

MEALTIME



BY:

ABDEL BAIG

ANSH PATEL

BENJAMIN AKINNUSI

BORA BASKAYA

DYLAN NEIL

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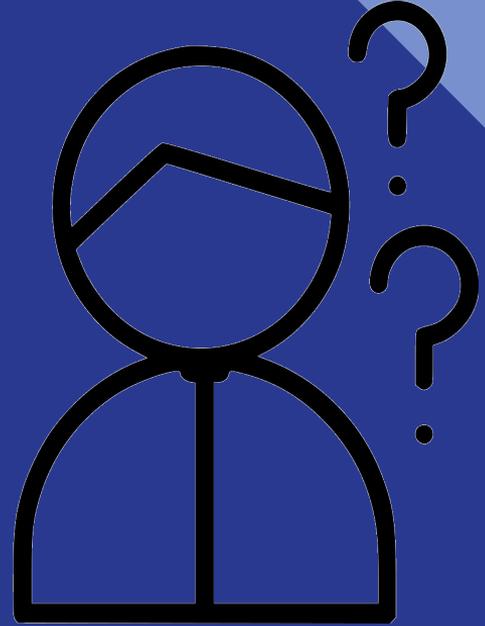
Who?

- Client's name: Mark
- Age: 50 years old
- Studying for a masters' degree and performs telework part time
- Has ADD and suffers from Type II diabetes
- Uses glucose meter with insulin calculator, but is inefficient



What does our customer need?

- Free mobile application
- Simple design that is easy-to-use (ADD-friendly)
- Finds all the hidden sugar contents
- Inputs the user's meal
- Calculates carbohydrates, sugars, and fiber intake
- Notifications to remind the user of upcoming meals



What is available?

- Failed to meet client needs
- Most created by insulin tracker companies
- Overly complicated input
- Additional costs
- Underwhelming past student iterations



What we wanted?

- Ease-of-use
- Good user feedback
- Free of cost
- Excellent product quality
- ADD friendly, straightforward
- Input and store data



Conceptualizing

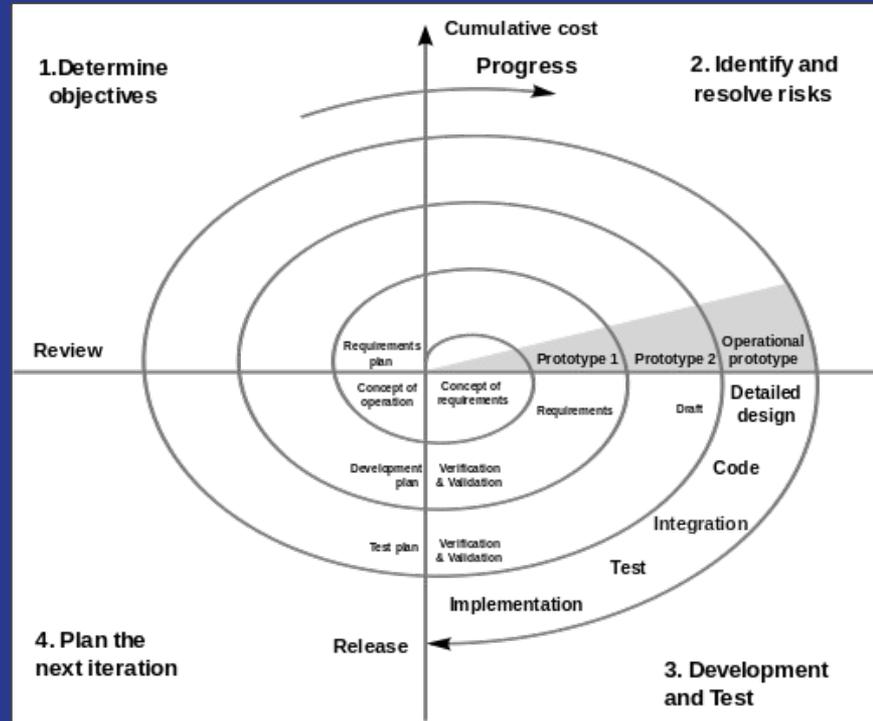
- Aesthetic design
- Food input
- Input history
- Graphical representation
- Contacts for M.D. submission

