid-Fi testing results. This prototype continues to support our design decisions and refine hi-fi prototypes to finalize the product.

Revisions or adjustments: This is a new iteration that did not propose in the original proposal.

Explain changes: We decided to present the latest version of Social Queue in this report with well-integrated Mid-fi testing feedback.

### **Chalkmark, Optimal Workshop**

We created a first-click testing using the mid-fi Axure prototype. The testing consisted of four tasks. we recruited ten participants by advertising the card sort link with two DePaul HCI summer classes and the HCI interest group on Facebook. We chose participants who met the inclusion criteria:

- Individuals who are over 21 years old

Goal (contribution to the project):\_Determine if the design aligns with the user's mental model when completing key tasks.

Revisions or adjustments: We conducted Chalkmark testing instead of Tree Jack.

Explain changes: First-click is crucial to get a quick user's impression on our design. We already created our mid-fi prototypes, and it is a mobile-based application. Chalkmark would be more appropriate to observe based on our designed task scenarios. Chalkmark also guided the information architecture design.

Recruitment: 10 participants

### **3.1 Diversity Documentation**

We designed the following steps to increase our diversity of subjects:

1. Race: We selected participants from a variety of backgrounds, including Asian, Latinx, African American, and Caucasian communities. Testing Social Q with participants of diverse cultural backgrounds allowed us to understand the social needs and preferences of our users.
2. Age: The minimum age to sign up for Social Q is 21. The age range for our usability testing participants is 22 to 54. The average age is 34.4, with the stand deviation of 9.8. We intentionally sought out participants from a variety of age to test their preferences on our application. The wide age range also made our design more inclusive to users of all ages.
3. Physical Ability: We invited one individual with a different physical ability to participate in each stage of testing. The variety of physical abilities included visual impairment, missing fingers, and hearing impairment. Participants with various physical abilities provided us great insights on the physical designs of the application, such as size, color, and placement orientation.
4. Testing Methods: We conducted the Axure prototype testing in both remote and in-person testing by using Skype. We posted our Chalkmark testing link in DePaul HCI [UI/UX] group on Facebook to recruit a wider diversity of participants beside our

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

classmates. We recruited participants outside of the HCI field to decrease the expert's basis.

## 4.0 Project Results

### Interview

#### *Types of Interests*

All participants were looking for meeting new people who have mutual interests and things in common. When we asked about what they are looking for when they decide how compatible they and their new friends are; Mike, Ben and Kathy had the same answer that they are looking for mutual interests and sense of humor. Most of the participants also mentioned about availability.

#### *Safety*

The main concern that we have heard from our participant during the interview is about safety. Participants are worried about their safety using the social media app. We continued asking our participants about their safety and security concerns. When we asked what would make them feel secure while using the app. All four participants said they wished to have the ability to control or have access to their privacy setting.

#### *Pain Points*

There are two different kinds of pain points brought up from our interview data: (1) those that they could control, and (2) those that they could not control. Example of pain points that they could control were searching for upcoming interesting events by using online tools or through their personal connection and add it into their schedule. One user was frustrated in her search by looking through people's posts on social media.

### Competitive Analysis

For the event and user filtering we leveraged competitive analysis, looking at apps like Yelp, MeetUp, Facebook, and Doodle. For improving scheduling, we discovered during interviews that leaving the app can cause planning to be complex and frustrating. When implementing safety, we relied heavily on interviews and usability tests, as well as competitive analysis, for best practice

### Hybrid Card Sorting Results

The card sort was conducted to see how people categorized the content. We conducted our card sort with 8 participants. We list the card sorting results below;

- We noticed that some cards proved to be problems due to similar meaning or ambiguous which could make the participants got confused; for example, "match" and "buddy"
- The cause of unclear cards, it shows that we got scattered results which is clear that participants had difficulty determining card (*See Figure D: Card Sort Similarity Matrix*)
- We found that the highest group in agreement with "event categories" was 65%, but the remaining groups in agreement was very low under 40%.

### Usability Testing on Lo-Fi Prototypes

We sketched out our first paper prototype. We conducted a usability test with 4 participants and

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

asked to complete **9 key tasks**. We listed our results below.

*(Please see our lo-fi prototype and protocol in Figure E: Paper Prototype and Figure L: Lo-fi Prototype Usability Testing Protocol).*

**Task 1: Freely Explore and First Impressions.**

- One participant mentioned the logo was inappropriate. The logo doesn't have a strong sense to present our application's branding and convey our business perspective.
- Missing "forgot username/ email" link on the log-in screen.
- Redesign the logo.
- Add a checkbox "Remember me" or "Forgot username/ email" link in the login page.

**Task 2: Complete Social Q's Preference. (3 screens)**

**Compatibility Questionnaire (Screen 1)**

- Missing some categories that meet users' interests which could make users withdraw using the application.
- Actionable Recommendations: Add more categories.

**Compatibility Questionnaire (Screen 2)**

- Gender selection call-to-action buttons prominently display that only allow users to select only one type of gender to hang out with. It limits users inputs which don't meet their needs.
- Actionable Recommendations:
- Change gender selection call-to-action buttons to checkbox which display as multiple selects.
  - Add options that users are able to select their preference either hanging out as a group or individual.
  - Spell out "non-binary" and other gender identities.

**Task 3: Discover Home Page or Event Feed**

- The displayed categories were not age-inclusive. Some users don't feel interested to attend these displayed event categories.
- Missing header to identify page.

Actionable Recommendations:

- Add more inclusive categories to meet the diversity of users' needs.
- Add the header to the page e.g. events feed or events

**Task 4: Event Filter**

- The terminologies are vague such as availability and categories.
- Sort and filter are placed in the same box which cause some confusion for the users.

Actionable Recommendations:

- Change "availability" to "day" and "categories" to "event types".
- Separate "sort" and "filter" to be more salient that they are different features.

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

### **Task 5: Event Detail Page**

- Missing an important event detail such as location.
- Users was curious about why “share” and “buy ticket” buttons placing in higher level compared to other icons. It cloud mislead users about high level call-to-action button.

Actionable Recommendations:

- Add event location
- Relocate “share” and “buy tickets” buttons.

### **Task 6: Add Event to Calendar**

Some users don’t use those available calendar options, so users can’t select any of calendar options.

Actionable Recommendations: Adding “Apple calendar” as an option.

### **Task 7: Find People**

Lack of matched people’s profile information because users need to know general information about people that they are going to meet.

Actionable Recommendations: Show matched people’s profile information.

### **Task 8: Message People**

Missing a way out of the worst case scenario, if users are not available as an emergency situation.

Actionable Recommendations: Add an additional option such as suggest different day or time button.

### **Task 9: Reminder**

Users mentioned “buy tickets” and “add to calendar” buttons don't make sense on this screen.

Actionable Recommendations: Remove “buy tickets” and “add to calendar” button.

## **Chalkmark Test**

Our Mid-Fi prototype was also tested in a Chalkmark test in Optimal Workshop. This test was conducted to seek additional feedback and results to compare against our Mid-Fi usability testing. *(Please see our Chalkmark protocol and results in Figure H: Chalkmark Test Results).*

The chalkmark test showed us similar feedback we received in the Mid-Fi prototype testing, along with additional issues that didn’t appear in earlier tests. The hard part with the chalkmark test was that it was not interactive. It asked the user to complete a task and to click on the first place they would go. This led to users leaving feedback that could have been addressed if they were testing with the interactive prototype.

Some similar feedback we received on both our chalkmark test and usability test was the labels next to icons. Some of our icons we assumed were well known so a label was not required. We quickly learned that some of our icons were similar and had different meanings, so a label was required.

Our average task success rate on the chalkmark test was 69%. This was based on 10 users participating in the test. The biggest area for improvement was the account creation and

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

questionnaire process. On this area of the chalkmark test, the average success rate was 40%. Many users said that they couldn't tell if they successfully completed the identity verification process. In the interactive prototype, a user was presented with a message to let them know if they were successful. We were not able to showcase this in a chalkmark test using static images. We feel the success rate would have been significantly higher if we were able to showcase it in the test. By conducting the usability test and chalkmark test, we ensured that no problems went unnoticed. This allowed us to make changes and correct all the issues that were present as we completed our last round of revisions to the prototype.

### **Usability Testing on Mid-Fi Prototypes**

We built our interactive mid-fi prototype in Axure. We conducted a usability test with four participants in-person and three participants remotely on Skype. The participants are asked to complete four key tasks. We listed our results below.

*(Please see our mid-fi prototype and protocol in Figure F: Mid-Fi Prototype and Figure M: Mid-Fi Prototype Usability Testing Protocol).*

#### **Task 1: Complete Social Q's Preference. (6 screens)**

- The profile preference pages are clear and easy to navigate. Six screens achieved 100% task completion rate. All participants completed the task on the first try on five out of six screens.  
*Security Feature: Photo Verification (Screen 6)*
- The average SUS rating of photo verification feature is 83.14, considered excellent usability.
- The image display contained small photo boxes was confusing to two participants.

Actionable Recommendations:

- Add header: Photo Verification on screen 6
- Add text: Show Your Smile!
- Add facial gesture/body gesture to the side small boxes
- Make one box clickable to link to a camera, then click, then come back to screen 6
- Make the rest of the small boxes have a green check mark indicating completion

#### **Task 2: Browse Event and Add to Calendar. (8 screens)**

- The task is clear and easy to navigate. All screens achieved 100% task completion rate. All participants completed the task on the first try.
- A participant would like to do a direct search instead of filtering event.

Actionable Recommendations:

- Add a search box on the top on the even landing page

#### **Task 3: Finding People (3 screens)**

- The task is clear and easy to navigate. All screens achieved 100% task completion rate. All participants completed the task on the first try.
- Two participants are confused about "Invite Jeff" button.

Actionable Recommendations:

- Change "Invite Jeff" to "Message Jeff" on screen 14

#### **Match Filter Feature (Screen 14)**

- The average SUS rating of the match filter feature is 82.36, considered excellent usability.

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

**Security Feature: Green Checkmark (Screen 14, 15)**

- Participants gave positive feedback on the verification indicator. All participants could explain the meaning of the green checkmark.

**Security Feature: Block Icon (Screen 14)**

- Participants responded positively to the block icon and understood its function without coaching.

**Task 4: Message People. (3 screens)**

- The message task is clear and easy to navigate. All screens achieved 100% task completion rate. All participants completed the task on the first try.
- Participants praised the pre-written message SQ provided to start a conversation with matches.
- One participant desired the function to write his personal message instead of sending a systematic one.

Actionable Recommendations:

- Offer a text box with a pencil icon on screen 17 so that participants can have the option to write person message to their matches.

**Revised Mid-Fi Prototypes**

We produced a refined revised mid-fi prototype based on the second testing results. One major *(Please see our revised mid-fi prototype in Figure G: Mid-Fi Final Prototype)*. One executive decision by the team is to take out the call 911 function out on the help screen (see Figure F: Mid-Fi Prototype) to decrease the possibility that users may maliciously abuse the call. Under the current climate of law enforcement brutality and excessive use of law enforcement on non-white communities, we feel responsible for handling this function with sensitivity.

**5.0 Project Discussion**

**People Like to Browse for a Wide Variety of Events**

Our participants indicated that they would like to see the events featured on the land page reflecting their interests and culture. In our paper prototype test, one user stated that she felt the application did not showcase events that appealed to a wide range of users. Many of the events listed were concerts, street festivals, and bar crawls. After taking our users feedback into account, we decided to conduct a competitive analysis with similar meet up applications. We compared our app to a well-known app called “Meetup”. We looked at all the different categories that they offered and used it as a base to determine what type of events users might be interested in attending. We went from having 4 categories in the paper prototype to 16 categories in the final app. Some of these categories include; Outdoors & Adventure, Tech, Family, Sports & Fitness, Food & Drink, Writing, and many more. We also added a filter function that allows users to narrow the search results even further. The filters allow the user to sort events by price, location, date, and more.

**The Active and Passive User Groups Both Exist on SQ**

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

SQ provides different features for both active users and passive users. An active user is defined as someone who initiates invitations to others, and a passive user is who marks their interests and responds to requests. It was important to cater the application to work with both user groups. The end goal for both user groups is the same, find people to attend events with in Chicago. This was accomplished by having two distinct paths for an active and passive user to take. We first asked our users some questions in the interview stage to determine what the pain points for each user group were. After determining the pain points, we created a journey map for both active and passive users. This showed how they would use the app and determine their path of success. For active users they would browse events in the app and find one they would like to attend. They would then share the event with their friends through text message or social media to see if any of their friends are interested in attending. Next, they would get the friends who are interested in attending and coordinate ticketing and meet up details. Lastly, they would buy the tickets and send a reminder to their friends about the event and include meet up details. A passive user gets an invitation from a friend to attend an event via text message. They would then check their availability and see if they are able to attend the event. Next, they would look up more details about the event and see if it interests them. Lastly, they would accept the invitation from their friend and add the event to their calendar. The calendar event will include all the important information about the event. This includes the event time, address, ticket information, and meet up details.

### **Compatibility Measurement is Complicated**

Participants considered the matchable level with other users highly significant. We will continue to refine our compatibility measurement through research. Users are matched with other people by completing a compatibility questionnaire when they first register for an account on the app. A user is asked to select their types of interests, favorite parts of Chicago, what type of people they are willing to meet based on age and gender, and whether they prefer to hang out with a single person or a group of people. The app then suggests the user with potential matches based on shares similar interests that are determined from their responses to the questionnaire. Measuring compatibility is a complicated matter. New questions will have to continue to be developed to ensure that Social Q is always delivering its users quality matches.

### **A Sense of Control and Safety is a Strong Motivator:**

Participants requested that SQ takes care of user's security by implementing safety measures. SQ is expected to provide a sense of control and empowerment to keep user engaging. Social Q has several security measures in place to keep our users safe. Users are asked to submit several photos of themselves doing a predetermined pose as stated in the app. Once a user submits their photos a team member from SQ will review the photos, and confirm the user's identity. A user is able to sort their potential matches to only show verified users who confirmed their identity with SQ. A verified user is marked with a green checkmark next to their profile. Users also have the ability to block other users from matching and contacting them. With the

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

Social Q help center, a user is able to report any problems they experience with other users right from the app.

