

Spartan Spit App Design

Developing an app for Michigan State's Spartan Spit Kit

Client

Dr. Wyche, Michigan State University

Project Date

November 2021-December 2021

Role

Ideation, Sketching, Low/High-Fidelity Prototyping, Usability Testing

Team: 4 Designers

Project Summary

Spartan Spit Kits are used for COVID-19 testing on Michigan State University's campus. The goal of this project was to create a better system/app for Spartan Spit Kit information and test results. Another goal for this project was to come up with a new and innovative idea for distributing the COVID-19 tests. My team and I created a new app that met these goals.

The Problem

The website that is used for Spartan Spit Kits is not designed well and is difficult for the user to use effectively. The users of the Spartan Spit Kits are students and faculty. The user needs to be able to use this system easily so that they can connect their COVID-19 test information to their account and get their results.

Another part of the problem was figuring out a way to improve distributing and collecting COVID-19 tests. The current system has drop off and pick up locations for the spit kits. However, if someone is ill, having a way to obtain and submit a test without going to public areas would be best.

The Solution

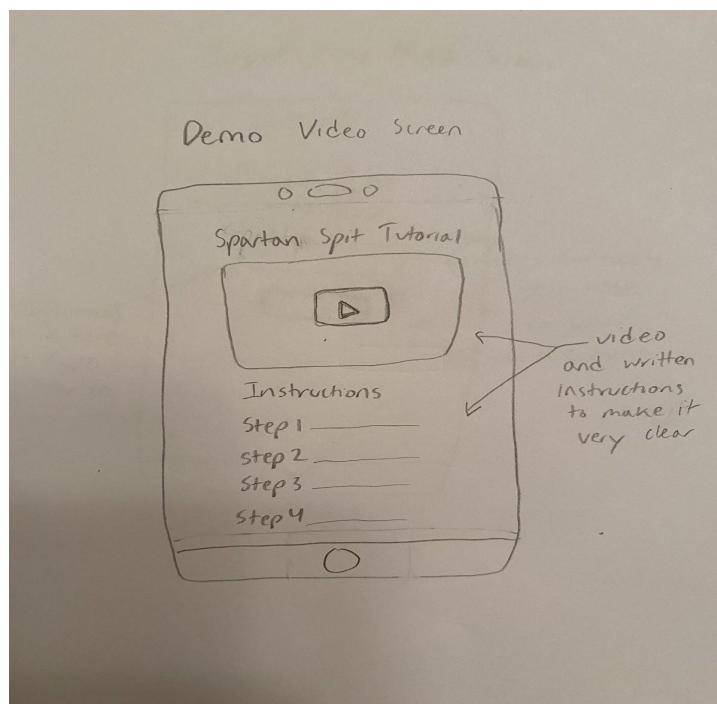
The Design Process:

Defining the Problem

The first step of this project was defining the problem that the Spartan Spit Kit website was not working well for users and needed to be improved upon. In addition to this, the challenge given to us was to create a new way to help with the distribution and collection of Spartan Spit Kits.

Ideation

To solve this problem, my team started out by coming up with a list of 25 ideas. During this ideation process, we came up with the idea of incorporating drones into the Spartan Spit drop off and pick up system. We then selected a good proportion of the ideas that we thought would be best for the app and started sketching. This is a sketching example that shows a demo video screen to teach users how to properly use the Spartan Spit Kit.

