APP DESIGN

NUTRITION TRACKER

A Solution to Staying on Track with Dietary Goals.

Process Outline

Problem Definition

Research

Design Goals

Solution Ideation

Prototyping

Design Refinement

Usability Testing

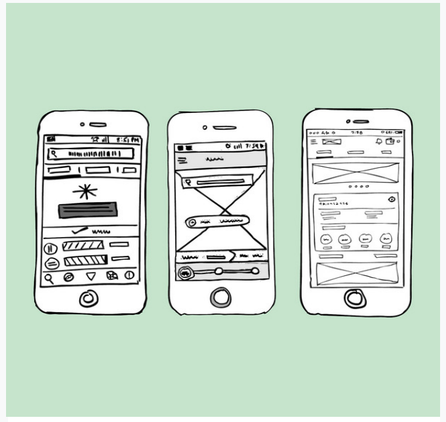
Techniques Used

USER RESEARCH & REQUREMENTS

- User interview & observations
- Personas
- User requirements

NAVIGATION & LAYOUT DESIGN

- Task analysis
- Card sorting
- Storyboarding



EARLY DESIGN METHODS

- Moodboard
- Sketching
- Wireframing

DESIGN REFINEMENT

- Typography
- Icons
- Color
- User testing

PROBLEM DEFINITION

What are we solving?

Who are we solving it for?

Is this a problem worth solving?

It's important to really understand what issue we are trying to solve before diving into making a solution.

Problem Space

45M

Americans follow diets every year. Unique plans.

66%

experience obesity - a chronic disease requiring lifelong treatment.

95%

Americans fail to meet vitamin & mineral RDA.

Root Cause Analysis

– Lack of Motivation

"I WANT TO LOSE 15 LBS."

Why didn't you lose 15 lbs?

I didn't follow my diet accurately.

Why didn't you follow your diet accurately?

I ate what my family cooked.

Why did you eat family cooked meals?

I was too lazy to cook my own meals.

Why were you too lazy to cook?

I lost motivation.

Root Cause Analysis

- Failure to space out meals

"I WANT TO GAIN MUSCLE."

Why aren't you gaining enough muscle?

I don't workout hard enough.

Why don't you workout hard enough?

I feel tired at the gym.

Why are you tired at the gym?

I get food coma.

Why do you get food coma?

I meals end up being too big or I eat a lot before working out.

Why are your meals so big?

I forget to eat at snack time so I group snacks with bigger meals.

Root Cause Analysis

- Missed meals

"I WANT TO GAIN MUSCLE."

Why aren't you gaining muscle?

I don't eat enough calories.

Why don't you eat enough calories?

I miss some meals.

Why do you miss some meals?

I forget to eat around snack time.

Why do you forget to eat at snack time?

People around me don't have set snack times so it doesn't come to mind..

User Reserch

From existing studies

Methods

75% Trying to lose weight by dietary changes.

72% Trying to lose weight by exercise.

11% Trying to lose weight through pills/bars/shakes.

7% Take medicine prescribed by doctor.

Sources

28% Participate in a low carb, high fat diet – an increasingly popular trend.

19% Following some other sort of diet.

11% Follow commercial slimming programs like Weight Watchers.

Data from the Nielsen Health & Wellness Survey, polling 30,000 respondents.

PROBLEM

Obesity is a significant concern. In addition to those trying to cure/prevent this condition, there is a large population that diets and exercises to acheive health coupled goals often related to weight changes. While there exists diet tracking applications on the market, dieters still fail to follow dietary plans due to their behavioural limitations such as lack of motivation or poor scheduling.

A diet enforcing solution **is required** for dieters **because** they currently fail to follow diets consistently.

RESEARCH

It's important to really understand what issue we are trying to solve before diving into making a solution.