### **The User Wants a Clear and Easy Scheduling Tool**

Participants praised and had a high positive response to the scheduling tools and quick built-in messages SQ provides. Social Q's scheduling system allows users to add events to the calendar app that they already use. SQ is compatible with Google, Apple, Outlook, and Yahoo Calendar. Users also have the ability to set reminders to notify them when their event is about to take place. It will remind them of the meeting place, event details, and when to leave to ensure they make it to the event on time. SQ also offers a built-in messaging system to allow users to message each other without having to share their phone number. Users can type their own message or choose from a list of canned responses. A user gets an alert every time they receive a message in SQ and are presented with quick response buttons to reply to a message. For example, a user can send a message to a match and ask them if they want to attend Lollapalooza. When they open the message, they can press one of the quick reply buttons to send a response with ease. The quick reply buttons say; yes, no, or suggest a different day/time.

## **6.0 Project Conclusion**

The Social Q (SQ) aims to empower people to increase social interaction by finding things to do with new people outside of their current friend groups. Users have the option of browsing event by setting filters, and when users discover new activities, they are automatically matched with individuals who share their interests. The highlights of SQ are clear content, smart compatibility filters, easy scheduling tools, and safe meetups. This project used six methods, from idea exploration to design iterations, to achieve these four goals.

22 participants were recruited to complete specific testing, including preliminary interviews, hybrid card sort, usability testing, and first-click testing. The inputs and suggestions from the participants guided us to identify pain points, revise prototype iteration, and develop journey map, user groups, and persona. We identified five key themes and elements from the results: (1) People enjoy the ability of browsing a wide variety of events, (2) The active and passive user groups both exist on SQ, (3) Compatibility measurement is complicated, (4) A sense of control and safety is a strong motivator, and (5) The user wants a clear and easy scheduling tool.

Our results informed the physical and content design of SQ, and the team presented the revisioned prototype in this report.

## **7.0 Future Steps**

In our next step, we will design a hi-fi prototype with a new logo design and diversify our testing participants with different physical needs. We also have planned to launch SQ in other major

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

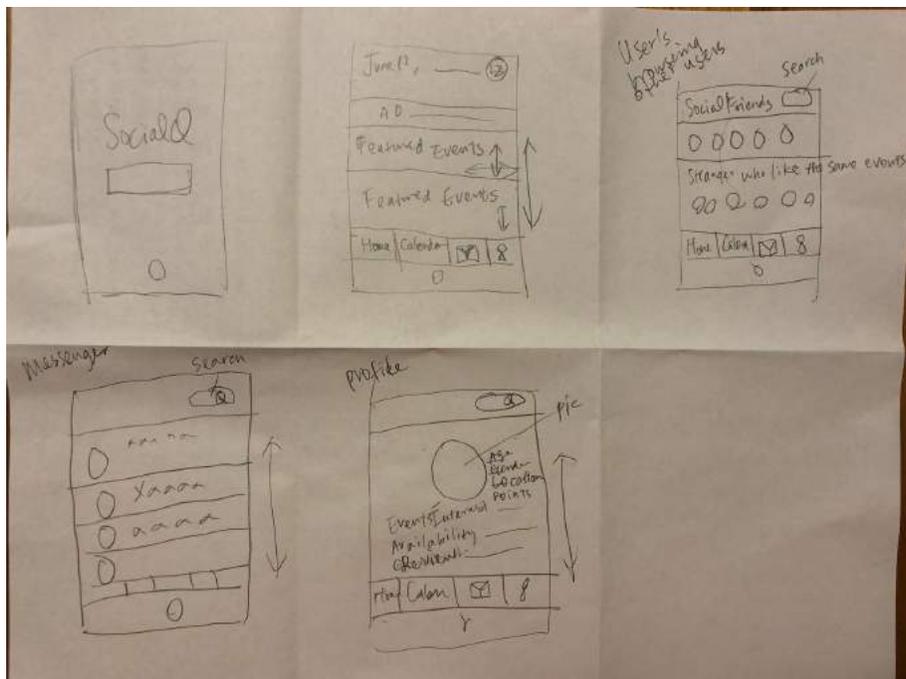
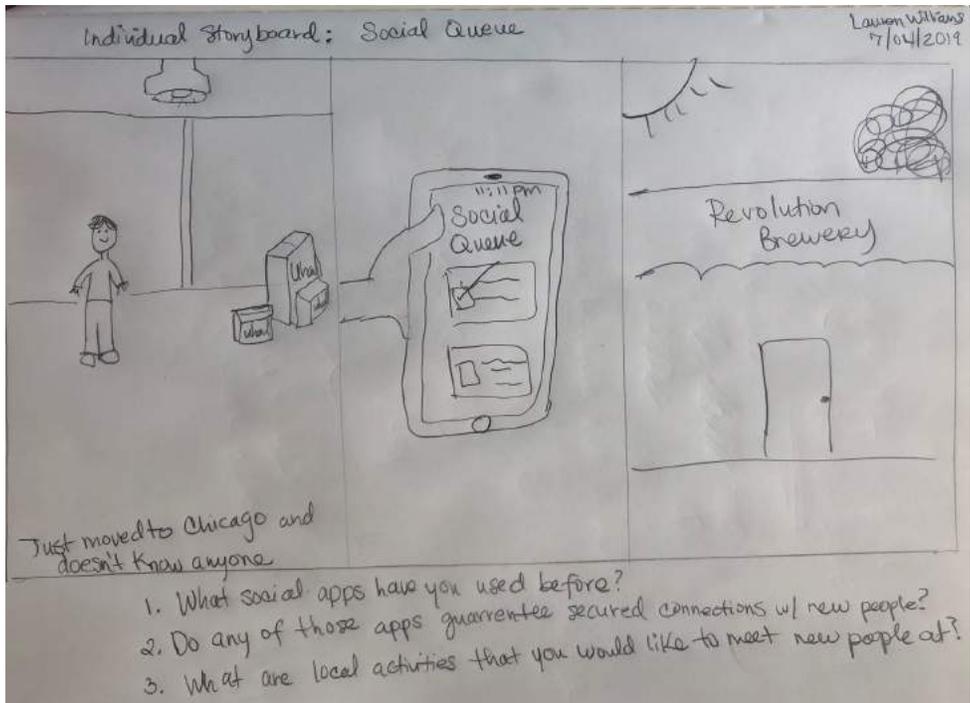
cities and expanded the SQ functions by providing distinct socializing goals, such as dating or networking, or allowing users to create their events instead of just listing the public options.

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

## 8.0 Project References

### Appendix

Figure A. Storyboard



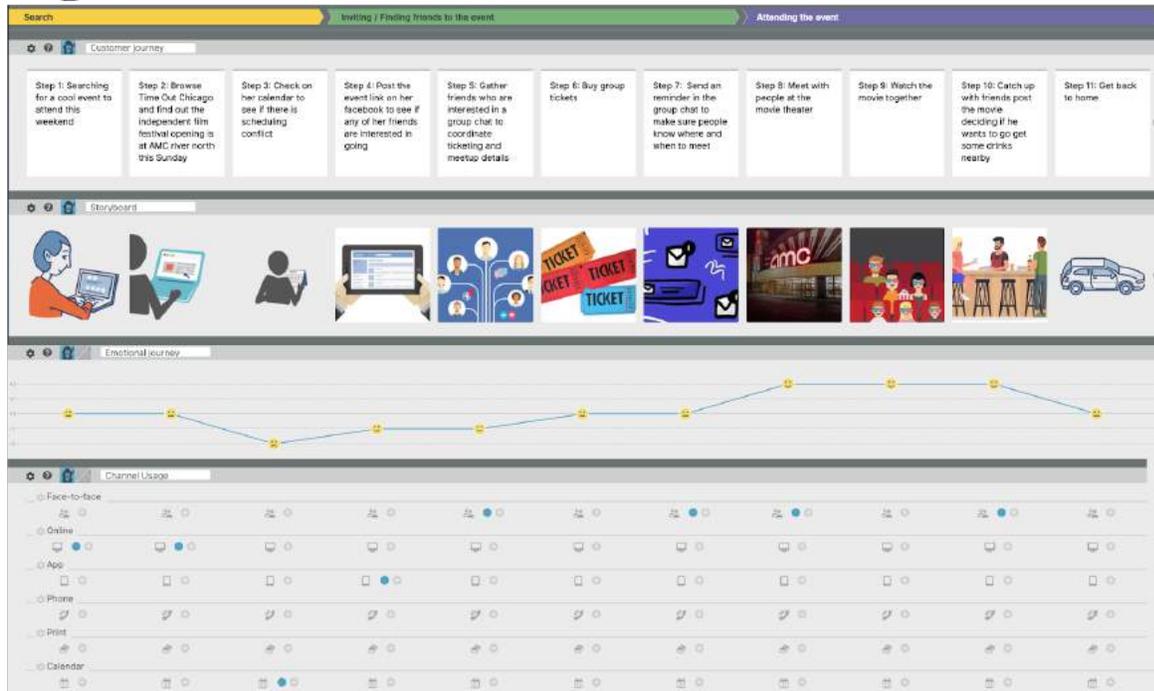
HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

**Figure B. Journey Map**

**(1) Active Event Goer's Journey Map**



**Amber's Journey Map(Active Event Goer)**  
27 years old, Marketing Manager



**(2) Passive Event Goer's Journey Map**



**Jeff's Journey Map(Passive Event Goer)**  
36 years old, Behavior Interventionist



HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

**Figure C. Personas**  
**(1) Active User**

**Amber**
**Active Event Goer**



*"I'm always looking to find something fun to do. Sometimes it can be hard to communicate and plan events with my friends."*

Age: 27  
Work: Marketing Manager  
Status: Single  
Location: Lake View, Chicago  
Gender: Female

### Bio

Amber is tech savvy and loves to try new things. She enjoys attending a variety of different events and often takes the lead in coordinating fun outing with her friends.

### Goals

- Simple way to find local activities
- A better way to plan outings
- Easy way to communicate about upcoming events with friends or new acquaintances

### Frustrations

- Finding people to attend events with
- No Shows
- Coordinating a meet up place and time

### Motivation

Incentive: ██████████

Fear: ██████████

Growth: ██████████

Social: ██████████

### Technology

IT and Internet: ██████████

Mobile Apps: ██████████

Software: ██████████

Social Networks: ██████████

**(2) Passive User**

**Jeff**
**Passive Event Goer**



*"I moved to Chicago a few months ago and started a new job. I want to make friends and get to know people outside of work"*

Age: 36  
Work: Behavior Interventionist  
Status: Single  
Location: Pilsen, Chicago  
Gender: Male

### Bio

Jeff is from southern California. He has moved to Chicago to start a new job and is anxious to meet new people . He is not sure what to expect his first winter in the midwest.

### Goals

- Make new friends outside of work
- Looking for outdoor activities and team sports
- Get comfortable with his new neighborhood

### Frustrations

- His first summer in a new city, does not have one easy way to find events.
- Needs help finding good vegan and vegetarian-friendly restaurants near his apartment.

### Motivation

Incentive: ██████████

Fear: ██████████

Growth: ██████████

Social: ██████████

### Technology

IT and Internet: ██████████

Mobile Apps: ██████████

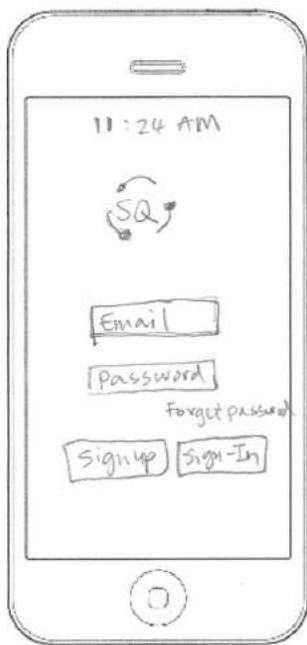
Software: ██████████

Social Networks: ██████████



HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

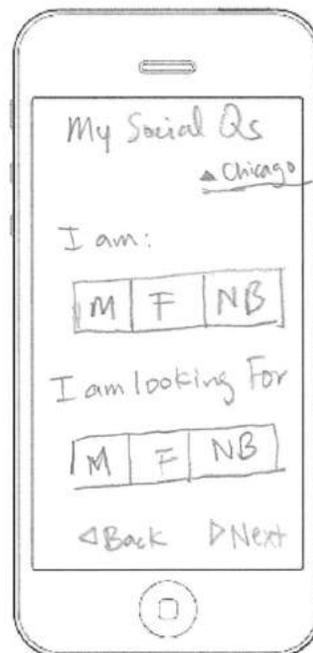
**Figure E. Paper Prototypes**



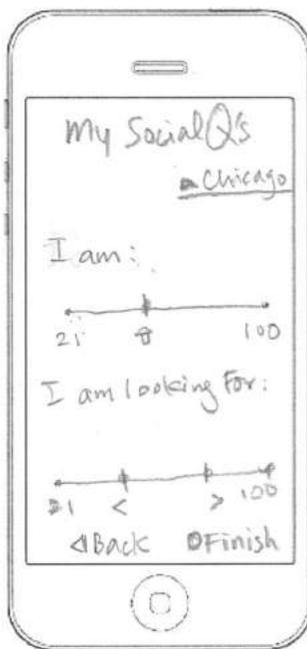
Login Screen



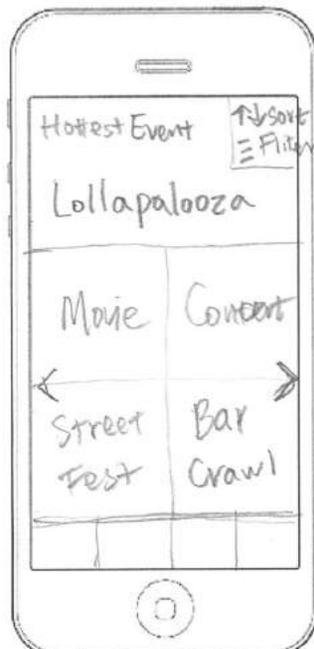
Compatibility questionnaire (1)



