Github Link: https://github.com/proesslet/HCI—Diabetes-Monitoring-System

Installing and Running

Installing Dependencies

1. Inside of the root directory, run 'npm install'
2. Verify that a 'node_modules' directory has been created

Running the App

To run this application, you can either compile the Javascript and create servable files that you can then open in your browser, or you can just run it in development mode (this is the easiest since we are not deploying this appication to a server).

1. Inside of the root directory, run 'npm run dev'
2. Open a web browser and go to localhost:5173 (Note: the port may be different depending on your computer's configuration)

Application Description

This application is a diabetes monitoring system that allows users to record their current blood sugar level and it will inform them whether it is high, low, or normal. If it is high or low, it tells them what steps to take to bring their blood sugar levels back to normal.

File Descriptions

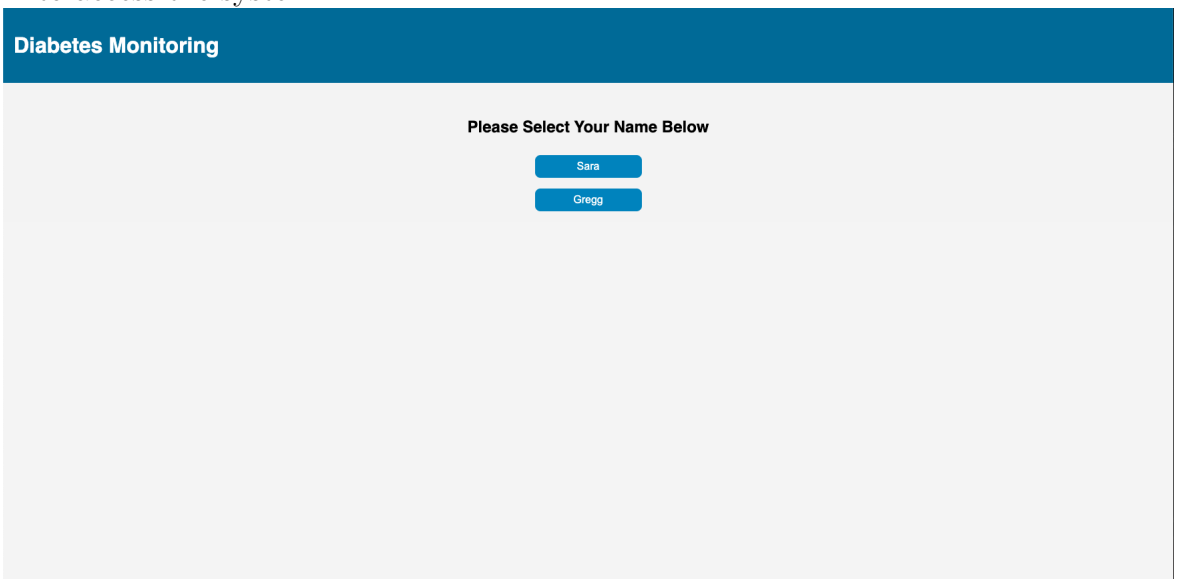
You don't need to understand all of the files in this app in order to understand the code. The main files/directories that are required to understand are listed below:

1. node_modules - this directory contains all required dependencies.
2. main.js - this file mostly contains set-up and configuration code for the app. It is also where the global variable for the user information is stored.
3. App.vue - this is the main vue file for the application. It contains the logic for signing a user in and logging them out and also contains the code for the header.
4. components - this directory stores all the files needed for the app. It includes the file that controls the logic for allowing a user to record their glucose level as well as some other files for utilities such as tooltips and popups.