Educate yourself on the space

Understand the user

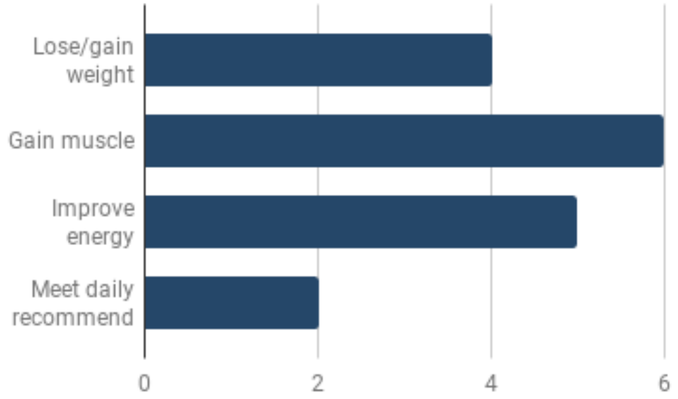
Existing solutions

User Interview

An interview script was created to understand users' objectives when it comes to nutrition tracking. Major goals and pain points were addressed. The response data is visualized below.

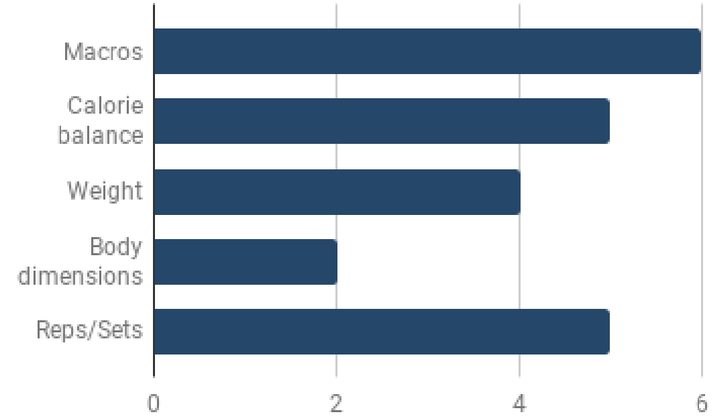
What are your fitness goals?

- Most users aim to make lifestyle changes by improving eating habits
- Common physical goals include weight changes



What are important influences In achieving your fitness goals?

- Significant portion primarily focused on macros.
- Exercise metrics like reps/sets are important.

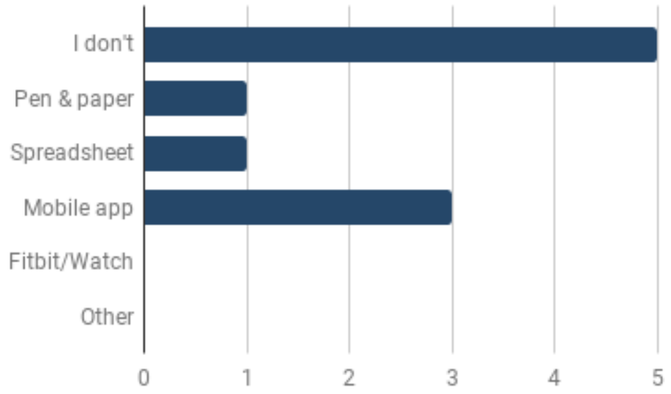


User Interview

...continued analysis of interview response data.

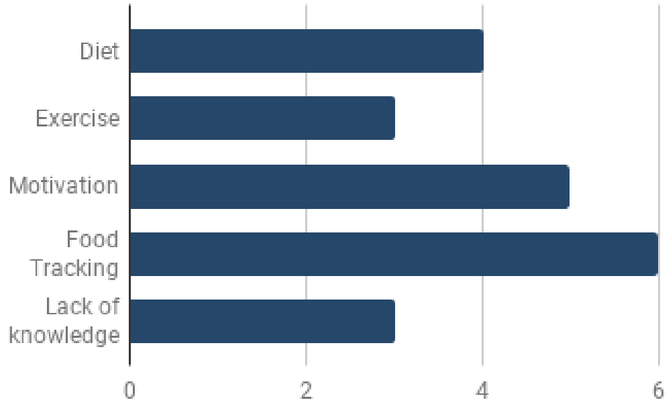
How do you track fitness goals?

- Apps are the most commonly used medium amoung those who do track.