Compatibility questionnaire (2)



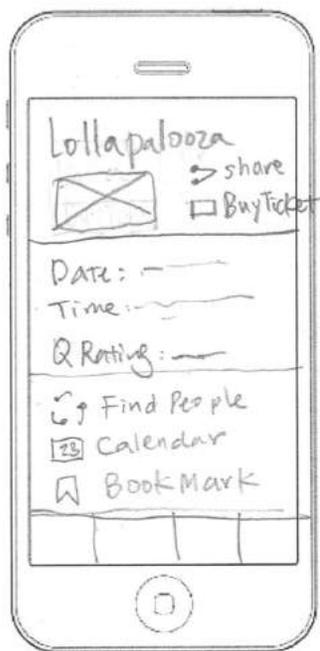
Compatibility questionnaire (3)



Events Feed



Event Filter



Event Detail



Add to Calendar



Finding New Friends



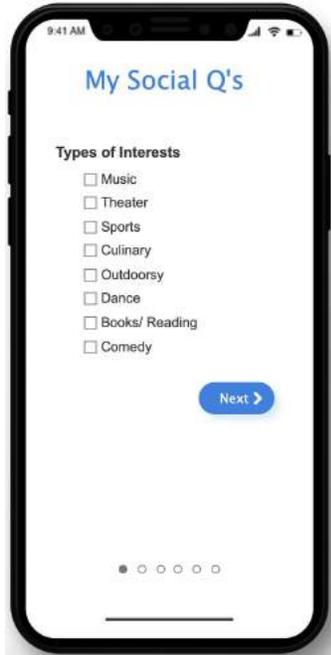
Messaging



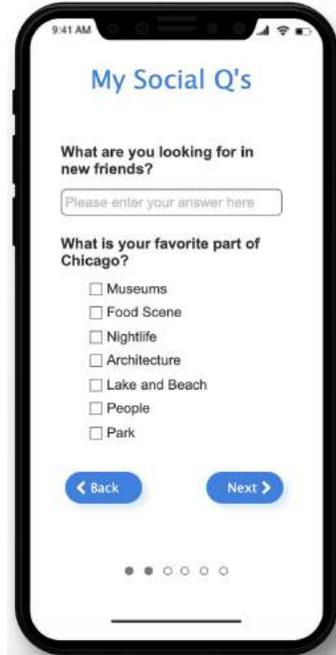
Confirmation Invitation

### Figure F. Mid-Fi Prototypes (1st version)

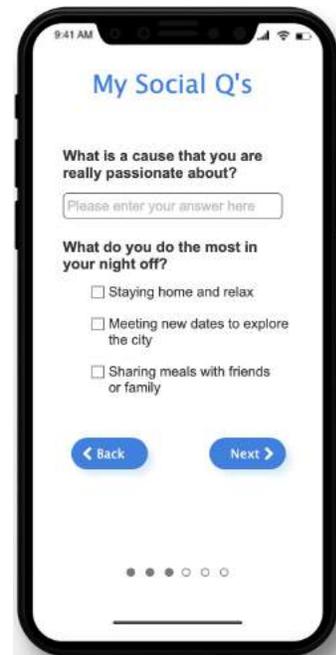
#### 1. Sign In - Questionnaire Feature



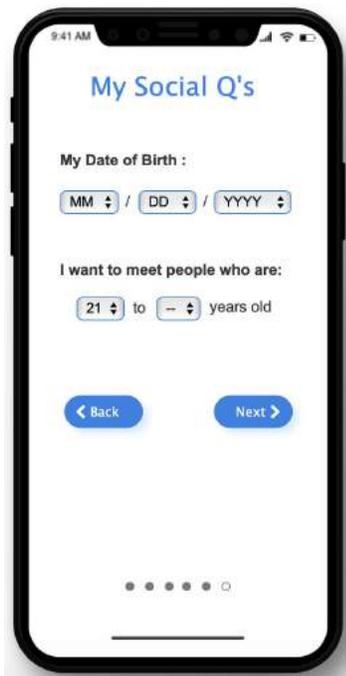
Questionnaire: Screen 1



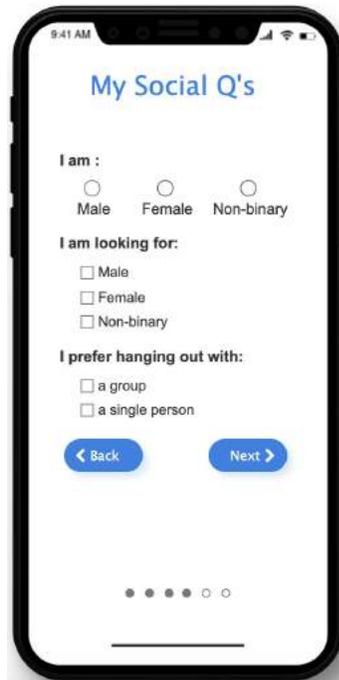
Questionnaire: Screen 2



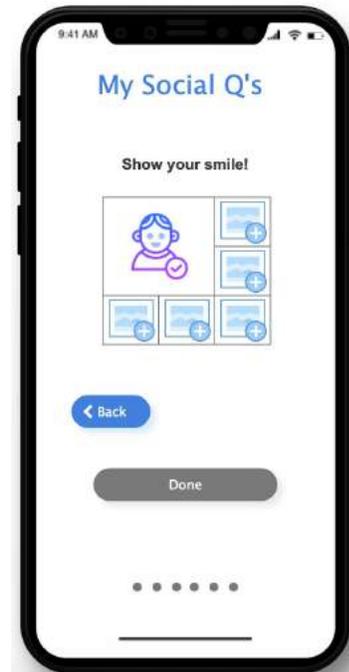
Questionnaire: Screen 3



Questionnaire: Screen 4

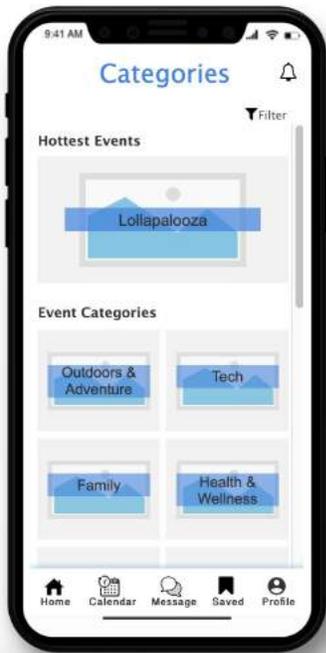


Questionnaire: Screen 5



Questionnaire: Screen 6

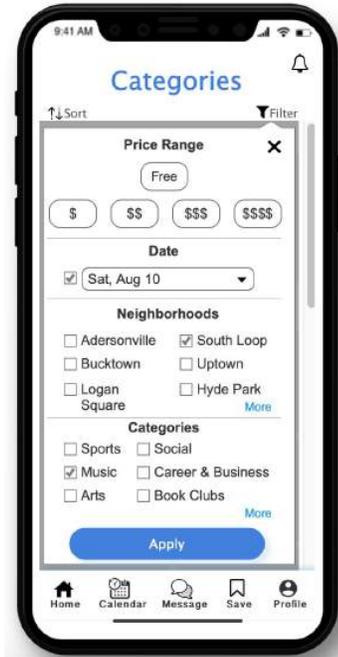
## 2. Event Filter Feature



Event Filter: Screen 1



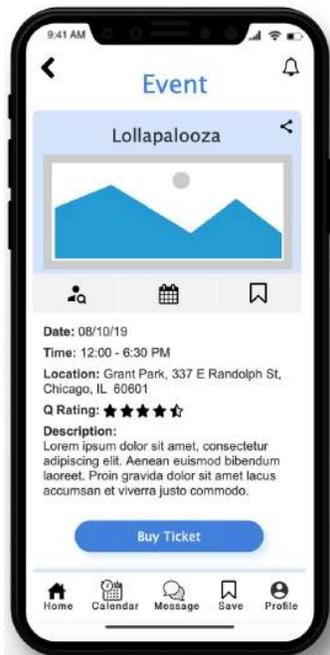
Event Filter: Screen 2



Event Filter: Screen 3

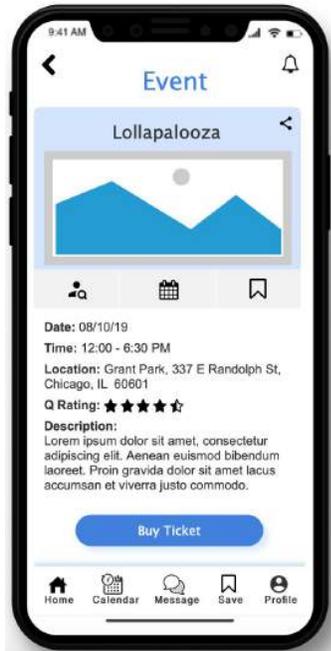


Event Filter: Screen 4

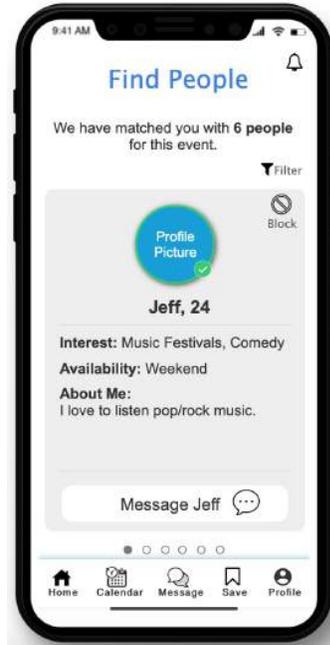


Event Filter: Screen 5

### 3. Finding/ Matching new friends feature



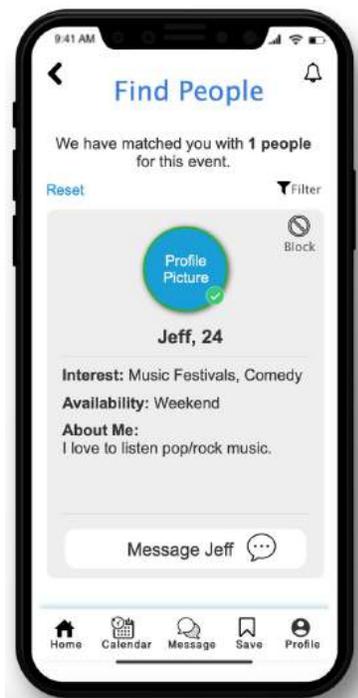
Matching: Screen 1



Matching: Screen 2

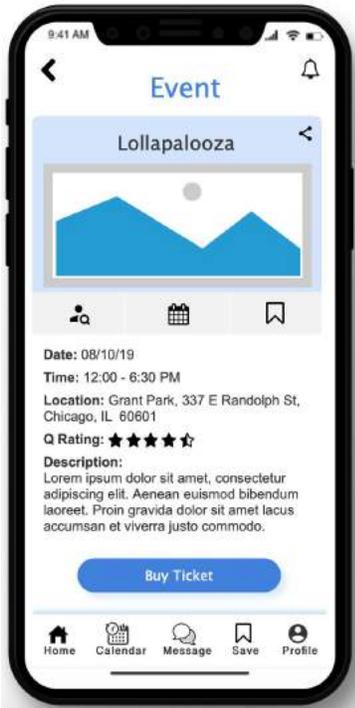


Matching: Screen 3

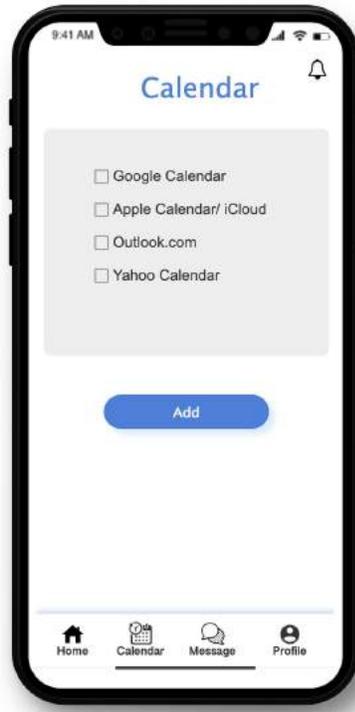


Matching: Screen 4

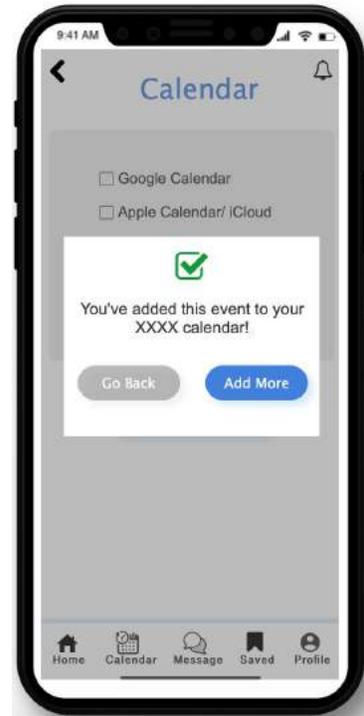
### 4. Calendar feature



Calendar: Screen 1

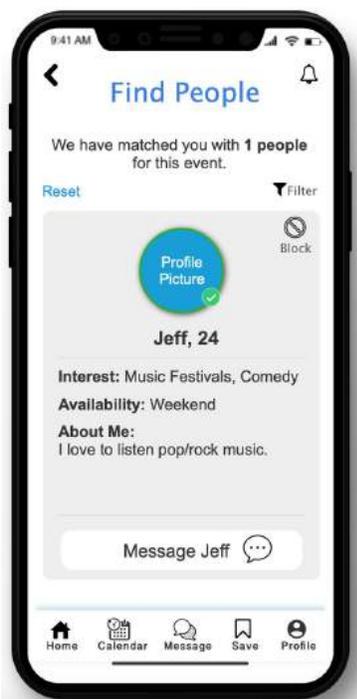


Calendar: Screen 2

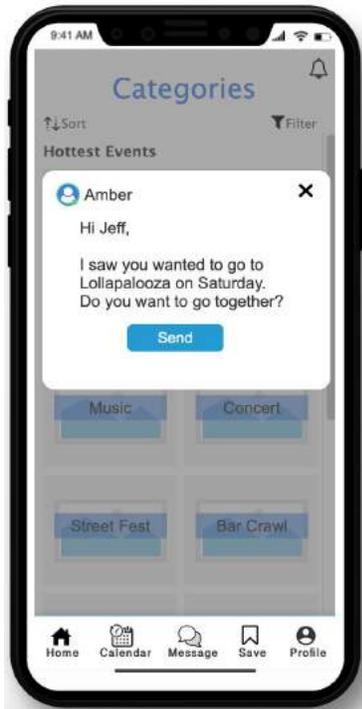


Calendar: Screen 3

### 5. Messaging feature



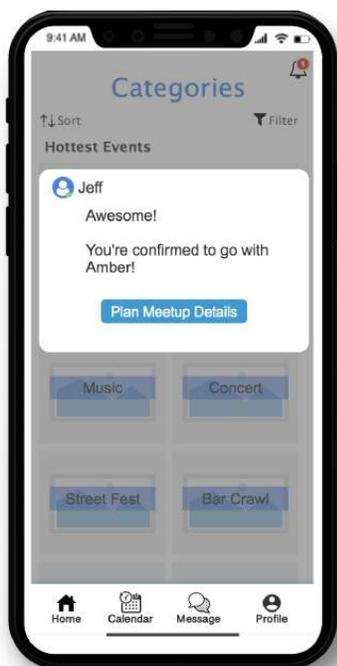
Message: Screen 1



Message: Screen 2

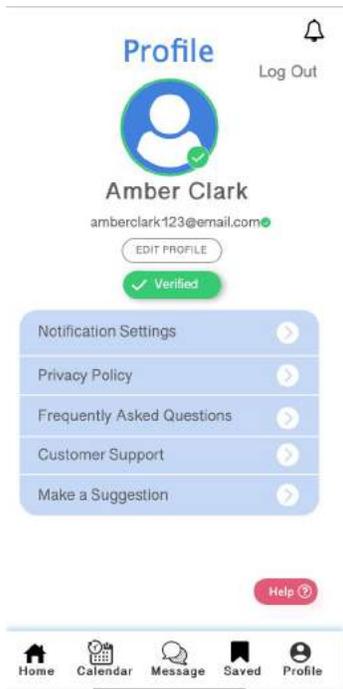


Message: Screen 3

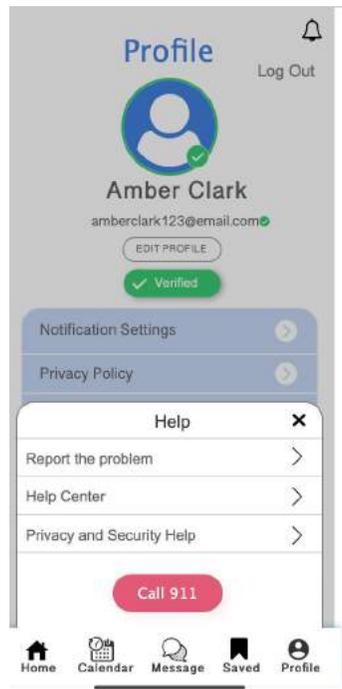


Message: Screen 4

