

PROJECT I: WEB-BASED SERVICES
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ATHLETICARE

PROJECT I: WEB-BASED SERVICES

INTRODUCTION

We are building a system which will connect the athletes to the doctors.

Here we want to implement Google O-Auth for data security. The athletes will be able enter the required injury which they are suffering currently, post which the system will show the list of expert doctors in that domain along with their availability and ratings. The athletes can schedule their appointment with the required doctor after looking at their rating and availability date. The athletes will be able to rate the doctor after their session depending on various parameters.

The current state-of-art is the *UHS* online appointment scheduling system. Our initial impression of it is that it is not user-friendly. One cannot see doctor's information, and has to go through a badly-designed survey to see the appointment slots. We want to build a website that is more user-friendly.

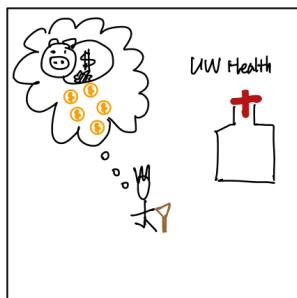
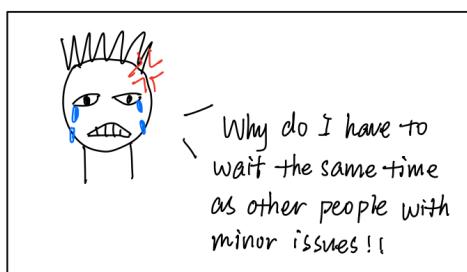
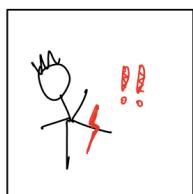
Currently we are starting off this project by building a web-based platform for them to connect but in future we will definitely build a cross platform app which will render both on Android and IoS devices.

PROJECT I: WEB-BASED SERVICES UNDERSTANDING

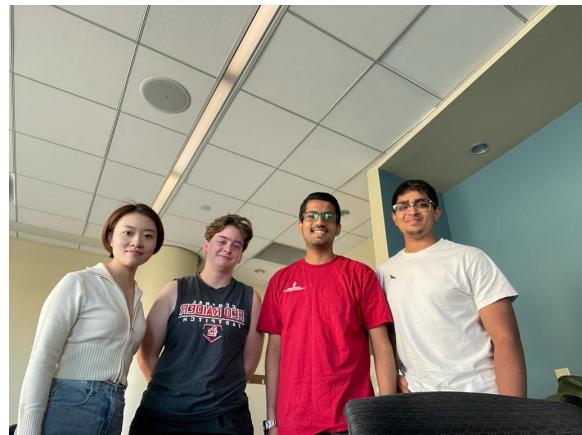
We did CI with 3 athletes in UW Madison.

According to our initial understanding, *doctor and appointments choices* are crucial in our design space. That is why we focused on doctor descriptions and ratings.

The problems we identified from Cis are different from our initial understanding. *Immediate availability is the most crucial* for athletes. If one doctor is immediately available, they most likely would go with it. In contrast, rating is not that important. However, *UHS don't have an emergent service, and don't even prioritize different patients*. They have to wait the same amount of time as others with minor problems. This finding is reflected in the following story board:



Photos of interviews: (the other one is on zoom)



Affinity Diagrams:

PROJECT I: WEB-BASED SERVICES UNDERSTANDING

Helena

Doctor preference:

- Most important: patient efficient, quick appointment, less time spent for better understanding, communication, and comfort.
- Do you choose doctor? What qualities are the most important? Do you prefer to see the same doctor or based on immediate need? Do you prefer to see the same doctor based on personal preference?

Facts about appointments:

- How long is your appointment? I have an hour-long appointment, which is fine for me, as long as it's not too late. The trainer has one hour, so he can't do anything else after that.
- I have seen on many occasions that the waiting period is 2-3 weeks.
- Usually it's the earliest appointment available, but if there is an emergency, I can book a later appointment.
- Is the coach or trainer the first person to contact you for injury consultation?
- Does the trainer play any role in booking sessions?
- Do you prefer to see the same doctor, or do you prefer different doctors for different situations?

Facts about injuries:

- Most injuries occur a game, training session, or practice per week.
- What frequency do players get injured?

Festival involvement:

- How often do you represent/represented?
- If you know your teammate is in a race, would you be willing to support their performance?
- How many miles would you be willing to travel during your injury?
- Do you have to reach out to anyone to receive treatment for the initial state?

Limited services:

- Most things are a severe under-performance, but some are just minor injuries and many require medical attention.
- Any changes or new systems you want to see in the current system?
- Do you prefer to see the same doctor, or do you choose different doctors for different situations?