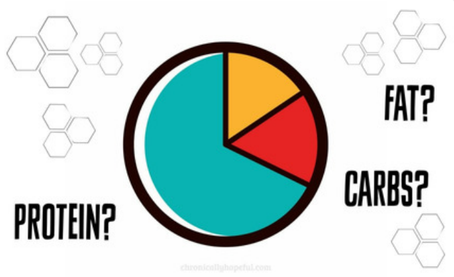
Why do you fail to meet your health goals?

- Provides insight to current frusturations.



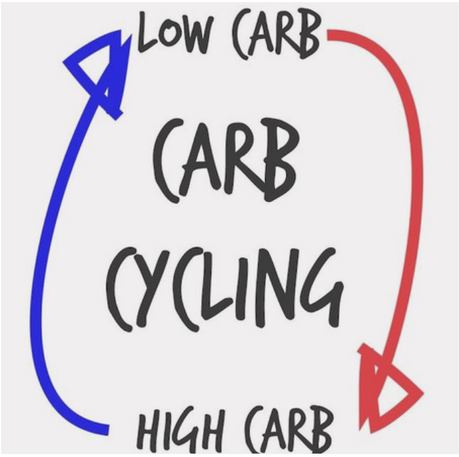
User Research & Requirements

User Observations



MACRO TRACKING

Highest priority for tracking macro nutrients (carbs, proteins, fats) and calories.



DIET BASED ON FITNESS

Different fitness goals demand particular diets varying commonly by target macros. Complicated diets cycle through varying macros throughout the week.

FREQUENTLY REPEATED MEALS

Users are annoyed when having to log an item they have already logged before.

User Research & Requirements

User Observations

...continued

BRAND SATISFACTION

Users feel satisfied when they find food item in app that is same brand as the item they wish to log. Provides higher sense of similarity accuracy in terms of nutrition content.

FRUSTURATION FROM MANUAL FOOD ENTRY

if numbers differ by 1 or 2, users are too lazy to change it and use it anyways.

PROCESS OF MEMORY

Often do not track immediately. Users remember their meals and record it into their log at a later time.

User Research & Requirements

User Observations

...continued

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PROCESS OF MEMORY

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Persona

About

Jacob is a 27 year old male who works in sales at a tech company. In his free time he likes to watch TV or take his dog for a walk. Jacob is getting married in 8 months and has a goal to put on 10lbs of muscle mass to look good for his wedding. He needs help to make sure this happens!

Age	27 years
Occupation	Sales
Income	$65k (CAD)
Status	Engaged
Location	Toronto, ON.

Needs

- Gain 10lbs of healthy weight in 8 months
- Accurately follow his diet plan
- Consume more calories than he burns to ensure muscle gain

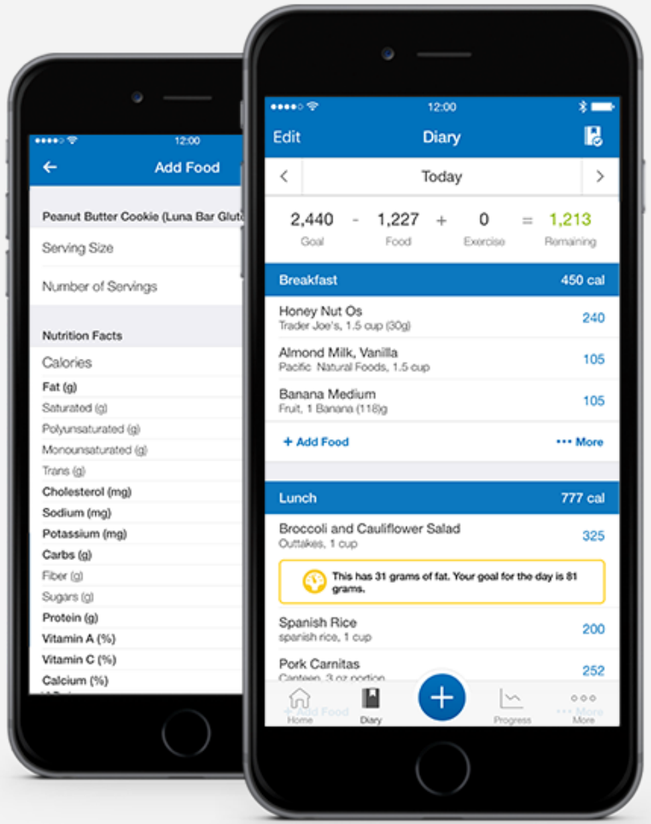
Frusturations

- Can't accurately track how much he has already eaten in the day
- Remembering to eat all his meals
- Doesn't want to overshoot on his calories and gain fat instead of muscle

