Project 5: Design

Project Name: Snow Tek Bot

Develop the app. Use wireframes and prototypes to help build the SnowTekBot app

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1. System Concept Statement

SnowTekBot will help Snow College students solve computer problems they are facing. If SnowTekBot can't solve the problem, it will direct them to the right place to have their problem solved. It will also:

- Have a friendly interface to be more appealing to Snow College students.
- Be programmed to react to certain responses.
- Help user with specific computer problems and questions.
- Guide the user to a specific Snow College department that specializes in solving their problem.
- Have a friendly response system that will help mitigate user frustration.
- Have step-by-step solutions for generic and common problems that students encounter.
- Quickly escalate questions beyond its scope.

2. Problem Statement

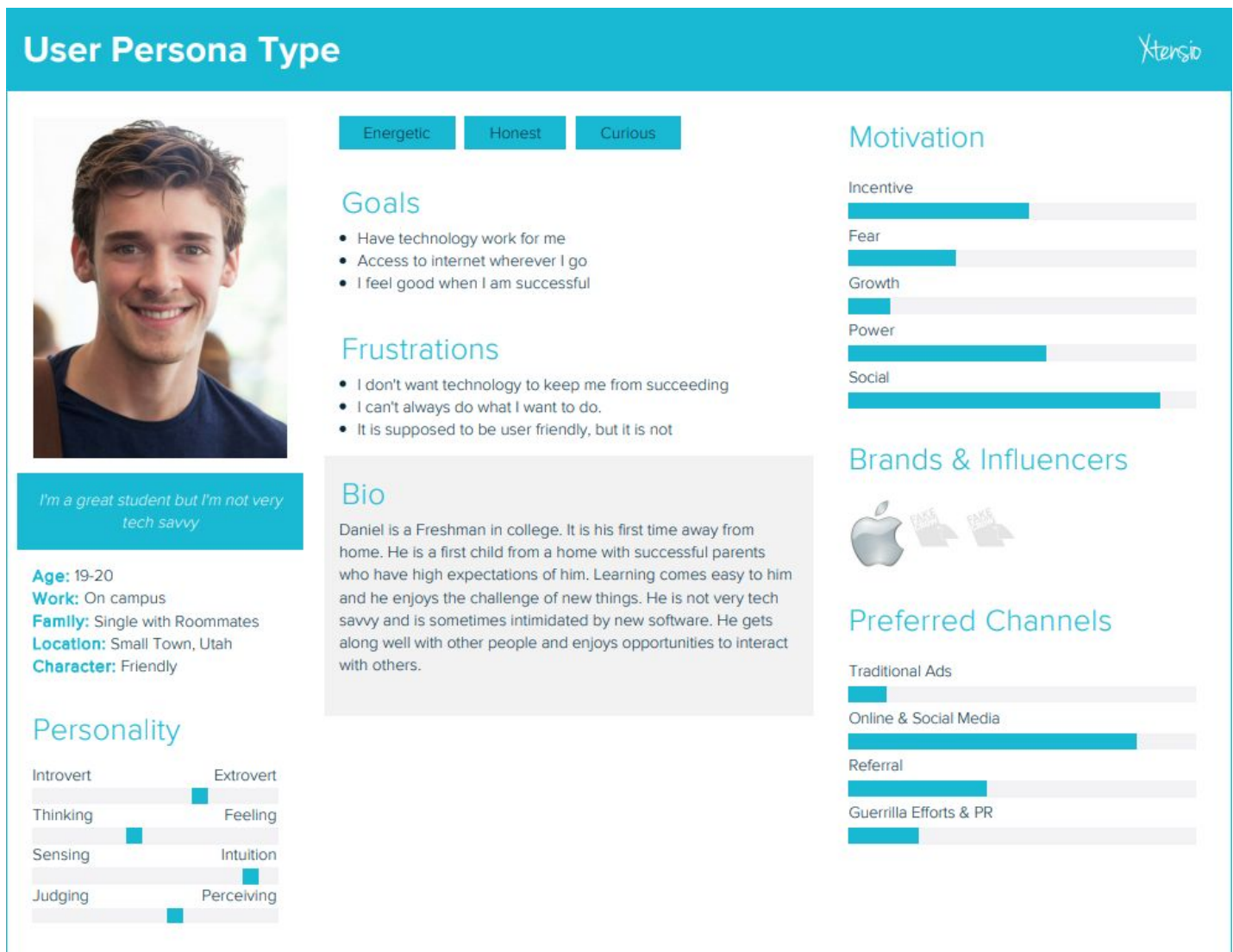At Snow College, there is a good chance that one will have issues with the school's network or other various computer problems. The problem is that students feel that it is hard to get help to solve their technological problems. Students and teachers may not know how to solve simple internet and application problems. They have no guidance. By creating this app, we aim to help individuals with their technology problems.