#	Specifications	Concept 1	Concept 2	Concept 3
1	Accuracy of insulin needed per meal	The client must insulin with what he eats (4)	Adjusted metrics to display how each person is affected (5)	Adjusted metrics will be altered by input of insulin by user and calculated result with food logging which will combine both aspects (5)
2	User feedback	Rating system has to be connected to WiFi (4)	Contact information with developers' emails (4)	Contact email (3)
3	Ease-of-use	Simplicity (4)	Simple with different functions (5)	Extreme simplicity is the goal (5)
4	Software application testing	We can test it (5)	We can test it (5)	We can test it(5)
5	Cost	Free to use (5)	Free to use (5)	Free but with ad. space but will distract ADD clients (2)
6	WiFi dependency	Pre-integrated formulations and functions (4)	Pre-entered meals that the client has on a regular basis (4)	WiFi should not be required (4)
7	Product quality	Functionality, it has to do what we want it to do (4)	Pleasing appearance, rounded buttons (5)	Cannot be over complicated(3)
8	ADD (Attention deficit disorder) friendly	Simple, Apple like interface (4)	Minimal buttons, not complicated (4)	White and blue interface (4)
9	Data Storage	Store data on hard drive (4)	Stored data which can be viewed by users and developers (5)	Simple data storage in form of history log (4)
	Total	38	42	35

Decision matrix

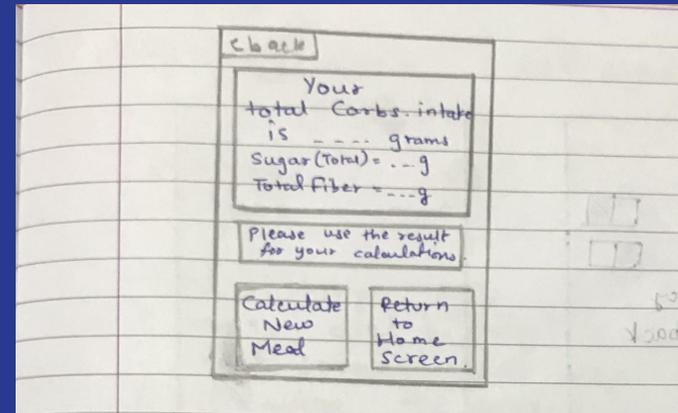
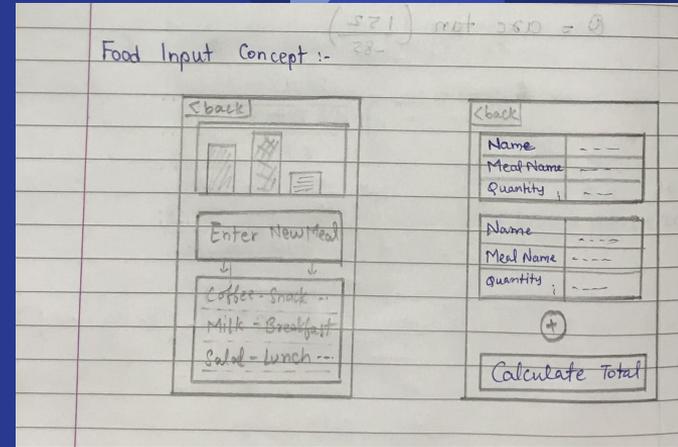
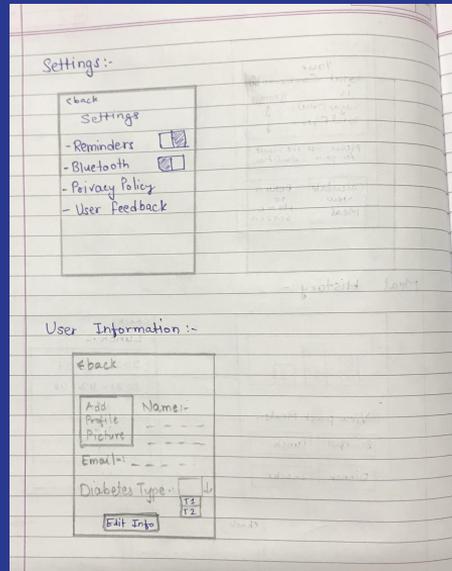
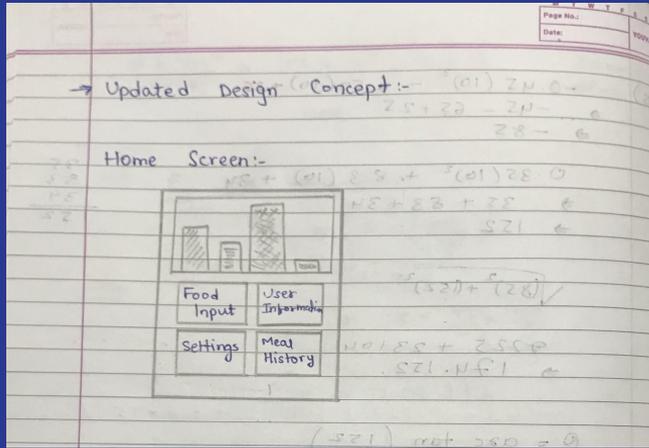
Design Process