Current feelings

- Busy
- Nervous
- Occupied

Existing Solutions



MY FITNESS PAL

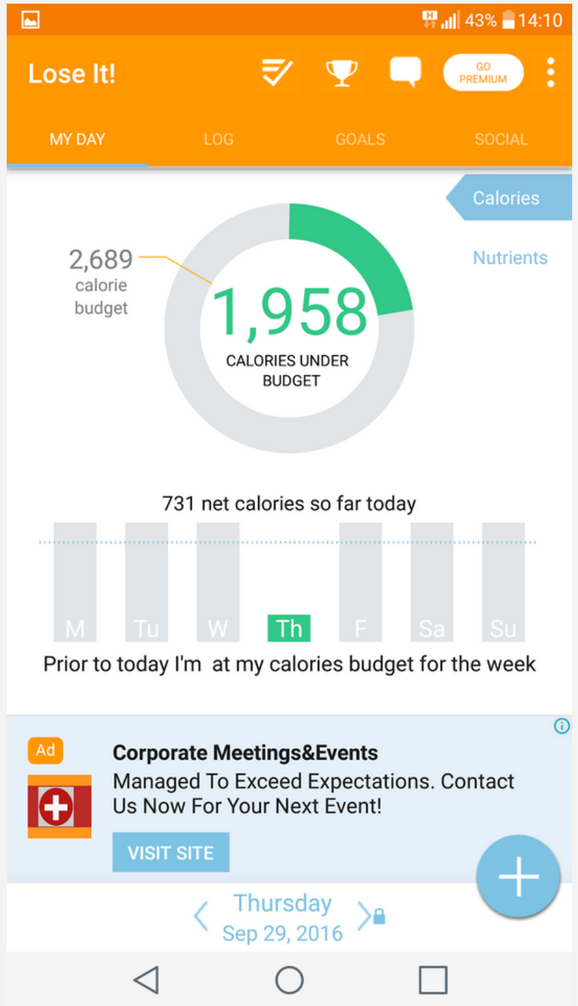
PROS

- Huge food database with over 5 million items.
- Works in conjunction with over 50 apps and devices like Apple Health, Fitbit, etc.
- Barcode scanner.

CONS

- Very tedious to manually input individual items and portions from large recipies.
- Time consuming to add food items after a meal.
- Barcode not always available (ex. grapes).

Existing Solutions



LOSE IT!

PROS

- Image recognition makes it easy to add items.
- Shows performance over time to motivate user.
- Data visualization.

CONS

- Users felt confused about calorie budget changing on its own from day to day.
- Poor usability - users unable to fix incorrect inputs.
- Lots of "ridiculous" entries that don't make sense, entered by other users.

Research

Scientific Background

TOTAL DAILY ENERGY EXPENDITURE

TDEE = (BMR) x (Fitness Activity Level)

MIFFLIN-ST JEOR FORMULA

BMR (kcal / day) = 10 x weight (kg) + 6.25 * height (cm) – 5 * age (y) + s (kcal / day)

where s is +5 for males and -161 for famales.

ACTIVITY LEVELS

Activity level	Factor
Sedentary	1.2
Light	1.375
Moderate	1.55
Very	1.725
Extremely	1.9

Research

Scientific Background

NOT AS SIMPLE AS CALORIE BALANCE

- All calories have same energy content, but not same effect on body.
- Different foods effect metabolism differently.

MANUAL ADJUSTMENTS

- TDEE is great starting point, but requires adjustment based on effectiveness.
- Updated.calorie intake based on body changes.
- Important to track results to identify plateaus.

VITAMINS & MINERALS

- Vitamin D deficiency linked to weight gain across many studies.
- Vitamin C helps absorb iron..
- Vitamin B & and Iron play string role in energy levels.