3. Persona

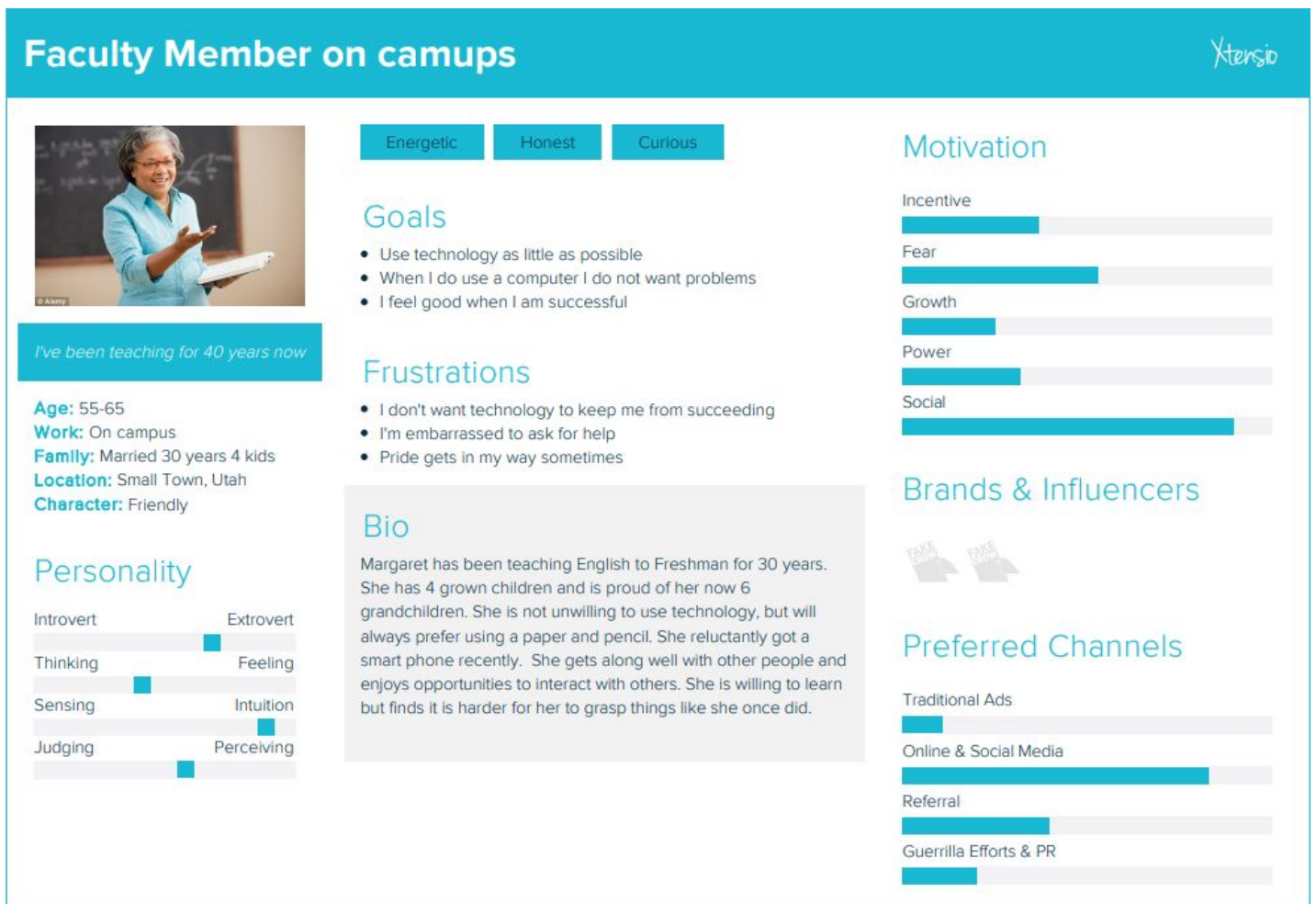For our project, we decided to create two distinct personas.

The Student:

Daniel is a typical student. He was successful in High School and would like to continue to succeed here at Snow. He owns several devices and knows how to use all the apps on his phone, but has never spent much time trying to understand how it does what it does. He has a job on campus helping students with housing. Although he isn't familiar with all the ins and outs of how his phone works, he certainly knows when it doesn't work, and wants easy solutions to get it working again. For additional information regarding the persona, you can use the picture below.

User Persona Type

Xtensio

Energetic   Honest   Curious

Goals
- Have technology work for me
- Access to internet wherever I go
- I feel good when I am successful

Frustrations
- I don't want technology to keep me from succeeding
- I can't always do what I want to do.
- It is supposed to be user friendly, but it is not

Bio
Daniel is a Freshman in college. It is his first time away from home. He is a first child from a home with successful parents who have high expectations of him. Learning comes easy to him and he enjoys the challenge of new things. He is not very tech savvy and is sometimes intimidated by new software. He gets along well with other people and enjoys opportunities to interact with others.

I'm a great student but I'm not very tech savvy

Age: 19-20
Work: On campus
Family: Single with Roommates
Location: Small Town, Utah
Character: Friendly

Personality

Introvert	Extrovert
Thinking	Feeling
Sensing	Intuition
Judging	Perceiving

Motivation
Incentive
Fear
Growth
Power
Social

Brands & Influencers

Preferred Channels
Traditional Ads
Online & Social Media
Referral
Guerrilla Efforts & PR

The Professor:

Margaret is a 20 year English professor. She is young enough to have been exposed to technology, but stubborn enough to never take the time to learn it well. While she recognizes the need to use modern software, she still prefers a paper and pencil. When she does need to do something on her computer she will frequently struggle, but she is embarrassed to ask for help. As such the chance to get assistance without exposing her ignorance is appealing to her. For additional information regarding the persona, you can use the picture below.

Faculty Member on camups

Xtensio

Energetic | Honest | Curious

I've been teaching for 40 years now

Age: 55-65
Work: On campus
Family: Married 30 years 4 kids
Location: Small Town, Utah
Character: Friendly

Personality

Introvert — Extrovert
Thinking — Feeling
Sensing — Intuition
Judging — Perceiving

Goals

- Use technology as little as possible
- When I do use a computer I do not want problems
- I feel good when I am successful

Frustrations

- I don't want technology to keep me from succeeding
- I'm embarrassed to ask for help
- Pride gets in my way sometimes

Bio

Margaret has been teaching English to Freshman for 30 years. She has 4 grown children and is proud of her now 6 grandchildren. She is not unwilling to use technology, but will always prefer using a paper and pencil. She reluctantly got a smart phone recently. She gets along well with other people and enjoys opportunities to interact with others. She is willing to learn but finds it is harder for her to grasp things like she once did.