- Spiral method
- By Barry Boehm
- Software development
- Multiple prototype iterations
- Retesting and perfecting
- Clear customer needs



Spiral method diagram

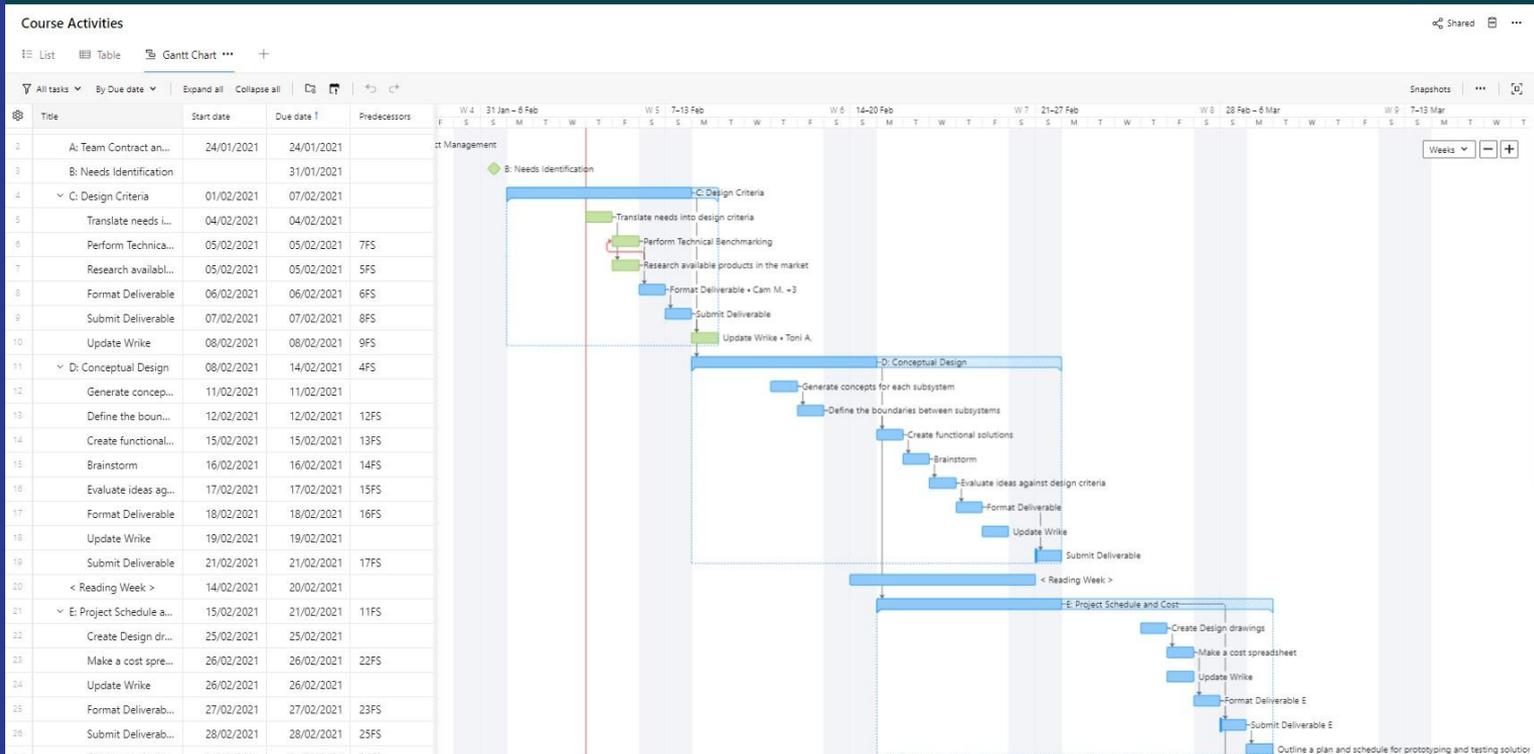
Final Design Concept



- Designed before creating the first prototype
- Combines individual concepts from all team members
- Can be further improved through adjusting features

Project Plan

Initial Plan:



Feasibility?

- Time constraints and deadline
- Costs