INSULIN

- Transports amino acids into muscles.
- Increase glycogen formation in muscles - helps with performance and recovery.
- Low insulin levels activates fat burning.

DESIGN GOALS

What does the design need to have to solve the problem?

Tells us what the solution needs to have

Provides good testing measures

Requirements

As a user, I want to...

Explore different diet plans

Add items to my log

Accurately track daily macros consumed

View remaining macros available

Meet my daily nutritional targets

View performance over time

Stay motivated to continue following my diet

Stay motivated to engage in daily exercise

Gain knowledge on how to better meet my diet goals

Be aware of flaws in my present diet

Be aware of my progress/results

Achieve a desired body image

Quantitative Benchmarks

Based on user requirements and knowing the frequency of tasks performed, I can quantify certain user goals. These numerics will act as a great meaure of success during later usability testing.

Search for food item within **2** taps.

Edit food item nutrition content within **2** taps.

View daily macro targets and performance within **1** tap.

View progress overview within **3** taps.

Log a complete meal within **3** minutes.

SOLUTION IDEATION

Creatively coming up with different ways to meet design goals.

A flying carpet!

Time travel!

Gamification

Motivation

Leaderboards-reward system to create competition among users to maintain motivated state.

DETAILS

- Daily badges to reward user for meeting target macros.
- Weekly badges for bigger accomplishments.
- Leaderboards.

PROS

- Community engagement.
- Competitive motivation.

CONS

- Users may enter fake data to win or stay ahead.
- Comparison with others may be unhealthy.

Progress Pics

Motivation + Unawareness

Body weight is often a poor measure of success. Pictures help the user better assess performance relative to their desired body image.

DETAILS

- Smart edit to make before and after picture lighting equal.
- Equal angle across all pictures.
- Take pictures at same time of day to avoid external factors like bloating.

PROS

- Provide sense of progress.
- Best measure of success.
- Personal competition.

CONS

- Demotivation from under performance.
- Hard to see small differences.

Schedule Builder

Scheduling

Propose a tailored eating schedule for the user, based on their provided daily activities.

DETAILS

- Typical eating routines (Breakfast, Lunch, Dinner, Snacks).
- Time meals well before exercise to allow for digestion.
- High insulin levels around workout time because cell membranes permeable to glycogen and amino acids.
- Use phone GPS to determine when is good timing to eat.

PROS

- Provides structure.
- Numerics are easier to follow.

CONS

- Need a lot of user information
- User's schedule may vary day-to-day.

Alarms

Reminders

Push notifications to remind user about upcoming meals.

DETAILS

- Send in advance to avoid interfering with user's activity.
- Can determine if user is actually following schedule by seeing if an item was tracked within some time frame after the alarm.

PROS

- Aids in forgetful memory.

CONS

- Daily alarms every meal may seem pushy.

