

CPSC 481 - Team K - Stage Five

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Tutorial Section: 02

Date: December 1, 2020

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Github

<https://github.com/mperror/cpsc481-TeamK>

Portfolio

<https://mperror.github.io/cpsc481-TeamK/>

Executive Summary (150 Words)

Xplore is a mobile application prototype that allows users to find, create, and attend events happening around them. The purpose of the application is to build a greater sense of community by allowing users to create their own events or attend ones hosted by others. This report showcases our journey as we applied user-centred design principles to bring this idea closer to reality. Our group conducted user research by forming and analyzing surveys and questionnaires, competitive product surveys, and scenario testing. We then used the insights gathered from the user research to create a low-fi prototype using Balsamiq to highlight initial tasks and functionalities. Following this, we used Figma to create a hi-fi prototype that implemented six vertical tasks that were iterated upon based on feedback.

Introduction

Our team applied user-centred design principles to prototype an application that aimed to notify and connect individuals about local events and activities happening in their community.

Description of our design problem

The problem we wanted to solve was based on the following observation:

With many events happening around the city, it is often challenging to track and be aware of the available opportunities. Currently, people learn about events through social media accounts, but this information is spread out and not consolidated anywhere. This is challenging when someone is either travelling to a new city looking for something to do, or is a current resident who wants to learn about events where they can meet new people, and have fun.

Description of our design solution

A potential solution to solve this problem consists of a mobile application that conveniently consolidates all events happening in a city that makes it easy to discover events. This way, people can easily access community-maintained pools of knowledge about events rather than having to access disparate sources. This platform would also help event planners to see and manage their events.

End-users and stakeholders

The end-users and stakeholders of our application consist of two different groups. Event organizers, and event participants.

1. Event organizers are local businesses, city planners, government officials, charities or non-profit organizations. Local businesses may be interested in creating unique marketing campaigns that involve customers visiting their location. An example of this includes “free donuts for the first 50 customers”. City planners may want to organize events like firework shows during holidays. This app would allow them to design a more robust experience and inform a broader range of citizens on what is planned. Charities and non-for-profit organizations may put together fundraisers with activities to entice people to visit and get informed about their mission.
2. Event participants consist of residents over the age of 13 in a geographic location, or tourists wanting to explore new places. Although this app is meant to be accessible by everyone over 13, events can set restrictions on age groups to ensure the safety of participants depending on the type of event. Tourists, visiting a new city, will want to check out local events during their visit to make the most of their experience.

User research methods, process, and findings

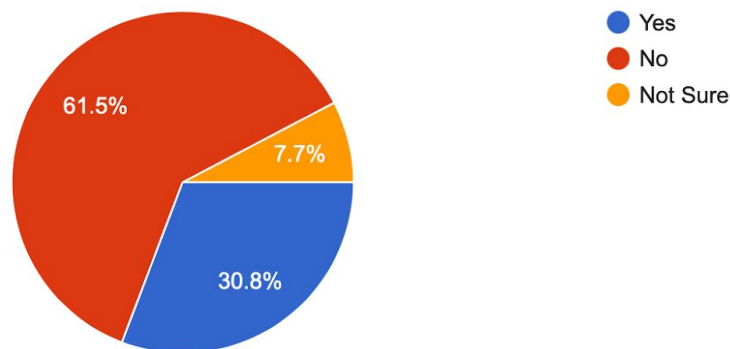
Our group conducted user research by using surveys & questionnaires, competitive product surveys, and scenario testing methods from the IDEO card set. The following is an in-depth explanation of our processes.

Ask - Surveys & Questionnaires

Methods & Process: We surveyed 26 potential users for the application, with participants of different ages, backgrounds, and lifestyles. Questions were asked to ascertain characteristics about users and understand who would be interested in this product. Below is a summary of one of the questions asked and the percentage of responses. A full analysis can be found in Appendix A.

Have you ever used event planning applications? (ex: Showpass, Eventbrite, Meetup, etc.)

26 responses



Findings: From the responses given, a few things were noticed: Majority of users were not familiar with event planning applications. Many people went to events once or twice a week (mainly because they find out about these events from all over the place) and the average person was neither a total introvert or extrovert. A survey was beneficial as it allowed us to quickly elicit information from many different people and gain a better understanding of our average user. However, based on some of the replies given, some users didn't seem to comprehend one of the questions, this was due to unclear wording. To improve, we could change the wording on that question to be more clear so that participants could have given more accurate answers.

Learn - Competitive Product Survey

Methods & Process: We reviewed four most frequently used event applications: Eventbrite, Meetup, Airbnb, and Facebook to better understand which features could be implemented in our system. As these applications have been available for a while, we felt they would provide meaningful insights. We reviewed factors such as the friendliness of the application's display, ease of use to make an event, ease of use to find an event, and any examined any other features that stood out to us. We made notes on each platform, the full set of features can be seen in Appendix B.

Findings: One of the features that stood out was the ability to filter results by date, category, price, and other factors. This was found across all applications, but the one on Eventbrite felt the most similar to our application's functionality. A noticeable trait was the simplicity of the user-interface design, only a few clicks were required to accomplish a task. Airbnb provided the simplest interface and served as inspiration. The competitive product survey was beneficial as it allowed us to analyze and experience what similar applications in the market are like, which helped us define our own application's functional requirements. One of the main issues we encountered during this research was that these applications had overlap, making it difficult to figure out which system or approach would be best implemented. Next time, it would be better if we did the competitive product survey with an audience and asked them questions about it to get more perspectives.

Try - Scenario Testing

Methods & Process: Three different scenarios were brainstormed to try and succinctly cover our application's possible functionalities. We tried to tailor each of these scenarios to embody different potential user perspectives like a tourist or small business owner. These scenarios were given to six potential users to analyze. Scenarios gave a great way to get feedback on the different functionalities that we would like to have in our app. An example of one of the responses for our "looking for something to do" scenario was that the user didn't want the application to "stalk" them or give them random event idea recommendations. The full analysis can be found in Appendix C.

Findings:

In terms of what went well, some of the scenarios got the interviewees really excited about the application as they had never heard of an event planner app like ours. The scenarios were good at eliciting more elaboration from some of the interviewees; getting what they thought about the application and based on the three scenarios, the interviewees had a good understanding of the system. Some participants thought that the scenarios were too specific and were confused, so they often needed guiding questions to give proper feedback. Others thought they were too general and they forgot the main functionality of the application and would get lost in them. To improve upon this, we would spend more time on making the scenarios more relatable and easy to understand. Additionally, having more than three scenarios with a mix of specific and general cases could help us cover a wider range of perspectives.