## 6. Profile



Profile: Screen 1

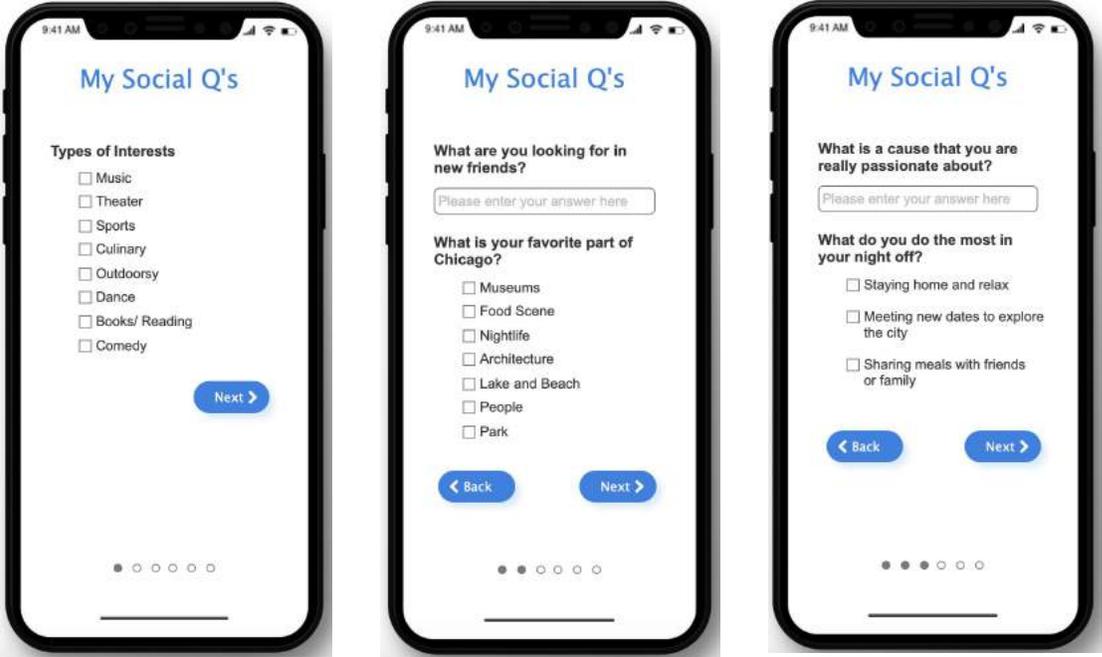


Profile: Screen 2

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

**Figure G. Mid-Fi Prototypes (Final Version)**

**1 . Sign In - Questionnaire Feature**



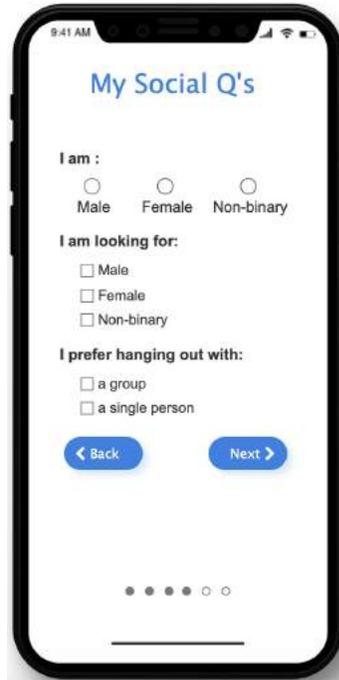
Questionnaire: Screen 1

Questionnaire: Screen 2

Questionnaire: Screen 3



Questionnaire: Screen 4



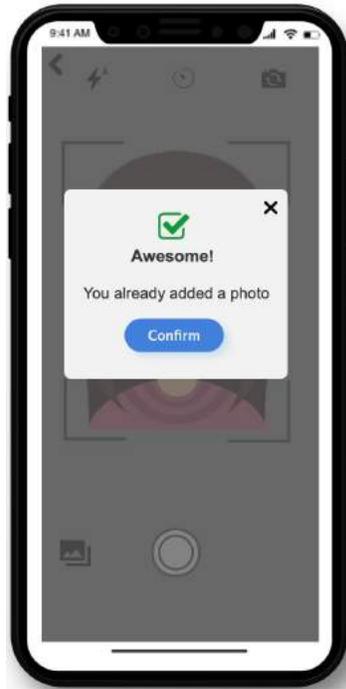
Questionnaire: Screen 5



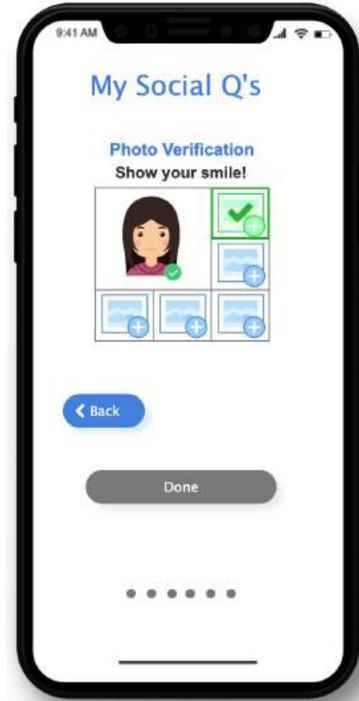
Questionnaire: Screen 6



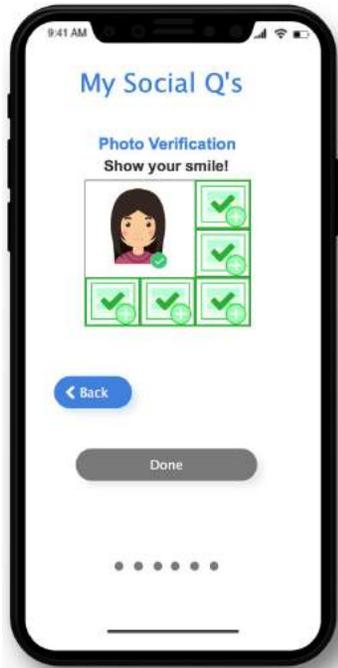
Questionnaire: Screen 7



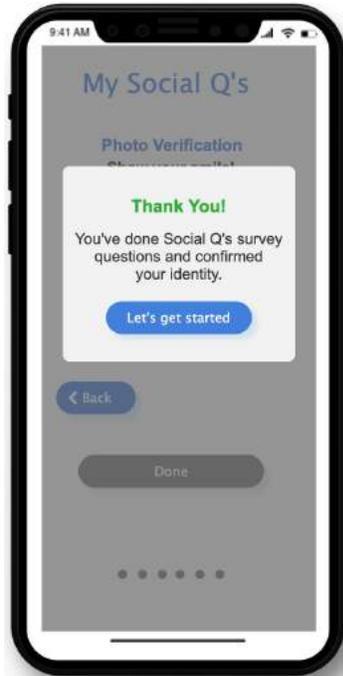
Questionnaire: Screen 8



Questionnaire: Screen 9

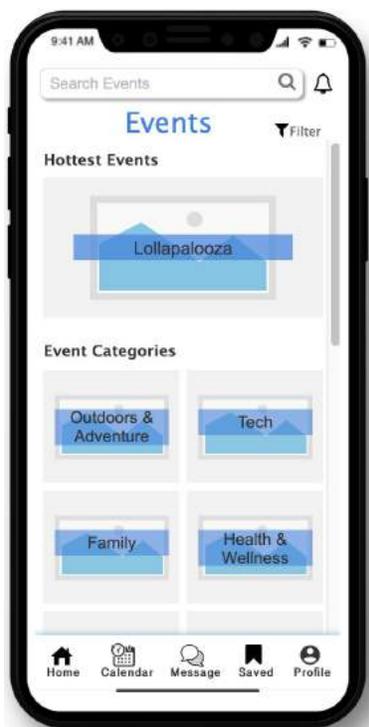


Questionnaire: Screen 10



Questionnaire: Screen 11

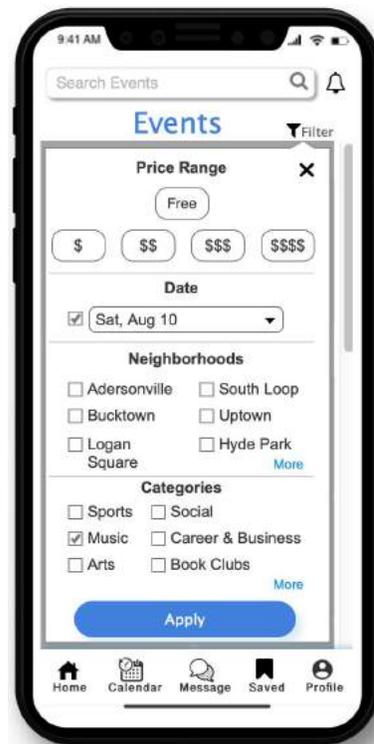
## 2 . Event Filter Feature



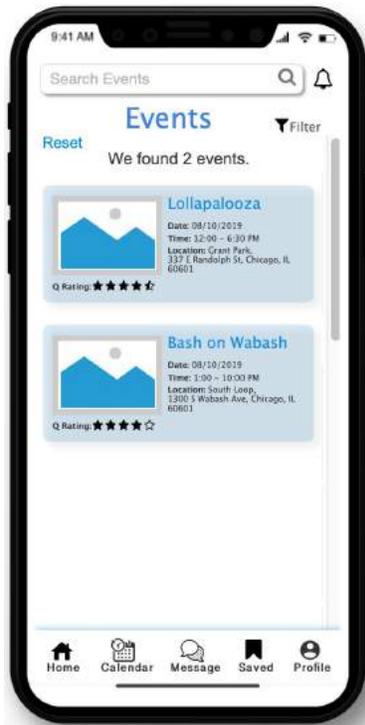
Event Filter: Screen 1



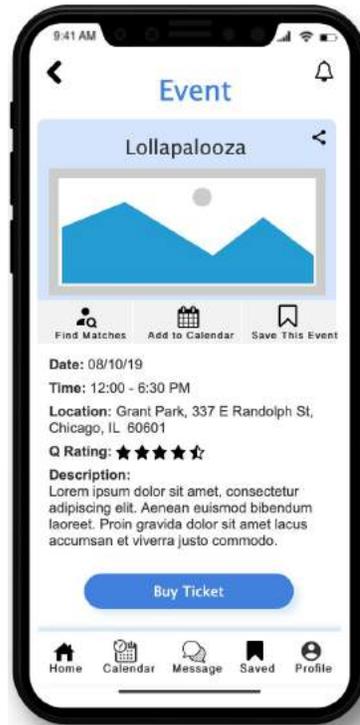
Event Filter: Screen 2



Event Filter: Screen 3

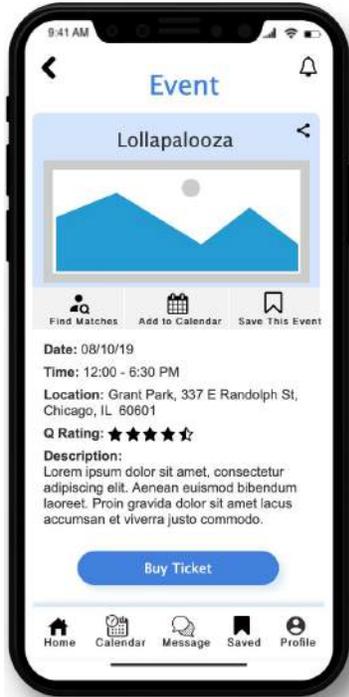


Event Filter: Screen 4

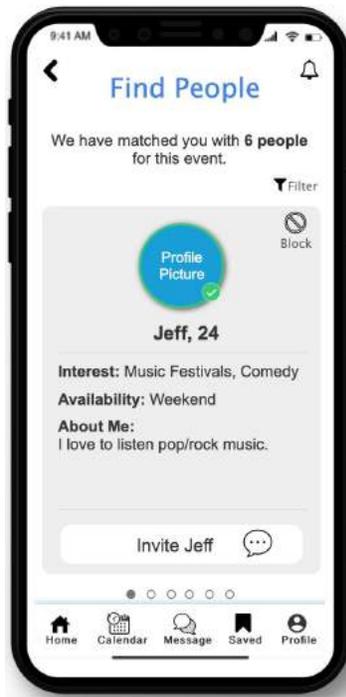


Event Filter: Screen 5

### 3 . Finding/Matching new friends Feature



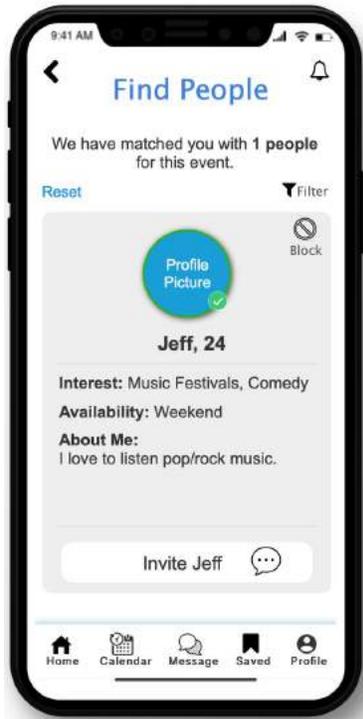
Matching: Screen 1



Matching: Screen 2

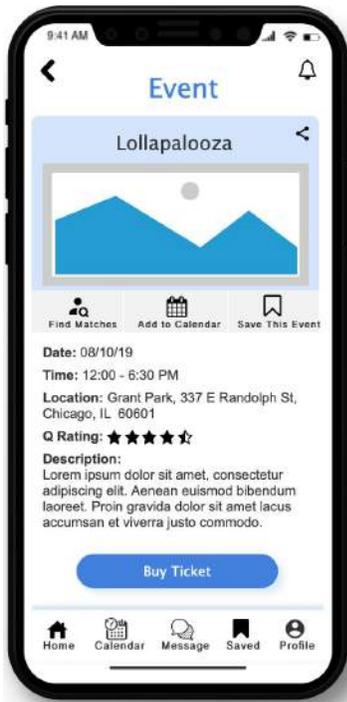


Matching: Screen 3

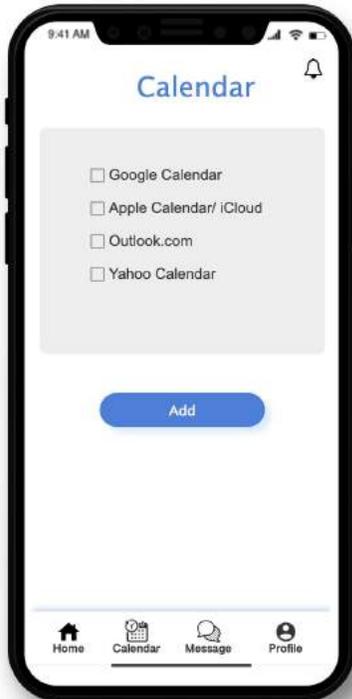


Matching: Screen 4

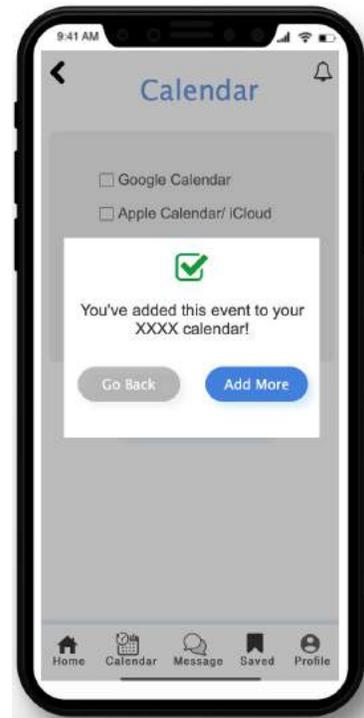
### 4 . Calendar Feature



Calendar: Screen 1

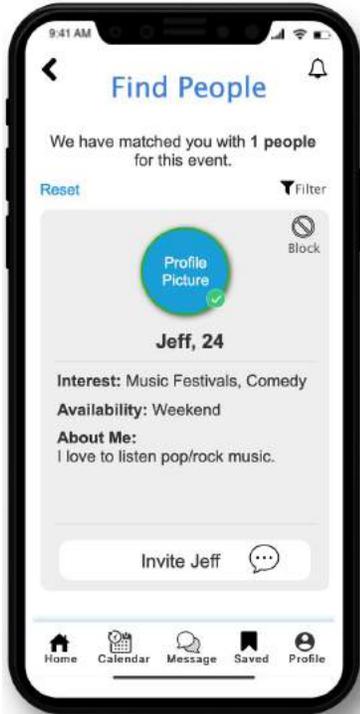


Calendar: Screen 2

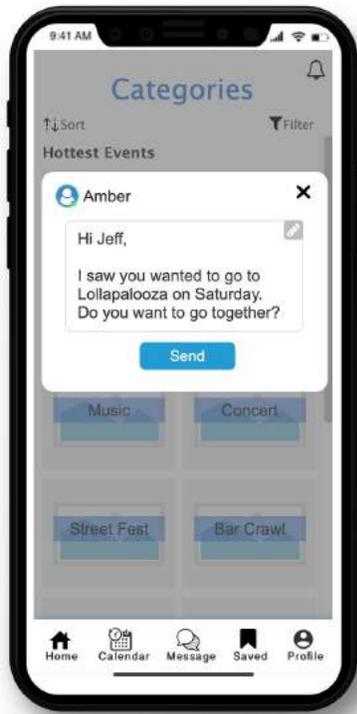


Calendar: Screen 3

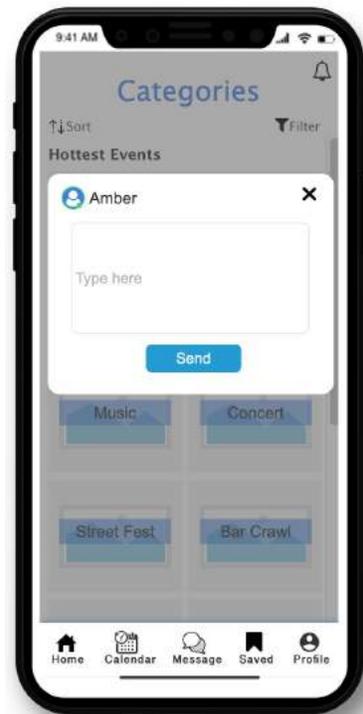
### 5 . Messaging Feature



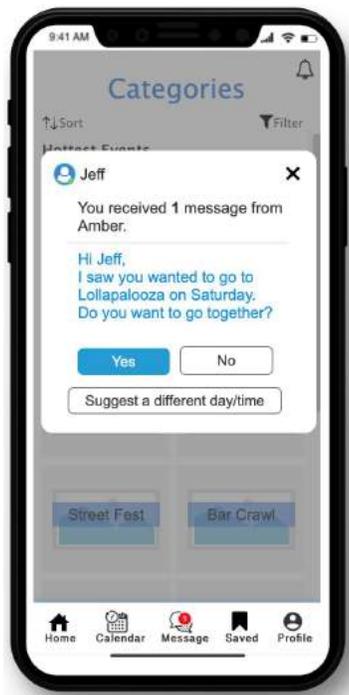
Message: Screen 1



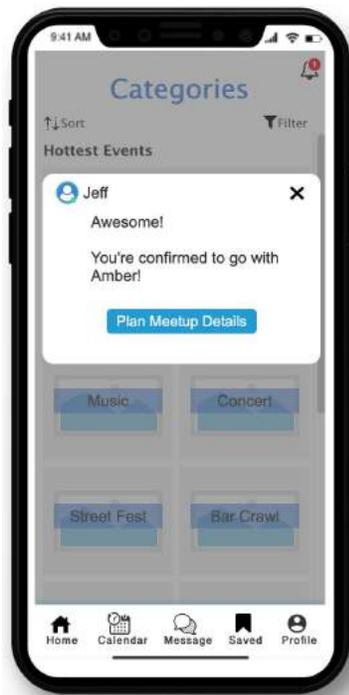
Message: Screen 2