- Core client needs
- Access to tools and resources (app developing software)
- Legal constraints



Mealtime tracker app “MEALTIME”

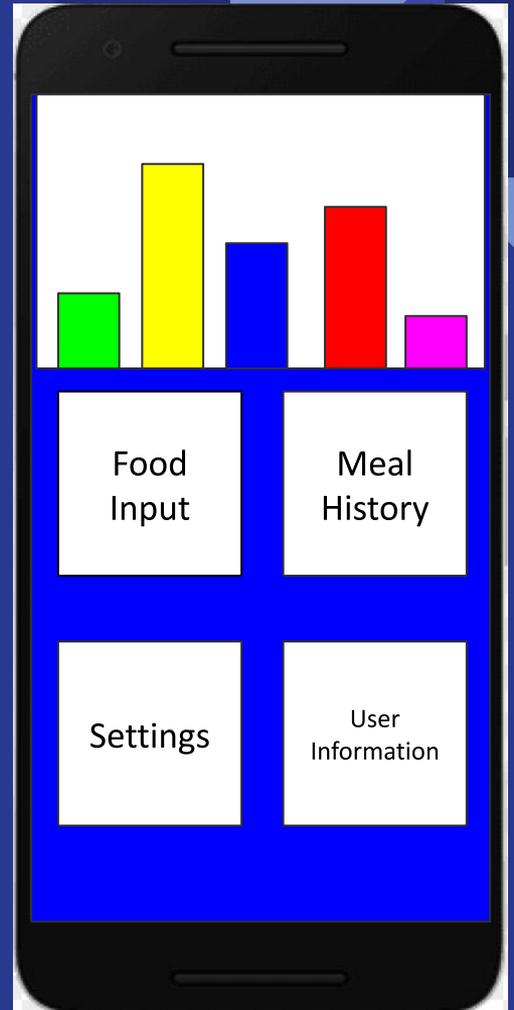
- Main function aimed to count and track carbohydrates (starches, sugars and fibers)
- Targeted towards diabetics in order to keep track of food intake in a simple and efficient way
- Reminds the user to input food with notifications
- Ability to submit food log to healthcare practitioner

