

# **Michigan State University Advising App Design**

Developing a solution for the inconsistency in Michigan State University advising

## **Client**

Dr. Wyche, Michigan State University

## **Project Date**

February 2022–April 2022 (Current Project)

## **Role**

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

Team: 4 Designers

## **Project Summary**

MSU advising has inconsistencies that cause students to feel misguided and lead to students taking classes they do not need. The goal of this project was to create a solution that would provide students with the information and consistency they needed for advising. We created an app to solve this problem.

## **The Problem**

There have been many issues with MSU advising among different departments. Some advisors are great and provide students with the information they need while others are not very helpful. Students need to know the correct information that they need for their degree program so that they can graduate on time.

My team and I needed to find a way to help solve this inconsistency and misinformation from advisors.

## **The Solution**

### **The Design Process:**

#### **Defining** the Problem

The first step was defining the problem that MSU advising was inconsistent and some students were misguided or felt like their advisor was not helpful.

#### **Contextual Inquiry**

After selecting our problem to solve, my team and I needed to conduct some user research through contextual inquiry. We developed an interview protocol and interviewed 8 students about their experiences with advising. We asked students questions about their experiences with the advising appointment scheduling system and experiences with their advisors.

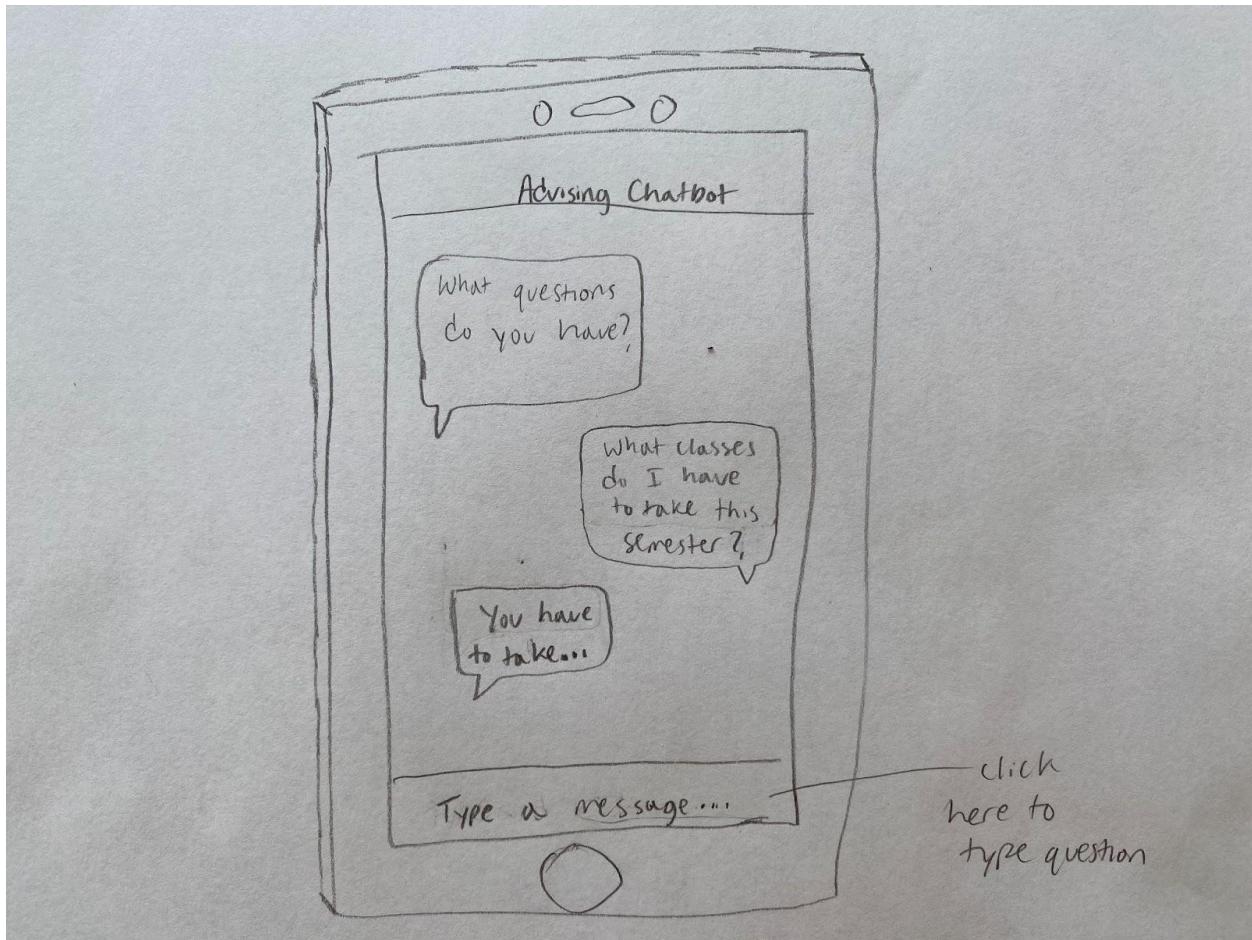
We learned that multiple participants were directed by an advisor to take a class that did not count toward their degree. In addition, one of these participants also had friends who had the same negative advising experience happen to them as well. We also learned that some students did not have an assigned advisor. Lastly, we had multiple participants say that they did not like the advising appointment scheduling system.