Motivation

Incentive
Fear
Growth
Power
Social

Brands & Influencers

FAKE FAKE

Preferred Channels

Traditional Ads
Online & Social Media
Referral
Guerrilla Efforts & PR

How we established these personas:

Early on in our project, we realized we had two distinct groups using the help desk. As such we quickly gravitated to the need to have two personas. Our typical professor and our typical student were who we began talking with when we began our contextual inquiry, and who became the models for our personas.

4. Ideation

In our ideation process, we looked at a few different designs that other major companies use for their chatbots. Including Google, iPhone, and the chat assistants offered by many companies now. We noticed that many companies provide live assistance to provide this service to their customers. During our defining the scope we decided the idea of allowing the help desk attendants to monitor the 'chatbot' conversations and provide live assistance as needed to be considered in a future version of our chatbot.

We picked apart each feature that the chatbot offers, and we took features and the ideas that best fit our created personas based on the interviewed individuals. Listening to our interviewed individuals, we made note of features that they would like or wanted. We have tried our best to incorporate these ideas in our ideation process while keeping the navigation simplistic and not overbearing. As we would discuss different features, we would generate our own versions of features and what was simple and easy for the user to work with. All along this process, we continue to generate ideas for chat client that best fits our personas needs. Even in the stages of creating different view sketches and wireframes, we have new ideas that we want to implement that would be useful to our personas.

The Sketching process helped us start our wireframe. The helpful connection between the ideation process and the sketching process comes from viewing other chatbots and our own collaboration. We first started our sketches based off a few designs coming from those ideas. The mobile version of SnowTekChat was sketched into some storyboards and these were then extended into our wireframes that are the building blocks for our eventual final design. This critical step gives us the bones from which our final product will emerge, and also allow for future expansion to make the product better in the future.

To develop our project, we looked at a few chat templates online and how they constructed their interface. We took the details that we liked from other chat interfaces and adapted them to our concept. We started our project with our wireframe in mind, but as we continued programming we soon discovered some complexities in our design. It became more complicated to program it the way we wanted to. Even though we had to modify our design a little bit, we were still able to accomplish the functionality we intended, while maintaining a good user experience.

5. Workspace

As part of our humble, student budget, our workspace was fairly simple and straightforward. In the beginning we used a whiteboard to generate a few ideas between the two of us. We also started doing sketches on a paper to help each other see what potential models we could use for SnowTekBot. We came up with a few ideas and agreed upon designs and quickly started working on mock ups. We learned that using a computer program to create mockups was really resourceful. With the ability to adjust features across multiple pages is really helpful. We used PowerPoint to create a few designs. We used basic paper and pencil to create our storyboard ideas. Throughout the whole process though, we would use a white board to discuss different designs and what would be best with what we have. We also used Xtensio to better develop who our personas are.

Materials Used:
- Paper
- Pencil
- Whiteboards
- Xtensio

6. Mockups

Someone using the SnowTekBot app
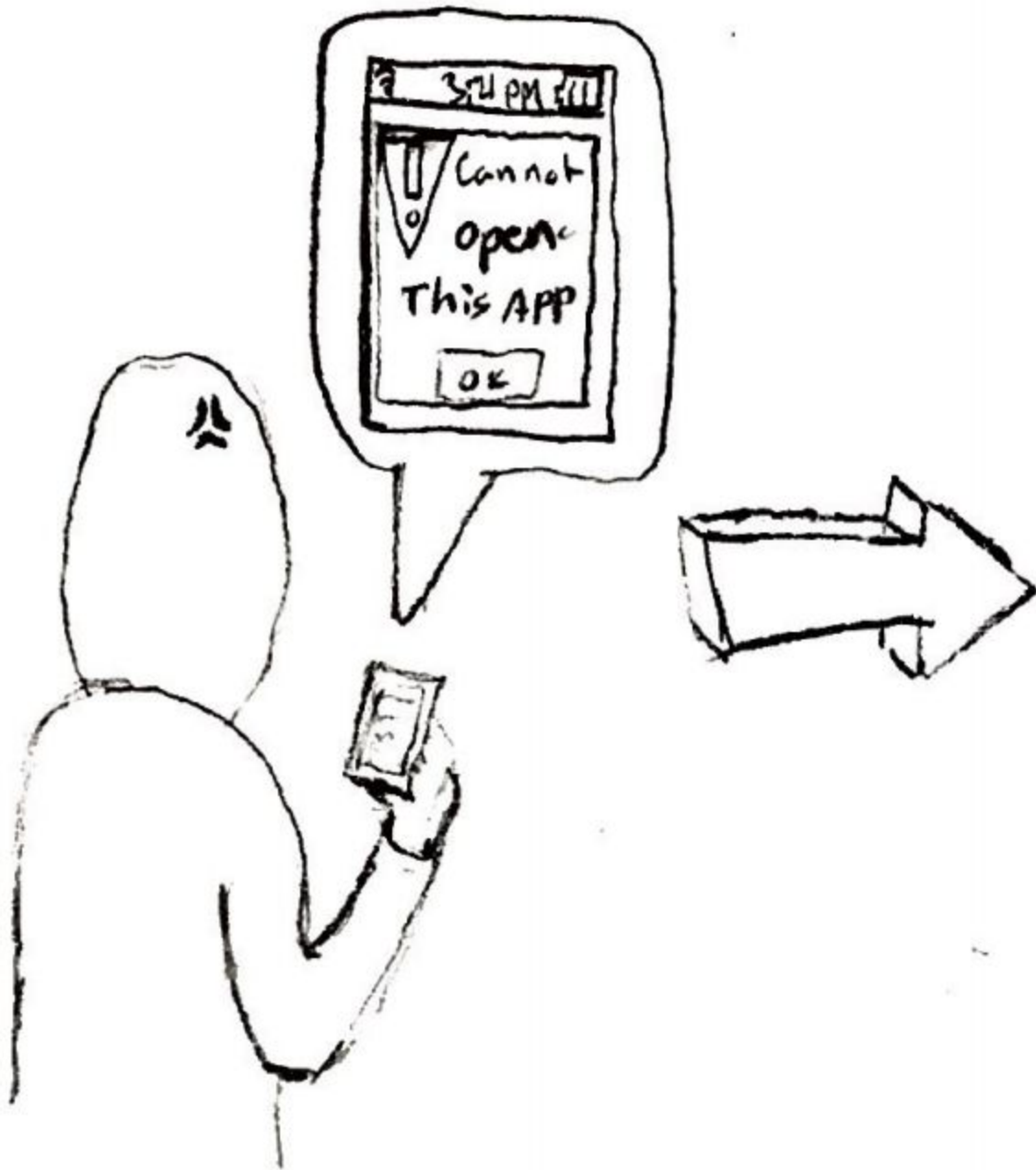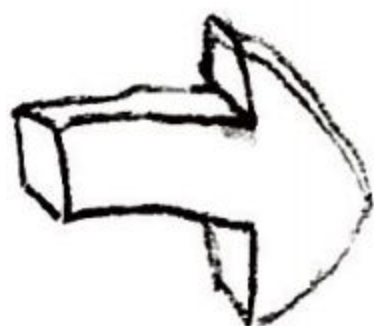
Snow Tek Bot