Application Logo



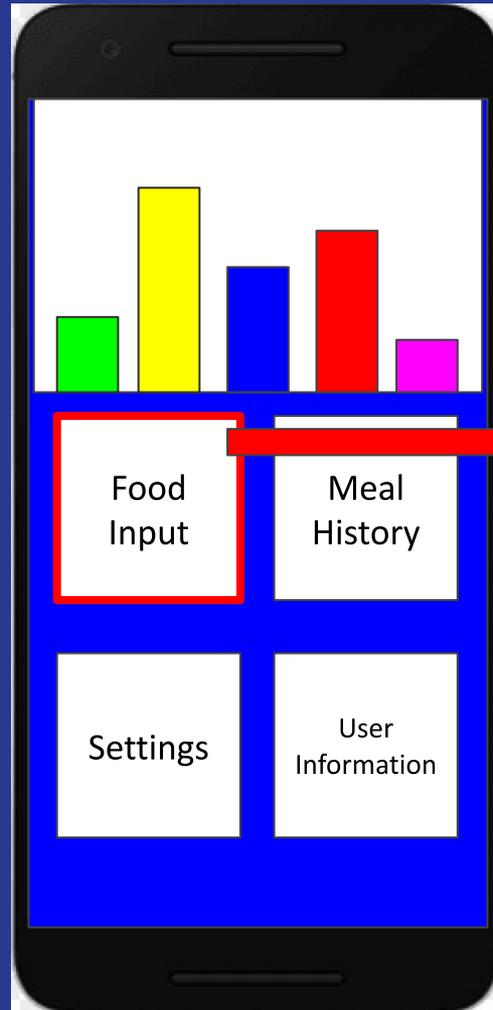
Home Screen

- Simple user interface
- Color coordinated graph representations of meals throughout day
- Main functions
 - Food Input
 - User Information
 - Settings (profile, privacy policy, notifications etc)
 - Meal History (extended food input history folder)



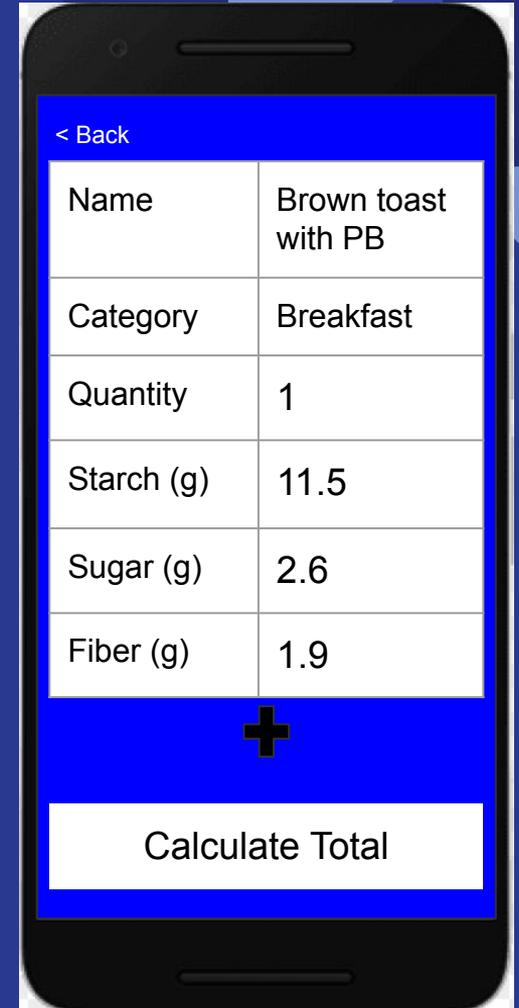
Food Input Screen

- Graph showing starches, sugars, and fibers consumed throughout the day
- Enter new button allows user to enter new food product which is then stored in history
- Past food products are displayed for easy re-entry



Food Content

- Meal Name and Category of the meal
- Quantity
- Amount of starches, sugars and fibers
- Other macros are unimportant for the application
- Calculate Total
- Enter New Meal



The image shows a smartphone screen with a blue background. At the top left, there is a '< Back' button. Below it is a table with two columns. The first column lists nutritional components, and the second column lists their values. Below the table is a large black plus sign, and at the bottom is a white button with the text 'Calculate Total'.