Documentation

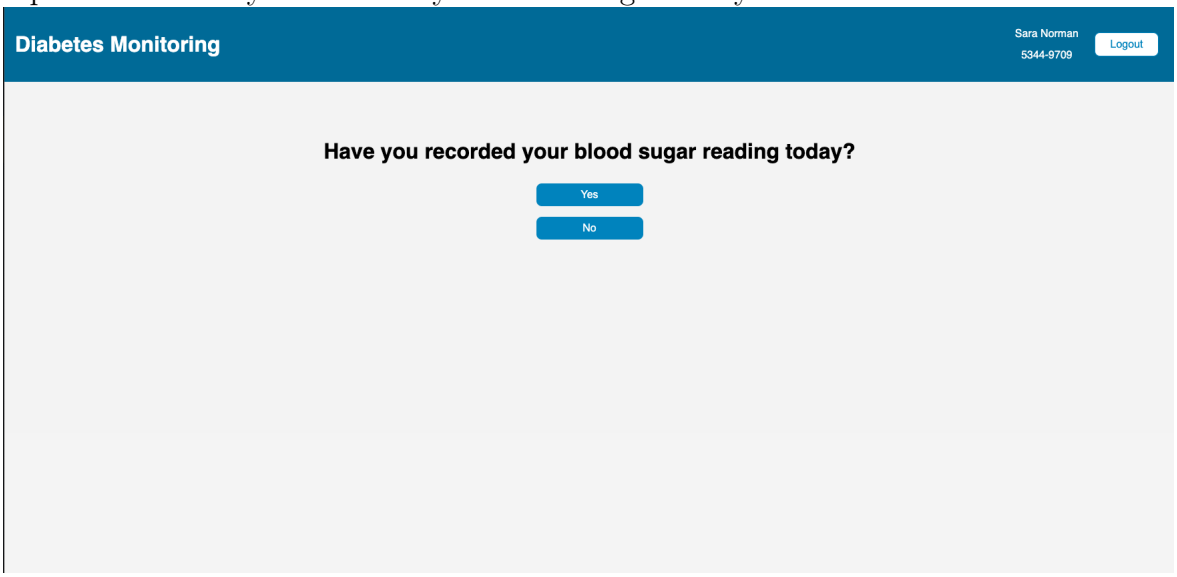
Log-in Screen

This screen displays a list of users. Once a user is selected, it logs them in and allows them to access the system.