(optional)

Email

"I cant open my application on my phone."

Question

SUBMIT

Possible Home Screen Options

Snow Tek Bot

What can you help you with?

Text box to place the answer

Enter your email address to receive a transcript of the conversation
optional

SUBMIT

SnowTek Bot

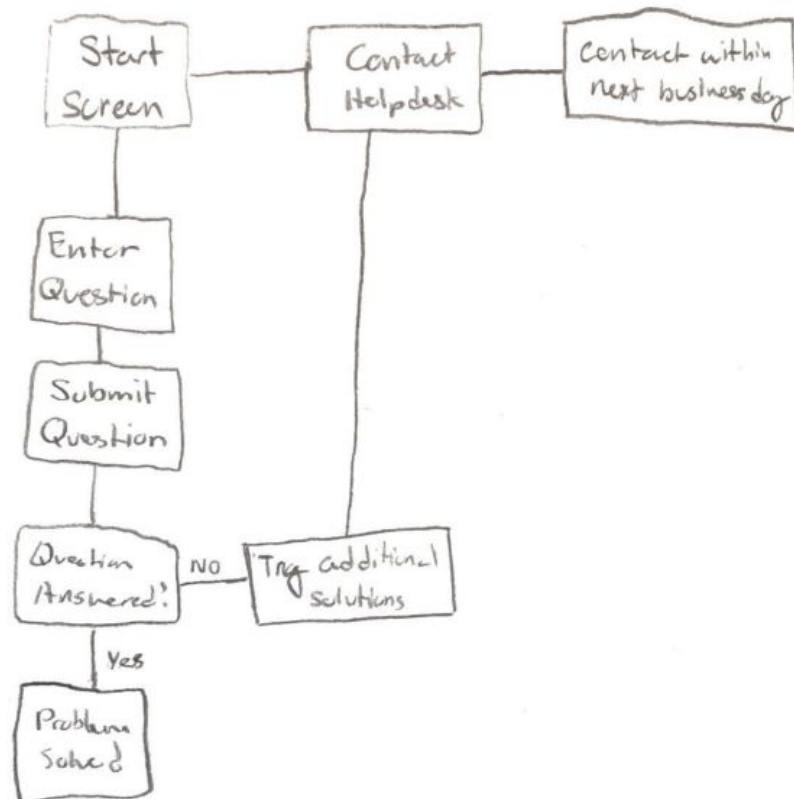Email:

[(optional)]