PROTOTYPE

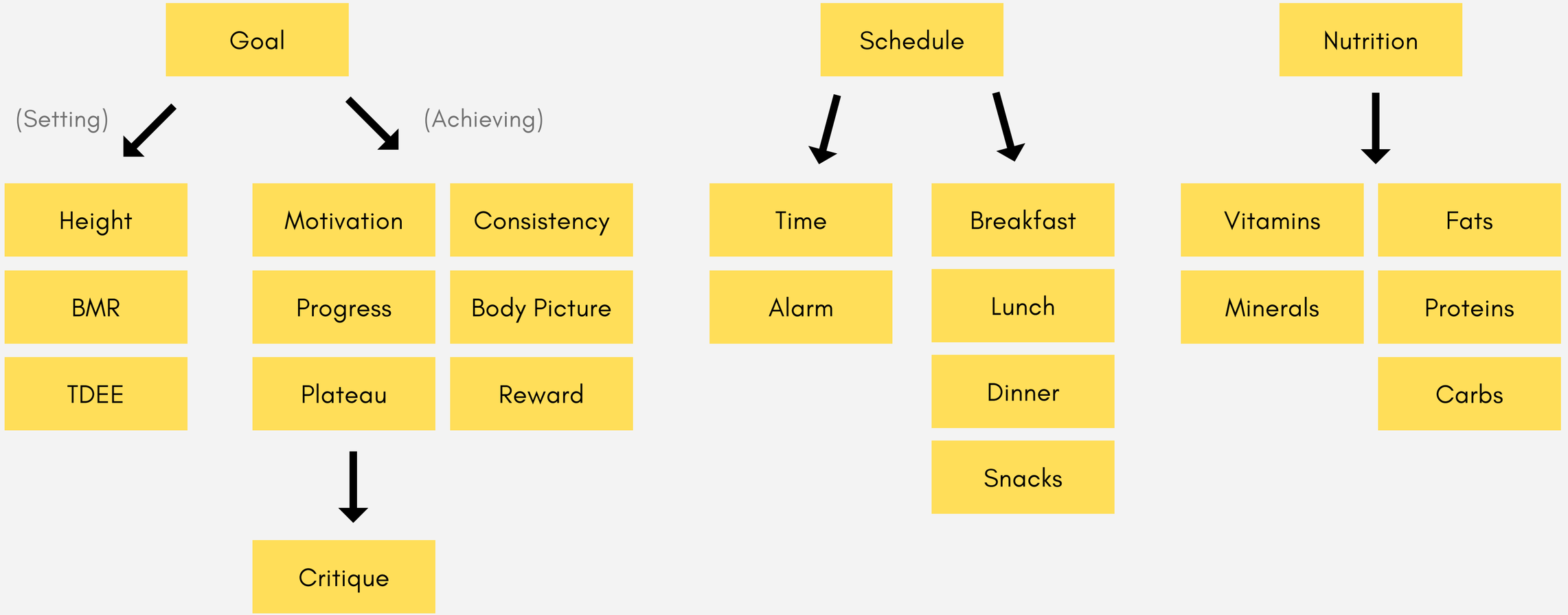
Starting to build a skeleton of the solution.

Navigation & Layout Design

Card Sorting

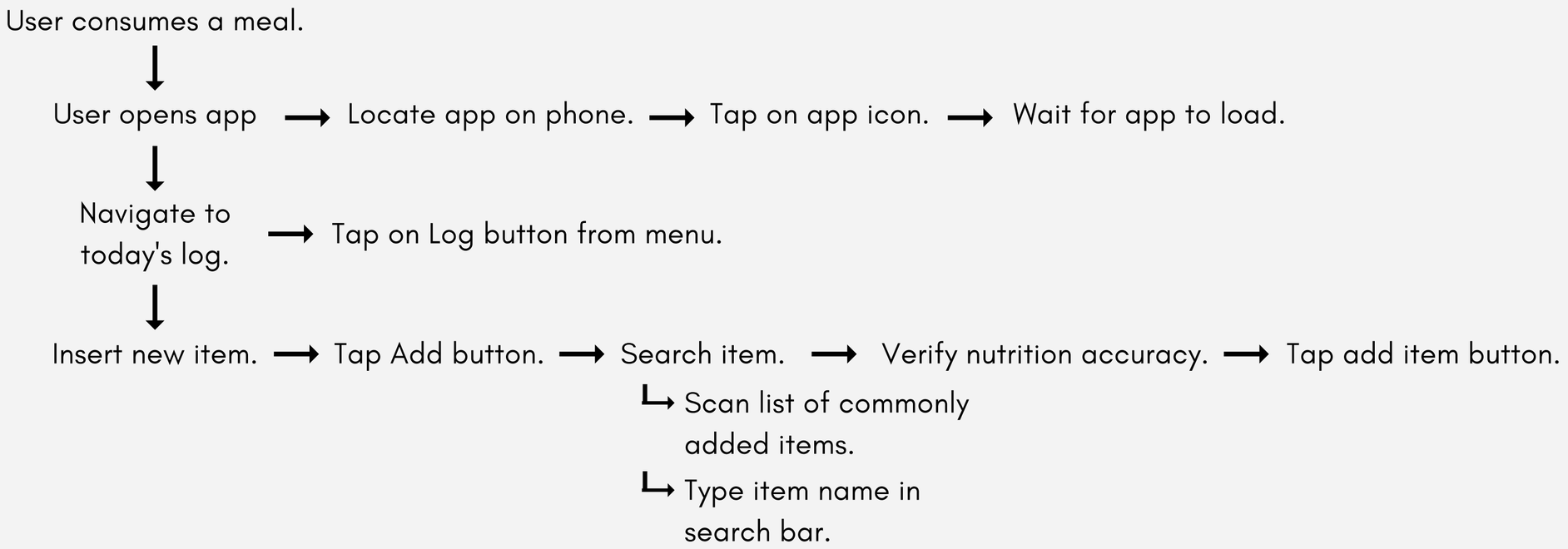
Card sorting is a technique that allows the designer to group a list of relevant words in a structural manner. The first step is to simply brainstorm a variety of words related to the problem space.