Rosmini

Doctor preference:

- The most important factor for me, besides experience, is efficiency. Different doctors have different ways of doing things, and some may take longer than others. I'd prefer to see a doctor who is efficient and gets things done quickly. I also prefer to see a doctor who is experienced in my specific condition.
- Do you choose doctor? What qualities are the most important? Do you prefer to see the same doctor or based on immediate availability or would you prefer to see different doctors?

Facts about appointments:

- Depends on the injury, currently on wait and see basis. If it's a minor sprain, I'll wait a few days to see if it improves on its own, and if it doesn't, I'll go to the trainer or doctor. If it's a more serious injury, I'll go to the doctor right away.
- For training injuries I have never booked into one, as I don't make time for them.
- Immediate or 2-3 weeks wait period.
- How long is the waiting period to book a session?

Facts about injuries:

- Depends on the location, either minor or major. If it's a minor sprain, I'll wait a few days to see if it improves on its own, and if it doesn't, I'll go to the trainer or doctor. If it's a more serious injury, I'll go to the doctor right away.
- How many visits would you have to visit the doctor during your injury?
- How frequently do players get injured?
- How long is the time of your next match influence your perception of injuries?

Festival involvement:

- After you have the race, you have to back up the team, which means you have to be available for other races and competitions, and you have to be available for other events and activities or other people's matches.
- Do you like the trainer play any role in booking sessions?

Limited services:

- No emergency services, as through general ASAP system, but if there is an emergency, I would prefer to see a doctor who is experienced in that area. I don't have time for non-emergency services, as I have other responsibilities and I don't have time for them.
- Do you like the trainer play any role in booking sessions? Do you feel it affects the quality of service?
- In case of the situation, how long is it reasonable to wait for an appointment, and how long would it be ideal?
- Any changes or new systems you want to see in the current system?

Alexis

Doctor preference:

- Same doctor.
- Do you prefer to see the same doctor, or do you prefer different doctors for different situations?

Facts about appointments:

- Through email or phone, I try not to wait more than 2-3 days to get an appointment, if it's urgent, I'll wait a few more.
- In each of the cases, how long is the waiting period to book a session, and how long will it be until the next available slot?
- How many visits would you have to visit the doctor during your injury?
- Who decides the workshops and session plans based on the injury?
- Does the trainer play any role in booking sessions?

Facts about injuries:

- Several times a week, sometimes once-a-week.
- What are the common injuries you have?
- How frequently do players get injured?
- How long is the time of your next match influence your perception of injuries?

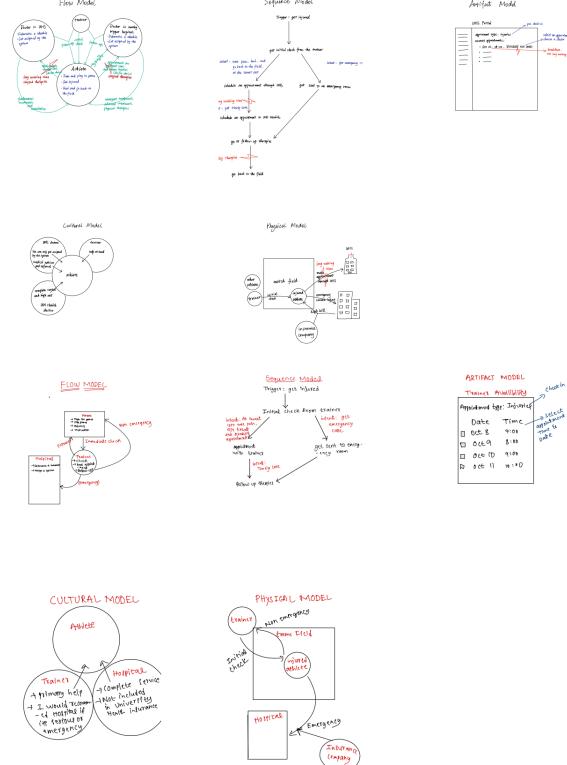
Festival involvement:

- It depends on what's possible, the appointments are in your free time, so it's not always possible to be involved in every race, but if you're free, you can help out.
- If you know your teammate is in a race, would you be willing to support their performance?
- Do you like the trainer play any role in booking sessions?
- Any changes or new systems you want to see in the current medical services for your team?