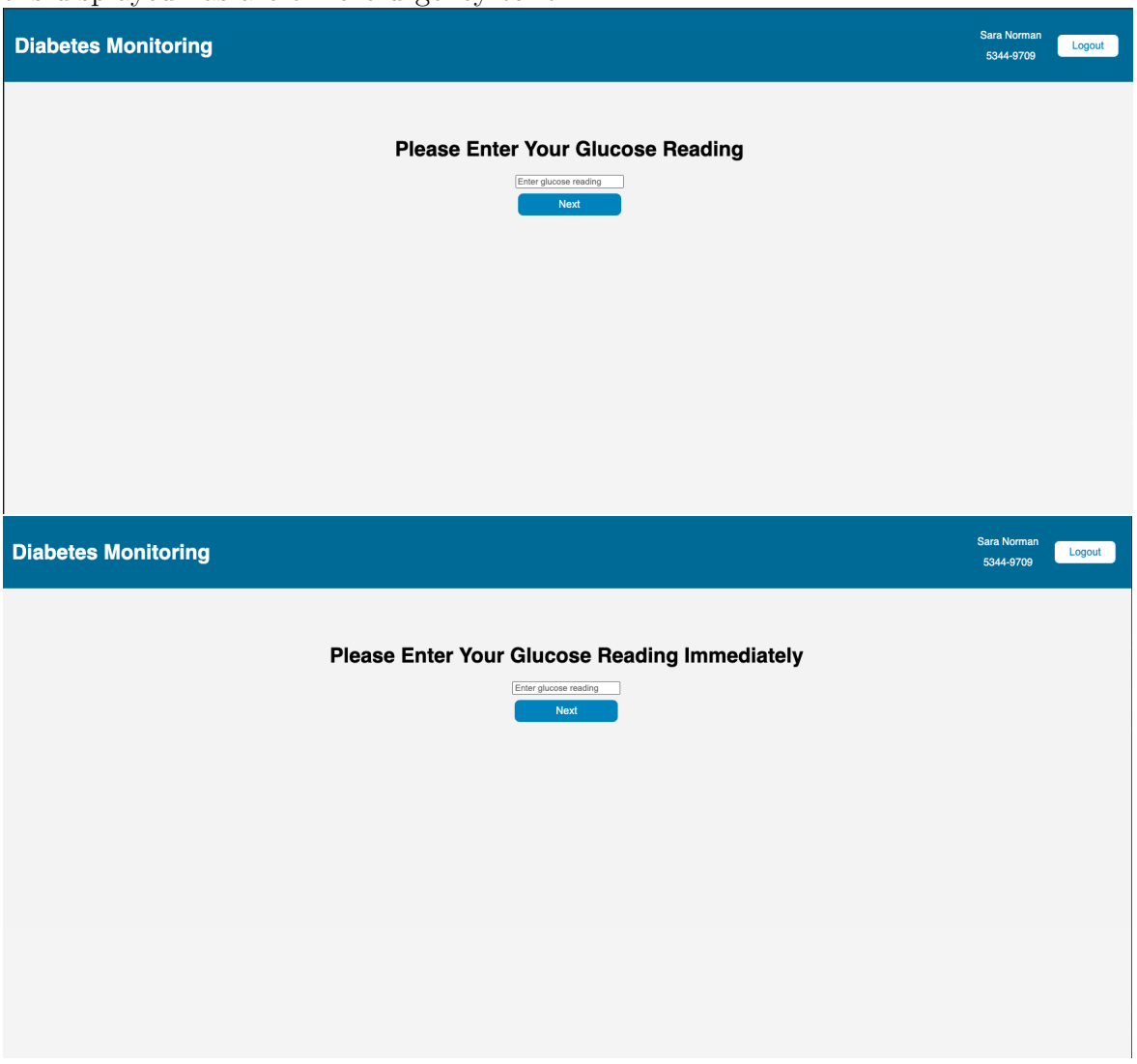
Post-login Screen

This is the first screen a user sees after they have logged in. As you'll notice, the user's name and ID number is displayed in the top-right corner as well as a logout button (this button takes the user back to the main log-in screen). This is displayed throughout the whole application, so a user can choose to logout at anytime. This page also includes the first question: "Have you recorded your blood sugar today?".

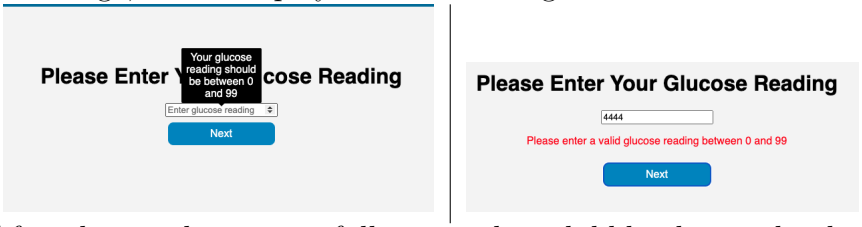


Glucose Entry Screen

Once a user has recorded whether or not they have recorded a reading today, the app will then ask them to record their current glucose level. If a user has already recorded a reading today, it will simply ask them to enter it. If they haven't recorded it yet, then the message that is displayed has a bit more urgency to it.



In addition, this page includes techniques to prevent errors and make it easier to use. When the user hovers their mouse over the input box, it displays a tooltip that describes what range of numbers is allowed. Also, if a user tries to enter a number outside of the allowed range, it will display an error message and allow them to fix it.