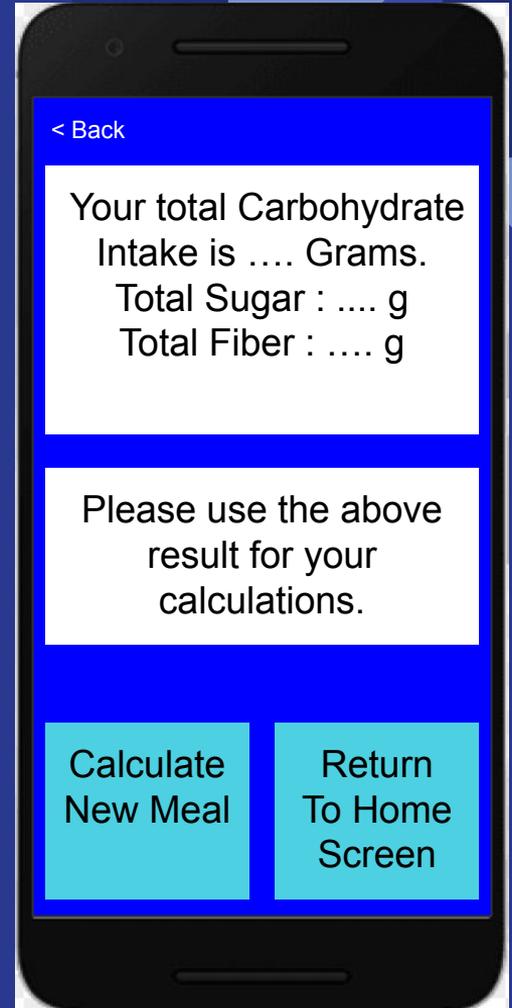
Name	Brown toast with PB
Category	Breakfast
Quantity	1
Starch (g)	11.5
Sugar (g)	2.6
Fiber (g)	1.9

+

Calculate Total

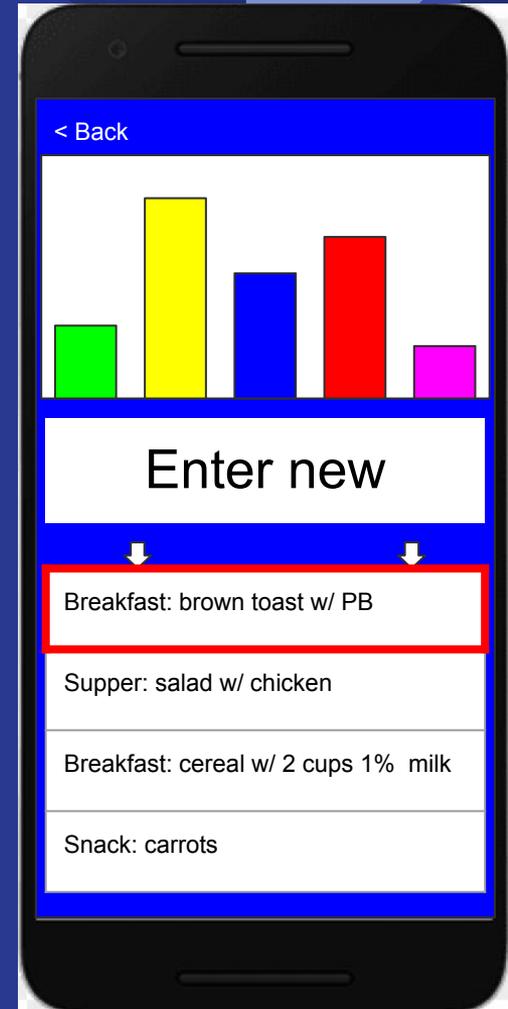
Results Page

- Total calculation of the carbohydrates, sugar and fiber the user intakes when he consumes a certain amount of food
- This result could then be used by the user to calculate his required insulin dose.