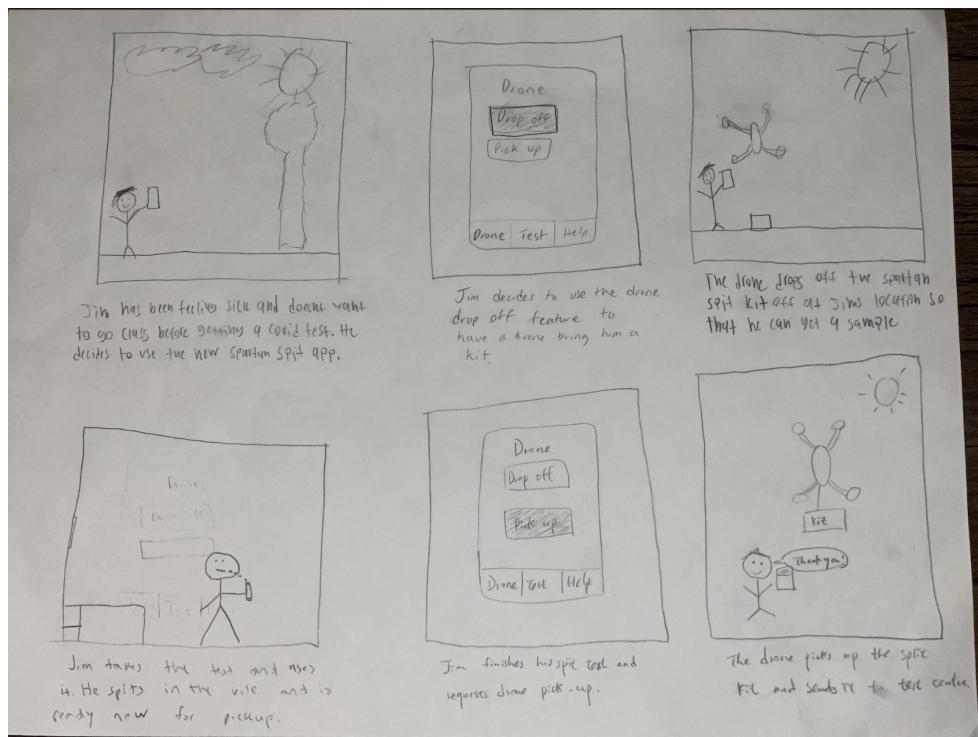


We narrowed our ideas down to three main ideas to include in our app. Our first idea was a drone drop off/pick up system. Our next idea was to include test information, like the sketch above and include test results as well. The

last idea we chose was a rewards system to encourage students to get tested more frequently.

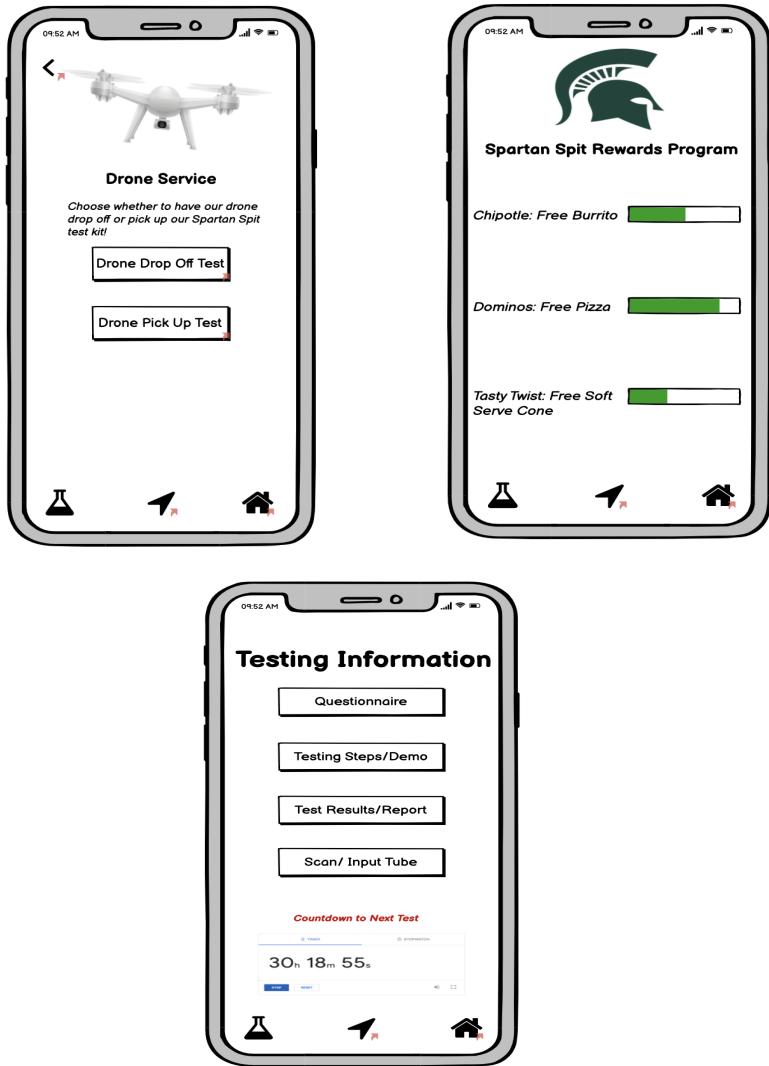
Prototyping

After sketching out our ideas, my team started our prototyping process. First, we developed a storyboard to help establish the context of our app. We created a storyboard showing the drone drop off/pick up option in our app.