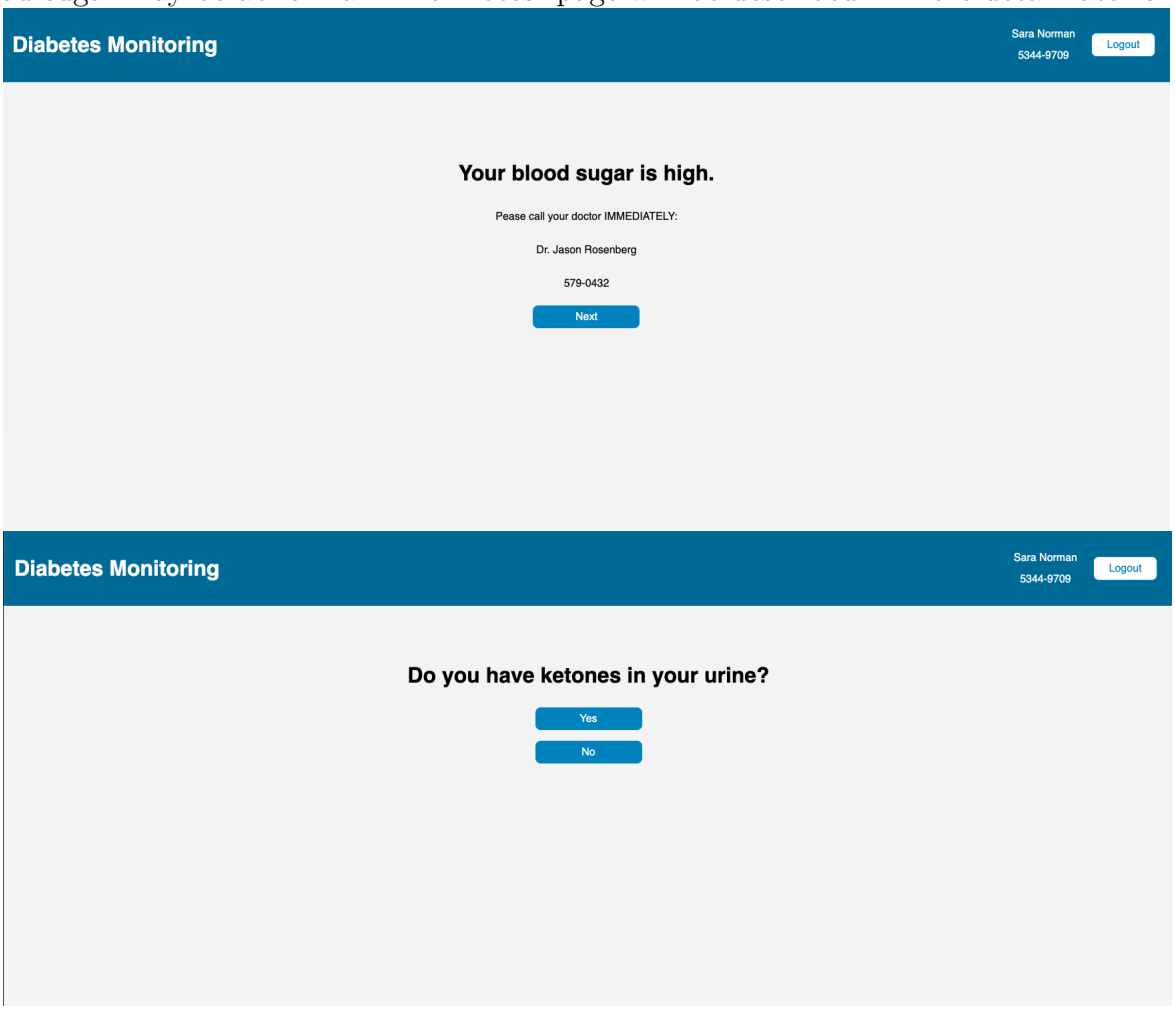


After the user has successfully entered a valid blood sugar level, the app will then process

it and determine whether it is high, low, or normal.

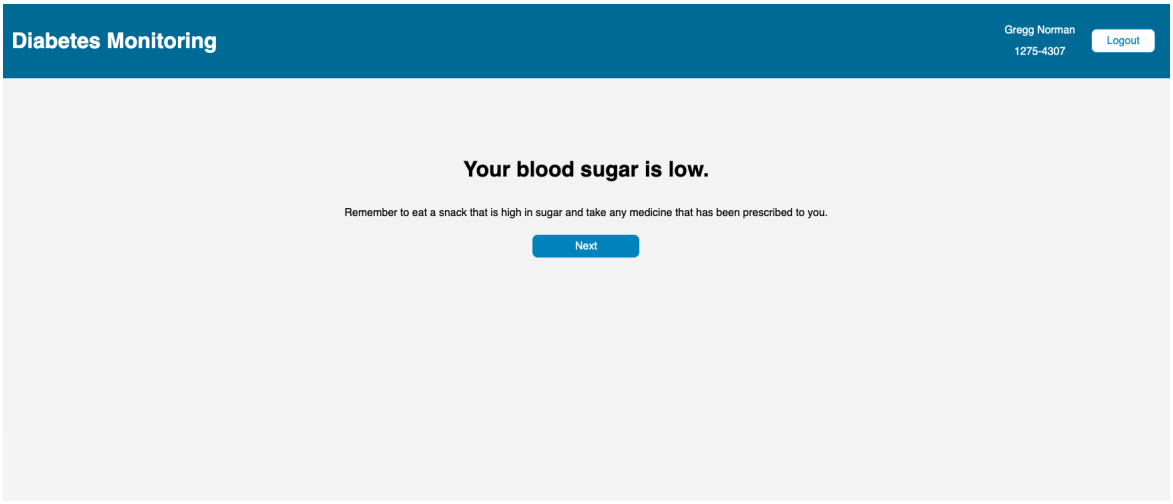
High Blood Sugar

If the user's blood sugar is high, it will first inform them to call their doctor immediately. A screen is displayed with their doctor's name and phone number. After they call their doctor, they can continue in the app. Next it will ask them if they had the presence of ketones in their urine. After that it then asks the user to write any notes as to why their blood sugar may be abnormal. The "notes" page will be described in more detail later on.