To receive a transcript of
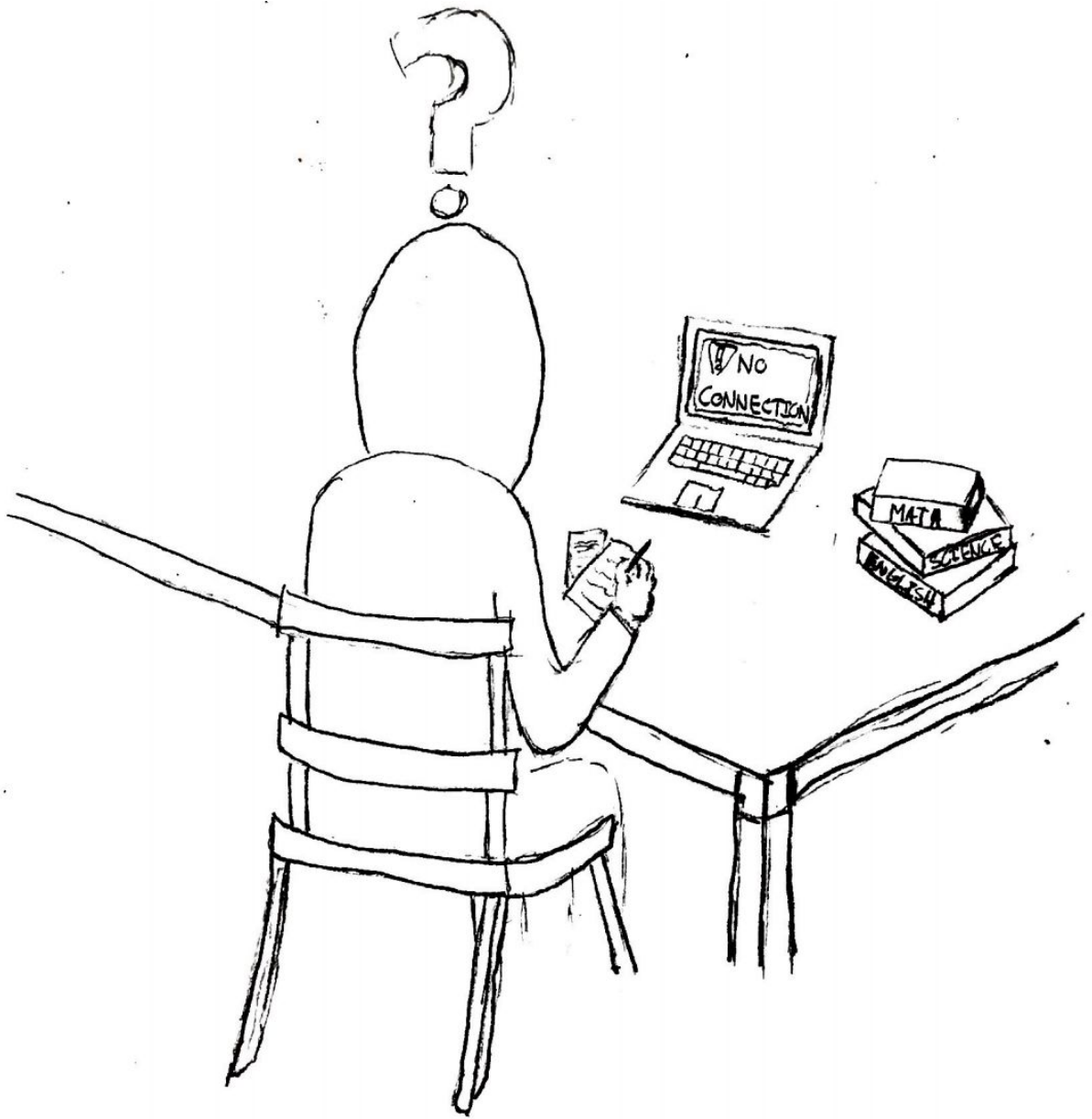the solution and conversation.

Question:

What can we help
you with?

[Continue >]

Connections between the different states

Snow Tek Bot Model

Start Screen → Contact Helpdesk → Contact within next business day

Start Screen → Enter Question → Submit Question → Question Answered?

Question Answered? — NO → Try additional solutions

Question Answered? — Yes → Problem Solved

Contact Helpdesk → Try additional solutions

7. Story Boarding

This picture is a of a modest Snow College student. This student is working on homework at some place on college campus. While they are doing homework, something happens to their computer to where they can no longer connect to the internet. They try a few different options but it ultimately unable to fix it. In this situation, it would be convenient for them to use the SnowTekBot app to find a solution.

In another common scenario, this teacher walks into their office and starts up the computer. They open up an adobe program only to find out that they can't get into the program they need. After trial and error, they are unable to find a solution to this problem. In this moment, it would be opportune to use the SnowTekBot app to try and find a solution.

In these two examples, you are able to see an ecological and emotional perspective used in this storyboard. These two individuals are frustrated that they have these problems in the first place. At the same time, they can quickly find a solution to their problems using the TekBot application.

8. Wireframing

Snow Tek Bot

Email (so we can send you a transcript)

What question can we help you with?
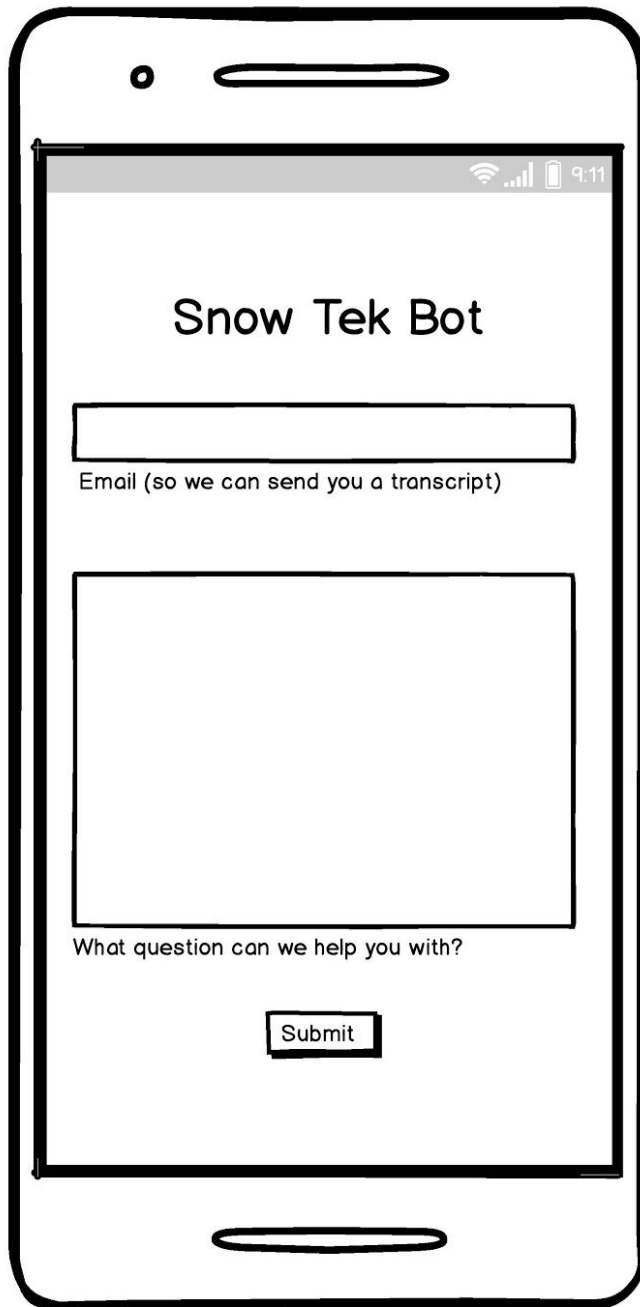
Submit