After these interviews, we created an affinity diagram to combine all of the information that we learned from these interviews.

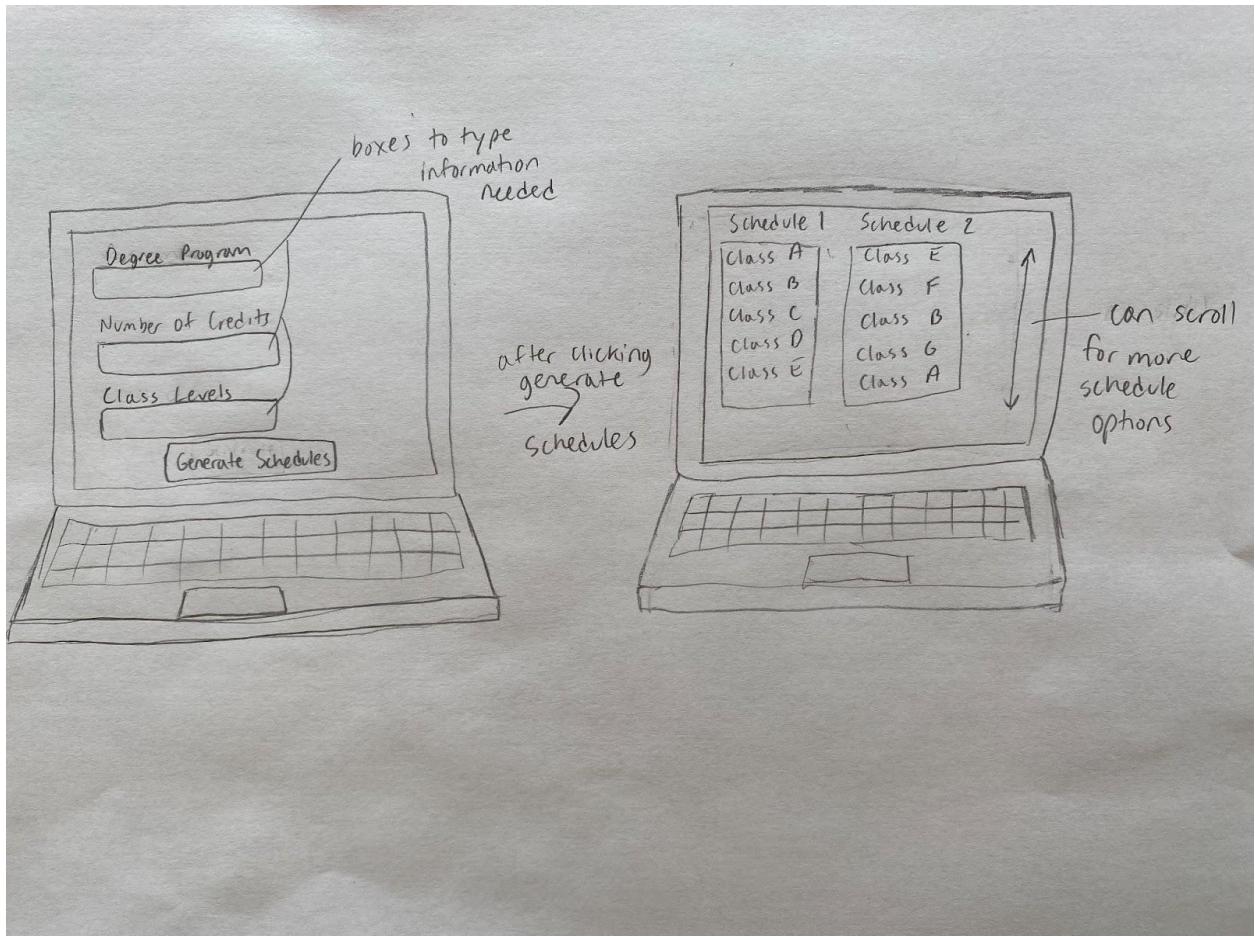
These interviews helped my team and I learn more information about our problem and helped us come up with ideas in the next phase of our design process.