Message: Screen 3  
(Customizable Message)

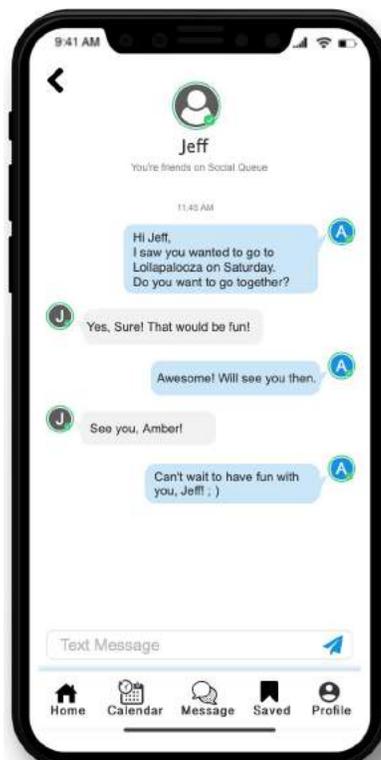
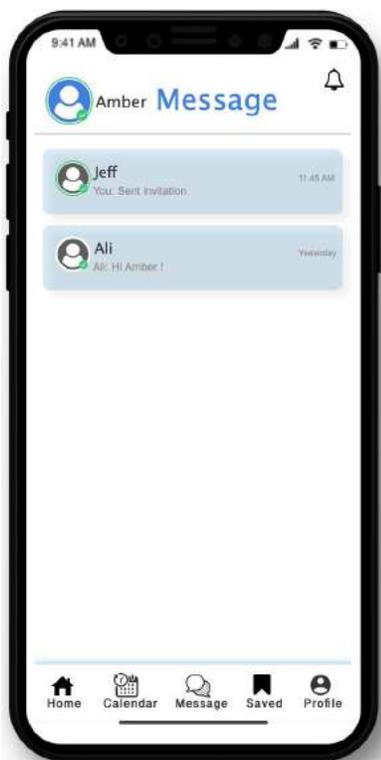


Message: Screen 4

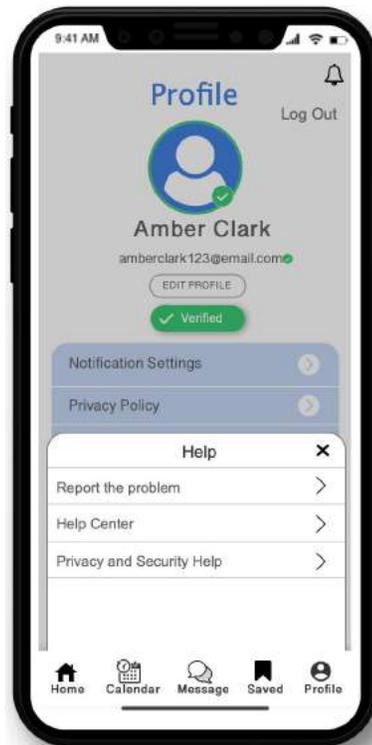


Message: Screen 5

Additional Message Feature Screens



## 6 . Profile



HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

## **Figure H. Chalkmark Test Results**

### **1. Where would you click to find a musical event that is happening this weekend, Sat Aug 10 in the South Loop?**

Clicks: 10

Successful: 4

Skips: 0

Average time: 21.6 (secs)

### **2. Now that you have found the event, where would you click to save the event and add it to your calendar?**

Clicks: 10

Successful: 6

Skips: 0

Average time: 18.0 (secs)

### **3. Where would you click to find your matches of people to attend Lollapalooza with?**

Clicks: 10

Successful: 10

Skips: 0

Average time: 12.9 (secs)

### **4. Where would you click to save an event to view later?**

Clicks: 10

Successful: 7

Skips: 0

Average time: 9.2 (secs)

### **5. You were matched with 6 people that you could attend Lollapalooza with. Where would you click to show only people that have completed the security identity verification?**

Clicks: 10

Successful: 10

Skips: 0

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

Average time: 15.7 (secs)

**6. Where would you click to select the person you found in your matches who has completed the security verification?**

Clicks: 10

Successful: 2

Skips: 0

Average time: 29.9 (secs)

**7. Review the message from Amber. Where would you click to confirm that you will attend with her?**

Clicks: 10

Successful: 10

Skips: 0

Average time: 7.1 (secs)

**8. Jeff receives an alert confirming he is attending Lollapalooza with Amber. Where would you click to review your confirmation?**