The storyboard details how a sick student named Jim uses the Spartan Spit App to order a spit kit drone drop off. After the drone drops off the spit kit, Jim takes the test and uses the app to order a drone pick up. The drone then comes back to pick up the spit kit.

Creating this storyboard helped us in our next phase of prototyping. We decided to create a low-medium fidelity prototype using Balsamiq.



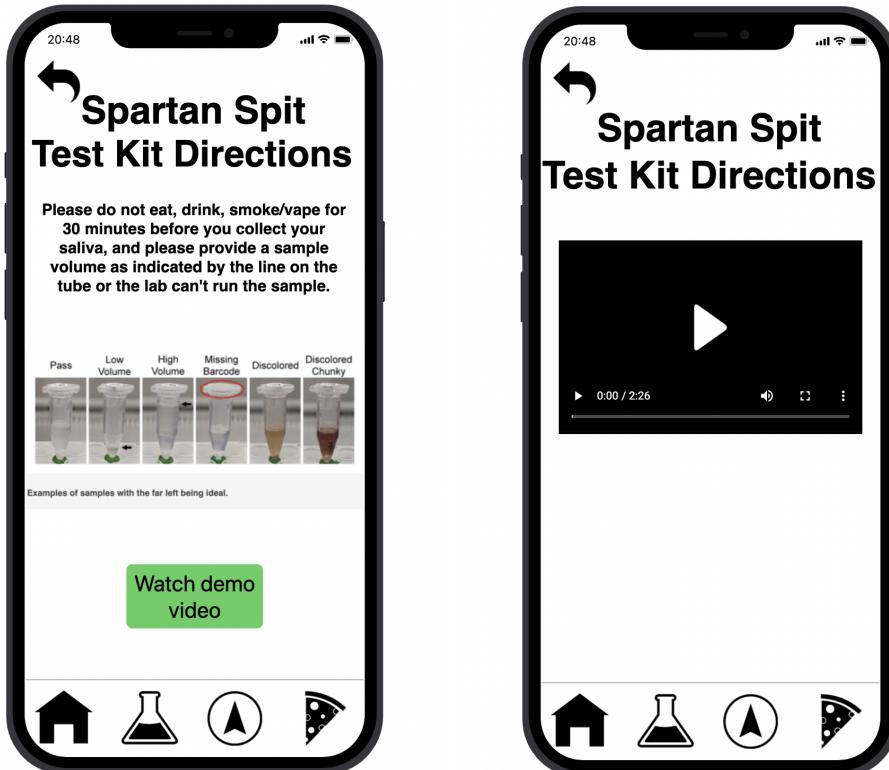
We created screens for all 3 of our main ideas. We then received feedback on our ideas thus far in the design process. The drone and reward ideas were well received by students, encouraging us to further develop these features of the app. We also received feedback that we needed to include a COVID-19 testing results page so that users could check their test results. My team also noted that we wanted to add a login page for the app so that users did not have to fill out a form for every test like they did on the website.

In the next phase of prototyping, we decided to create a high-fidelity prototype of the app using Proto.io.

One of the important additions to our prototype was the addition of the testing information icon to the navigation bar.



We also added more screens after clicking on the Test Results button and Test Kit directions above.

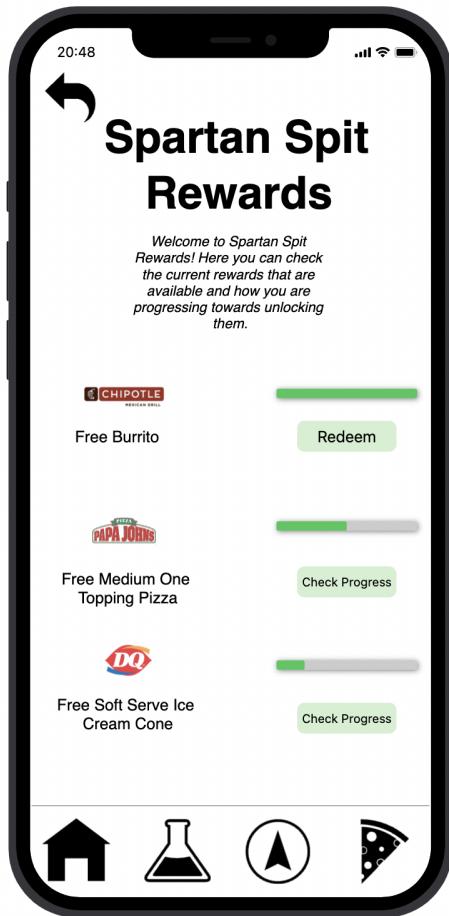


We made sure to include helpful directions/images to make sure the user knew how to correctly take the test. We linked the Spartan Spit kit official video tutorial within the app so that users could see the most accurate and clear directions possible.

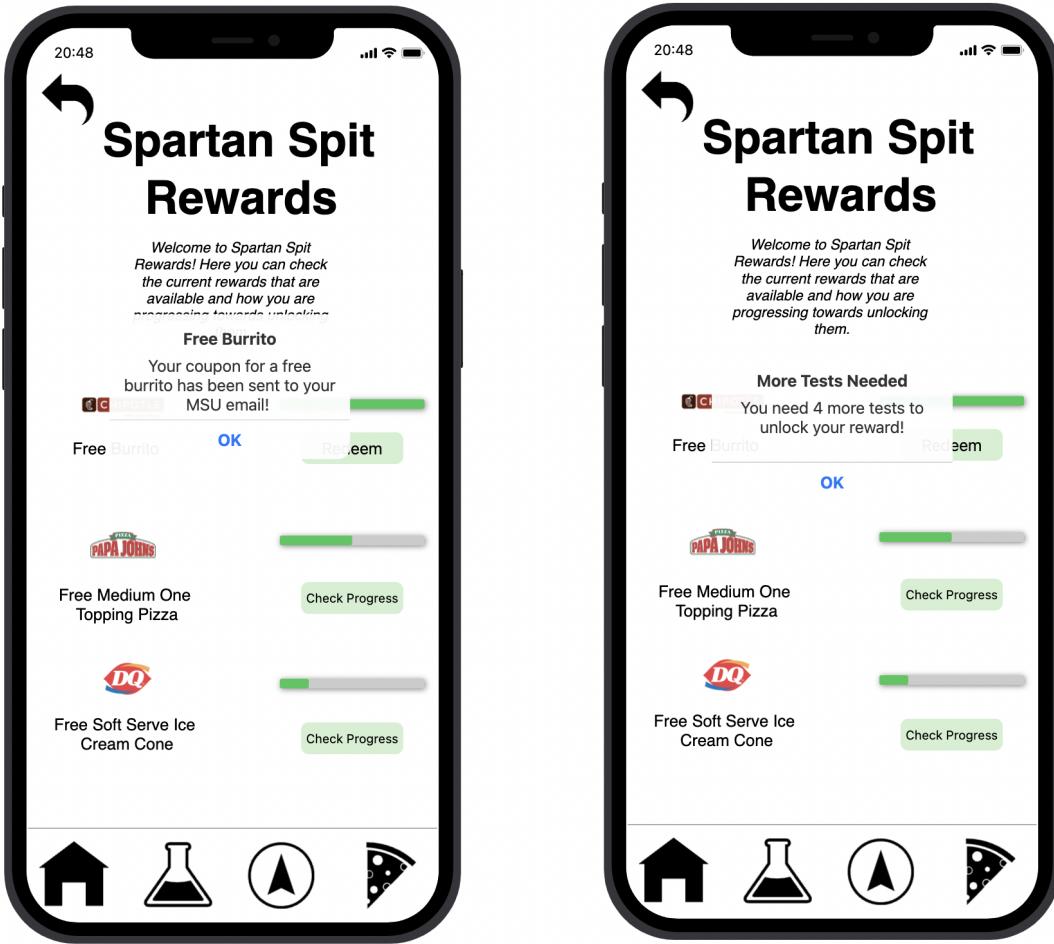


We included a page to choose which result the user wants to view and created this result page to allow the user to see their test result.

We also updated our rewards idea by using a pizza button on the navigation toolbar and creating an updated rewards page.

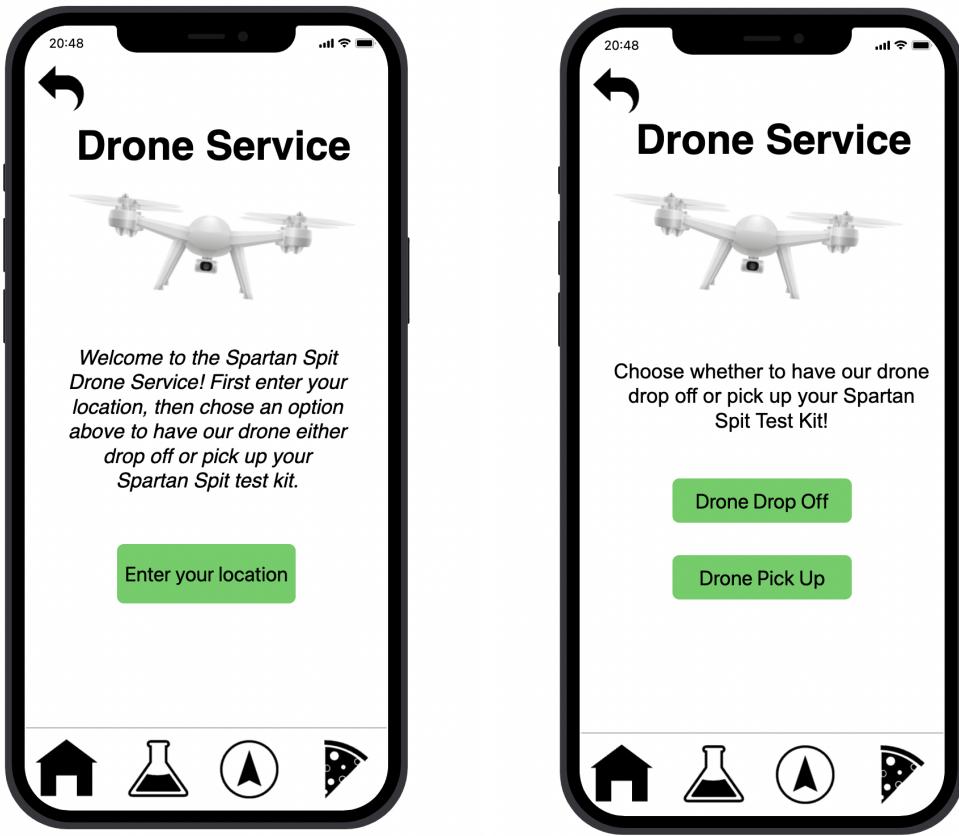


In this section, we added new “redeem” and “check progress” buttons to allow users to redeem their rewards. We created notifications after clicking on “redeem” or “check progress” to give users updates on their rewards and rewards progress.