#### **Ideation**

After completing contextual inquiry, my team and I started coming up with ideas of how we could solve the issues that we learned about in the user interviews. We came up with 25 ideas and then we each sketched 5 ideas.



This was a sketch I created for our advising chatbot idea. This chatbot would be able to answer questions that the user has and direct them to an advisor for questions that the chatbot could not answer.

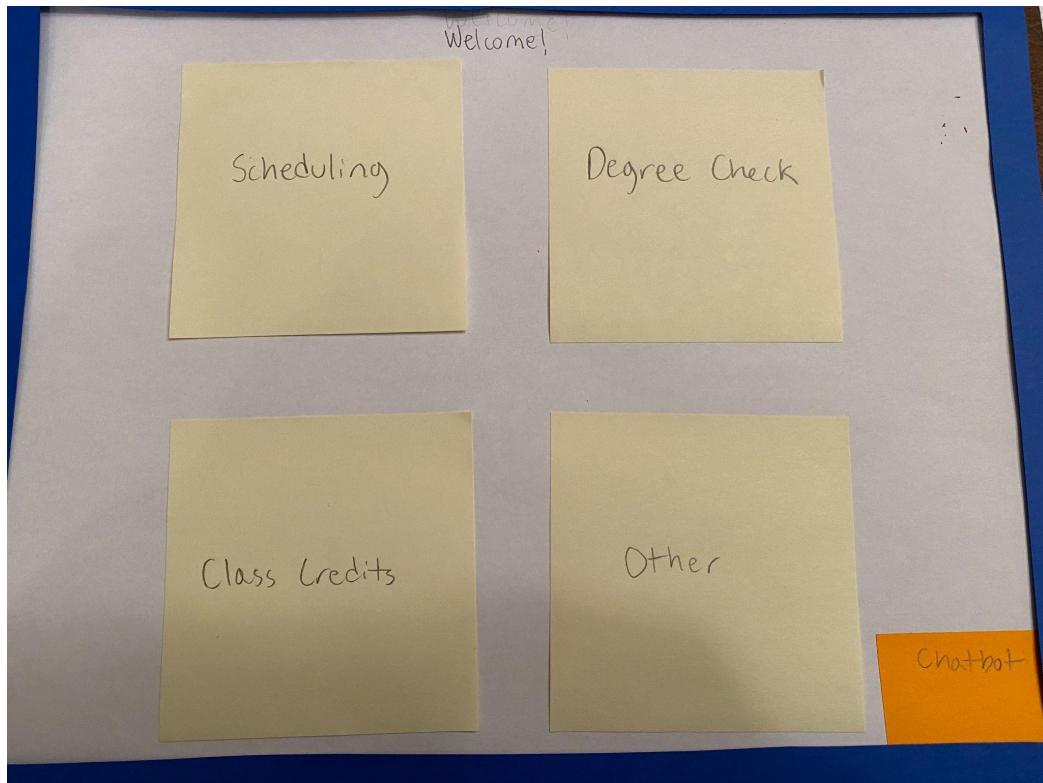


This next sketch I did was for our automated schedule creator idea. This idea would allow users to pick from class requirements along with the user's preferences and the system will create a schedule for the users.