- Greet the user
- Optionally collect email address
- Collect initial question
- Click Submit to begin
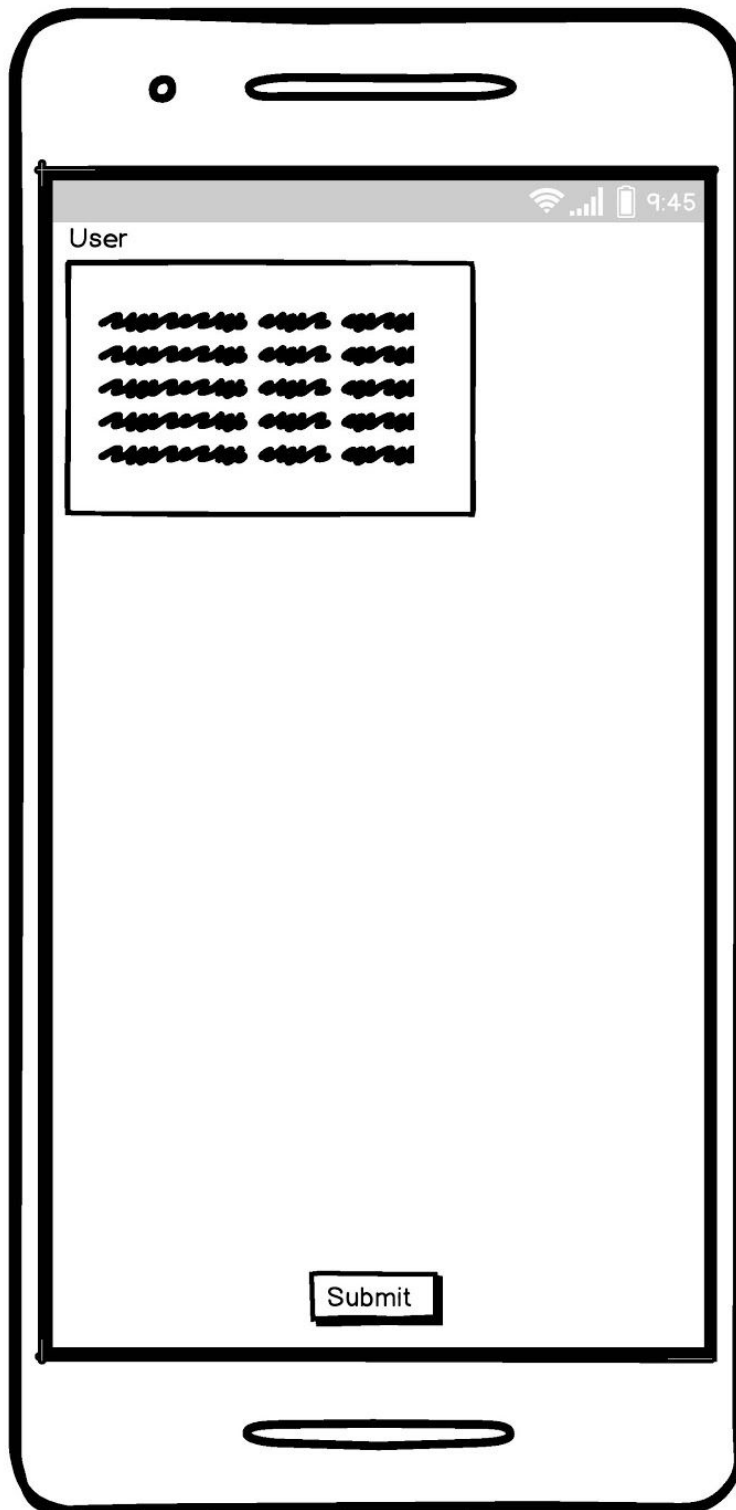
User

- Initial question is loaded onto the screen.

- Although the bot has an immediate response, the systems has a slight delay to simuate thinking.