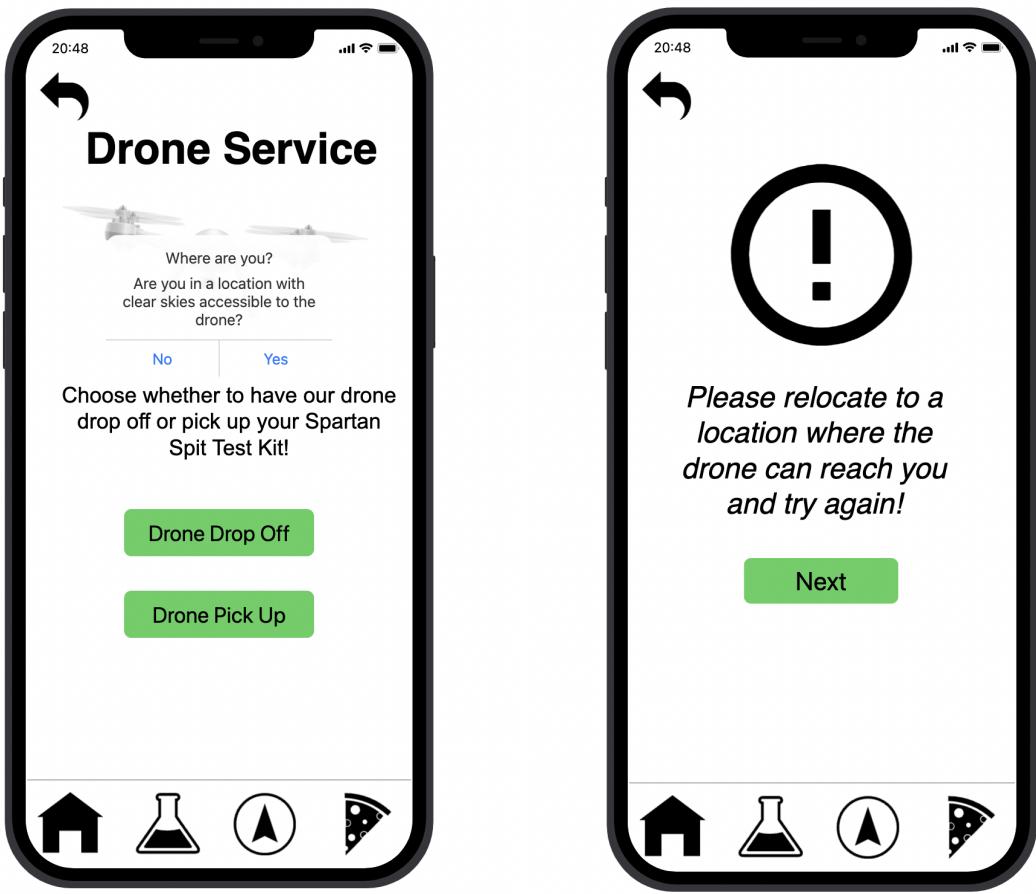


The first notification screen shows the response for the “redeem” button and the second screen shows the response for the “check progress” buttons.

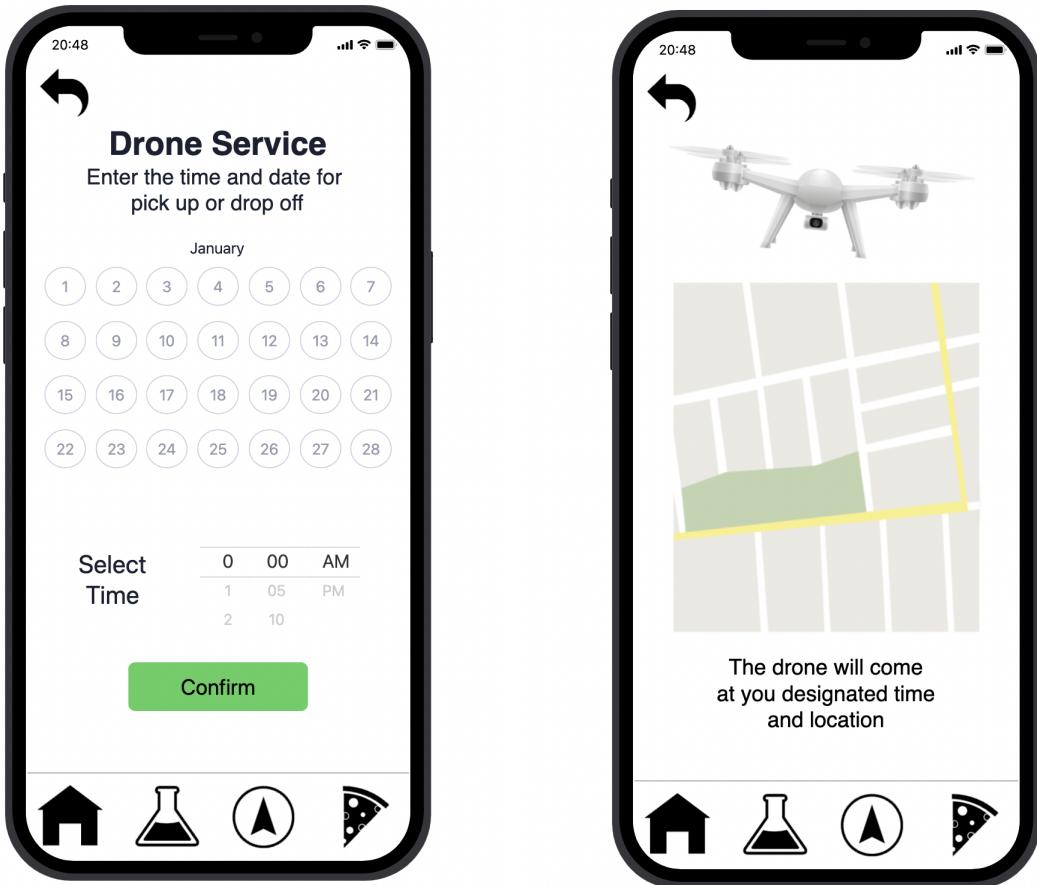
Our final idea that we developed further was the drone drop off/pick up option for Spartan Spit kits. My team and I wanted to make sure to create more detail in the drone interaction experience for users. For the first drone screen, we made a screen that asks the user to input their location.



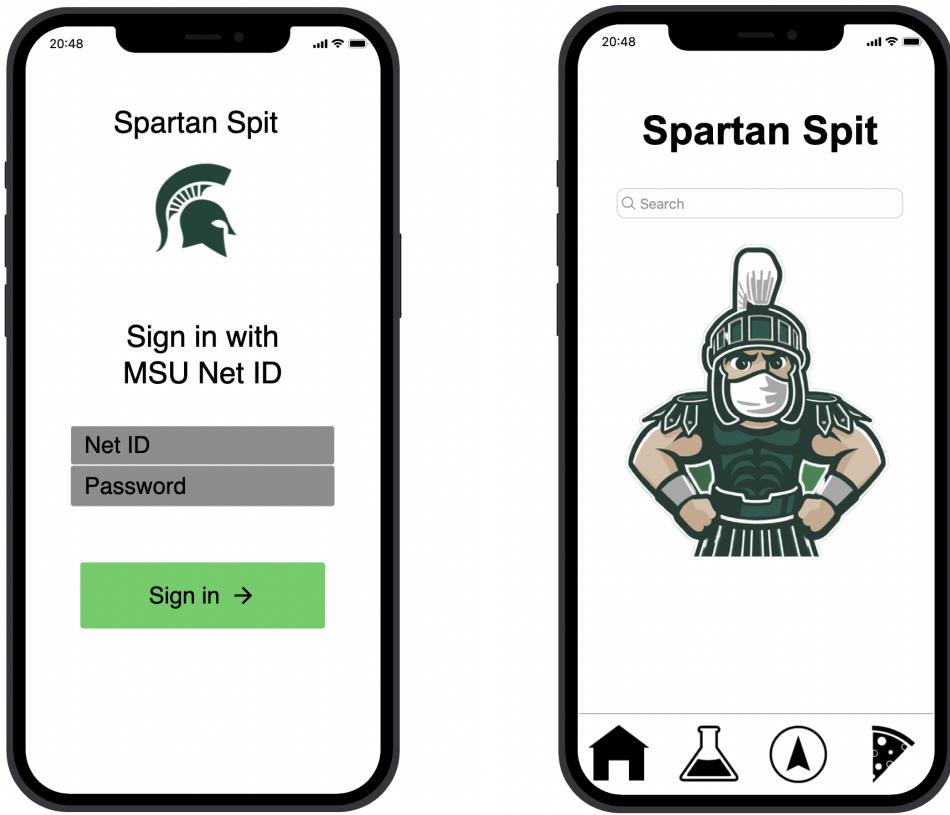
After entering your location, the user is directed to the second screen above to choose between pick up or drop off. After selecting either of these options, a pop up will appear to ask the user if they are in a location that can be accessed by drones. If the user selects no, they will be taken to a warning screen that notifies the user to move to a location that is drone accessible.