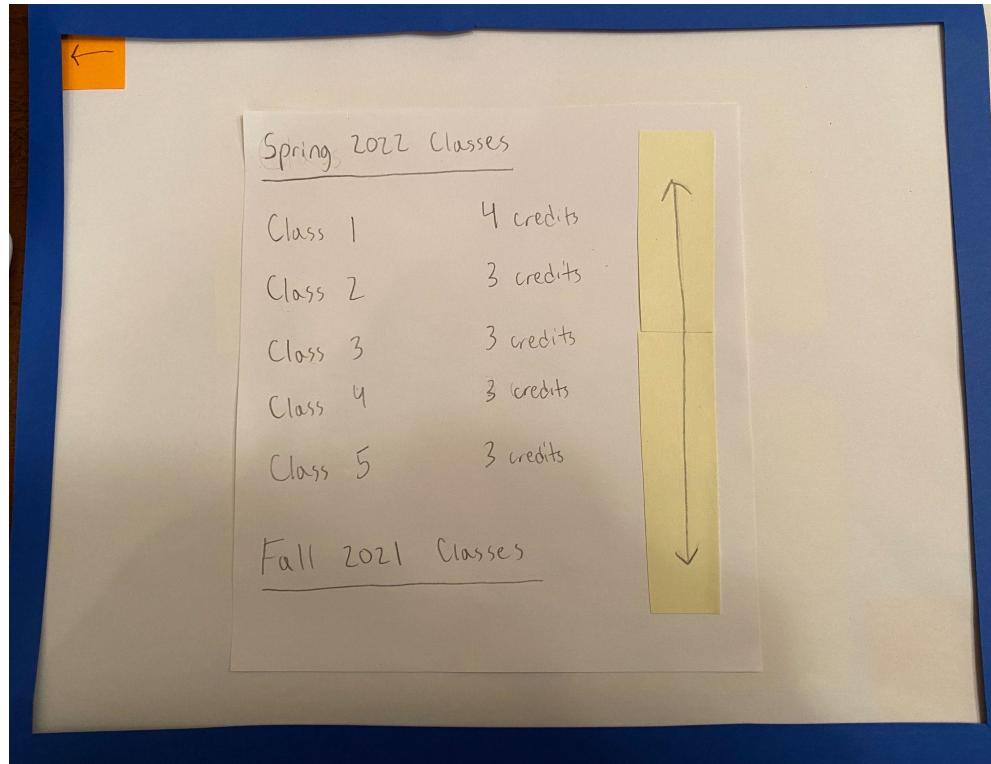
## Prototyping

After completing our sketches and narrowing down our ideas, we decided to create two different prototypes to help solve our problem. The first prototype idea we decided to develop was a telephone booth idea. This is the idea that there would be a "telephone" type of booth in each college/program building where students could go in and talk to an AI advisor. We created a low fidelity prototype made of cardboard for the actual "telephone" booth and used paper to show what the interaction with the AI advisor would be like.

For our second prototype, we decided to further develop our advising tablet room idea. This idea was that there would be a room with tablets that had all of the important advising information on them to help students with their advising needs. We also combined other ideas from our ideation process into the tablet idea. For example, we included our chatbot idea and the automated schedule idea into our tablet idea. We decided to create a paper prototype for this tablet idea.



This is the home screen for the tablet paper prototype. I used sticky notes to represent the buttons of the interface. I also used blue paper to represent the outline of the tablet.

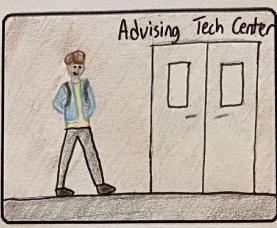


This is another screen from the tablet called the Class Credits page. This page allows students to look back at all of the classes they have taken so far in their college career.

We received some critique on our paper prototypes from classmates and our professor. One critique that we received for our paper prototype was that students wondered why the advising information could only be accessed in the tablet room and not accessed on something like an app. To respond to this critique, we decided to make this a downloadable app and also still available in the tablet room for students who do not have access to devices/internet. Another critique was that more context was needed for our prototypes. To respond to the critique, my group created storyboards for each prototype. I created a storyboard for the tablet idea to give the idea more context.



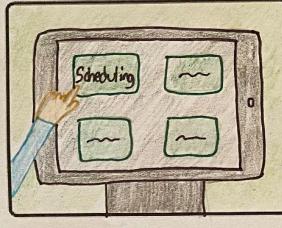
Bob just got notified that he needs to schedule classes for next year, but he doesn't know what classes he needs.



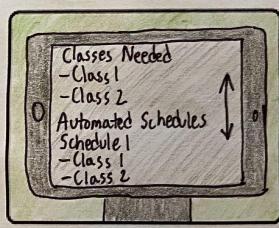
He heads to the Advising Technology Center for help with scheduling.



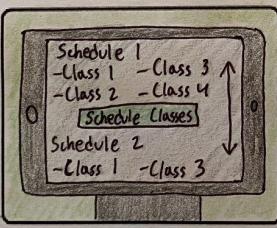
He finds one of the tablets and logs in with his MSU email and password.



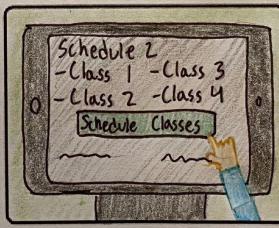
On the welcome page, Bob clicks on scheduling to get scheduling help.



Here, he can see classes he still needs to take, as well as automated schedule options.



Bob decides to scroll through the automated schedules to find one he likes.



He finds one and clicks on schedule classes.



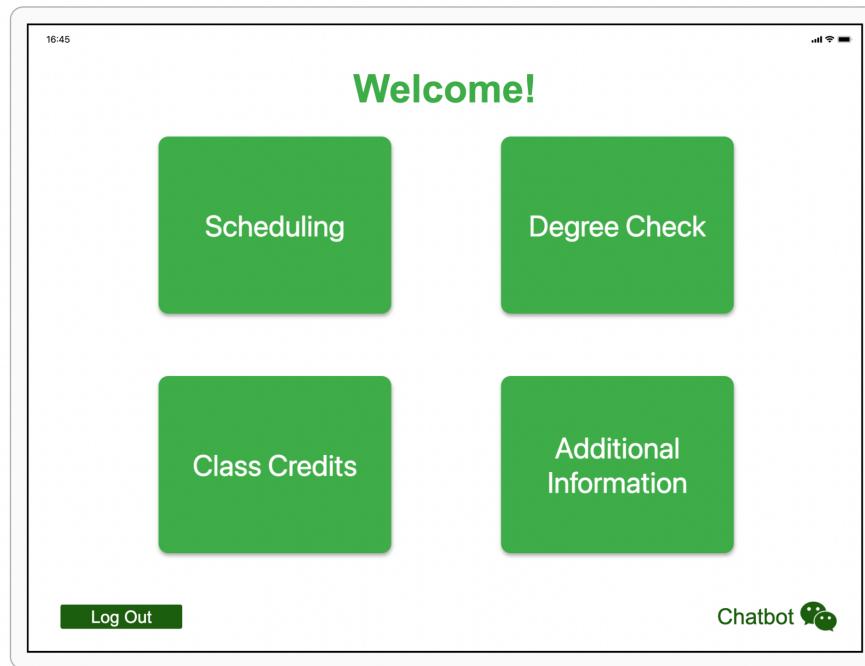
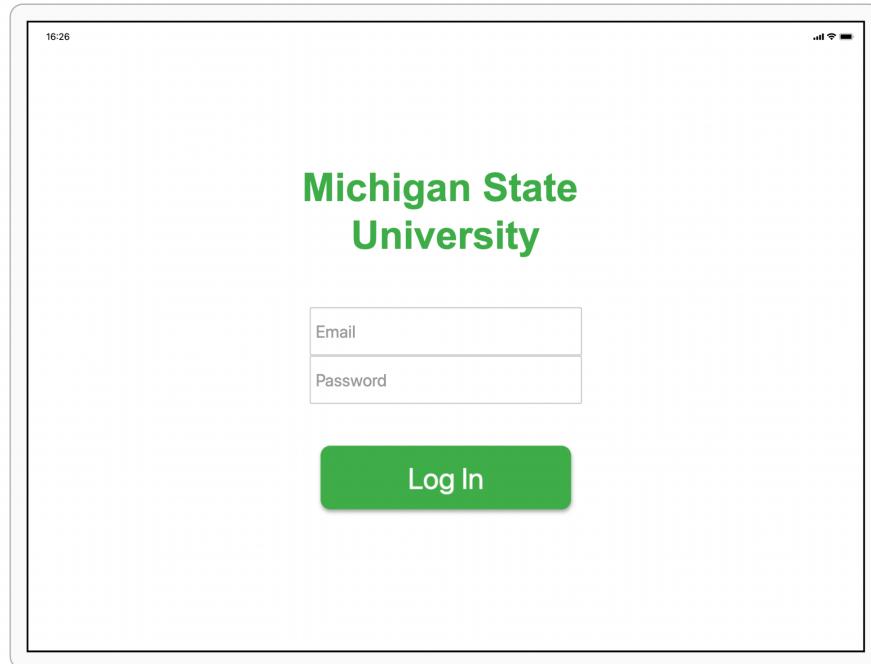
Now, Bob has a schedule for next year!

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I designed this storyboard to focus on the automated schedule feature of the tablet idea. Two of my other team members made storyboards for the telephone booth idea.

After developing storyboards for both ideas, my team and I needed to decide to move forward with one idea for our final prototype. We decided on the tablet/app idea because this could be accessed by multiple users instead of just one person at a time when using the telephone booth advising.

We used Proto.io to design our final app prototype. I designed many of the screens in this prototype.



I created the login screen above and my team helped me with the design of the home screen.

For the scheduling page, we further developed the automatic schedule creator interface.

The screenshot shows a mobile application titled "Automated Schedule Creator". The interface is divided into three main sections: Step 1, Step 2, and Step 3. Step 1: Classes you need to take. It contains three groups of checkboxes for selecting classes. Step 2: Choose your electives. It contains two groups of checkboxes for selecting electives. Step 3: Choose your class times. It includes a grid for setting class times and days, and a "Create Schedules" button. The bottom right corner features a "Chatbot" icon.