Submit

User

Snow Tek Bot

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Submit

- Based on words in the question, Tek bot finds three possible matches to the question

- Possibilities are presented to the user as Radio Choices

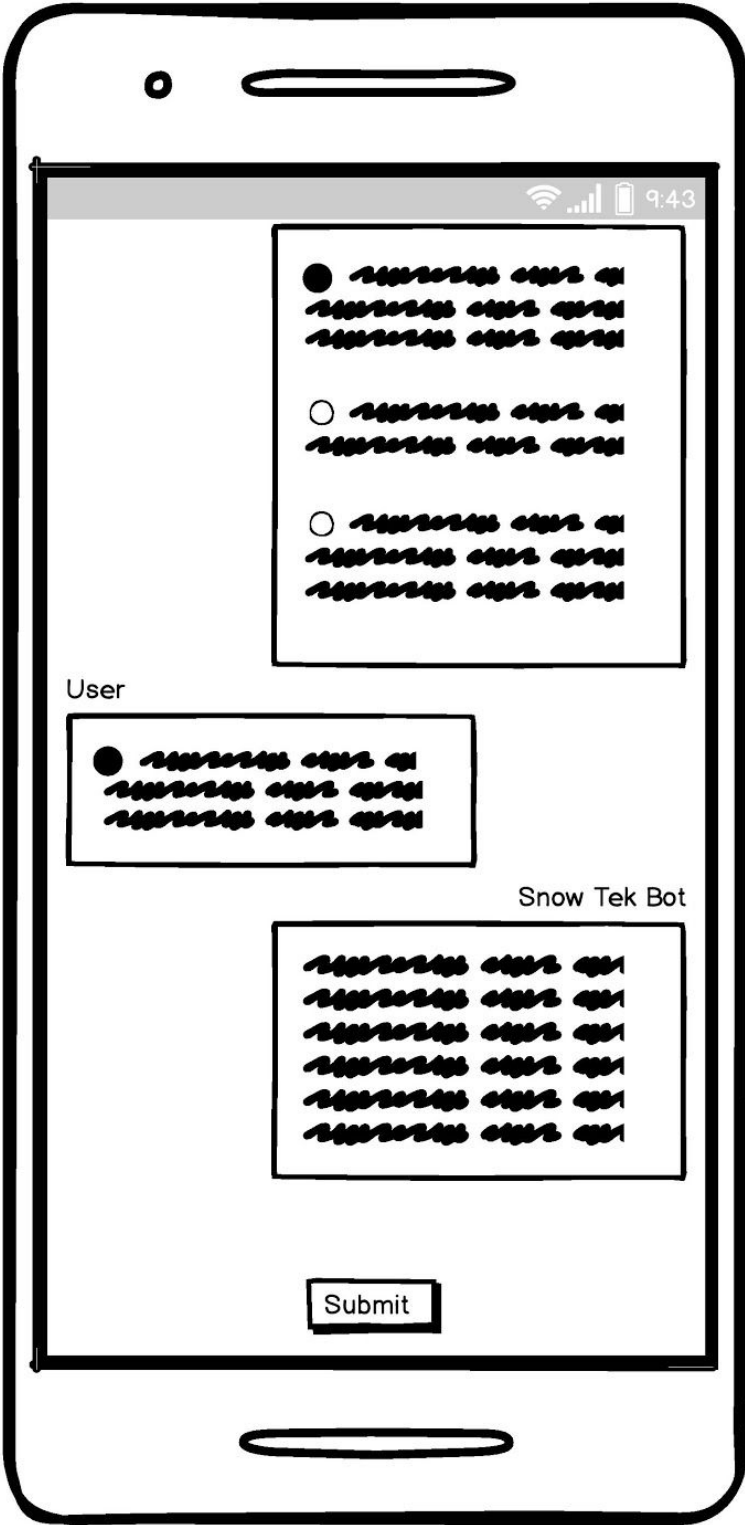- User selects question that closely resembles theres

- User clicks Submit

Snow Tek Bot

User

Submit

- Selected button is highlighted and the question populates as a user question

User

Snow Tek Bot

Submit

- Again after a small delay Tek Bot supplies the answer to the selected question

User

Snow Tek Bot

Snow Tek Bot

Did this answer your question?

○ Yes

○ No

Submit

- After providing an answer, TekBot will always ask if the question was answered.

- The program forks here. Depending on the response.

Snow Tek Bot

Snow Tek Bot

Did this answer your question?

● Yes
○ No

Snow Tek Bot

Do you have another question to ask?

○ Yes
○ No

Submit

- With a yes answer:
- TekBot says thank you
- Present a button to 'Ask another'
- emails a transcript of the conversation

Snow Tek Bot

Snow Tek Bot

Did this answer your question?

○ Yes

● No

Snow Tek Bot

Would you like to set up a help ticket?

○ Yes

○ No

Submit

- With a no answer, we offer to set up a help ticket

- A yes to this will jump to the 'Ticket' Screen

Snow Tek Bot

Snow Tek Bot

Did this answer your question?

○ Yes

● No

Snow Tek Bot

Would you like to set up a help ticket?

● Yes

○ No

Submit

- With a no answer, we offer to set up a help ticket

- A yes to this will jump to the 'Ticket' Screen

SUBMIT HELP TICKET

Help Desk: 283-7351

Transcript

Email

Phone #

Additional Information

Submit

- On the help ticket screen:
  *The transcript is pre-filled
  *The user email is pre-filled
  *A new field for a phone number is given
  *All fields will be editable.

- The phone number for the help desk will be given as an alternative to submitting a help ticket.

9. Development

During the process we began with a desire to make a product to help out the students and faculty at Snow College. We considered their needs when designing what ultimately became our finished product. Some of these issues included ease of use, combined with a need to get the right answer when they used our product.

We recognized an early concern that bots frequently do not understand our questions directly. This lead to our largest design decision, how to predict the users question. We debated over different algorithms to predict exactly how answer the right question, and realized quickly there was no way to get it right every time.
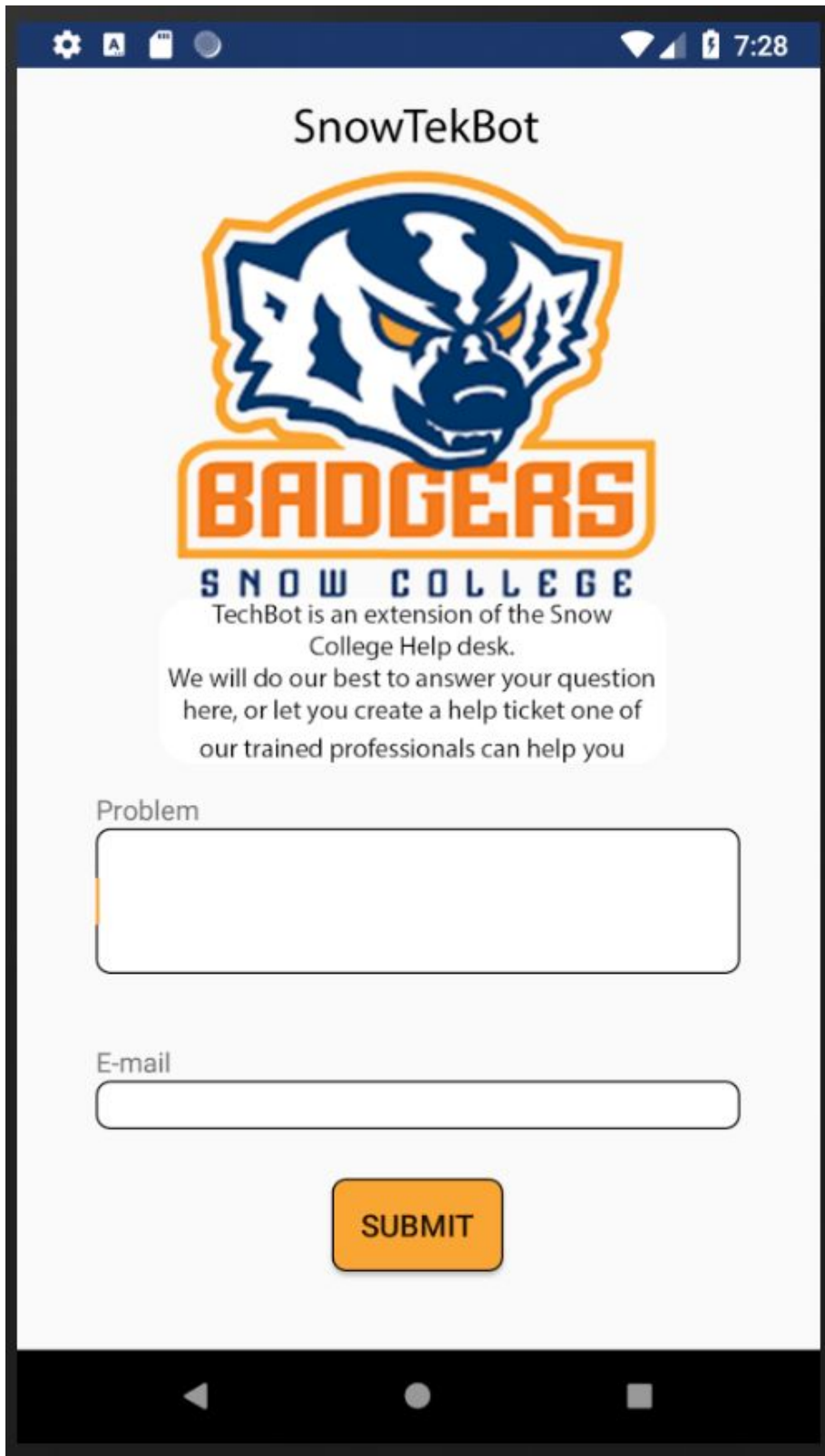
Instead we decided to predict three 'best choices' based on the question they input. The user then selects the question that most closely addresses their concern. The application then provides the answer to that question.

Having solved that issue, we needed to address our other key objectives, which was to allow the user to escalate their concern to a real person if our bot failed to provide them the necessary answer. Time constraints in our development prevented us from fully implementing this option. Our design discusses how to create this functionality, however, and as we continue to work on this project in our next version, this will be addressed.

This is our version 0 option. A functional skeleton providing our interface with the user. In version 1 we will address the escalation to a help desk to get a better answer than the bot provided. In version two will will implement a back door to the database so help desk technicians can provide ongoing updates to the questions and answers we provide. In a final version envisioned up to this point we will look more closely at the UI to try and create a more positive experience for our user.

This process has taught us many things, specifically how to plan a project appropriately from start to finish, and how to allocate time appropriately to make a deliverable product. We fell victim to the 90% rule believing ourselves to be almost done only to discover the final items of implementation took significantly more time than we had allotted. All in all, we created a well functioning application.

10. Showcase

SnowTekBot

TechBot is an extension of the Snow
College Help desk.
We will do our best to answer your question
here, or let you create a help ticket one of
our trained professionals can help you

Problem

How do I install Microsoft word?

E-mail

example.person@awesomail.com

SUBMIT

SnowTechBot

How do I get word on my laptop?

Step 1. Go to https://www.snow.edu/offices/it/index.html
Step 2. Click on Office 365 Free for Students ifon in the middle of the screen
Step 3. Enter your school email address and click get started.
Step 4. Click on I'm a student
Step 5. Fill out the required information and click start
Step 6. Access your email account that is registered to your student email alias.
Step 7. Get the access code from your email and use it on the registration page.
Step 8. You will then be allowed to see the dashboard of your Microsoft account.
Step 9. In the top right quadrant of the screen, you will see a get office now button. Press that button.
Step 10. After the product downloads, run the file in your downloads.
Step 11. After the installation is complete, it should be ready for your disposal. Enjoy Microsoft office!

SEND