When the user is in a location that is accessible to drones, they can say yes to the pop up above. After saying yes, they are brought to a screen where they can select the date and time that they need the Spartan Spit kit dropped off/picked up. The user then clicks confirm and is brought to the confirmation screen that states that the drone will come at the designated time that the user selected.



My team also added a login screen and created an updated homepage for the app. The user can login with their MSU email and password.

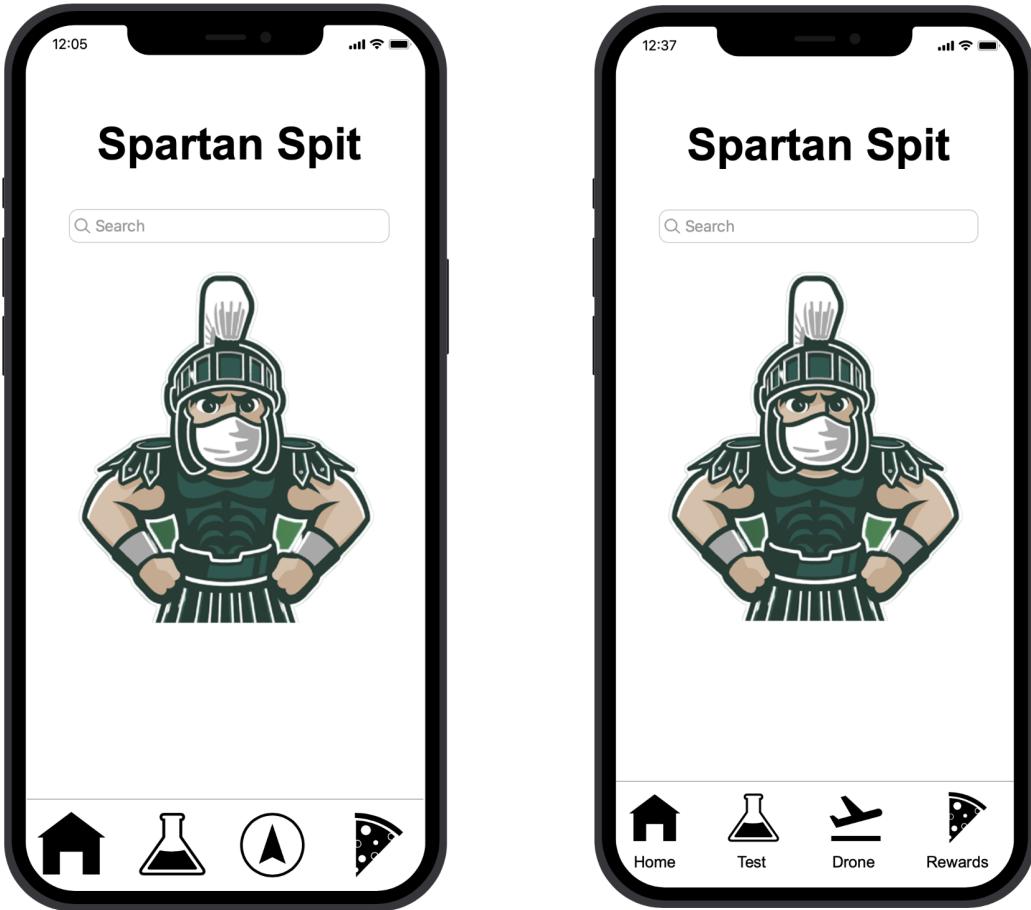


Evaluation

We conducted a usability study to test the three main ideas that we incorporated into our design (testing information, drone drop off/pick up, rewards). We came up with three tasks to test these three features.

As a result of the study, we learned that users did not understand that the location icon on the navigation toolbar was the drone icon. We also learned that there were still some unknowns about how the drone system would work. For instance, users were confused about how to get the Spartan Spit Kit box from the drone and give it back to the drone.

To respond to this feedback, we improved the icons on the navigation toolbar by labeling them and changing the drone icon to a flying icon. The screen on the right down below shows the improvement.



Results

This project was successful because my team and I met our project goals by developing a new app for Spartan Spit kits. The app provides a more convenient experience for users when they use a Spartan Spit kit test. The next steps in this project would be to further test the drone feature by using drones for test drop offs/pickups. In addition, another next step would be to test the app with more users.