Important design choices and justification

A Home bar with three buttons was used to provide a simple and fast way for users to navigate through different sections, similar to Google Maps. Consistent colour choices and visual cues were used to allow users to associate colours with certain actions and tasks, helping them learn the interface faster. We created multiple ways for users to search for events to give them more freedom. Lastly, we wanted to ensure the number of steps to complete tasks was as low as possible to ensure efficiency.

Low-Fi design and lessons learned (Stage Three)

What went well in this process was our initial prototyping session. We all had a common understanding of the app's objectives which allowed us to form cohesive design elements. It was easy to collaborate on integrating the prototypes since we used Balsamiq Cloud. However, what went poorly was our time management as we struggled with it early on and this led to a build-up of work that limited our creativity. Additionally, the affinity diagram was confusing to understand which made us spend more time on the early portions of this stage. What we would do differently is to, first, be more organized with our approach to this stage since there were so many tasks. We could have created a concrete schedule, as well as had more frequent meetings. Secondly, the prototyping portion helped us realize what was feasible and what was overly ambitious for this stage. As a result, we will more closely analyze the feasibility of our ideas in the future. Screenshots of our low-fi prototype can be found in Appendix D.

Hi-Fi design and lessons learned (Stage Four)

What went well for this stage was how we frequently met up after reading break to deal with the workload. Staying in constant communication, we were able to work around everyone's schedules. We were able to take ideas from our stage three and build on them, utilizing them as a foundation rather than starting from scratch. We also reviewed feedback from stage three to better understand the objectives of the stage. What went poorly was that Figma was initially difficult to learn which slowed project progression. We also did not use all of Figma's features effectively leading to inefficiencies during our prototyping sessions. In terms of what we would do differently, we would have planned more time to learn Figma by watching video tutorials and using additional online learning resources. We also would want to start our initial meetings earlier in the stage in order to prevent time crunches at the end. Screenshots of our hi-fi prototype can be found in Appendix E.

Heuristic evaluation and findings

The goal of our evaluation was to gauge the usability of our app and find elements in its UI design that were confusing or unclear. We first got a feel for the app and saw how everything flowed. Then three of us individually utilized Nielsen's ten usability heuristics as a guideline to come up with a scenario and tasks to evaluate our four main tasks for issues and success areas. The qualitative part of the evaluation was performing a walkthrough of the system with each of us identifying what we think was a problem. With this, we identified several areas of improvement in the app's functionality. At this point, the evaluation was subjective, and we had to turn this evaluation into quantitative data. So, we had two testers who rated the severity of the problems from 0 to 4. From those ratings we prioritized the major problems for our next iteration.

Findings: The important things to note were that we did not have any issues that were classified as a level 4, which would indicate a usability catastrophe. The usability heuristics 'visibility of system's status', 'matching between system and real world', and 'recognition rather than recall' had several positive findings that were compliant with the heuristic principles and enhanced the experience with our app. We found that there were plenty of indicators to let the user know what is happening when they do major tasks like signing up for an event, and the familiar icons and simple language made it fairly easy to use the system. Our negative findings lied with the 'consistency and standards' and 'error prevention' usability heuristics. The colouring of interactive buttons lacked consistency which made navigation confusing, and it was easy for the user to skip critical steps in the event creation section as there were no error prevention measures to inform the user. The full evaluation can be seen in Appendix F.

Design changes made based on the heuristic evaluation in Stage Four

Based on the heuristic evaluation above, the team iterated the prototype by implementing consistent colouring of buttons and design, implementing error messages for when the user wants to create an event but leaves fields empty, indicated that horizontal scrolling is possible in the manage events sections, and implemented more navigation options so user does not have to always reset.

Changes made to the Hi-Fi prototype in this stage

For this stage we wanted to give users ways to search for and browse events based on their established event interests. When a user shows interest in an event on the map and clicks on it to get further details, they will now also have the option to view other events similar to that one. We also provided users a quick way to view all of their favorite events from their profile, this way they aren't restricted to viewing those events on the map or in the calendar view of their event manager. We also fixed a spacing issue that was present in the 'create events' section to help streamline the design and make it look cohesive to the other sections.

Changes that should be done in the future

Some of the changes that should be made to the prototype primarily involve cleaning up how users create events in our application. Currently, when users create an event they must navigate through a sequence of event creation pages where they can only navigate to the next page, previous page, or very first page from where they currently are. This setup could be made more efficient by giving users a tab system that allows them to navigate to any event creation page from any other event creation page. This would also allow us to more easily alert the user to required but undisclosed information by having alert icons appear on the tabs corresponding to pages that are missing information.

Changes that could be done in the future

Some changes we could make include adding additional features to enhance the functionality of our app. One feature we could add is a passive event finder that would actively look for events on behalf of the user based on their interests, notifying them during their daily routine. This would just be a convenience feature that users could use when they don't know precisely what kind of events to specifically search for or maybe don't have time to browse themselves.

Conclusion

Overall, by using user-centred design principles to create a prototype for our application, Xplore, we gained significant experience learning about creating a sleek and user-friendly mobile application user experience. Identifying problems and users, conducting user-research, creating low-fi and hi-fi prototypes using Balsamiq and Figma respectively, and conducting a heuristic evaluation were all exciting processes that ultimately taught us how to design applications that cater to the needs of users.

Appendix

Appendix A: Survey & Questionnaire

Appendix B: Competitive Product Survey

Appendix C: Scenario Testing

Appendix D: Low-fi prototype sample images

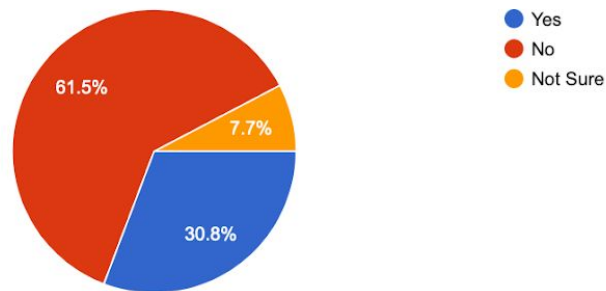
Appendix E: Hi-fi prototype sample images

Appendix F: Heuristic Evaluation

Appendix A: Survey & Questionnaire

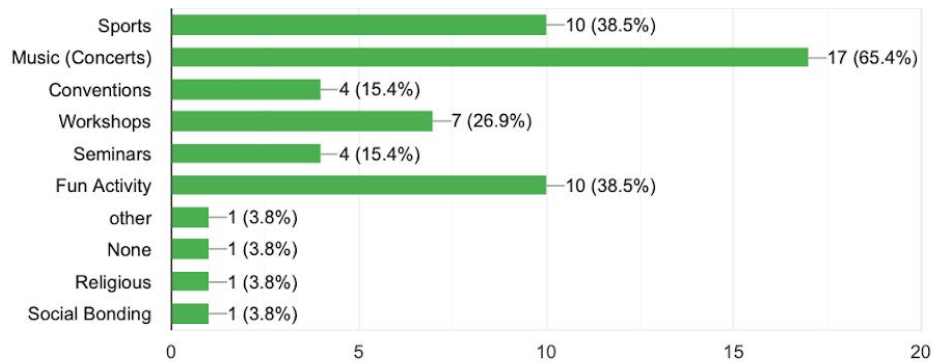
Have you ever used event planning applications? (ex: Showpass, Eventbrite, Meetup, etc.)

26 responses



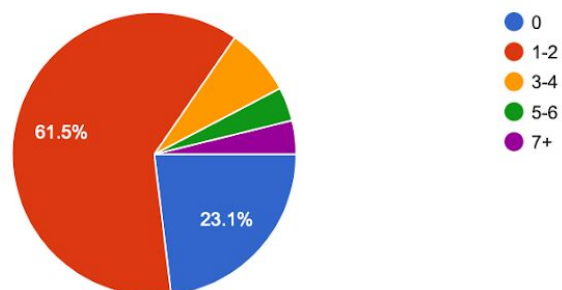
What are your favourite kinds of events? (Check all that apply)

26 responses



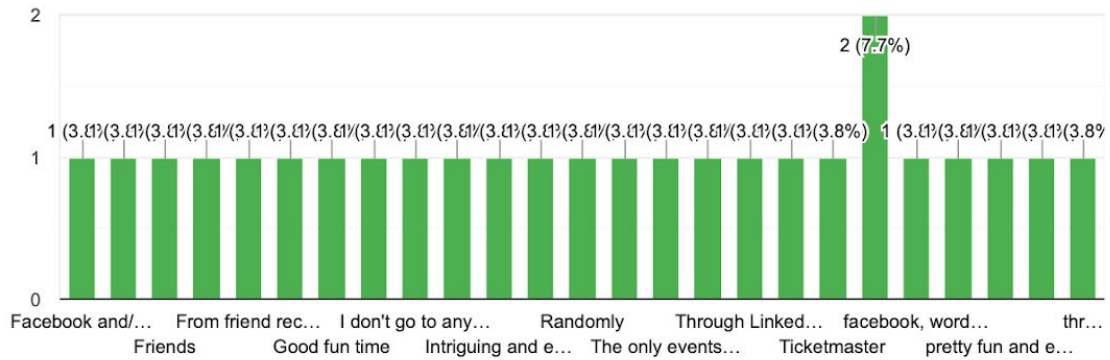
How many times a month do you go out to events (on average)?

26 responses



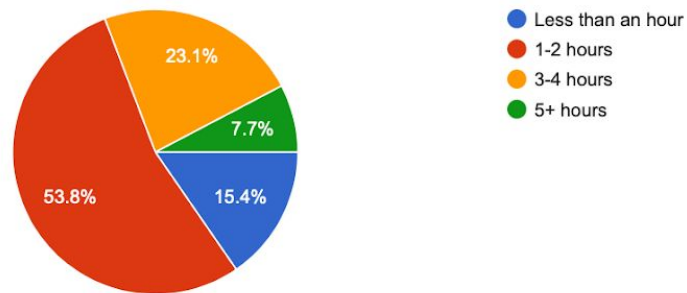
How do you currently find the events that you attend?

26 responses



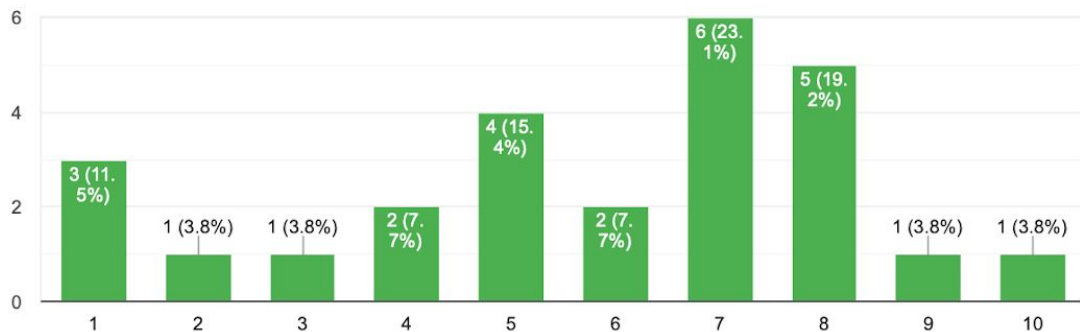
How long do you usually stay at events for?

26 responses



On a scale of 1 to 10, how outgoing are you?

26 responses



Appendix B: Competitive Product Survey

- 1) How Friendly is the display of the event site?
- 2) How easy is it to make an event on the site?
- 3) How easy is it to see and visit other events?
- 4) The impressive feature that we found and should be in our system.

Meetup (<https://www.meetup.com>):

- The customer can create groups that will have a certain description that users could join. Furthermore members of the group can share an event within the group and all group members will get a notification for the event.
- Also this feature allows users to construct events that the members can be invited to so it helps build a community feature in the app
- It should show how many people are already going to the event
- Similar events should be mentioned at the bottom of any event so that users can sign up and see other similar events.

AirBnb (<https://www.airbnb.ca>):

- The display of the airbnb app is pretty simple and really intuitive so it makes it very easy to navigate
- A map function showing all of the events taking place near the user and the price of every event. This will allow the customer to better examine how far the events are and how much they will cost. By clicking on the event it will show more details such as the event details, number of people going, what the customer needs such as equipment if any, how long it will be, what is the maximum number of people that will be there
- Add a messaging service if we could in order to better contact the event organizer, as some people may not feel comfortable giving out their phone number
- Have highlighted tabs when details of the events are looked at so that certain promoting features may be highlighted, for example free food, drinks, equipment, certificates and etc
- Have a review feature so that users can leave a review on an event that they went to so that future customers could have a better idea of what the event is actually like (applies to recurring events)
- Asks what type of participants that the organizer is looking for when creating an event
- Also ask what type of place location the event is being held

Facebook (<https://www.facebook.com>):

- Allows customers to select another option called interested so that they are not taking up a place even though they might not end up visiting, but it still shows how many people are interested in a certain event
- Also have a calendar feature so that a future event automatically gets added to the calendar and when the day of the event comes it will give the user a notification for the event.
- Sending an invitation to a single person resulting in that person getting a notification for the event (Could be added to the group share feature).

Eventbrite (<https://www.eventbrite.ca>):

- A bar on the top stating the different categories of events that are taking place either today or very soon allowing customers to easily identify the events that they would be interested in and find the type of events that they would like to visit.
- Allows users to search up events if they are interested in a very specific event. It also allows the searches to be filtered according to Date, Category, Format, Price, language and currency. This can help the user find the specific events that the customer may be looking for
- Every event which is free has a tag saying that it is free and allows users to also only look for free events, this feature could be enhanced by also stating the price of the event if there is a cost to visit the event
- Allows the users to share and like events, liking an event also results in it being saved. This feature makes it easier for the customer to collect all of the events that they would like to visit.
- When you sign up for an account it asks the customer to select their interests for example music. Following this a customer could select subfields such as pop if that is the only type of music that they are interested in, or they can select many different kinds of music. This feature applies to all categories and interests.
- The customer should be prompted to select whether they are interested in online events or in person events and in the case of in person events it allows you to select specific places where you are trying to visit such as Calgary or Vancouver. This setting should be changeable and the person should be allowed to select both in person and online. This feature would enhance the product especially during the pandemic where users may not want to go to events in person.
- Once all of the interests have been decided it shows you the channels that most frequently post events belonging to those interests that the customer could subscribe to. So that the customer would be updated whenever that channel would post a new event
- For free events when trying to sign up you simply have to select the date when you would like to participate and click register, in case of paid events it will make you pay for the event before you get to register in order to ensure that the seats are not taken by people who might not visit. After registering the customer will receive the ticket which they can print out or save online and present when they visit the event.
- The customer can contact the organiser for further details or information.
- When trying to make an event it asks the customer to select the type, category and subcategory of the event that the customer is trying to construct.
- Can make a single event or a recurring event. In case of a recurring event it allows the customer to select how often it will happen such as daily, weekly, monthly. Customers can also edit what days the events will take place and after how many events the event will expire.
- The customer can add pictures, videos, and text in order to better describe and explain the events better and also attract new people as well.
- Allows the event organizer to edit how many people can come to the event by setting the range of the amount of people that visit the event. Organizers can also decide when the tickets for the event become unavailable and can also decide the format in which they would like to sell the tickets. Whether in person, on call or through the app.

Appendix C: Scenario Testing

Scenario 1: Looking for Something to do

Suppose you have an unexpected day off with no other responsibilities for that day. You can simply take the day off and enjoy it as you see fit. Now you want to find something to do, but you don't want to just settle into old routines, you want to find something new to do! Of course, if you just go out and look for things on your own you might come up short. But you don't want to waste any of your time researching new things to do, after all, there are probably some things you already KNOW you want to do. Suppose then that you had an application on your phone that, when turned on, would actively search for events around your current location that are related to your interests and notify you if any meet your requirements. This way, you could go out and start enjoying your day off, enjoying the things you KNOW you want to do while at the same time discovering new things when your app finds an event near you that would be of interest to you.

Scenario 2: Getting the Word Out

Suppose you're planning an event. This event can be almost anything you want. It can be a one-time affair like a basketball game or maybe it's a recurring thing like a book club. Regardless of what it is, you've made all the preparations; you've gathered all the necessary supplies and set up all the infrastructure. Now, you just need to get the word out and get like-minded people participating in your event. You could probably set up a website for your event or use other social media platforms to get the word out. But not only is this tedious and time consuming, but also unnecessary if your event is just an informal one-time affair. Instead of fooling around with any of that, what if you could just open an app on your phone that lets you post your event and all its details on a kind of virtual community board. Other people who also have the app and have it set to filter for similar interest will then see the event you posted in their feed and can get all the info they need to start participating in it. You could also post updates and changes for your event as they become available, informing participants of changes in time and location due to things like weather or traffic conditions and so on.

Scenario 3: Drumming up Business

Suppose you are a small business owner and you want to drum up more business. You've already done things like setup a website as well as pages on various social media sites but you find that you're still not getting the traffic you wanted. You find that your current methods of advertisement, like social media and the internet, are too static, people still have to do a lot of work to search for and discover your business. You figure you'd get more traffic if your advertising was more active. What if you had a way of specifically targeting the people who were actually interested in your products and what if your business itself had a way to "ping" and notify potentially interested customers as they came nearby? Now suppose you discover an app that did just that. Suppose that app let you post weekly events and deals for your business on a kind of virtual community board where interested parties who also had the app, and had their filter settings configured properly based on their interests, could see your business's events and deals and get all the information they needed to participate.

Results:

Participant Name	Feedback/Opinion Scenario 01	Feedback/Opinion Scenario 02	Feedback/Opinion Scenario 03
Participant 1	<ul style="list-style-type: none"> - Don't want the app to "stalk" me. - Want "blackout" periods where you don't get any recommendations. - If there was a feature where you would ask to suggest stuff at a particular time or maybe have a switch to be always on. - Like the idea of not getting random events and have the events more geared towards your interest. 	<ul style="list-style-type: none"> - Is there a broadcast level to say just your city, block, country, only people who have connected with me? - What if you don't sign up? Can you not participate? - I usually go to recurring events without signing up, and just show up, and the planners are fine with it (first come first serve) - Is there any money involved in the events or are they just free? - And if you charge people for the event (informal) how do you manage that? - Directly receiving money? - If i put out an event can people trust it will happen? - Do people get a "credibility rating" over time? - Why not just use something like Facebook to broadcast your event and people will be notified? (How can this app be better than Facebook?) 	<ul style="list-style-type: none"> - As a business owner, I want to know how the users are interacting and I want to be able to treat them in a nice way. - Find a way to attract more customers by "respecting" people on the receiving end. - Don't like the idea of bombarding the users with business ads.(Invasive advertising) - What if i put in only 1 interest. Am I only gonna see businesses that have to do with that 1 interest? - Does the app have adaptive learning where it knows your other events you've been to and then recommends those types too? - How do you prevent the user from getting flooded with notifications about different businesses that might be of interest to you? I would like the ability to stop getting those notifications but not like going to the setting and turn off specific settings and then remember to turn it back on later. - After turning off notifications, how would i find out about that business if they make some changes

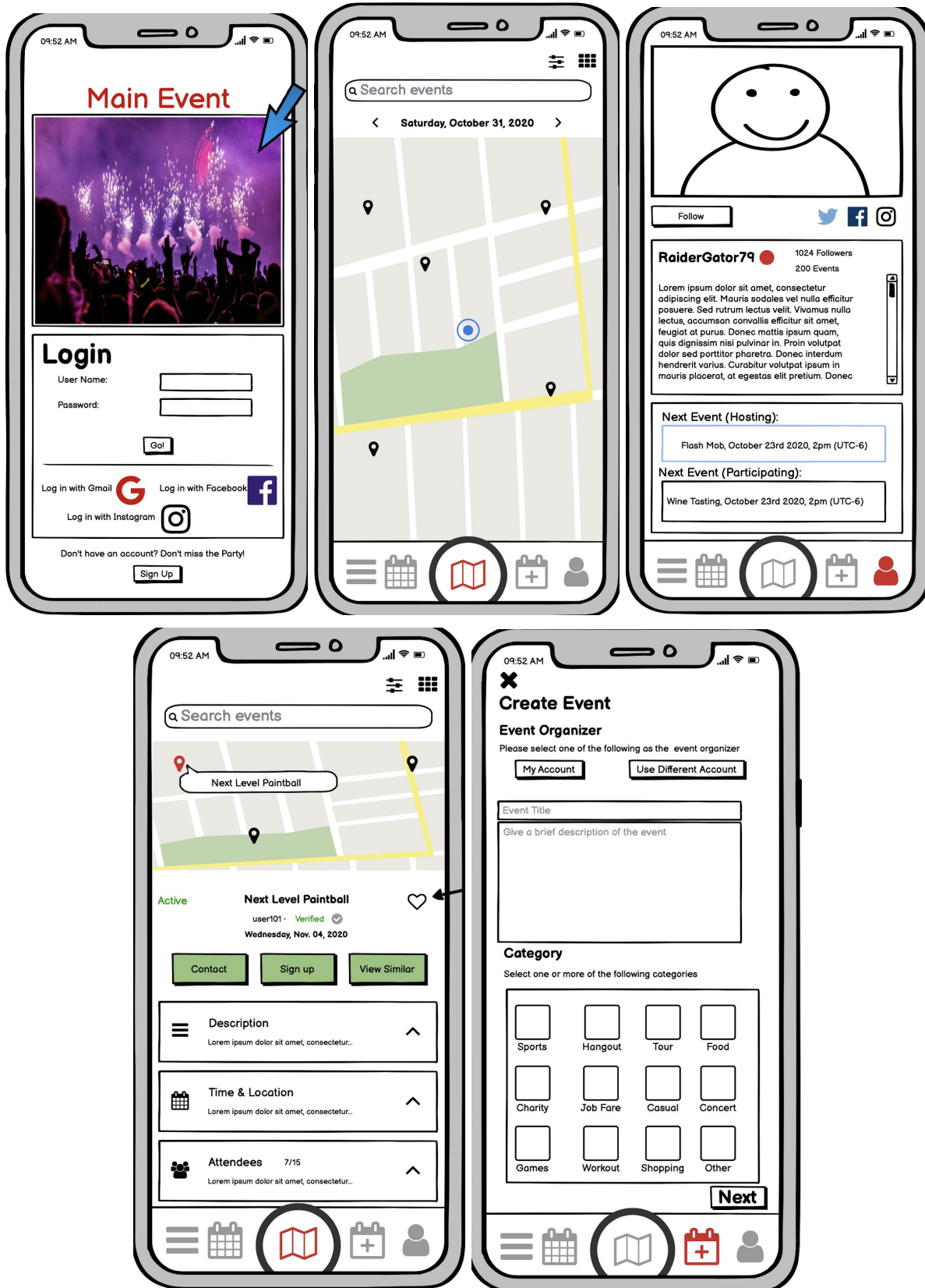
			<p>and they're now better (cancelled culture)</p> <ul style="list-style-type: none"> - I want to be able to turn off certain notifications for a while because the notifications were getting "annoying" - there would be something to know why you turned off the notifications in the first place
Participant 2 (Qianru)	<ul style="list-style-type: none"> - I like it if i'm going out with someone not really when i'm alone - i don't want to be notified all the time, i want to open the app myself and check the events myself. - Works on a budget so would want to see filters that would be applied for the costs on events - Want the ability to see all events regardless of the filters applied in settings. 	<ul style="list-style-type: none"> - really likes the idea of being able to post custom events - Will be able to meet the right people who are interested - wants to be able to know the number of people attending their event (RSVP) - want the ability to make the event open to the general population - what if my interest changes and I forget to update in the settings, will the app 'know' what i'm interested in? - if there is an entry fee, i want them to pay online when they RSVP so i know they are coming, I don't wanna deal with people who just say they're coming but don't - If the seats are full, I want a waitlist for my event that I post. 	<ul style="list-style-type: none"> - love the idea to attract customers - feels like the filter settings might potentially cause for the loss of a customer if their settings was not configured properly and your business was filtered out as a result (accidentally) - Want the ability for people to rate their business - Be able to "subscribe" to the person's events and see all future events that they will hold.
Participant 3 (Dwayne)	<ul style="list-style-type: none"> - great idea to find events near you - want active vs passive modes - don't wanna be notified all the times 	<ul style="list-style-type: none"> - Don't like how the post will only go to this one app. Wants to post it on other sites but wants the app to be somehow able to find 	<ul style="list-style-type: none"> - all ads are selective like this so the app is not really special in terms of using it for advertising. But i'd love it because it's free!

	<ul style="list-style-type: none"> - want to be able to filter events and also want the ability to explore all events and be more involved. Might not know interests when first using the app but wants to see what they might or might not like. - great to quickly find activities to do when alone or with friends. 	<p>the event from other social media sites (get all relevant info too)</p> <ul style="list-style-type: none"> - likes getting the word out to only people who are interested. - With big events, I want to broadcast it to a lot of people, not just those who are interested. Especially for an official recognized event like a fundraiser and just want a general population. - Want events to be "reviewed" by some moderator to ensure safety, and legitimacy - Big special events like fundraising must pass certain requirements such as being a "certified event", a "recognized poster" - There should be options when you post events to limit the number of people who can attend, people should be able to register and RSVP so i know how many will be attending - For paid events pay in person or pay online to "reserve" seats. (will open doors to fraud) - 	<ul style="list-style-type: none"> - would like the idea for app users to rate their business and as it becomes more popular somehow broadcast it to a large population. - more "stars" (higher rating) should give my business events a higher preference and "urgency" setting. But then if you have a low rating, then you might not show up first :(- Rating should only be by those who attended the event and have some sort of proof. - I don't just want to post business events I wanna be able to send out coupons to potential users who are interested. - wanna see the count of people who are planning on attending and those who viewed the event. - want users to be able to see my future/upcoming events.
Participant 4 (Dave)	<ul style="list-style-type: none"> -Thinks that such an app would be a really great idea (believes there is an unfulfilled demand for this kind of app) - Would want the filter setting to be very well refined (not too general with too few filter 	<ul style="list-style-type: none"> - Really likes the active aspect of event planning in application (appreciates being able to update and change the event details in real-time) - Also likes the idea that the events he posts will only be seen 	<ul style="list-style-type: none"> - Thinks the application would be great for small "diamond-in-the-rough" /"hole-in-the-wall" businesses that are very good at what they do but don't receive the attention they deserve because

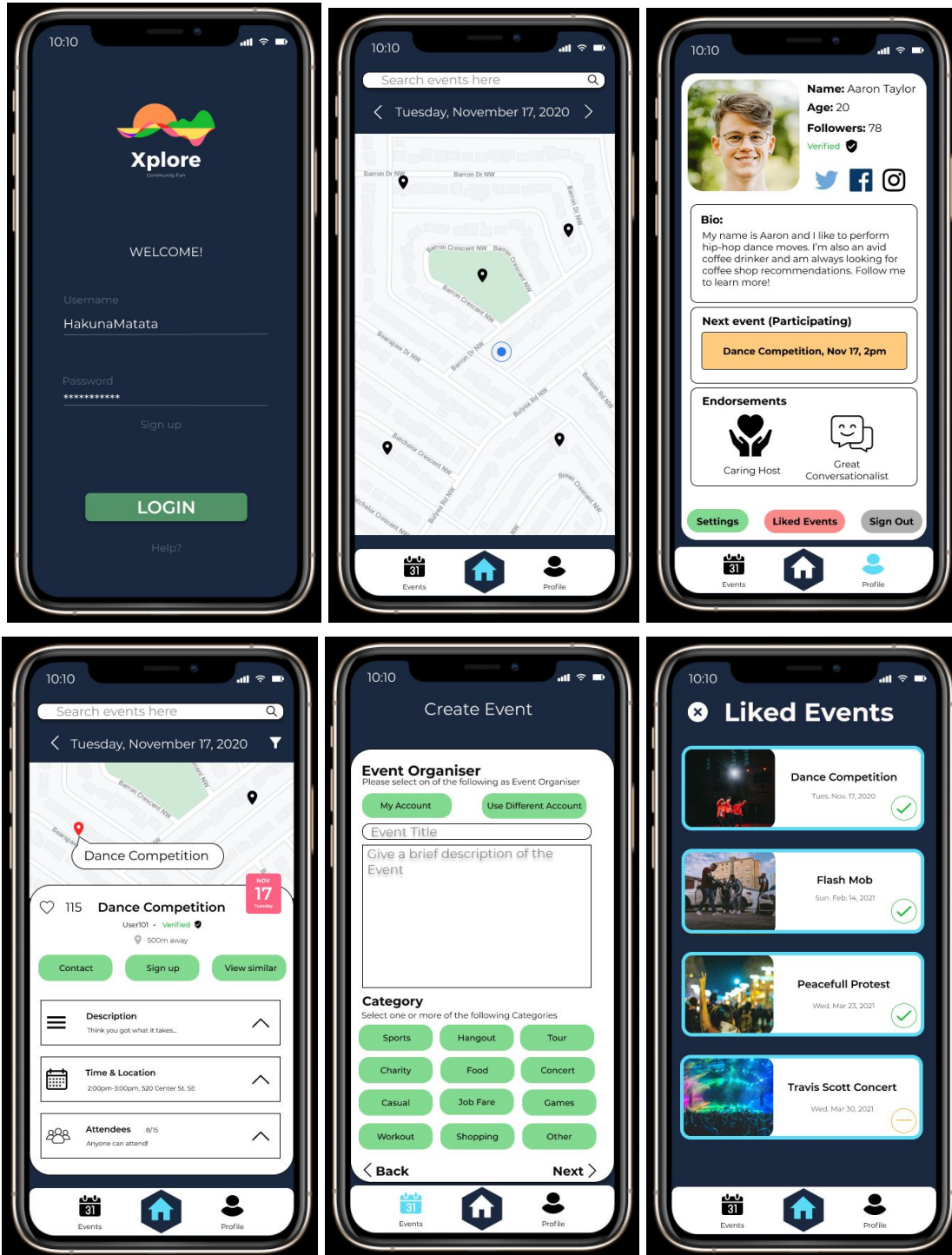
	<p>choices but also not too specific with too many filter choices)</p> <ul style="list-style-type: none"> - Thinks the application should factor in travel time when suggesting events (don't want the app to tell them about an event that will be over by the time they get there) - Would want priority settings in addition to interest settings for event filters so that events that align with their most important interests are suggested first 	<p>by people who care (is bothered by the idea of posting an event that will be seen by people who don't care and will maybe judge or harass the event)</p> <ul style="list-style-type: none"> - Would like to see a suggestion feature in the application for future events that the user may not have found in their feed yet ("Because you attended these events here are some others you might like") 	<p>they're in a lesser known area</p> <ul style="list-style-type: none"> - would want to see a joint review and rating system for events (participants could post some kind of score for the event along with a review detailing their thoughts about it) - would want the application to notify users who are interested in the event about things like capacity (would want to know if slots for an event are filling up)
Participant 5 (Lian)	<p>Really likes the idea of the app searching for things to do on her behalf as she's usually too busy to do research on her own. At the same time she thinks it might sometimes be inconvenient to get notifications while she's out because the timing might be bad (if she's out that usually means she's already busy, so she's concerned that the notifications would only serve to tell her what she's going to miss)</p>	<p>Really likes the idea of having an app dedicated to event planning for her to set up her own events. She especially likes the idea because she's not very familiar with website building (and thinks even blog builders like wordpress would still be too tedious). Would much prefer having an app on her phone that she could just quickly open up and expeditiously plan an event on.</p>	<p>Was actually very put off by this scenario. She considered it from the customers perspective and thought it would be too annoying if the application started notifying her about deals from business as this would be too close to advertising (She hates ads and wants to avoid them as much as possible). She thinks it would benefit small business and would be willing to accept it if it was constrained only to small business (worries that if large companies used it it might make app very obnoxious)</p>
Participant 6 (Jacen)	<p>Thinks that an application with such a feature would be great for when he's on vacation since he usually likes to wing it</p>	<p>He thinks that it would be great if he had an application like that. He thinks it would be great for planning flash mobs since he was part of</p>	<p>He thinks that our app would be particularly relevant in the future business context as he thinks that because of the pandemic many</p>

	<p>and not waste time researching things to do while he's there. He feels he might not use this feature as much while he's at home because he's already busy enough and he's familiar with his home city enough that he feels he might not need it</p>	<p>one once and says the biggest challenge was finding participants in a public context while keeping things discrete. Also thinks that if the app has such event planning functionality that there should be additional privacy setting so that event organizer can control who sees their events (not just anyone who's interested but also those that the organizer wants there like friends and family)</p>	<p>businesses are looking to online applications to help supplement their business (ex: small family owned restaurants are signing on with skip the dishes and so on). So he thinks our app is a good idea that will capitalize on this. Also really likes the idea because it makes getting into contact with more essential services like plumbing and electricity easier when contact with them matters most (told a story of how his heating went out and he had to flip through yellow pages while freezing in his home to find a furnace repair place)</p>
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Appendix D: Low-fi prototype sample images



Appendix E: Hi-fi Prototype sample images



Appendix F: Heuristic Evaluation

Evan's Evaluation

Rule of Thumb	Is this rule being applied? How so?	Is this rule violated? How so?	How can this rule further improve usability, utility and desirability?	Severity (Reviewers)
1. Visibility of system status	Yes, there are plenty of indicators to let the user know what is happening when they do major tasks such as signing up for an event or getting confirmation in some menus.	No, the user is aware of the system status at all times.	Possibly a couple of more confirmations such as when signing out, but other than that there are already confirmations when they are needed.	2 - minor usability problem 1 - cosmetic problem
2. Match between system and the real world	Everything is understood in plain english and I was never guessing what was happening on the screen. It's very similar to Google Maps, meaning I know how to use it fairly well already.	No, this is a very common application, so there was nothing that was hard to understand.	There is no improvement necessary here as the rule isn't violated.	0 - doesn't seem to be a usability problem 0 - doesn't seem to be a usability problem
3. User control and freedom	Yes, in all of the screens you could get to other screens freely with the help of the bottom bar.	No, the user seems to have complete freedom to navigate around on all screens.	There is no improvement necessary here as the rule isn't violated.	0 - doesn't seem to be a usability problem 0 - doesn't seem to be a usability problem

4. Consistency and standards	There were a lot of consistency issues, so this rule wasn't being applied.	There were some screens that were inconsistent at least with the color schemes. Also there were back buttons on some screens but not all of them.	A simple fix would be to color the buttons similarly, and to have back buttons on most menus so there's a feeling of consistency.	1 - cosmetic problem 1 - cosmetic problem
5. Error prevention	I never ran into any errors, and due to the nature of the app, when something cannot be done, it just won't let you do it.	It was slightly violated in the sense that there were no error messages when there should have been, such as empty fields on creating events.	Possibly more error messages when something doesn't work when the user thinks it would.	2 - minor usability problem 1 - cosmetic problem
6. Recognition rather than recall	As mentioned above, since this application is very similar to how Google Maps works, I have not had any issues navigating or understanding what each icon means.	This rule was not violated because of the amount of recognition utilized in the app, lowering the learning curve.	There is no improvement necessary here as the rule isn't violated.	0 - doesn't seem to be a usability problem 0 - doesn't seem to be a usability problem
7. Flexibility and efficiency of use	The app is mostly straightforward and efficient, but there were some tasks such as creating events where it was not very efficient.	There are some screens such as creating events that have a lot of screens to go through and don't feel efficient, but there are also a lot of options to select.	Possibly putting everything into one screen could help speed up this process, or skipping some selections altogether. This isn't a practical solution though given the nature of this task.	2 - minor usability problem 2- minor usability problem

8. Aesthetic and minimalist design	This design borrows heavily from Google Maps, meaning it's fairly minimal to begin with.	In some areas, it didn't feel consistent aesthetically such as clashing colors. Some areas seemed to appear as if they were developed by different people based on the colors.	Overall a good design, but some colors could be fixed so it's consistent all throughout the entire application, and not just in certain sections.	1- cosmetic problem 1- cosmetic problem
9. Help users recognize, diagnose and recover from errors	When an event is cancelled, the user would be properly notified not to go.	I never saw any error messages, yet I never encountered any situation where an error message would be warranted, so I'm inconclusive with this one.	If there were more situations where errors are likely to occur, adding those messages would be good.	2 - minor usability problem 2 - minor usability problem
10. Help and documentation	The steps necessary to complete tasks such as creating events is very straight forward, and the menus provide a fairly easy layout to navigate and understand.	There is no documentation provided, so if I ever did need help, I'm not sure how I would get help.	Some sort of documentation or even a help section would be nice, although given how straightforward the app is, I don't think it's warranted.	0 - doesn't seem to be a usability problem 0 - doesn't seem to be a usability issue

Brett's Evaluation

Rule of Thumb	Is this rule being applied? How so?	Is this rule violated? How so?	How can this rule further improve usability, utility and desirability?	Severity (Reviewers)
1. Visibility of system status	Yes, When users navigate the app, the bottom nav bar changes colors of icons to indicate the user's in-app location. Also, whenever users make selections those selections change color.	No. The app communicates well with its user, letting them know what they have triggered and what is available to them to trigger	By giving feedback to the user we can help keep the user informed about the current state of the app. It helps the user navigate the app geometrically and temporally.	0 - doesn't seem to be a usability problem 0 - doesn't seem to be a usability problem
2. Match between system and the real world	Yes, when the user goes to create an event the order of attributes they need to specify appear in a natural and order. Also, when the user is making their event, they can select from categories that are familiar to them	No, there isn't anywhere in this system where this rule is particularly violated. The purpose of our application is concrete and simple enough that it is easy to match the design of the app with the real world.	By matching the design of our app with user's world we help to make it more approachable and easy to learn	0 - doesn't seem to be a usability problem 0 - doesn't seem to be a usability problem

3. User control and freedom	Yes, selections available to the user trigger overlay screens to appear which can be easily backed out of with a simply tap to the sides, top or bottom of the screen	Somewhat, when users are creating their events they have to travel through a sequence of pages. If the user makes a mistake early on they have to navigate back through the sequence.	Users will have to make many choices in our app to create events which means many potential errors. By giving users quick and easy ways to back out and correct these errors we make the app more convenient.	3 - major usability problem; important to fix 3 - major usability problem; important to fix
4. Consistency and standards	Yes, our application uses consistent and familiar language consistent within the app and outside of it. The color scheme is also intuitive, using green and red to denote positive and negative statuses	Yes, there are some areas where the color schemes didn't match up as if there was a lack of agreement on the apps primary colors	By ensuring our app's language and visuals are consistent within the application and also with users outside world (within reason) we decrease the mental burden of using our app and streamline that use	1 - cosmetic problem 0 - doesn't seem to be a usability problem
5. Error prevention	Yes, when users go to cancel events they're enrolled in they are prompted to confirm their cancellation, just in case the cancellation was a mistake	Yes, when users go to create an event they are allowed to progress without entering critical information such as the starting time	We can make design choices that minimize the risk of mistakes as possible. It helps make our application intuitive enough so users can form accurate mental models of it easily.	2 - minor usability problem 3 - major usability problem; important to fix
6. Recognition rather than recall	Yes, the user's cognitive load is minimized when creating events as all the details necessary are displayed in a logical manner.	Yes. When users manage their events via the calendar GUI, it's not obvious that the event overview below each months calendar scrolls horizontally through ALL events for that month	Focusing on recognition over recall helps to ensure the app's design informs more and requires less memorization making it easier to work with.	0 - doesn't seem to be a usability problem 1 - Cosmetic issue

7. Flexibility and efficiency of use	Yes. Users can look at event details through either the map or calendar GUI's of our application. The calendar GUI gives an overview of events but the map GUI gives in-depth descriptions of events.	Yes. There are possible avenues for task completion our application doesn't provide. For example, users cannot cancel events from the map GUI, they must go to the calendar GUI.	By giving users multiple ways to complete the same tasks in our application, we increase its flexibility and the diversity of its usability. Users can form their own workflows that suit them best or can explore different workflows for different contexts	2 - minor usability problem 2 - minor usability problem
8. Aesthetic and minimalist design	Yes, our app only delivers relevant info. For example event map markers toggle to display event details or hide them	No there wasn't any particular point in our app where irrelevant information was being presented to the user	By limiting the content displayed at any given time to what's relevant we guarantee that the user never feels overwhelmed.	1 - cosmetic problem 0 - doesn't seem to be a usability problem
9. Help users recognize, diagnose and recover from errors	No, currently there is a distinct lack of error checking let alone error recovery	Yes. Currently our app provides almost no error checking, and so it does not give meaningful error messages	Helping users recognize, diagnose and rectify errors makes using our app desirable. Otherwise, our app easily becomes frustrating to use whenever anything goes wrong.	2 - minor usability problem 3 - major usability problem; important to fix
10. Help and documentation	Yes. When users create events they're given descriptions of what they are supposed to enter into the input fields.	Yes, currently our application has no kind of external documentation which could help users learn to use it.	External documentation would help lessen any kind of learning curve our application has and make it more accessible to new users	0 - doesn't seem to be a usability problem 0 - doesn't seem to be a usability problem

A's Evaluation

Rule of Thumb	Is this rule being applied? How so?	Is this rule violated? How so?	How can this rule further improve usability, utility and desirability?	Severity (Reviewers)
1. Visibility of system status	When a user signs up for an event, there is a notification popup. The events in manage events have a status displayed. Location on map to show user's live location. The nav bar icons change colour based on which page the user is on.	Cannot see event name on map without clicking on it.	Give feedback for some of the operations like filters when applied.	1 - cosmetic problem 1 - cosmetic problem
2. Match between system and the real world	Familiar icons: left arrow is for going back, plus is for adding/creating, etc. Pins on a map means some activity going on in the area. Icons in the nav bar are easy to understand what their functionality is.	It was unclear that I could swipe to view more of your events in 'my events'. I wasn't too sure that I had to click the green checkmark to cancel the event (or click the status icon in general to view updates/delete).	Keep commonly used icons and colours (red -> cancelled, green -> going)	1 - cosmetic problem 1- cosmetic problem

3. User control and freedom	Cancelling events, undo when typing,	Some pages only have a specific sequence you have to follow to get to the end and if those settings don't apply to you then you still go through it.	Add redo (don't wanna have to go through all the steps again if it was a mistake)	2 - minor usability problem 2 - minor usability problem
4. Consistency and standards	Colour scheme is consistent (background, buttons, etc.). Font type and size for headers and normal text is consistent.	Back button placement not consistent. Can't filter without clicking an event first. In create events, the next arrow and text both can be clicked but the back button, you can only click the arrow to go back. The icons in the nav bar are not the same size.	Keep functionality of buttons the same from frame to frame.	1 - cosmetic problem 1 - cosmetic problem
5. Error prevention	Confirmation when cancelling events.	After signing up for an event, it still says sign up. No colour difference or difference in icon in 'yes' and 'no' buttons. No confirmation when signing out (maybe not a big deal but if i click it then i have to go through all the steps again).	Can add labels (show on hover) for icons/tasks.	1 - cosmetic problem 1 - cosmetic problem
6. Recognition rather than recall	Popular social media icons on the 'profile page'.	Slider in create event looks like a progress bar	On the map, add event labels so we don't have to click each one to find out what it is.	1 - cosmetic problem 0 - doesn't seem to be a usability problem

7. Flexibility and efficiency of use	Can use the map to click and find events rather than using the search feature (multiple ways to find events). Can like events or view similar events if something interests you.	Some elements are unclear that they can be interacted with	Limit the number of things happening on one page (in 'create event'). Can maybe create multiple pages to not make it overwhelming for the user.	1 - cosmetic problem 1 - cosmetic problem
8. Aesthetic and minimalist design	Simple colours used, not too many. The Navbar has 3 main icons and everything is grouped in 1 of those 3.	Margins are not the same on every page. In the profile tab, the event you are participating in is orange and in my event that colour is used to represent an update with your event like weather delay. The purple colour used in 'my events' page is not used anywhere else.	Keep the colours and phone background the same.	1 - cosmetic problem 1 - cosmetic problem
9. Help users recognize, diagnose and recover from errors	Confirmation/error messages are simple to understand and use plain language.	Some pages allow you to go back without confirmation like the 'create event' page	For errors, add explanations for why those errors occurred and how they can be fixed.	2 - minor usability problem 2 - minor usability problem
10. Help and documentation	The icons have a label for new users to understand what each one does.	No specific help or documentation in the app	Add help link in app (like a question mark somewhere in the corner)	0 - doesn't seem to be a usability problem 0 - doesn't seem to be a usability problem