Clicks: 10

Successful: 6

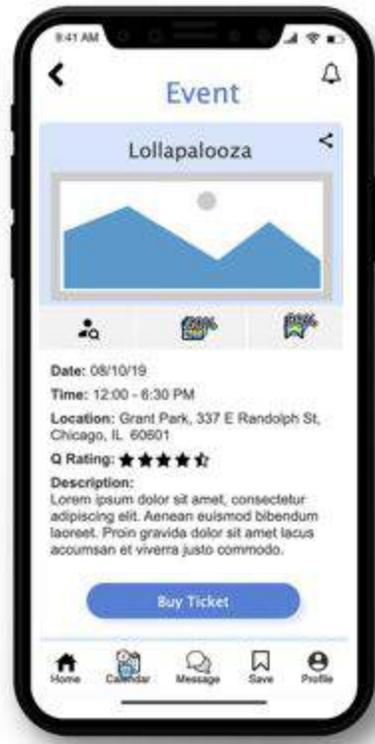
Skips: 0

Average time: 19.1 (secs)

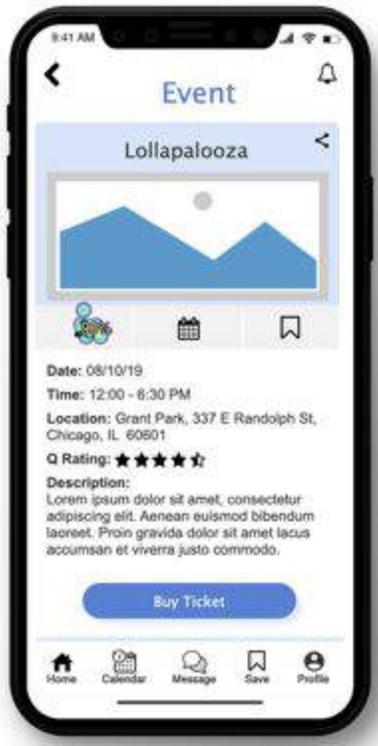
**Task 1:**



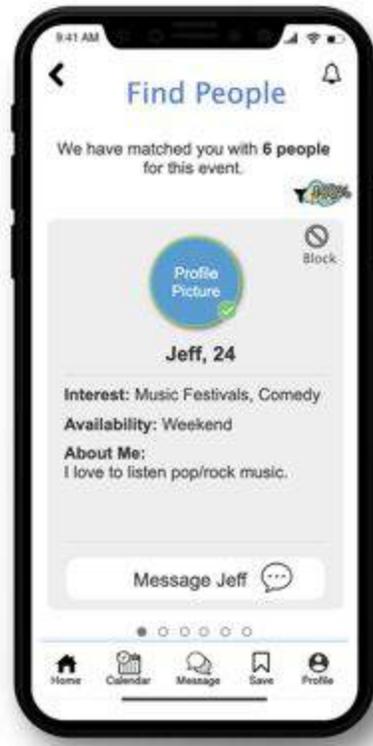
**Task 2:**



**Task 3:**



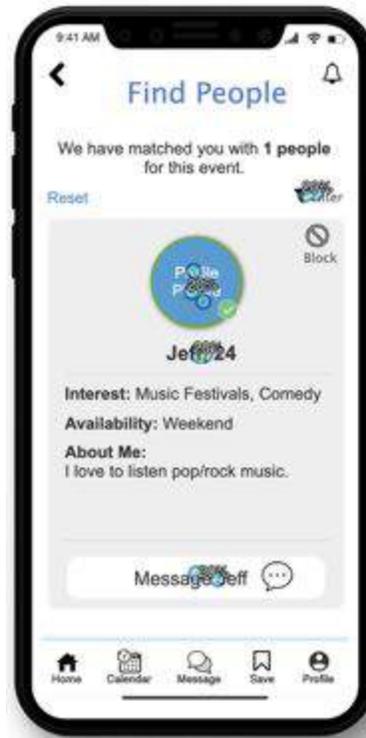
**Task 4:**



**Task 5:**



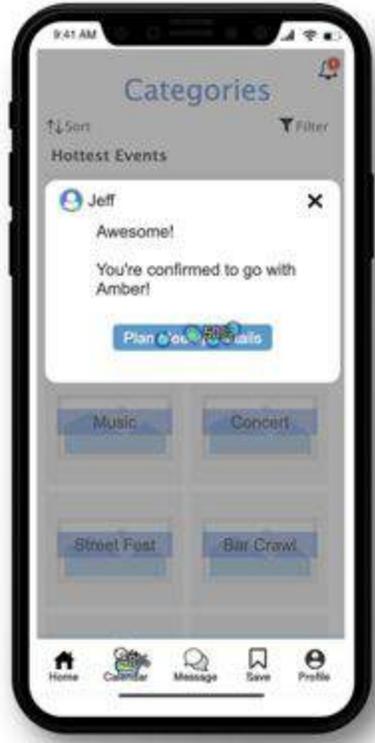
**Task 6:**



**Task 7:**



**Task 8:**



HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

## Figure I. Interview Consent Form

### **ADULT CONSENT TO PARTICIPATE IN RESEARCH**

#### **Social Q**

**Principal Investigators:** Iu-Luen Jeng, Noppawan Taratiwat, Brandon Welch, Lauren Williams

**Institution:** DePaul University, Chicago, Illinois, USA

**Department (School, College):** Computing and Digital Media (“CDM”)

**Faculty Advisor:** Hank Streeter - CDM, DePaul University

#### **What is the purpose of this research?**

The investigators (“We”) are asking you to be in a research study because we are trying to learn more about improving the process of how people organize and schedule a social event with others. This study is being conducted by Iu-Luen Jeng, Noppawan Taratiwat, Brandon Welch, and Lauren Williams, graduate students at DePaul University as a requirement to obtain their Master’s degree. This research is being supervised by their faculty advisor, Hank Streeter.

We aim to recruit 4 participants for this research project.

#### **Why are you being asked to be in the research?**

You are invited to participate in this study because we would like to learn more about how you choose social events and people to go with. You must be age 21 or older to be in this study. This study is not approved for the enrollment of people under the age of 21.

#### **What is involved in being in the research study?**

If you would like to participate in this research, the researcher will conduct an interview where you will be asked a series of questions related to social interactions, The audio of this interview may be recorded. We will transcribe our interview questions and responses into written notes to get an accurate record of what you shared. We may use a portion of video footage for portfolio videos that describes the overall process.

This study will take about 30 to 45 minutes of your time.

#### **Are there any risks involved in participating in this study?**

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

Being in this study does not involve any risks other than what you would encounter in daily life. You may feel uncomfortable or embarrassed about answering certain questions. You do not have to answer any questions that you do not want to disclose.

**Are there any benefits to participating in this study?**

You will not personally benefit from being in this study.

We hope that what we learn from you will help users gain insights on how technology can help people to organize and plan social events with others.

**Can you decide not to participate?**

Your participation is voluntary, which means you can choose not to participate. There will be no negative consequences, penalties, or loss of benefits if you decide not to participate or change your mind later and withdraw from the research after you begin participating.

**Who will see my study information and how will the confidentiality of the information collected for the research be protected?**

The research records will be kept and stored securely. Your information will be combined with information from other people taking part in the study. When we write about the study or publish a paper to share the research with other researchers, we will write about the combined information we have gathered. We will not include your name or any information that will directly identify you. We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. However, some people might review or copy our records that may identify you in order to make sure we are following the required rules, laws, and regulations. For example, the DePaul University Institutional Review Board. If they look at our records, they will keep your information confidential.

**Who should be contacted for more information about the research?**

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study or you want to get additional information or provide input about this research, you can contact the investigators:

Iu-Luen Jeng  
[ijeng@depaul.edu](mailto:ijeng@depaul.edu)  
312-375-4552

Noppawan Taratiwat  
[taratiwat.noppawan@gmail.com](mailto:taratiwat.noppawan@gmail.com)  
773-964-6272

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

Brandon Welch  
[xredrockerx@live.com](mailto:xredrockerx@live.com)  
224-400-8566

Lauren Williams  
[lwill150.mail@depaul.com](mailto:lwill150.mail@depaul.com)  
510-703-2389

You can also contact the faculty advisor:  
Hank Streeter  
[hstreete@depaul.edu](mailto:hstreete@depaul.edu)

***You will be given a copy of this information to keep for your records.***

**Statement of Consent from the Subject:**

I have read the above information. I have had all my questions and concerns answered.  
By signing below, I indicate my consent to be in the research.

Signature: \_\_\_\_\_

Printed name: \_\_\_\_\_

Date: \_\_\_\_\_

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

## Figure J. Interview Protocol

### Goal

How can a mobile application (Social Q app) help individuals to meet new people and make new friends and entertainment to users and who have similar interests, while presenting users with a list of social events?

### Research Questions:

- How do we present meaningful information about social events?
- How do people decide which events to attend and how can the app curate that experience?

### Screener Questions:

1. Do you live in the greater Chicago area?
  - a. Required: Yes
2. Are you at least 21 years or older?
  - a. Required: Yes
3. Are you interested in meeting new people and attending events with people you are meeting for the first time?
  - a. Required: Yes
4. Which social apps have you used in the past? What are they?
  - a. Required: Any social apps ( e.g. Meetup, Facebook, Tinder, Coffee meets Bagel)

### Introduction

Hello, my name is \_\_\_\_\_, and I am a graduate student at DePaul. Thank you for your participation in this interview today! I'm working on a school project that aims to help people find social buddies who have the same interests to attend social events or entertainment with (e.g. concert, festival and etc.) and create a new connection/ network through a technology-based product/ system (Social Q Mobile Application).

[Give participants the informed consent form.]

Do you mind if I [audio] record our interview?

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

Once we get started, let me know if you don't understand a question so we can clarify. Keep in mind that there are no right or wrong answers. If there are any questions you don't have an answer for or don't feel comfortable answering, or you feel like it doesn't apply to you, just tell me, and we'll move on.

Do you have any questions before we start?

Let's start!

### **Warm-up Questions**

For this interview, we'd like to focus on the process in searching social buddies for social events or entertainment events - from the time that you started searching for events to the point where you actually started finding/ convincing people to join with and decided to buy a ticket (if needed).

Tell me about the last time you make a plan with someone to attend a social or public event:

1. What event or activity did you attend?
2. How did you find out about it?
3. Who did you go with?
4. How do you decide who you were going with?

### **Deep Focus**

#### **Attending a Social Event**

1. How would you find an interesting event or activity to do in your spare time?
2. How do you decide whether you are going to attend an event?
3. You mentioned earlier that you have used social apps. Can you tell me why you use that app?
  - a. tell me what are your favorite features of the app
  - b. your least favorite ones

#### **Meeting New People**

1. When you decide to meet new people, what are the conditions or factors are important to you?
2. Can you rate the following features based on how important it is to you to decide whether you want to meet this stranger: 1 is not important at all, 3 is neutral, 5 is very important

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

1. Gender
2. Age
3. Physical Appearance (Weight and Height)
4. Their current locations
5. Their hobbies or interests
6. Their rating scores by other users
3. Does the size of the social buddy group affect your participation? If so, why?
4. What are you looking for when you decide how compatible you and new friendare?

### **Safety and Security**

1. What would make you feel secure while using social apps?
2. What apps you are currently using that had raised safety concerns for you before?
  - a. What were your concerns?
  - b. why makes you continue using the app even though you had concerned before?

### **Retrospective**

1. What is the most challenging part about meeting new people?

### **Wrap Up**

1. Is there anything else you would like to share or elaborate on?
2. Do you have any questions or comments?

Thank you for your time.

---

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

**Figure K. Prototype Usability Testing Consent Form**

**ADULT CONSENT TO PARTICIPATE IN RESEARCH**

**Social Q**

**Principal Investigators:** Iu-Luen Jeng, Noppawan Taratiwat, Brandon Welch, Lauren Williams

**Institution:** DePaul University, Chicago, Illinois, USA

**Department (School, College):** Computing and Digital Media (“CDM”)

**Faculty Advisor:** Hank Streeter - CDM, DePaul University

**What is the purpose of this research?**

The investigators (“We”) are asking you to be in a research study because we are trying to learn more about improving the process of how people organize and schedule a social event with others. This study is being conducted by Iu-Luen Jeng, Noppawan Taratiwat, Brandon Welch, and Lauren Williams, graduate students at DePaul University as a requirement to obtain their Master’s degree. This research is being supervised by their faculty advisor, Hank Streeter.

We aim to recruit 4 participants for this research project.

**Why are you being asked to be in the research?**

You are invited to participate in this study because we would like to learn more about how you choose social events and people to go with. You must be age 21 or older to be in this study. This study is not approved for the enrollment of people under the age of 21.

**What is involved in being in the research study?**

If you would like to participate in this research, the researcher will conduct an usability testing where you will be asked a series of questions related to matching and searching for social events, The audio of this interview may be recorded. We will transcribe our interview questions and responses into written notes to get an accurate record of what you shared. We may use a portion of video footage for portfolio videos that describes the overall process.

This study will take about 30 to 45 minutes of your time.

**Are there any risks involved in participating in this study?**

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

Being in this study does not involve any risks other than what you would encounter in daily life. You may feel uncomfortable or embarrassed about answering certain questions. You do not have to answer any questions that you do not want to disclose.

**Are there any benefits to participating in this study?**

You will not personally benefit from being in this study.

We hope that what we learn from you will help users gain insights on how technology can help people to organize and plan social events with others.

**Can you decide not to participate?**

Your participation is voluntary, which means you can choose not to participate. There will be no negative consequences, penalties, or loss of benefits if you decide not to participate or change your mind later and withdraw from the research after you begin participating.

**Who will see my study information and how will the confidentiality of the information collected for the research be protected?**

The research records will be kept and stored securely. Your information will be combined with information from other people taking part in the study. When we write about the study or publish a paper to share the research with other researchers, we will write about the combined information we have gathered. We will not include your name or any information that will directly identify you. We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. However, some people might review or copy our records that may identify you in order to make sure we are following the required rules, laws, and regulations. For example, the DePaul University Institutional Review Board. If they look at our records, they will keep your information confidential.