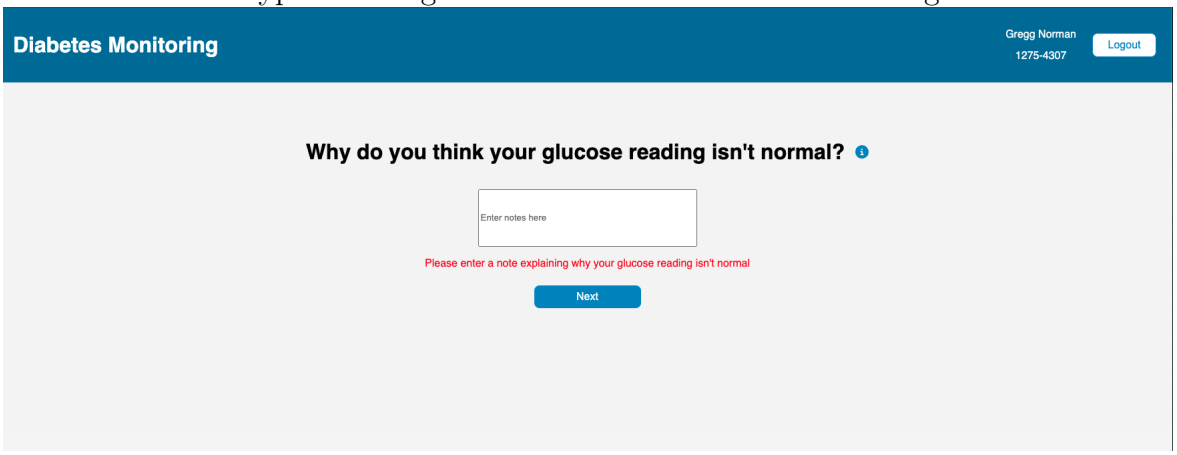
Low Blood Sugar

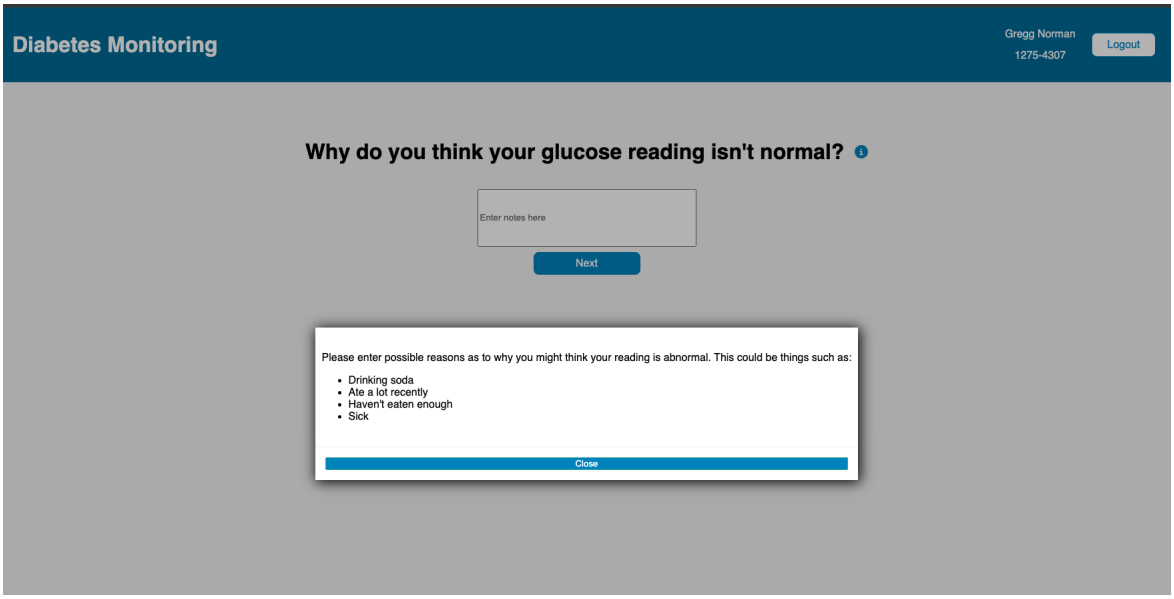
If the user's blood sugar is below their normal range, the application informs them of this and also gives some recommendations on how they can bring it back up. Once the user clicks the "next" button it takes them to the same "abnormalities notes" page as it does for if their blood sugar is high. We will discuss that page in more detail next.