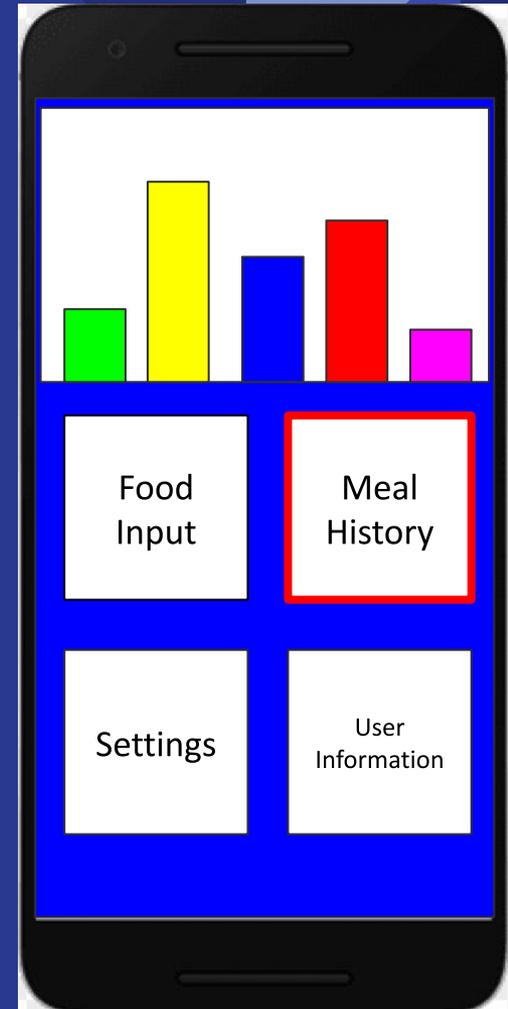
Enter New Meal

- Past food products are displayed for easy re-entry
- New breakfast meal has now been entered



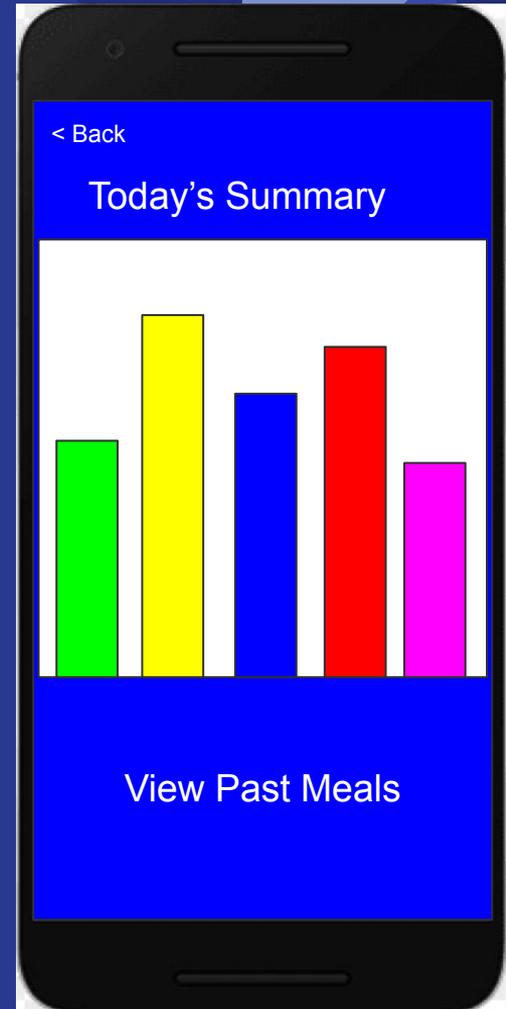
Meal History and Log Keeping Screen

- Another main function is tracking past entries
- Capability of withholding data in a .txt file
- Enables user to determine patterns in carbohydrate consumption



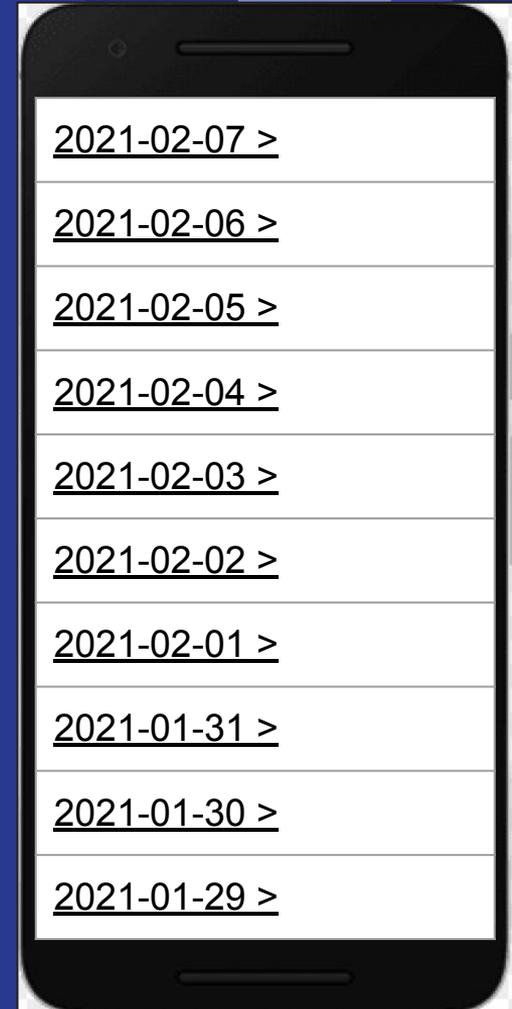
Graphical Log Keeping

- Displays the present day's summary of carbohydrate intake (grams) vs sugar intake (grams) and fiber intake (grams)
- Provides a radio button below that opens up the dates for which the user could review their past meals



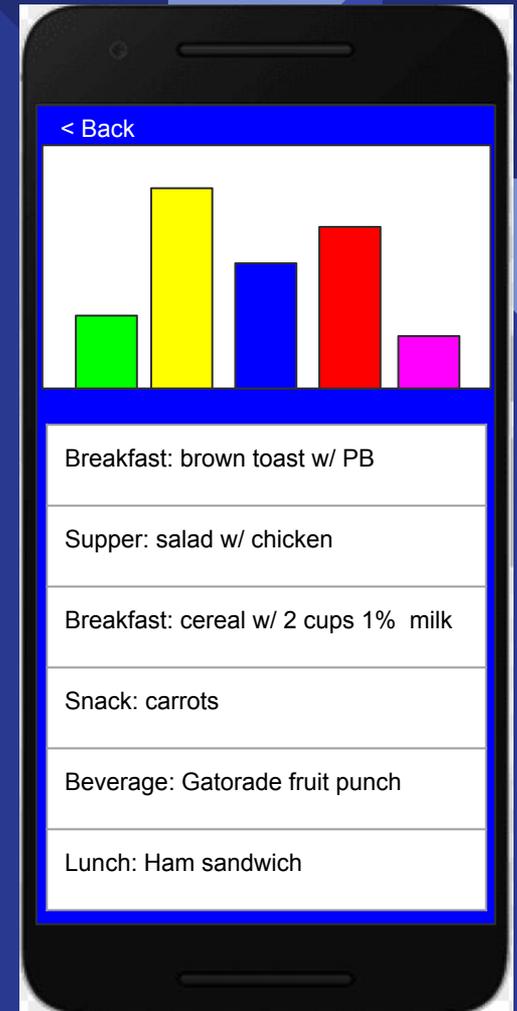
Past Meal History

- Display where all past dates and present day meals are stored
- Can store up to 3 months of data depending on the meal size consumed by the user
- A scroll type interface that is very easy-to-use and ADD friendly for our user



Details of the Past Meal

- Allows the user to view the details of their meal on a particular day
- Helps to keep track of their meals as well as their carbohydrate, sugar and fiber intake.



Next Steps

Prototype 1

- Create a low fidelity prototype using MIT App Inventor
- Three main functions; home screen, food input, and meal history
- Receive client feedback at third and final meeting (March 2)

Prototype 2

- Medium fidelity prototype, add settings menu and user information history
- Receive client feedback on own time (March 7)
- Create business model and economics report (March 21)

Prototype 3

- Highest fidelity prototype, create a WiFi independent app by integrating Bluetooth functionality
- Present on Design Day (April 8)



- Create a short 3 min video and a user manual which is a detailed guide that outlines how to use our application (April 11)
- Provide a final 15 min presentation that outlines our product (April 12)

Questions