**Who should be contacted for more information about the research?**

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study or you want to get additional information or provide input about this research, you can contact the investigators:

Iu-Luen Jeng  
[ijeng@depaul.edu](mailto:ijeng@depaul.edu)  
312-375-4552

Noppawan Taratiwat  
[taratiwat.noppawan@gmail.com](mailto:taratiwat.noppawan@gmail.com)  
773-964-6272

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

Brandon Welch  
[xredrockerx@live.com](mailto:xredrockerx@live.com)  
224-400-8566

Lauren Williams  
[lwill150.mail@depaul.com](mailto:lwill150.mail@depaul.com)  
510-703-2389

You can also contact the faculty advisor:  
Hank Streeeter  
[hstreeete@depaul.edu](mailto:hstreeete@depaul.edu)

***You will be given a copy of this information to keep for your records.***

**Statement of Consent from the Subject:**

I have read the above information. I have had all my questions and concerns answered.  
By signing below, I indicate my consent to be in the research.

Signature: \_\_\_\_\_

Printed name: \_\_\_\_\_

Date: \_\_\_\_\_

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

## Figure L. Lo-Fi Prototype Usability Testing Protocol

### Overview:

This app is designed for people who are interested in attending local events but find logistics and coordinating with others challenging. This mobile app screens and filters potential social buddies, and curates events to the user's taste. Social Q will ask users to answer a compatibility questionnaire upon signing up for the app. Our goal is to help users to find a new friend that has similar interests and match their new friend search by their questionnaire answers. Users will be asked to complete three tasks using our lo-fi or paper prototypes while we observe them and take notes. Tests will be conducted in person. Findings will be notated and used to enhance the Social Q App.

### Lo-fi Prototype:

#### **Mobile App:**

### Tasks:

#### **TASK 1: [Freely explore/the first impression of screen1 ]**

Tool: Screen 1

We are now going to begin the session. please take a few moments to explore this screen. As you explore, please try to think out loud as much as possible. I would like you to share your impression of the app, your expectations of the app, and any additional comments that come to your mind.

#### **[Present participant with Screen 1]**

Screen 1 Comments/Notes:

#### **TASK 2: [Complete Social Q's Preference]**

Tool: Screen 2

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

Now you need to complete your social profile by selecting events that interest you. Show me how you do it and how would you proceed to the next step.

***[Present participant with Screen 2]***

<b>Correct Path:</b> 1. Click on many options as wish 2. Click “next”	<b>Did participant complete task? (Yes or No):</b>
<b>Number of Error:</b>	
<b>Comments/Notes:</b>	

**TASK 2: *[Complete Social Q's Preference]***

Tool: Screen 3

Great. Please continue to set your gender preference. Show me how you do it and how would you proceed to the next step.

***[Present participant with Screen 3]***

<b>Correct Path:</b> 1. Set account gender 2. Set gender preference to match buddy 3. Click “next”	<b>Did participant complete task? (Yes or No):</b>
<b>Number of Error:</b>	
<b>Comments/Notes:</b>	

**TASK 2: *[Complete Social Q's Preference]***

Tool: Screen 4

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

Great. Please answer the questions about age. Show me how you do it and how would you proceed to the next step.

***[Present participant with Screen 4]***

<b>Correct Path:</b> 1. Set account gender 2. Set gender preference to match buddy 3. Click “next”	<b>Did participant complete task? (Yes or No):</b>
<b>Number of Error:</b>	
<b>Comments/Notes:</b>	

**TASK 3: *[Discover the homepage]***

Tool: Screen 5

I would like you to share your impression of this screen, your expectations of the screen, and any additional comments that come to your mind.

***[Present participant with Screen 5]***

Screen 5 Comments/Notes:

**TASK 4: *[Filters]***

Tool: Screen 5

You only have free time this Saturday afternoon and want to find out what event happens this Saturday. Show me how would you do.

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

***[Present participant with Screen 5]***

<b>Correct Path:</b> 1. Click filter	<b>Did participant complete task? (Yes or No):</b>
<b>Number of Error:</b>	
<b>Comments/Notes:</b>	

**TASK 4: [Filters]**

Tool: Screen 6

I would like you to share your impression of this screen, your expectations of the screen, and any additional comments that come to your mind.

***[Present participant with Screen 6]***

<u>Screen 6 Comments/Notes:</u>
---------------------------------

**TASK 5: [Event Detail Page]**

Tool: Screen 5

You want to check out some music event, what would you do?

***[Present participant with Screen 5]***

<b>Correct Path:</b> 1. Click concert/ or Lollapalooza	<b>Did participant complete task? (Yes or No):</b>
<b>Number of Error:</b>	

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

<b>Comments/Notes:</b>	
------------------------	--

**TASK 5: [Event Detail Page]**

Tool: Screen 7

I would like you to share your impression of this screen, your expectations of the screen, and any additional comments that come to your mind.

**[Present participant with Screen 7]**

<u>Screen 7 Comments/Notes:</u>
---------------------------------

**TASK 6: [Add Event to Calendar]**

Tool: Screen 7

You would like to add lollapalooza to your calendar. Show me how would you do.

**[Present participant with Screen 7]**

<b>Correct Path:</b> 1. Click "calendar"	<b>Did participant complete task? (Yes or No):</b>
<b>Number of Error:</b>	
<b>Comments/Notes:</b>	

**TASK 6: [Add Event to Calendar]**

Tool: Screen 8

I would like you to share your impression of this screen, your expectations of the screen, and any additional comments that come to your mind.

**[Present participant with Screen 8]**

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

Screen 8 Comments/Notes:

**TASK 7: [Find People]**

Tool: Screen 7

You would like to match someone who wants to go to the event together. Show me how would you do.

**[Present participant with Screen 7]**

<b>Correct Path:</b> 1. Click “find people”	<b>Did participant complete task? (Yes or No):</b>
<b>Number of Error:</b>	
<b>Comments/Notes:</b>	

**TASK 7: [Fine People]**

Tool: Screen 9

I would like you to share your impression of this screen, your expectations of the screen, and any additional comments that come to your mind.

**[Present participant with Screen 9]**

Screen 9 Comments/Notes:

**TASK 8: [Message People]**

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

Tool: Screen 9

Now you want to message Jeff. Show me what would you do.

***[Present participant with Screen 9]***

<b>Correct Path:</b> 1. Click “conversation bubble icon”	<b>Did participant complete task? (Yes or No):</b>
<b>Number of Error:</b>	
<b>Comments/Notes:</b>	

**TASK 8: [Message People]**

Tool: Screen 10

I would like you to share your impression of this screen, your expectations of the screen, and any additional comments that come to your mind.

***[Present participant with Screen 10]***

<u>Screen 10 Comments/Notes:</u>
----------------------------------

**TASK 8: [Message People]**

Tool: Screen 11

Now, Jeff gets your message. I would like you to share your impression of this screen, your expectations of the screen, and any additional comments that come to your mind.

***[Present participant with Screen 11]***

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

Screen 11 Comments/Notes:

**TASK 9: [Reminder]**

Tool: Screen 12

Our app would send you a reminder on the day of the concert. I would like you to share your impression of this screen, your expectations of the screen, and any additional comments that come to your mind.

***[Present participant with Screen 12]***

Screen 12 Comments/Notes:

***[Post-task Question:]***

1. What was the most challenging part of all the tasks you did and why?

Comments/Notes:

2. Is there anything on the screen that stood up to you and why?

Comments/Notes:

3. Any feedback or thoughts you would like to share?

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

Comments/Notes:

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

## **Figure M. Mid-Fi Prototype Usability Testing Protocol**

### **Overview**

Social Q is an app that is designed to help residents of Chicago to enjoy what the city has to offer, while connecting with new people outside of their current friend group. SQ offers users a curated listing of local events specific to the user's taste. Users have the option of saving events, adding them to their personal calendar and buying a ticket within SQ. While users discover new activities, they are matched with individuals who share their interests. Once matched with other users, they can filter their matches further to identify who they would like to attend an event or activity with. Security filters enable users to feel empowered and safe when using the app.

Testers are prompted to complete seven key tasks using the mid-fi interactive prototype (second iteration). Five key tasks will be completed as Amber, active user and two of the tasks will be completed as Jeff, our passive user. Findings are to be documented and collated, then utilized to make revisions to the second mid-fi prototype (third-final iteration).

### **Key Tasks**

- 1A.** Profile Creation
- 2A.** Manage Event Filters
- 3.** Event Details: Add to Calendar & Save
- 4.** Get Matches
- 5.** Message Your Match
  
- 1B.** Receive Invitation and Accept
- 2B.** Receive Confirmation

### **Goals**

1. Create and evaluate the content strategy and information architecture for the application, to ensure that it is easy to use and provide effective navigation for users.

Measure: The number of successfully completed information-finding tasks, number, and types of

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

errors, as well as the number and types of slips.(Quantitative)

2. Goal: Install a compatibility filter to increase the user's ease of use and satisfaction in finding and matching the new friend.

Measure: SUS rating in the usability testing and the qualitative data from the interviews. (Qualitative and Quantitative)

3. Streamline the scheduling and schedule to meet up for our users.

Measure: The number of successfully completed communication and scheduling tasks, number and types of errors, as well as the number and types of slips. (Quantitative)

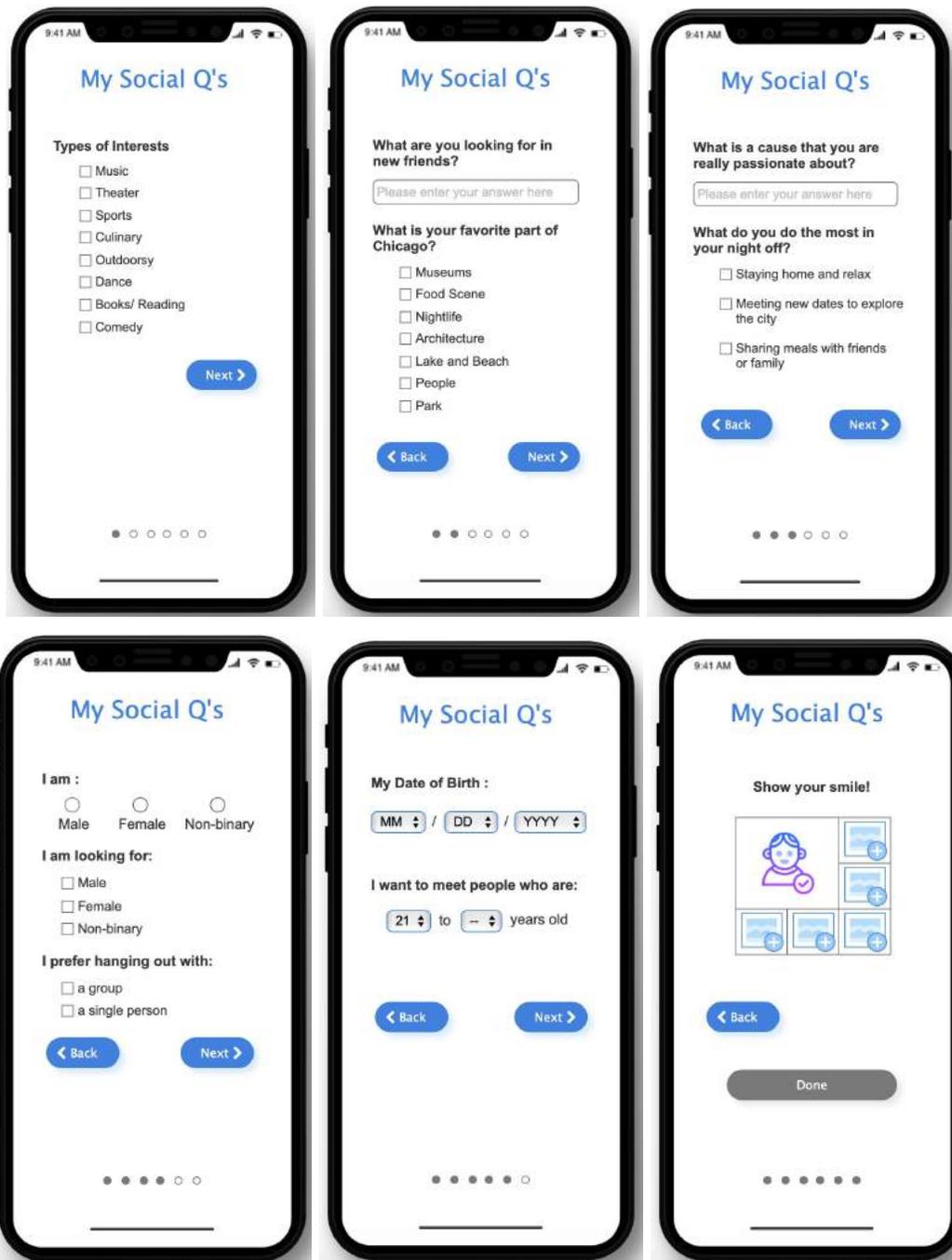
4. Improve the user's sense of safety and security, by requiring photo-verification before using the app. Photo verification asks the user to submit four photos of the user making specific randomly-generated gestures or poses. Those photos are then reviewed by our team and the person's identity is confirmed.