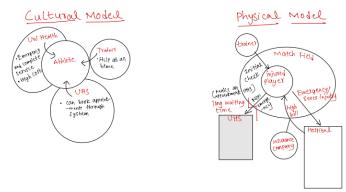
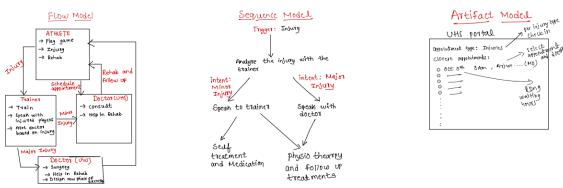
Good services:

- They are very strict with it, never tell the truth.
- How often does the school accommodate urgent situations? Do you feel it unsatisfactory?
- How long is the waiting period to book a session?
- Are changes or new systems you want to see included which are missing in the current system?

Work Models for 3 Participants:



PROJECT I: WEB-BASED SERVICES UNDERSTANDING



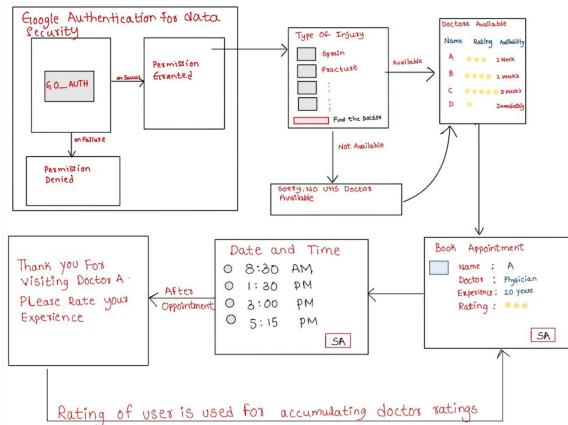
PROJECT I: WEB-BASED SERVICES

IDEATION

Our main design idea is to build an appointment scheduling platform that is more straightforward and user-friendly than UHS.

The main design feature is **a prioritizing feature**. Patients in urgent needs can indicate their needs and see most recent appointments.

Before CIs, we focused on doctors' ratings and descriptions, so that athletes can choose doctors they want.



After CIs, we realized that prioritizing is the most important. Originally, we want to ask every patient to fill out **a survey** about their conditions:

- The pain they are experiencing
- The type of injury
- The date of their next game

We want to prioritize accordingly.

However, this design might have a *privacy problem*. We then decide to give them a **checkbox** to indicate whether or not they are in urgent needs.

I am in urgent need!!

In order to prevent possible abuses of this feature, we are going to remind the

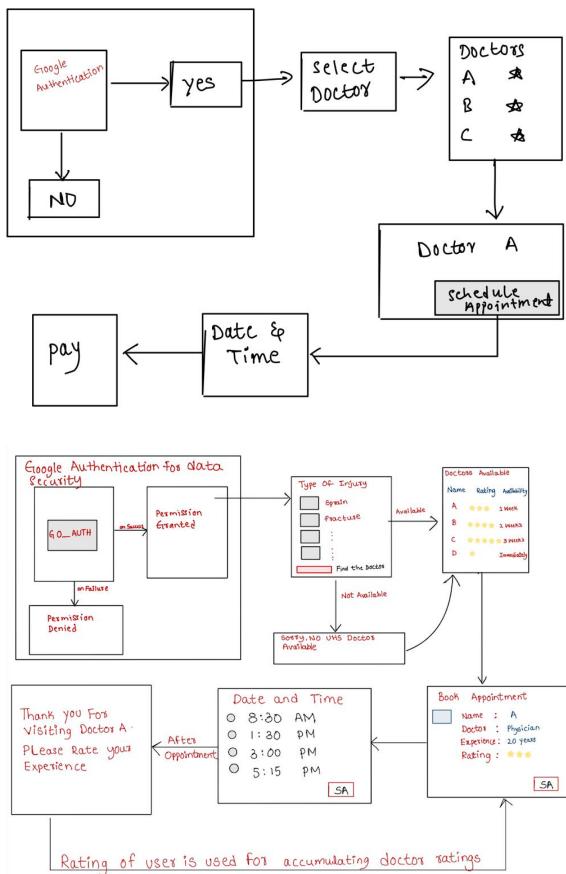
limitedness of medical resources and encourage them to lease them to the people in need if they can wait a bit.

I am in urgent need!!

** Do not check the box unless you are in need for immediate medical assistance. Leave the resources to the ones in real need.

PROJECT I: WEB-BASED SERVICES PROTOTYPING

Lo-fi prototypes:

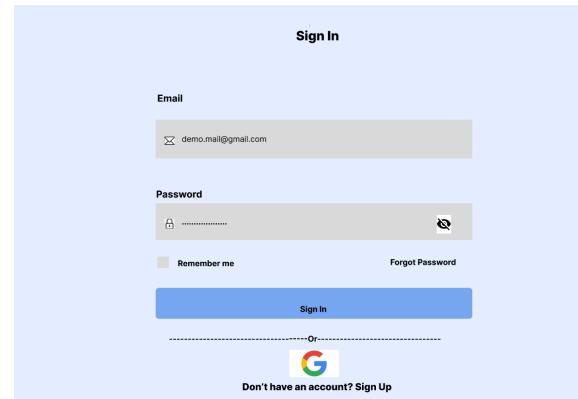


In our lo-fi prototypes before CIs, we implemented Google O-Auth for data security. The athletes will be able enter the required injury which they are suffering currently, post which the system will show the list of expert doctors in that domain along with their availability and ratings. The athletes can schedule their appointment with the required doctor after looking at their rating and availability date. The athletes will be able to rate the doctor after their session depending on various parameters.

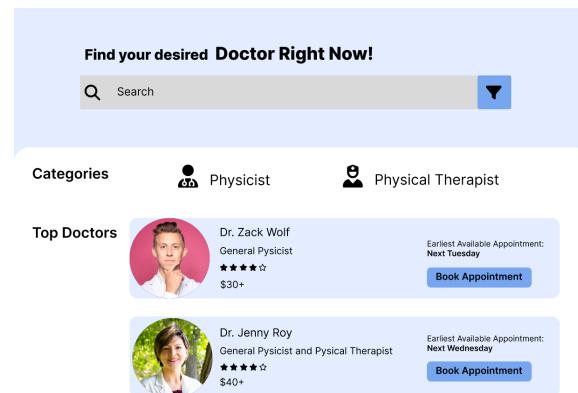
Hi-fi prototype:

<https://www.figma.com/proto/T7eD6L0OoD0HJSrB4zDOC6E/Athleticare---Medical-Appointment-Booking-System-for->

[Athletes?node-id=2%3A20&scaling=min-zoom&page-id=0%3A1&starting-point-node-id=2%3A20&showproto-sidebar=1](#)



Google O-Auth for data security



Doctors

PROJECT I: WEB-BASED SERVICES PROTOTYPING

▼Filter

Categories

- Physicist
- Physical Therapist

Urgency

- I am in urgent need! 

** Do not check the box unless you are in need for immediate medical assistance. Leave the resources to the ones in real need.

Done

Prioritizing feature: indicate whether they are in urgent need

Payment Method

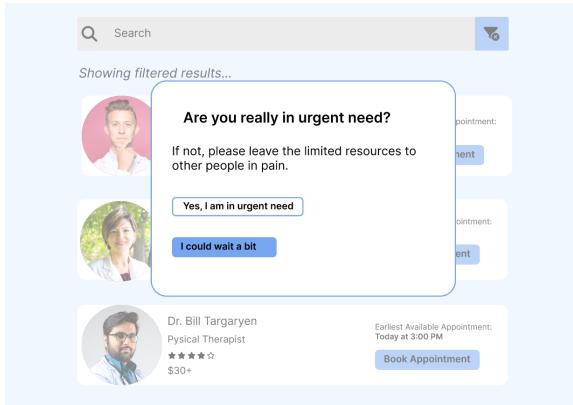
PayPal 

Debit/Credit Card 

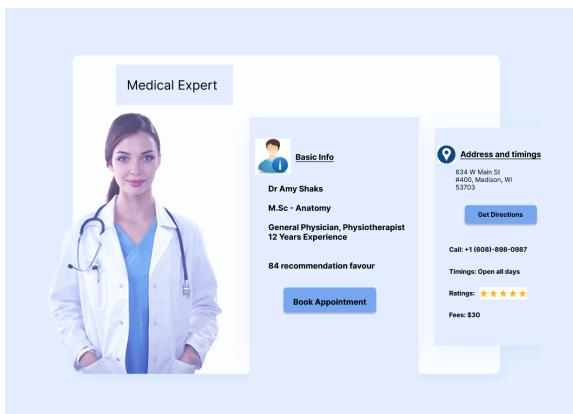
Card Number
Expiry MM/YY **CVV** 123

Pay

Paypal or credit card to pay



Prevent abuses of the prioritizing feature



Make appointment and get directions

PROJECT I: WEB-BASED SERVICES**EVALUATION****Methods: Within-Subjects Design; Talk-Aloud Protocol; Task-Based Testing**

Each of our participants are asked to work through the same task path. We conduct 3 individual 15-min usability tests.