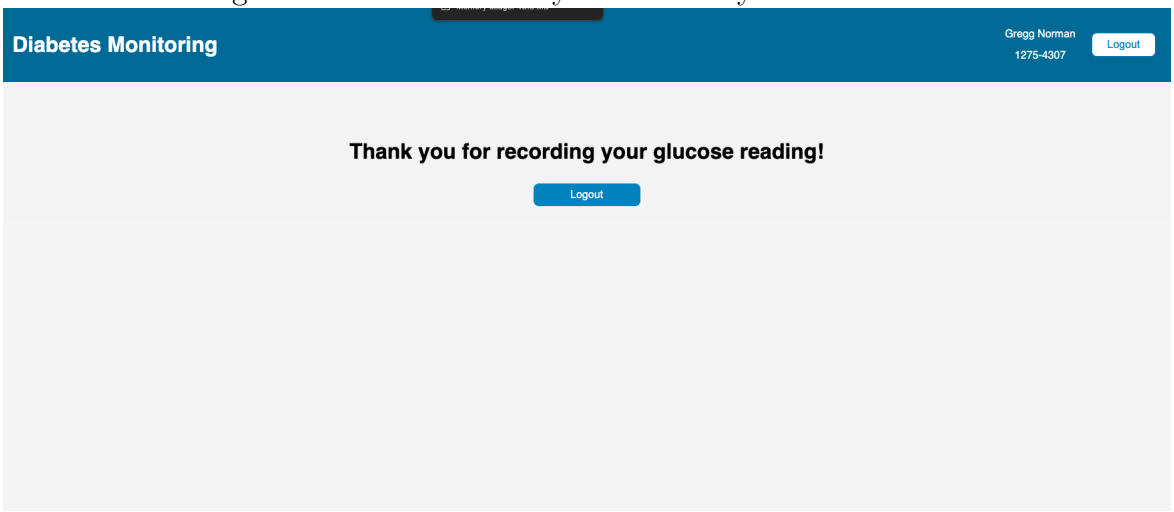
Abnormalities Notes

This page is displayed whenever a user's blood sugar is outside of their normal range. It allows them to write some notes on why they think their blood sugar isn't normal. As you can see below, this input prevents errors by requiring the user to enter some notes. If they don't, it shows them a helpful error message and allows them to try again. In addition, this page has a blue "information" icon that when clicked, displays a pop-up containing some information on what types of things could cause an abnormal blood sugar.



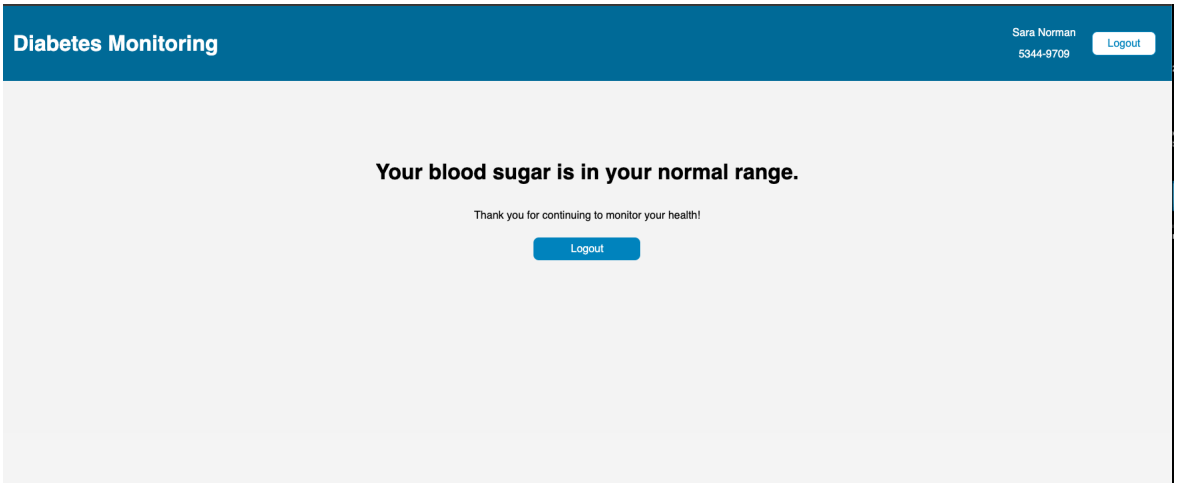


After the user has submitted their notes, the app shows a friendly "thank you" page and allows the user to logout so that other's may access the system.



Normal Blood Sugar

If the user's blood sugar is within their normal range, the app informs them off this. Since there are no abnormalities, there is no need for any notes and thus the app gives the user the option to log out so that the next user may access the system.


Diabetes Monitoring
Sara Norman
5344-9709
Logout
Your blood sugar is in your normal range.
Thank you for continuing to monitor your health!
Logout