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Automated Schedule Creator

**Step 1: Classes you need to take**

Select the classes you would like in your schedule

<input type="checkbox"/> Class 1	<input type="checkbox"/> Class 4	<input type="checkbox"/> Class 7
<input checked="" type="checkbox"/> Class 2	<input checked="" type="checkbox"/> Class 5	<input checked="" type="checkbox"/> Class 8
<input checked="" type="checkbox"/> Class 3	<input checked="" type="checkbox"/> Class 6	<input checked="" type="checkbox"/> Class 9

**Step 2: Choose your electives**

<input type="checkbox"/> Elective 1	<input type="checkbox"/> Elective 3
<input checked="" type="checkbox"/> Elective 2	<input checked="" type="checkbox"/> Elective 4

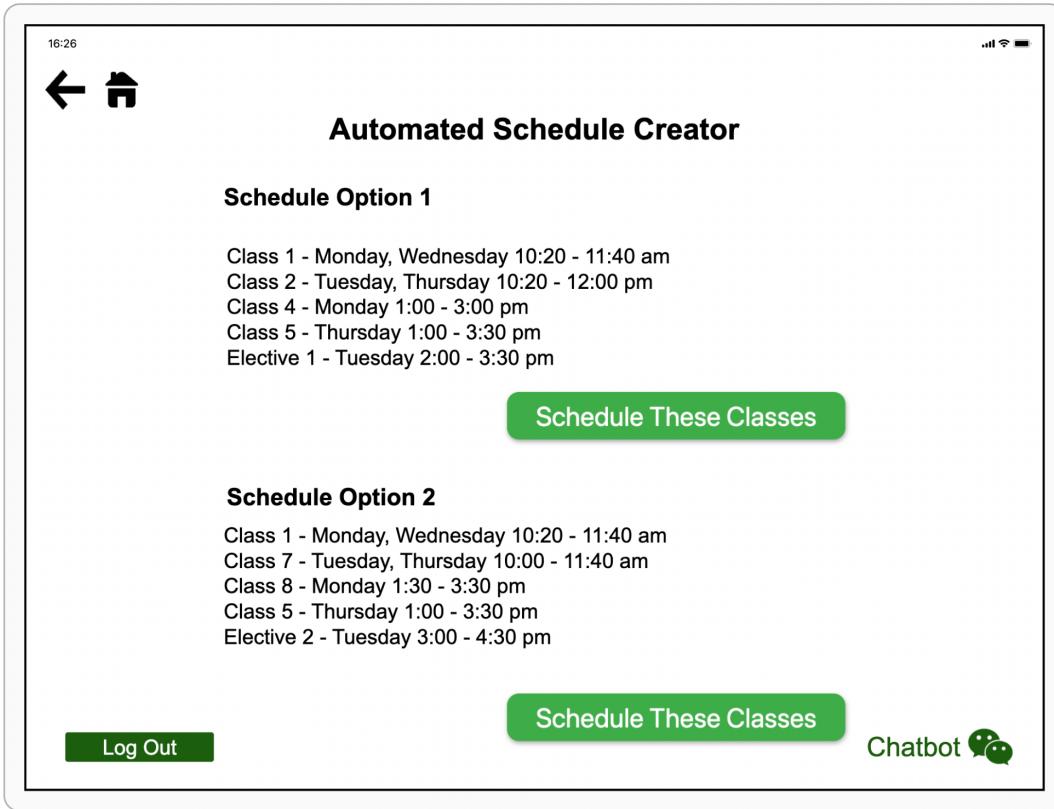
**Step 3: Choose your class times**

Monday   Tuesday   Wednesday   Thursday   Friday

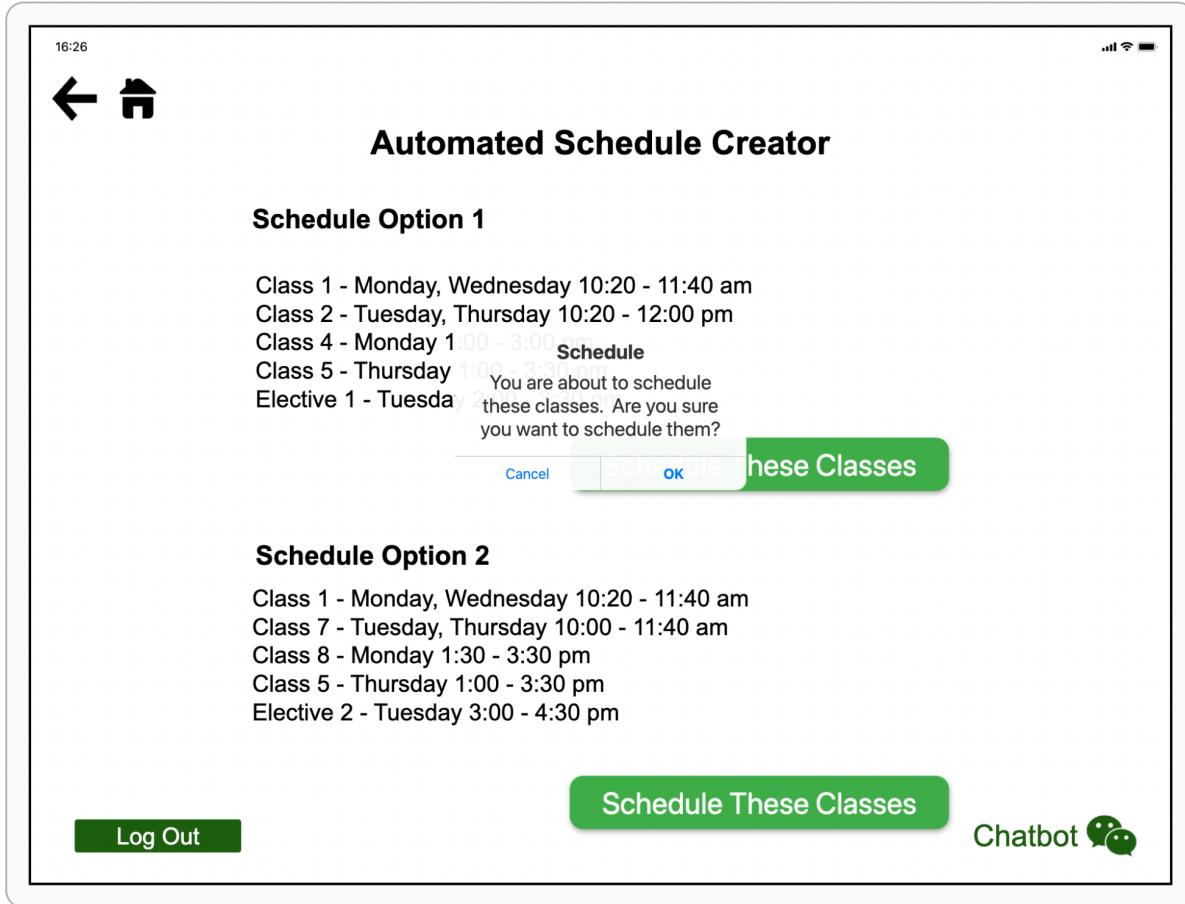
Earliest Desired Class Time	1 00 AM	Latest Desired Class Time	1 00 AM
	2 10 PM		2 10 PM
	3 20		3 20

**Log Out** **Create Schedules** **Chatbot**

I included different classes needed, electives, and class times in the options for the automated schedule creator. After clicking on Create Schedules, the user is taken to this next page.



This page gives the user schedule options based off of the choices they made on the previous page. The user can then choose a schedule and schedule those classes.



If the user makes a mistake and does not want to schedule those classes, they can choose Cancel when this pop up comes up after clicking the Schedule These Classes button.

We also created a Degree Progress page to make sure students know what classes they need to complete their degree. Users can also click on each class to learn information about that class.

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## Degree Progress

**Degree Program Credits Still Needed:** 28 credits

**Required Classes Still Needed:**

Class 1	Class 4
Class 2	Class 5
Class 3	Class 6

**Elective Credits Still Needed:** 30 credits

**Electives Still Needed:** ISP/ ISB/ Lab Requirement  
IAH Requirement  
Classes outside of your program

**Total Credits Required:** 120 credits

**Total Credits Taken:** 62 credits

[Log Out](#)

Chatbot 

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**Required Credits:** 120 credits  
**Completed Credits:** 62 credits

**Spring 2022 Classes**

Class 1	4 credits
Class 2	3 credits
Class 3	3 credits
Class 4	3 credits
Class 5	3 credits