- We first use 3–5 min to explain our design and what we are interested to find out in the usability testing.
- We then give him or her a scenario and the tasks.
- Participants are asked to talk aloud during the whole process.

Participants conduct the testing with their own computer in their normal life/work settings.

2–3 Tasks For 3 Participants:

You just broke your knee are in an emergent need.

1. Choose a doctor you want
2. Book an appointment ASAP

Results and Findings:

Audio and video recordings of usability testing: [Stage 3](#).

All three of our participants fail to find the nearest appointment.

The majority of breakpoints, errors, and confusions our participants encountered are due to the *limitation of figma*. They are used to dynamic and interactive website. Figma's lack in this respect is a constant confusion.

However, we did observe some data which would lead to improvements in our prototype:

- Breakpoints when the participant
 - want to filter doctor types
 - didn't see the zip code at payment
 - didn't see a sorting feature

- can't search and didn't see a tag for specific injuries
- don't see WisCard payment type
- don't see confirmation email sent
- Confusion about
 - the icon beside the urgent need check box
 - typos in Physicist & Physical Therapist
- Failure
 - to find the nearest appointment before he or she didn't see the existence of the filter.
 - to find the nearest appointment before he or she didn't see the existence of the checkbox to indicate urgent need.

Though some of these data points to an improvement in design, such improvement cannot be done in figma. For example, sorting feature and search and input features. Because figma cannot be dynamic, things like adding respective descriptions of doctors are also impractical. We are going to make the feasible improvements in figma.

PROJECT I: WEB-BASED SERVICES

FINAL PROTOTYPE

Final Prototype:

<https://www.figma.com/proto/uBAWkvx5VM3qWMhzHkahIT/Athleticare-Final-Solution?node-id=0%3A1&scaling=min-zoom&starting-point-node-id=1%3A37&showproto-sidebar=1>

Changes and reasons:

Add more prompts to let users know that we provide accommodations for urgent needs.

Add doctor specialty to help with choosing

Disable features that cannot be well supported by figma, so that they will not

confuse users when they test the prototype.
Ex1. categories deleted

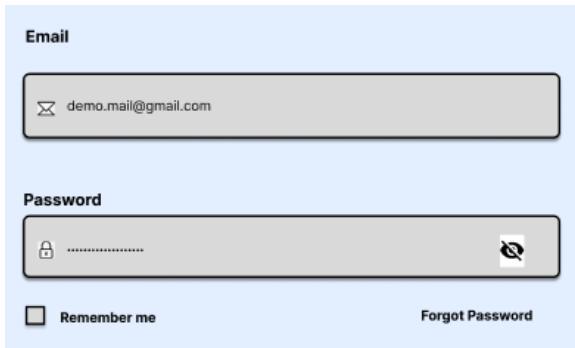
Ex2. paypal as the payment method

Add a prompt that confirmation email is sent, so that the patient can have a record

Add outlines to refine the looking. Ex.

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FINAL PROTOTYPE



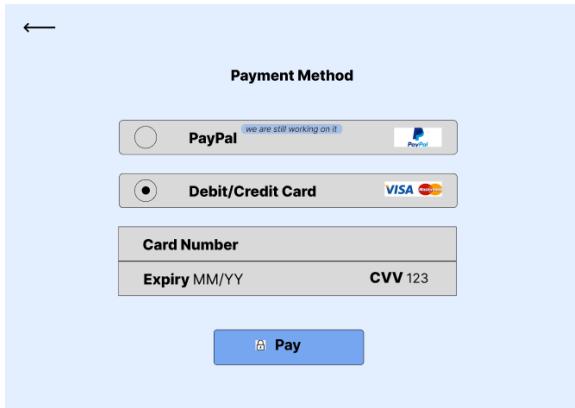
A screenshot of a login form. It has fields for 'Email' containing 'demo.mail@gmail.com' and 'Password' containing a masked password. There are 'Remember me' and 'Forgot Password' links at the bottom.

Email
demo.mail@gmail.com

Password
.....

Remember me [Forgot Password](#)

Added backward buttons in main breakpoints to simplify changes. Ex. On the payment page so that if the user wants to change the appointment timing, he can go back to modify the date and time frame.



A screenshot of a payment method selection form. It shows 'PayPal' (disabled) and 'Debit/Credit Card' selected. Below are fields for 'Card Number', 'Expiry MM/YY' (MM/YY), and 'CVV 123'. A 'Pay' button is at the bottom.

←

Payment Method

PayPal we are still working on it 

Debit/Credit Card 

Card Number

Expiry MM/YY CVV 123