Measure: Conduct a SUS which asks users to place on a scale their level of confidence in the safety of the application as compared to other social apps they have used. SUS will be completed as part of the usability test for the Mid-Fi version of our prototype. We will screen for users who have experience using any meetup apps. (Qualitative)

## Usability Test

### Task 1A: Profile Creation

*Click login. Complete your profile by indicating your preferences. Let me know when you are done.*



Correct path:

1. Click on many options as wish
2. Click "next" through 6 screens
3. Click "Done"

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

<b>Did the participant complete task? (Yes or No)</b>	Yes/No
<b># of Errors:</b>	
<b>What does the “photo verification step” mean to you? Can you elaborate?</b>	
<b>Notes:</b>	

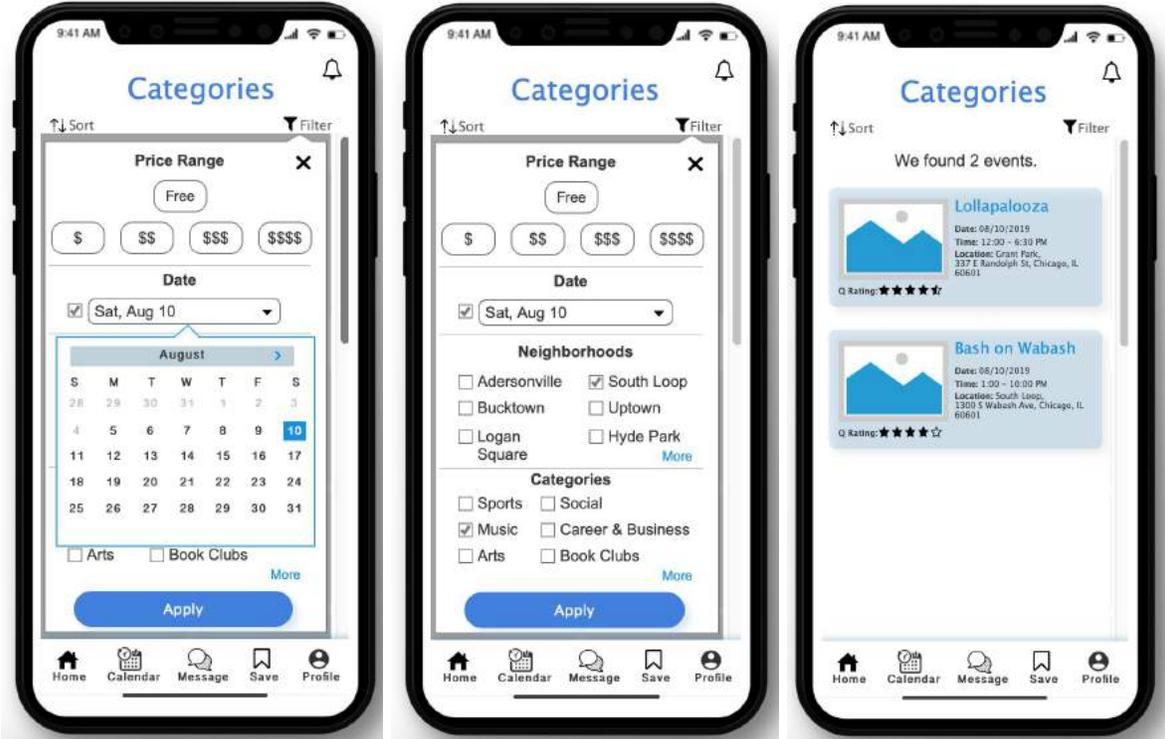
		1 Strongly Disagree	2	3	4	5 Strongly Agree	N/A
1	I think that I would like to use this filter feature frequently:						
2	I found this filter feature unnecessarily complex:						
3	I thought this filter feature was easy to use						
4	I think that I would need the support of a technical person to be able to use this feature:						
5	I found this filter feature in this app is well integrated:						
6	I thought there was too much inconsistency in this filter feature:						
7	I would imagine that most people would learn to use this filter feature very quickly:						
8	I found this filter feature very cumbersome to use:						

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

9	I felt very confident using this filter feature:						
10	I needed to learn a lot of things before I could get going with this filter feature:						

**Task 2A: Manage Event Filters**

*Show me how you would find a musical event that is happening this weekend, Sat Aug 10 in the South Loop. Select that event.*



Correct path:

1. Filter on category
2. Filter on day
3. Filter on neighborhood
4. Click "Apply"
5. Select Lollapalooza

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

<b>Did the participant complete task? (Yes or No)</b>	Yes/No
<b># of Errors:</b>	
<b>Notes:</b>	

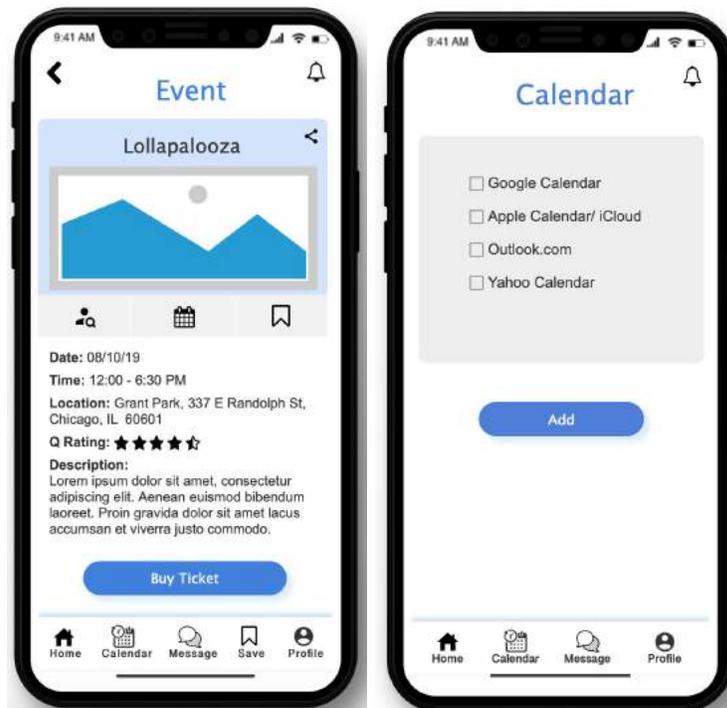
		1 Strongly Disagree	2	3	4	5 Strongly Agree	N/ A
1	I think that I would like to use this filter feature frequently.						
2	I found this filter feature unnecessarily complex:						
3	I thought this filter feature was easy to use						
4	I think that I would need the support of a technical person to be able to use this feature.						
5	I found this filter feature in this app is well integrated.						
6	I thought there was too much inconsistency in this filter feature.						
7	I would imagine that most people would learn to use this filter feature very quickly.						

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

8	I found this filter feature very cumbersome to use.						
9	I felt very confident using this filter feature:						
10	I needed to learn a lot of things before I could get going with this filter feature.						

### Task 3: Event Details\_Calendar & Save

*Now that you have opened the event, save it and add it to your Google calendar.*



Correct path:

1. Select calendar icon
2. Select Google calendar option
3. Click "Add"

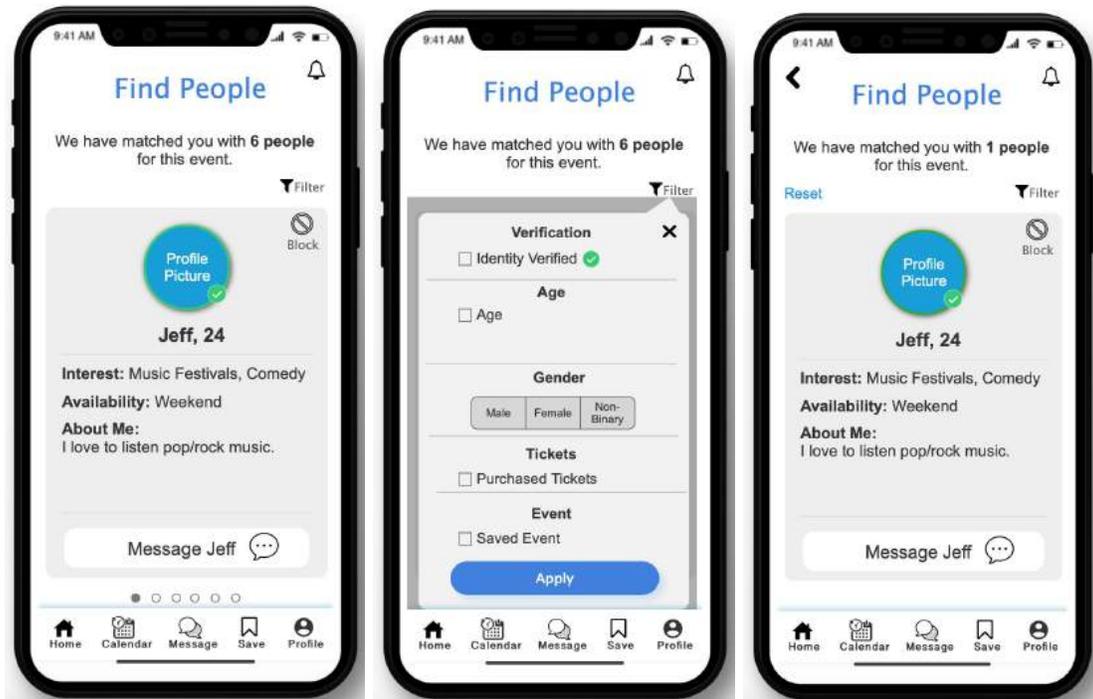
HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

<b>Did the participant complete task? (Yes or No)</b>	Yes/No
<b># of Errors:</b>	
<b>Notes:</b>	

#### Task 4: Get Matches

*You have found an event to attend, review the people you were matched with and find someone to go to Lollapalooza with.*

*Now, use the filter to find people who have completed the security verification.*



Correct path:

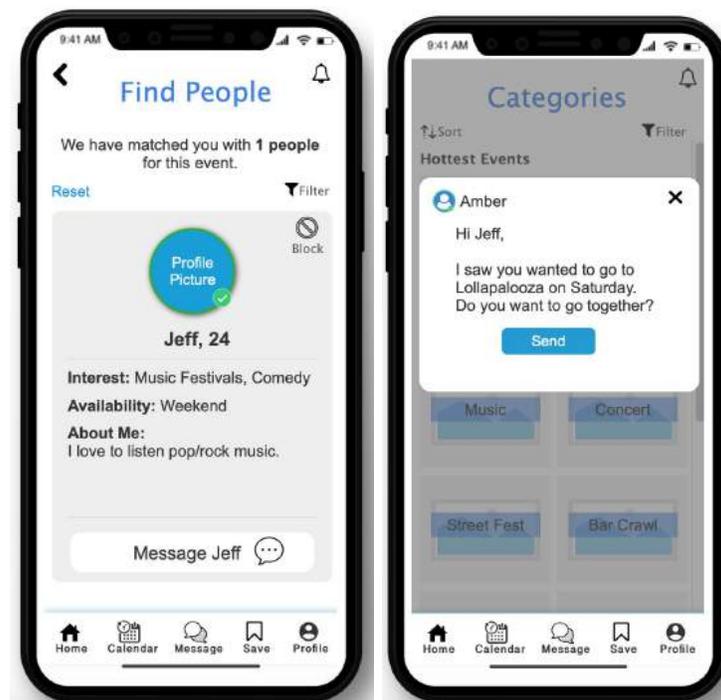
1. Select filter icon
2. Select the filter option for identity verification
3. Click "Apply"
4. Show only "Jeff"

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

<b>Did the participant complete task? (Yes or No)</b>	Yes/No
<b># of Errors:</b>	
<b>What does the green checkmark mean to you? Can you elaborate?</b>	
<b>What does the “block” mean to you? Can you elaborate?</b>	
<b>Notes:</b>	

### Task 5: Message your match

Select the person you found in your matches who has completed the security verification.



Correct path:

1. Select “Message Jeff”
2. Read message

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

### 3. Select Send

<b>Did the participant complete task? (Yes or No)</b>	Yes/No
<b># of Errors:</b>	
<b>Notes:</b>	

*Now I want you to rate both the verify green checkmark and the block options.*

		1 Strongly Disagree	2	3	4	5 Strongly Agree	N/ A
1	I think that I would like to use this safety feature frequently:						
2	I found this safety feature unnecessarily complex:						
3	I thought this safety feature was easy to use						
4	I think that I would need the support of a technical person to be able to use this feature:						
5	I found this safety feature in this app is well integrated:						
6	I thought there was too much inconsistency in this safety feature:						
7	I would imagine that most people						

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

	would learn to use this safety feature very quickly:						
8	I found this safety feature very cumbersome to use:						
9	I felt very confident using this safety feature:						
10	I needed to learn a lot of things before I could get going with this safety feature:						

**Task 1B: Jeff receives and accepts the invitation from Amber to attend Lollapalooza**

*Has Amber complete security verification? If so, how can you tell?*

*Review the message from Amber and confirm that you will attend with her.*

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19



Correct path:

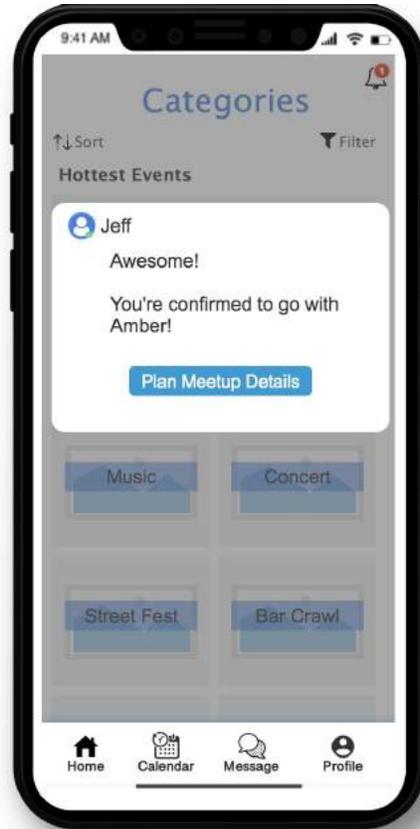
1. Review profile icon for green outline and dot
2. Read message
3. Select Yes to confirm

<b>Did the participant complete task? (Yes or No)</b>	Yes/No
<b># of Errors:</b>	
<b>Notes:</b>	

**Task 2B: Jeff reviews the alert confirming he is attending Lollapalooza with Amber**

*Review your confirmation.*

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19



Correct Path:

1. Read confirmation
2. Select Plan Meetup Details

<b>Did the participant complete task? (Yes or No)</b>	Yes/No
<b># of Errors:</b>	
<b>Notes:</b>	

HCI 594 Project Final Report	Team: 7
Social Q Mobile Application	Date: 08/21/19

### Post Test Questions

1. What was the most challenging part of all the tasks you did and why?

Comments/Notes:

2. Is there anything on the screen that stood up to you and why?

Comments/Notes:

3. Any feedback or thoughts you would like to share?

Comments/Notes: