

Moon Island

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Team Number: #16

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1.0 Introduction(Andrew Lam)

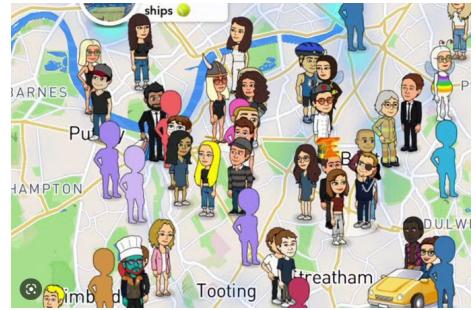
1.1 Purpose

The purpose of our app would be to inform and update users about sicknesses and diseases in their area. It would also inform them of how to avoid it as well as take care of their body if they are sick. Users will interact with the dashboard by updating them with symptoms, as well as diseases when they are sick. The AI attached to it will aim to predict the behavior of diseases in specific areas and what season they will be more prevalent. For example, the app is updated with lots of flu cases during the winter, and the app will continue to predict that the flu will usually spread a lot during that period of time.

There are a number of different tasks that you can perform on the app. One of the big things that we decided to add from our focus groups is the ability to add friends, this adds more of a social aspect to the app as well as gives the ability to trace disease outbreaks with privacy settings of course. Another task that we added to the app is being able to check a map with your area. Another thing that we added is vaccine information as well as treatment options/care treatments to help inform the public about how to go about treating illnesses.

Our model is based on a reliable and well-repeated design that other apps follow or at least include in their own products. A big modeling practice that we hope to replicate in our app is a mimic of the “social media” build where the app relies heavily on the number of people that use the app for it to be successful. This is because our data is more reliable if we have more users and larger sample sizes. Some examples of big successful apps that have a similar model are Snapchat, Instagram, and Facebook. While a lot of these apps rely on different kinds of information to grow their brand using ads and content developers, the idea and strategy still remain the same. One specific example can be found on Snapchat. In Snapchat, there is a

function where you are able to locate your friends based on their location. The UI is similar in the way that there is a map as well as color to display the concentration of users. We hope to replicate that in our app, but instead of looking for events to attend it would be identifying clusters of illnesses.

**Figure #1**

Add a short conclusion paragraph that sums all that up

1.2 Vision/Requirements

Building off of our purpose which is to inform and update users about sicknesses and diseases in their area, we've had a number of ideas and plans about how we accomplish this realistically and practically.

First, The most important constraint is the ability to update a “status” function on the app that is quickly toggleable and viewable to whoever they want(usually restricted to their friends). This creates the ability for others to clearly communicate with each other as well as allows our algorithms and calculations to be more accurate due to the increase of sample size with the data.

Second, we must create a friend/profile option that creates the ability for friends to interact with each other. This supports our desire to connect with friends over the app and the desire to help society communicate their health statuses with each other. Many other social media apps are successful because they execute this portion of their apps to a high degree.

Third, we must have the ability to update the location. This is also another data point to help our algorithms provide more information regarding infection outbreaks. This helps create

personal data for every user based on where they live or even travel to. Location accuracy is a high priority for the purpose of our app to be carried out ethically and accurately.

Lastly, the app must provide outside education resources regarding health conditions and how to prevent/treat them. This helps our users by increasing their knowledge as well as their awareness of illnesses. Along with this, the app must also be able to allow patients to contact their doctor/health care providers. By allowing users to have direct access to healthcare professionals, more lives could potentially be saved because this will decrease the chances of individuals receiving faulty information and lower the barriers in terms of contact with family doctors. We hope that this creates a more informal relationship between doctor and patient which usually shows more openness and comfortability to asking for help.

Overall, we feel very strongly about creating a quick and accessible way for users to get informed and updated about sicknesses and diseases in their area, as well as quick and easy access to resources such as doctors and informative articles. We have many ideas and functionalities that we think can help us accomplish this. We will have multiple forms of status updates to local data strings that will help others in similar distances stay up to date with local health news. There are also spaces created within our app that promote education and contact doctors for help and information. We feel that we can execute all of these visions to accomplish our goal.

2.0 Needfinding(Andrew Lam)

2.1 User Personas

After defining the purpose of our app, the team looked to target an ideal target population and some personas that practically would like to use our app. The target population of our app is anyone who is concerned and cognizant about being safe and informed about disease spread and treatment. When we talk about personas, we mean a narration or story about imagined characters; they are imagined and described in interaction with the product that is going to be developed.

We developed 3 primary personas that we used throughout the development of our app. Our first is John; he is a 20-year-old male college student who wants to be able to properly treat his disease or illnesses and protect his friends from sickness around his classes and campus. Secondly, we have Susan; she is a 65-year-old woman who is living by herself. She is unable to travel outside of her home to receive the medical treatment that she requires on a daily basis. She uses the app to communicate with her specialist so that she can keep up to date with new information on how to take care of herself. Lastly, we have Janice; she is a middle-aged mother who has three kids ages, 3, 12, and 19. She has trouble knowing how to take care of them all properly given their respective age groups. The app gives her daily tips as well as communication with their doctors about how to treat them and ensure their safety and wellness.

These personas are examples of demographics that our team thought would benefit most from it. All of these are people in need of stronger support and understanding of diseases and sicknesses. They all need guidance and communication with outside reliable sources. We feel that situations and problems similar to these are very prominent and our app gives these types of characters huge benefits after using our app.

2.2 Data Collection/Group Sessions

For our Data Collection goals, our team completed four interviews regarding tasks in the app. Provided below are transcripts from each of the interviews. We each spent a great deal of time coordinating and organizing spaces so we could get optimal feedback on our product before we released it. It was a great experience not just for the product, but also for us the designers. While overall we received positive feedback, we received valuable critiques as well. Each interview provided our team with valuable information from different and varying perspectives. Every individual equally gave us the data that we needed to make changes and rethink how our team went about solving problems with our app. All of our interviews mainly included fellow students from the University of North Carolina at Charlotte, mostly from the ages 18-24. All of our participants have experienced the recent COVID-19 pandemic so our users understand the significance and importance of health and safety. Before each data-driven interview, we gave participants tasks to complete. Each task included functions that involved user interaction, the layout of the UI, and mainly the usability of our app. Upon each completion of each task, the users gave us data and feedback by answering questions that are shown below.

2.3.1 Interview #1

Q1: Hello, I am working on developing a new app called Illness Tracker. This app is a Health and Wellness app that allows you and your friends to stay safe and informed about current disease breakouts within a user's location as well as stay educated about how to treat diseases. All users also can communicate with their friends and doctors for various purposes. Users will interact with the dashboard by updating them with symptoms, as well as diseases when they are

sick. The AI attached to it will aim to predict the behavior of diseases in specific areas and what season they will be more prevalent. For example, the app is updated with lots of flu cases during the winter, and the app will continue to predict that the flu will usually spread a lot during that period. The task that I would like you to perform will be to input symptoms as if you are sick to get a diagnosis for the illness. As you go through the steps, please describe your thought process of going through the app as well as which actions seem appropriate to take at the time and thoughts you may have on functionality.

A1: I would start with logging in. [Entering log-in information and arriving at the home screen. Presses the button “My Symptoms”] Ok, I’ll put in my symptoms. [Listing aloud the symptoms chosen] I think I’m done. [Illness results arrive on screen] I’d like more information about this illness. [Presses the “Illness Information” button for the information page]

Q2: Did anything inhibit you from trying to perform your tasks today?

A2: No, I could put in my symptoms very quickly and get a diagnosis from the AI.

Q3: How was your overall experience completing your tasks?

A3: It was very straightforward and the buttons were clearly labeled so I felt like the workflow was very easy to get through.

Q4: Would you say that the app was satisfactory?

A4: Yes for getting a, for finding out what illness matched my symptoms. Uh, it was a very straightforward process.

Q5: Are there any questions that pertain to why the app is laid out or processed a certain way?

How could we have made it better?

A5: I would have liked the option to see more information about the medication, to see what side effects uh, to be able to click on the medications to see what the side effects were and also to see if there were any interactions with the medications that I am currently taking. If I had used the app for a previous illness, I would have also liked them to keep a record of what medications I have and am currently taking so I don't have to go back and forth to look it up.

Q6: After your experience how would you want us to improve your experience with this app?

A6: Well aside from the previous mentions, I thought the app was pretty easy to use, and experience-wise, I don't have any suggestions.

2.3.2 Interview #2

Q1: Did anything inhibit you from trying to perform your tasks today?

A1: No, I was able to fully complete the tasks

Q2: How was your overall experience completing your tasks?

A2: I liked it. It was cool how the layout was like a social media app so it was easy to compare to my past experiences.

Q3: Would you say that the app was satisfactory?

A3: Yeah, I think the idea of it is cool. It does a lot of cool things that I've never seen before

Q4: Are there any questions about why the app is laid out or processed a certain way? How could we have made it better?

A4: I think if I had to change something, I would want the ability to see the history of my status updates. Or even maybe make group chats

Q5: After your experience how would you want us to improve your experience with this app?

A5: Not really, I liked it a lot. I liked the cute profile picture

2.3.3 Interview #3

Q1: Did anything inhibit you from trying to perform your tasks today?

A1: No, everything was simple to do.

Q2: How was your overall experience completing your tasks?

A2: Overall, the experience was great. Even though this is the first time I am using the app, I feel like the app is so similar to social media apps that I've used in the past, navigation was very easy and quickly picked up on.

Q3: Would you say that the app was satisfactory?

A3: Yes for getting a diagnosis for your symptoms. It is a straightforward process.

Q4: Are there any questions that pertain to why the app is laid out or processed a certain way?

How could we have made it better?

A4: The option to see more information about medications as side effects would be useful. Also, the ability to see if current medications conflict with new ones. A record of previous illnesses and treatments chosen would also be helpful.

Q5: After your experience how would you want us to improve your experience with this app?

A5: Other than what was listed earlier, there are no other suggestions.

2.3.4 Interview #4

Q1: Did anything inhibit you from trying to perform your tasks today?

A1: No, all tasks were able to be performed.

Q2: How was your overall experience completing your tasks?

A2: There were no hiccups throughout the process, so the overall experience of completing the tasks was very smooth.

Q3: Would you say that the app was satisfactory?

A3: I would say that the app was satisfactory, and the process was seamless.

Q4: Are there any questions that pertain to why the app is laid out or processed a certain way?

How could we have made it better?

A4: The process of connecting your doctor to your account could be improved.

Q5: After your experience how would you want us to improve your experience with this app?

A5: Narrowing down the steps required to connect with your doctor would make the experience even better.

Conclusion paragraph here that describes what we learned from the interviews.

3.0 Design Goals (Gabriel Abbate)

3.1 User Journeys/Characteristics

Building off of our personas we also created user journeys for our app. User journeys should define our user's goals, motivations, pain points, overall character, and main tasks that they would like to achieve with this app. Our user journeys include a series of steps that we believe best represent a persona's journey with our app. We describe context and emotion, which includes where the user may be, how they feel, their surroundings, or any realistic external factors. We also describe their progression and functionality by showing each step through a series of storyboards, and what type of functionality they would expect to use during their journey. We created three primary user journeys that describe the step-by-step process of completing certain tasks in Illness Tracker.



Susan

Age: 65
Education: Highschool Diploma
Hometown: Charlotte, NC
Family: None
Occupation: Retired

"Those who choose to become doctors do it because they have to heal."

Goals

- To communicate with her doctor without leaving the house
- To find an easy way to receive treatment options when she feels worse than usual

Frustrations

- Cannot leave the house
- Has received unreliable information from the internet before

Susan is a 65-year-old woman is living by herself. She is unable to travel outside of her home to receive the medical treatment that she requires on a daily basis. She uses the app to communicate with her specialist so that she can keep up to date with new information on how to treat sicknesses herself.

Figure #2

In this scenario we have Susan is unable to travel outside, so she opens up the app to communicate with her doctor there. A hypothetical situation involving Susan would go as follows.

Step 1. She wakes up feeling ill, as usual.

Step 2. She reaches for their phone and opens the Illness Tracker app.

Step 3. She then opens up the “Communication” part of the app.

Step 4. She sends a message to their doctor describing their symptoms.

Step 5. She checks back after an hour to see a response from her doctor with proactive steps she can take to improve her health.

Step 6. She is able to go through the doctor's steps to treat her symptoms.

This User Journey tells Susan's story. She is in her home, she is ill and unable to leave the house to get proper help. The app provides a fairly natural progression when it comes to contacting her doctor since it is very similar to traditional texting. Susan is able to reliably have quick communication with her doctor. She is very dependent on this feature as she is unable to leave the house.

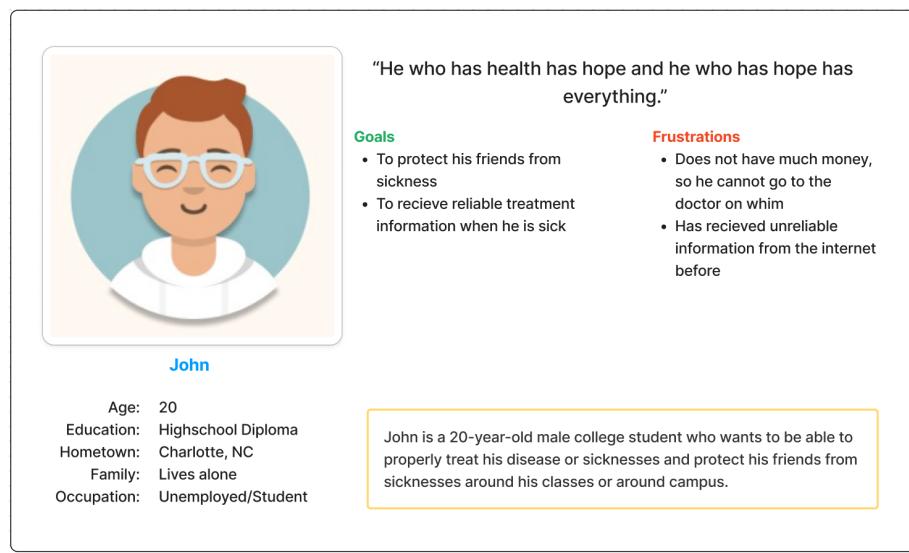


Figure #3

For the second scenario, we have John. John is very intentional about being friendly and taking care of his friends and everyone around him. The app allows him to take the most

precaution around his friends and he always feels safer going out with his buds. A hypothetical situation involving John would go as follows.

Step 1: John is starting to feel sick

Step 2: John checks the app and updates his status

Step 3: John sees that most people on campus are sick and are going to a party that his friends are also going to

Step 4: John is able to warn his friends about the party and he also refrains from going to the party himself.

Step 5: John checks the app a week later and sees that the sickness on campus has died down as well as his symptoms

Step 6: John is finally able to go be with his friends comfortably.

John is very careful when it comes to getting his friends sick. He goes to college which is a hot spot for spreading sickness so he needs to be careful as he and his friends like to go out a lot. Once the user clicks his location, he is able to see all of the people who are sick around his area. John is able to use the app to warn his friends and update his status that he is sick to let them know if they have been in touch with him recently. John is much more at peace and comfortable with going out with his friends and on campus now that he can feel better about protecting himself as well as his friends from illness.



Janice

Age: 35
 Education: Bachelors
 Hometown: Winston-Salem
 Family: Partner and kids
 Occupation: Full-time mother

"Just because someone is sick does not mean they can't recover. So hang tough."

Goals

- To protect her kids from illness
- To receive reliable treatment information when they are sick
- To receive reliable advice on how to keep them from getting sick

Frustrations

- Is tired of going to the doctor every time one of her kids is sick
- Her kids get her sick

Janice is a middle-aged mother who has three kids ages 3, 12, and 19. She has trouble knowing how to take care of them all properly given their respective age groups. The app gives her daily tips as well as communication with their doctors about how to treat them and ensure their safety and wellness.

Figure #4

For the third and final scenario, we have Janice. Janice has multiple kids, all of which get sick often. She doesn't have the time to take them to the doctor every day. She takes advantage of Illness Tracker's diagnosis feature. A hypothetical situation involving Janice would go as follows.

Step 1. One of her children comes to her with complaints of feeling sick.

Step 2. She thinks of finding out about the illness before going to the hospital.

Step 3. She uses her phone to open the Illness Tracker app.

Step 4. Once the app is open, she hits the Diagnoses tab.

Step 5. She checks off the symptoms of her child.

Step 6. The illness tracker lists the suspected illness and treatment options.

Step 7. Seeing the medications listed, she goes to the store to get medication.

Step 8. She administers the medication to her child.

Janice is at home and her child comes to tell her that they aren't feeling well. Once the user clicks on the Diagnoses tab, the app shows a checklist of symptoms. She chooses the symptoms that they have and then another screen presents the suspected illness. A box with the

word “Next” takes the user to the treatment options screen. She expects to see the suspected illness and possible medications if the illness is not that severe. She is relieved that they can find options at home and not deal with the costs/wait times of visiting the hospital, especially for mild symptoms.

In conclusion, we feel that after going through realistic user journeys our app will greatly improve and service those who require the specific needs that we are targeting. We reviewed many different user journeys and we made many adjustments to our app to encounter all kinds of realistic scenarios to give users and personas the best experience. Many of the problems generated by the personas in different contexts inspired us to continually add and change our app. All of the user journeys seem to have journeyed the way that we wanted to and we feel that the user journeys help us to greatly achieve our goals by helping us tweak and adjust our app to any scenario.

3.2

4.0 Design Prototype(Hunter Starets)

4.1. Low-Fidelity Prototype

Low-fidelity prototypes are a key stage in the design process. They are a great way to efficiently deal with things that are hard to predict. They are also very good at providing quick feedback about designs by helping developers think through key user interactions, purposeful use of color, and even how shadows behind elements will look. A primary example of prototyping is wireframe paper prototypes. They help developers understand the feel of their idea, and what it might look like. The implementation, which includes answering questions about what it might work like. And finally, the role, what the experience might be like.

Our team created multiple low-fidelity wireframe paper prototypes of our app. But two, in particular, were used as the main wireframes for designing our High-Fidelity prototype. Our first prototype, (figure # here) documents the user journey that Janice went through trying to diagnose her kid's illness. The screens listed in (insert figure name here) show every step in this process. There are four major screens the user has to go through. First, the user starts at the home screen. This is the main screen where the user can navigate to every section of the app. Our paper prototype demonstrates when the user goes down the "Diagnosis" path in the app. After the user presses the "Diagnosis" button, they are taken to the symptom checklist screen where they can input their current symptoms. After their symptoms have been inputted, they will press the "Done" button. The "Done" button will send them to the diagnosis screen. This is the screen that will output what the app predicts the user is sick with. Our final step involves the user clicking the "Treatment Options" button. This will send them to the final treatment options screen where they will receive feedback on how to treat their hypothetical illness.

Our second paper prototype involves two key screens documenting the user journey Susan went through to get treatment advice directly from her doctor. The first screen in the journey is the aforementioned home screen where everything is connected. However, in this journey it demonstrates what happens when the user clicks on their doctor's name to get in communication with them. The second and final screen shows an instant messaging interface where the user can send a direct message to their doctor for swift feedback.

Designing our low-fidelity paper prototypes helped us combine all of our ideas and make them more realistic. We were able to very quickly work out the kinks in all of our ideas. However, most importantly, we were able to use these paper prototypes as a foundation for our high-fidelity prototype later on in the design process. This proved to be a very successful step towards our final design.

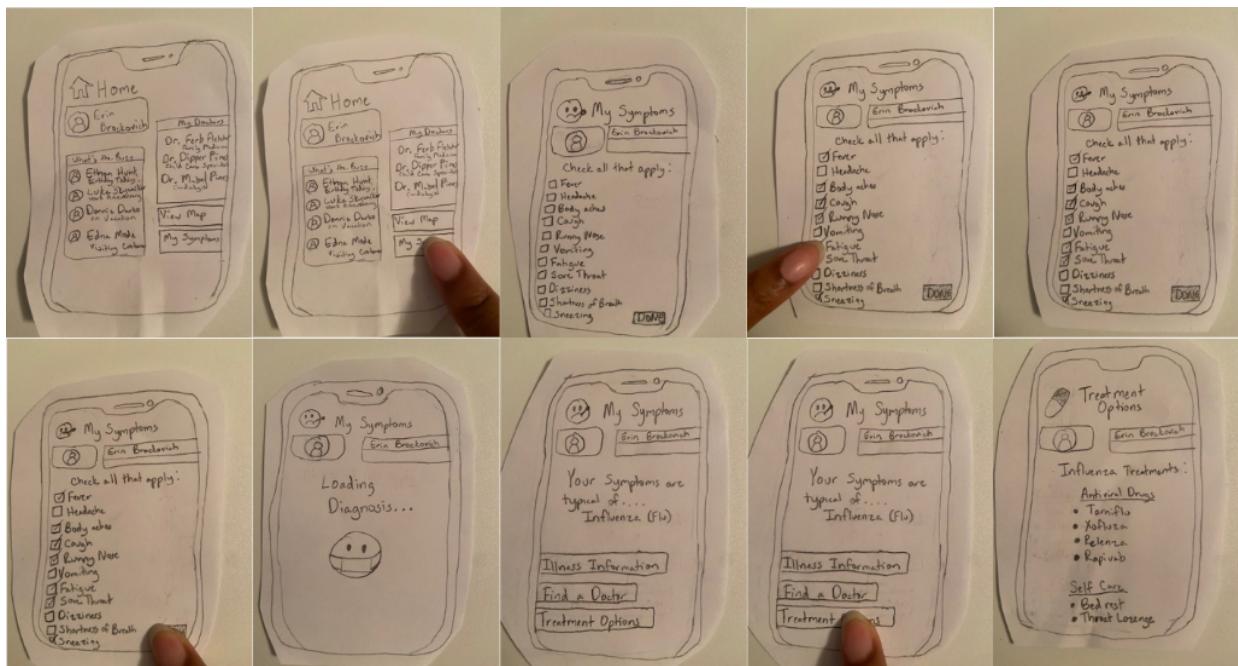
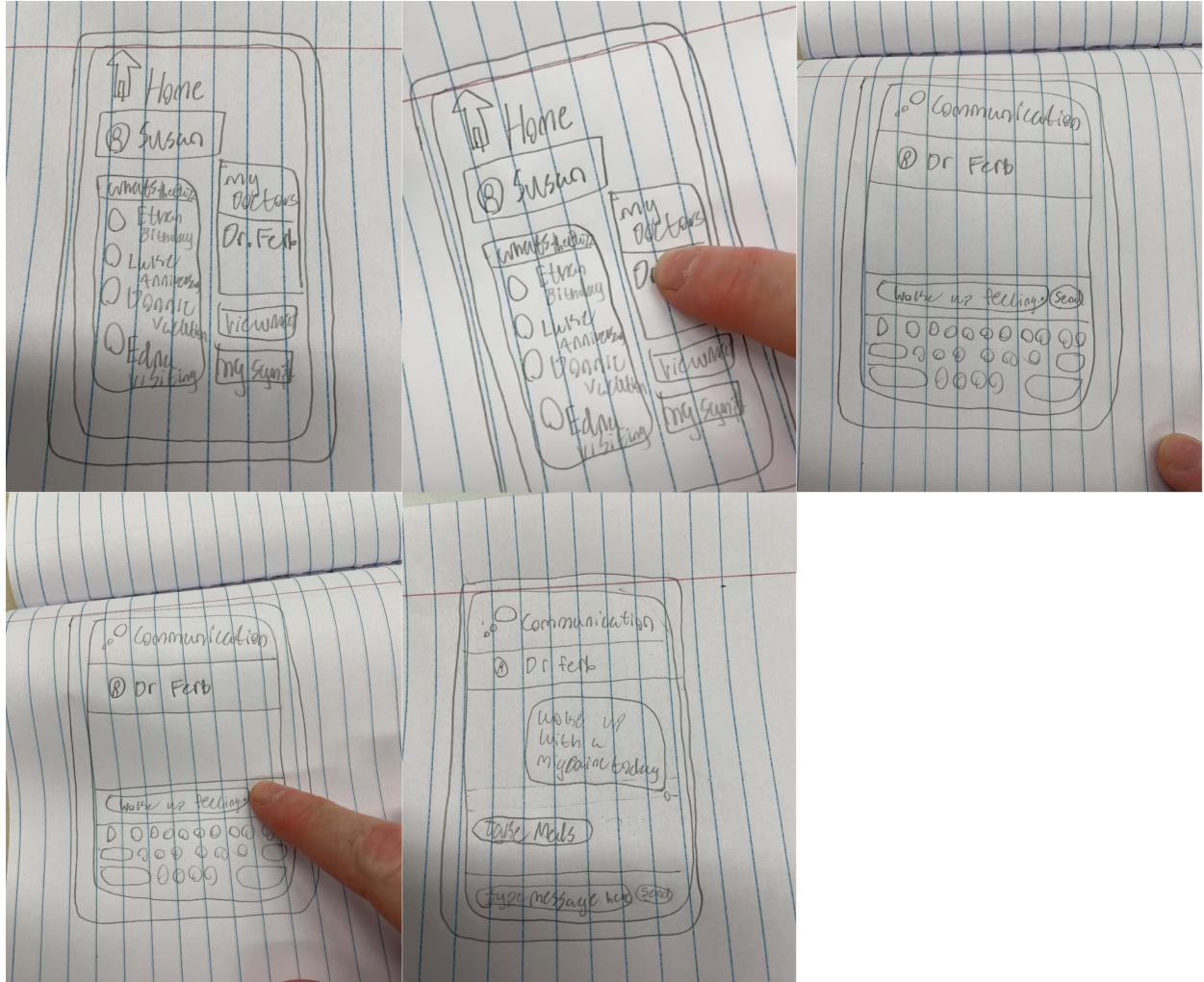


Figure #5

**Figure #6**

4.2 High-Fidelity Prototype

Creating a high-fidelity design is the process of seeing where an idea goes by creating an interactive experience. They are a great way for your ideas to become real. One of their main key benefits is their potential to build an experience that will look and feel like the final product without spending time or money on the full engineering process. Developers all around the world use them as a fast and easy way to explore many different ideas. This is exactly what we did.

High-Fidelity Prototypes are a necessary step toward creating a final finished product.

Our team used Figma to create a High-Fidelity prototype that explores all of the different

branches of our app. The Illness Tracker app is capable of a lot. With our hypothetical artificial intelligence built into the app, it is able to figure out what illness the user has based on their symptoms. But we were faced with the challenge of the best way to guide the user through the required information input screens. Through proper testing, we were able to fine-tune our prototype down to an easy to use and self-explanatory experience. We did this by incorporating a lot of visual cues to guide the user to where they want to visit in the app. The main signifiers in our prototype are the buttons that we have littered throughout. They are a separate color from the background so that it draws the user's attention. Once they have grabbed the user's attention, the text on them tells the user what screen the button will send them to. We use color again to show the user that their input has been received by the app by changing dull gray boxes to bright green boxes with a check in them after they have been pressed. This keeps the user more informed about what is going on behind the scenes. These are just a few of the signifiers we use to connect to the user with the different tasks they are capable of doing in our app.

Designing our high-fidelity prototype helped us figure out what needed to be done to our interface to make the app experience as seamless as possible. We were able to quickly experiment with different designs to find the one that users enjoyed the most. Because of this information, we are very confident that this is the interface we want to use for our final design.

The image shows two screenshots of the Moon Island Illness Tracker app. The left screenshot is the 'Sign In' screen, featuring a large circular user icon at the top. Below it is a 'Sign In' section with 'Email' and 'Password' fields, both containing '*****'. A blue 'Sign in' button is at the bottom. To the right of the sign-in form is a 'Done' button. Below these are links for 'Forgot password?' and 'Sign up'. The right screenshot is the 'Sign up' screen, which has fields for 'First name' and 'Last name' (both empty), 'Email' (empty), 'Password' (empty), and 'Re enter password' (empty). A blue 'Sign up' button is at the bottom.

Figure #7

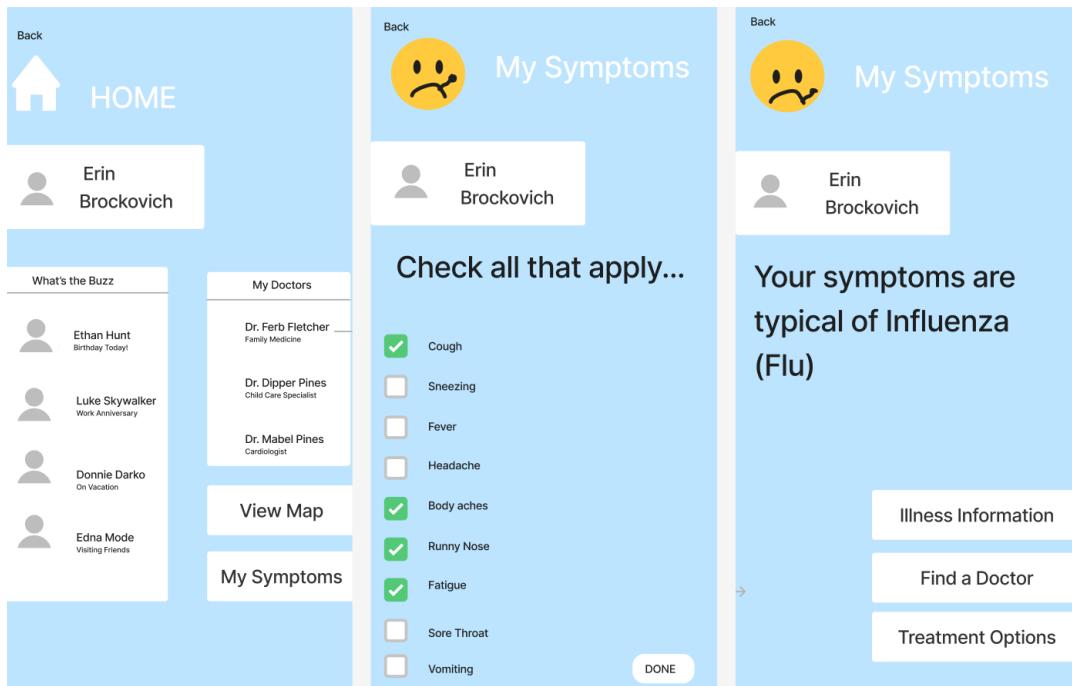


Figure #8

Moon Island

Illness Tracker

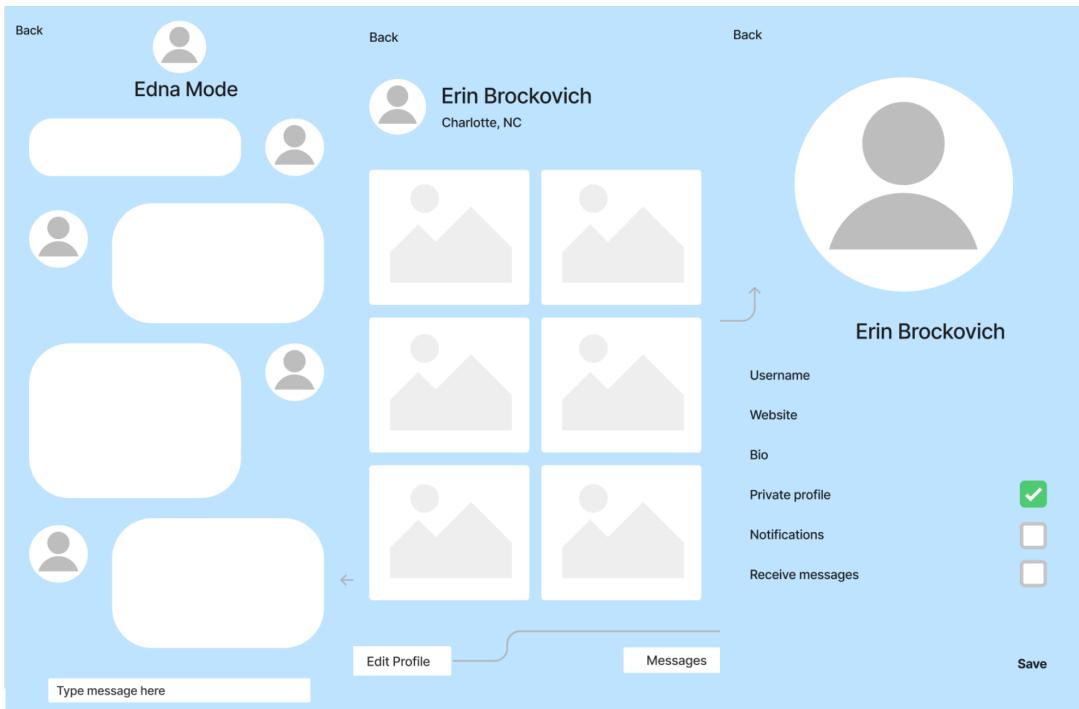
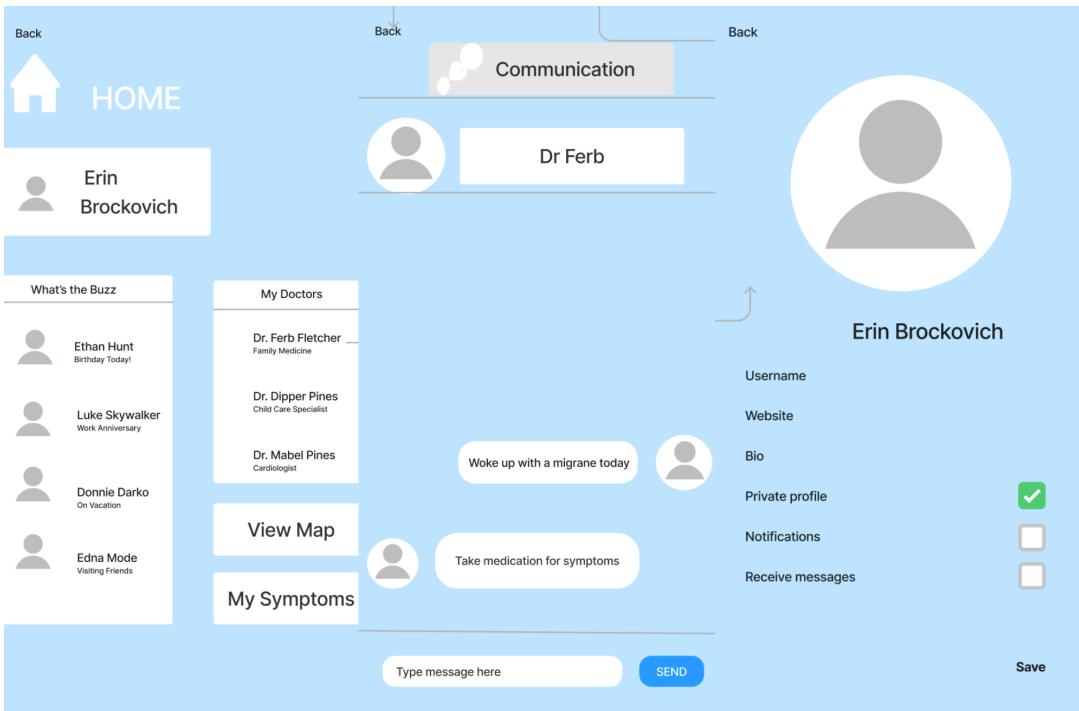


Figure #9



Figure#10

5.0 Evaluation(Gabriel Abbate)

5.1 Includes wizard of oz and usability experiment methodology, data collection, and analysis. Suggested changes reflect the results of the evaluation methods.

5.2

5.3

6.0 Summary(A'brea Sun)

Illness Tracker is an app that has the ability to track the trends of illnesses of surrounding areas so that the user can stay better protected. Since this app is based on communication, the vision was for the app to have a user profile with a status function, the ability to communicate with friends and family on the app, a way to update location information, and the ability to find more information about healthcare as well as spreading illnesses. The target population of the app is people who are generally cognizant of their health. Having information on seasonal illnesses or illnesses that happen to be spreading near them can help with limiting the spread of those diseases. The personas first chosen also reflect the different health-conscious users that could benefit from the guidance given from outside resources through the app and the user journeys helped to identify potential specific needs of users.

In our design goals, we wanted the app to be accessible to everyone since it is geared towards the general population over all ages. As common features of social media apps are familiar with most people, having some of those communication features would cause familiarity with users of Illness Tracker. Having the homepage for the account, after the user signs in, look like a social media app's dashboard on user's homepages was something that was aimed for. Things like a homepage with a section for the status updates of friends or a link for the messaging section of the app, would help with comfortability of using the app.

Collecting data from participants in the experiments showed that while people liked the idea of the app, there were things needed for improvement. Participants seemed to like how straightforward the app was, although confusing at some points, but there were clearly features that they felt were missing. Seeing that there were no options to save the history of what a user

has done in the app and scarce information about the types of medications being recommended made participants feel as though the app was not fully done.

The evaluation process helped to understand what people want in an app that would help them be more health conscious when it comes to illnesses. Testing would be users helped with generating ideas for future changes in the app. The headers at the top of each page kept the user informed of where they were in the app and the current state of the app. The buttons with clear language seemed to help participants navigate the app well. The back button labeled in the corner gives users some freedom and control if they made a mistake or simply misclicked. Recognizing that there were also missing features that participants felt would easily fit into the app does show that the clear language was helpful. The navigation of the app Overall Illness Tracker can be successful with further changes that focus on the information presented in the app and with the visual design.

7.0 Appendix(A'brea Sun)

7.1 Focus Group Questions & Answers

Below in this section are summaries from the answers from the focus group. Questions are grouped by the interviewer.

Hunter:

Q1: What do you think of the app as a whole?

A1: Most users agreed that the idea sounds promising. One user stated that it seems multifaceted, in the sense that it has multiple functionalities that are all related to each other. Users agreed that it seems like it is pretty useful. Some users raised concerns about personal information.

Q2: Would you get the app?

A2: Users agreed that they would like to be updated in the community, and know the best ways to stay safe. And for this reason, they would get the app.

Q3: Is there any functionality that you would want to add to the app?

A3: Users suggested adding treatment options. What medication should the user take, and even at-home remedies?

Q4: What is a downside that you see to the app?

A4: If a user is worried about their personal information being shared, it will deter them away from the app. You sacrifice personal privacy for physical well-being.

Q5: Any final thoughts?

A5: One user suggested that we could add a segment that discusses STDS. Users that were worried about their personal information being shared wanted an option to turn off personal data tracking.

Andrew:

Q1: What do you think of the app as a whole?

A1: All of the participants stated that they quite enjoyed the idea. The most agreed-upon comment was about how the app would be a huge help to the community as illnesses are passed around so much and how it would give users comfort as they travel around.

Q2: Would you get the app?

A2: All of the participants stated that they would get the app on their phones. One said that they would get it seasonally when it's around the time when the flu spreads every year.

Q3: Is there any functionality that you would want to add to the app?

A3: One idea that the entire group thought would be cool is to add a friendship function. They liked the idea of how social the app is, they wanted to up that a notch by giving the ability to add friends and communicate with each other when they are sick. This also gives more data of who is likely to catch a sickness based on friends.

Q4: What is a downside that you see to the app?

A4: One huge thing that the group talked a lot about is the issue of struggling to get accurate data because of the small number of users initially. Another thing that they talked about is the confidentiality of users' health data. They argued that many people would not want to buy into this app because they wouldn't be comfortable with sharing their personal health information.

Q5: Any final thoughts?

A5: My friends are computer science students so they were talking practically about how this app would look and what it would take to actually design it.

A'Brea:

Q1: What are the features that you would like to see in the app?

A1: Most participants would like to see a map that shows where the affected areas are. There was also talk about the privacy of their data.

Q2: What features should not be included?

A3: The participants think that the app should try to use day-to-day language when not necessary to use medical terms. They also would not like the more serious diagnoses to be provided by the app or see the app with as much stranger access like a social media app.

Q3: Does this app interest you, if not, how can we make it more interesting?

A3: All of the participants were interested in the app and they believed it would be useful in their lives.

Q4: Which features would you take advantage of and which do you feel are less useful?

A4: The participants were interested in the app's ability to show areas that are "hotspots" as well as the functions to predict care options. There weren't any features that they saw as less useful.

Q5: Are there any apps you can think of that are similar to this one?

A5: The participants that could think of apps listed the Teladoc app, the Doctor on Demand app, and a Covid test app. These apps were similar to the diagnosis feature described in this app.

Gabriel:

Q1: What do you think of the app as a whole?

A1: All of the users said that the app idea sounded useful.

Q2: Would you get the app?

A2: Every participant in the focus group said that they would get the app. The inclusion of trends from around the area makes the app useful.

Q3: Is there any functionality that you would want to add to the app?

A3: Allowing the users to see data from other users in the area along with news related to diseases would be very useful according to participants. The app should also include information on vaccinations and guidance from the local department of health and human services.

Q4: What is a downside that you see to the app?

A4: For information privacy, the user needs to be educated on how their data is used. The fact that the app would use sickness and location along with past treatments presents some concerns for app security and how the data is kept safe.

Q5: Any final thoughts?

A5: Participants think that it would be useful and that it is similar to the citizen app because it involves data from around the users' area.

7.2 Numerical Comparison

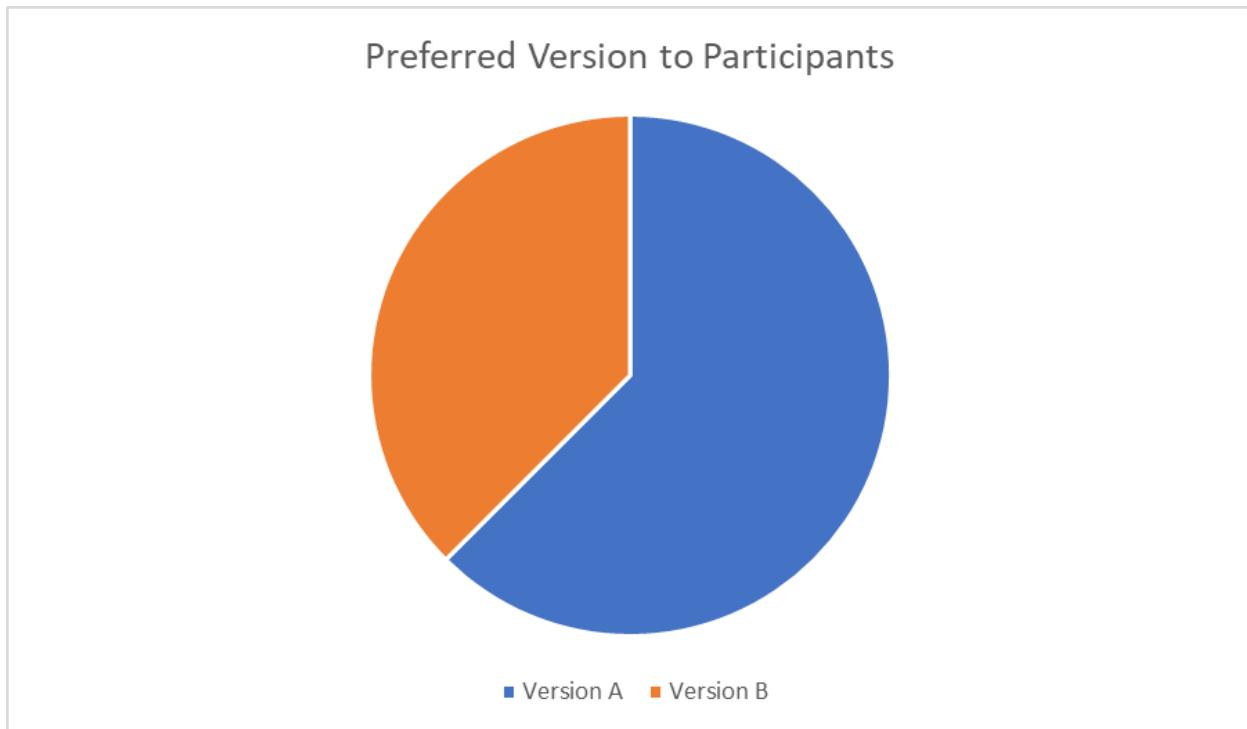
During our experiments, participants were asked to complete a task with both Version A and Version B. Version A would allow users to scroll through a printed list of options with buttons in a checklist. Version B would let the app read the input of the user's text to determine the illness. Participants were timed on how long it took to use each version and at the end, asked for their preferred version.

Participants	Time to Complete Version A	Time to Complete Version B	Preferred Version
Participant 1	48s	31s	A
Participant 2	42s	67s	A
Participant 3	42s	38s	B
Participant 4	45s	32s	A
Participant 5	22s	37s	B
Participant 6	45s	32s	A
Participant 7	50s	31s	A

Participant 8	42s	92s	B
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7.3 Aggregate Data Visualization

Chart showing how both versions compare to each other throughout all participants in the experiment.



7.4 Thematic Analysis

Table of information received from interviews about the general opinions of choices in the app design. This table lists tasks that can be taken with the app and uses quotes to show what can be improved in the app and which aspects of the app could stay the same.

Theme	Quotes/Excerpts	What this means for the Design
Ease of Use	<p>“It was cool how the layout was like a social media app so it was easy to compare to my past experiences.”</p> <p>“The app is very straightforward and the buttons are clearly labeled.”</p>	When it comes to making the app easier to use, no changes are necessary.

Make an appointment	<p>“It was not clear that I was making an appointment.”</p>	<p>The section of the app to make an appointment at a health center is unclear.</p> <p>Changing the app to have a “make an appointment” button on the homepage and making the steps afterward clearer would be something we can do.</p>
Get a diagnosis	<p>“for getting a diagnosis for your symptoms, it is a straightforward process.”</p> <p>“The option to see more information about medications as in side</p>	<p>While inputting symptoms is an easy process, the information afterward is scarce.</p> <p>We should make more information available in</p>

	<p>effects would be useful. Also the ability to see if current medications conflict with new ones. A record of previous illnesses and treatments chosen would also be helpful.”</p>	<p>terms of medications and make a saved record of the information of existing app users to their profiles.</p>
Communicating with a doctor	<p>“There were no hiccups throughout the process, so the overall experience completing the tasks was very smooth.”</p> <p>“The process of connecting your doctor to your account could be improved.”</p>	<p>The process of connecting to a doctor is clear but there is no connection to a user’s doctor through their account.</p> <p>We should add options to connect saved/preferred doctors to the user’s account.</p>

Updating user health status/contacting friends	<p>“I was able to fully complete the tasks.”</p> <p>“I think if I had to change something, I would want the ability to see the history of my status updates. Or even maybe make group chats.”</p>	<p>Completing the task is easy but there is no account history being kept on the app.</p> <p>We should make the app more like a social media app. A user’s status updates should be logged and there should be more options to communicate between users within the app.</p>
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