Total for Semester 16 credits

**Fall 2021 Classes**

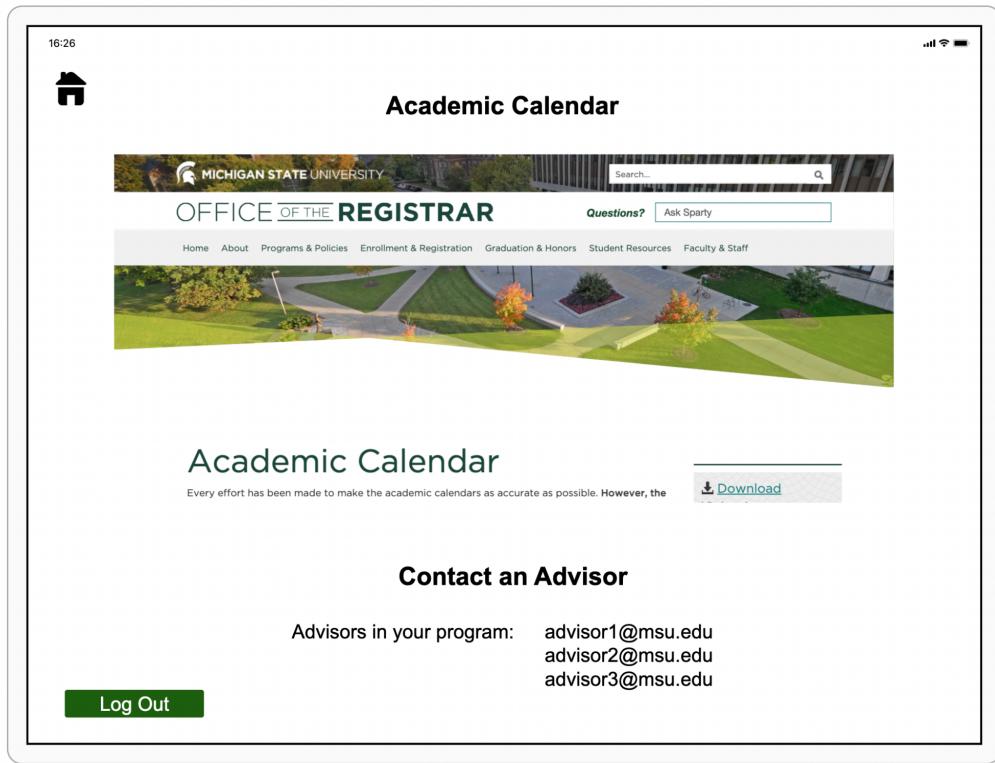
Class 6	3 credits
Class 7	3 credits
Class 8	3 credits
Class 9	3 credits
Class 10	3 credits

[Log Out](#)

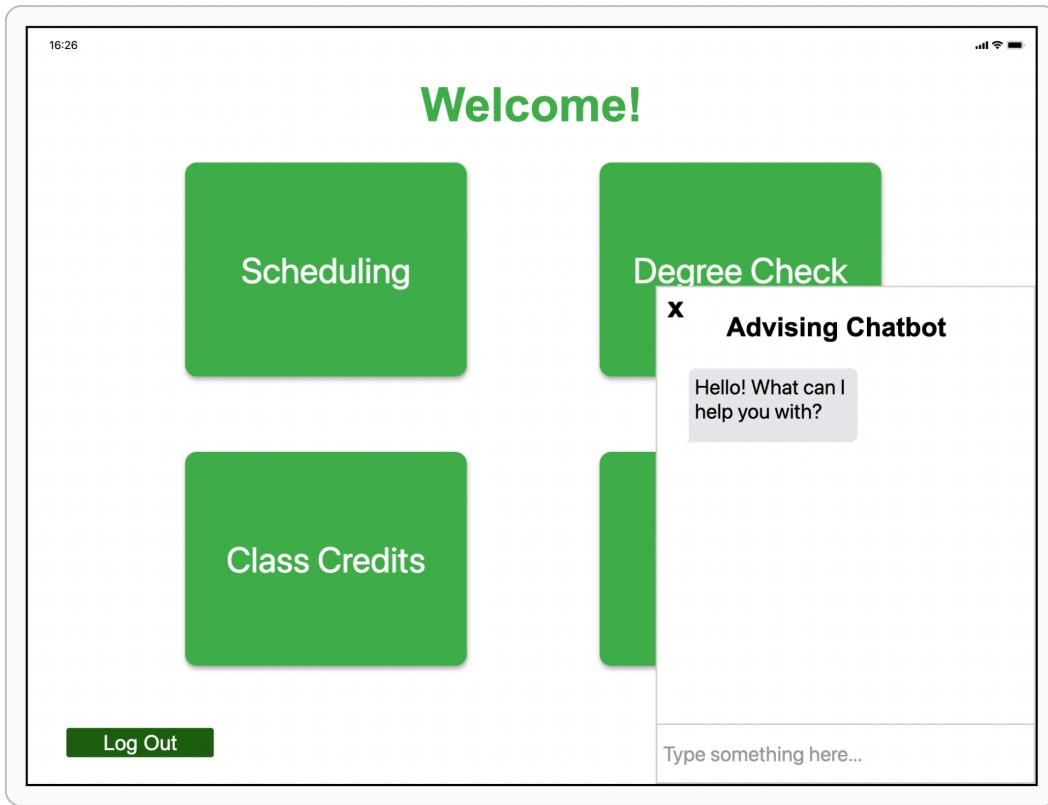
Total for Semester 15 credits

Chatbot 

I also iterated on the Class Credits page from the paper prototype and made this page scrollable for the user (screen above).



This is the Additional Information page that allows students to scroll through the academic calendar and find advisor contact information.



I also created this advising chatbot popup to allow students to ask advising questions. If the chatbot does not know an answer, it will tell the student to contact an advisor and give contact information for the advisor.

## Evaluation

We are currently evaluating this project at the moment.