Time	Minerals	Lunch	Calories
BMR	Goal	Reward	Plateau
Vitamins	Recipies	Trend	Alarm
Motivation	Protein	Schedule	TDEE
Consistency	Carbs	Progress	Breakfast
Exercise	Fats	Snacks	Body Picture
Height	Dinner	Critique	Weight


Goal
(Setting)
(Achieving)
Height
BMR
TDEE
Motivation
Consistency
Progress
Body Picture
Plateau
Reward
Critique
Schedule
Time
Alarm
Breakfast
Lunch
Dinner
Snacks
Nutrition
Vitamins
Minerals
Fats
Proteins
Carbs

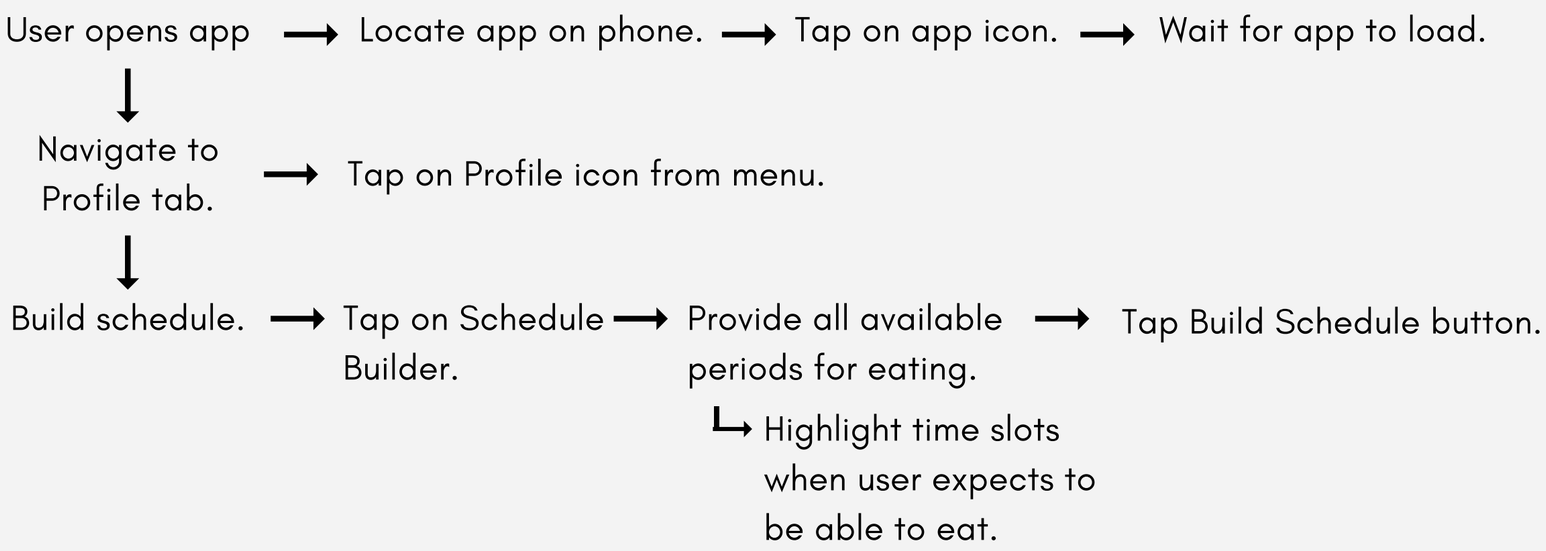
Task Analysis

Adding an item to the log.



Task Analysis

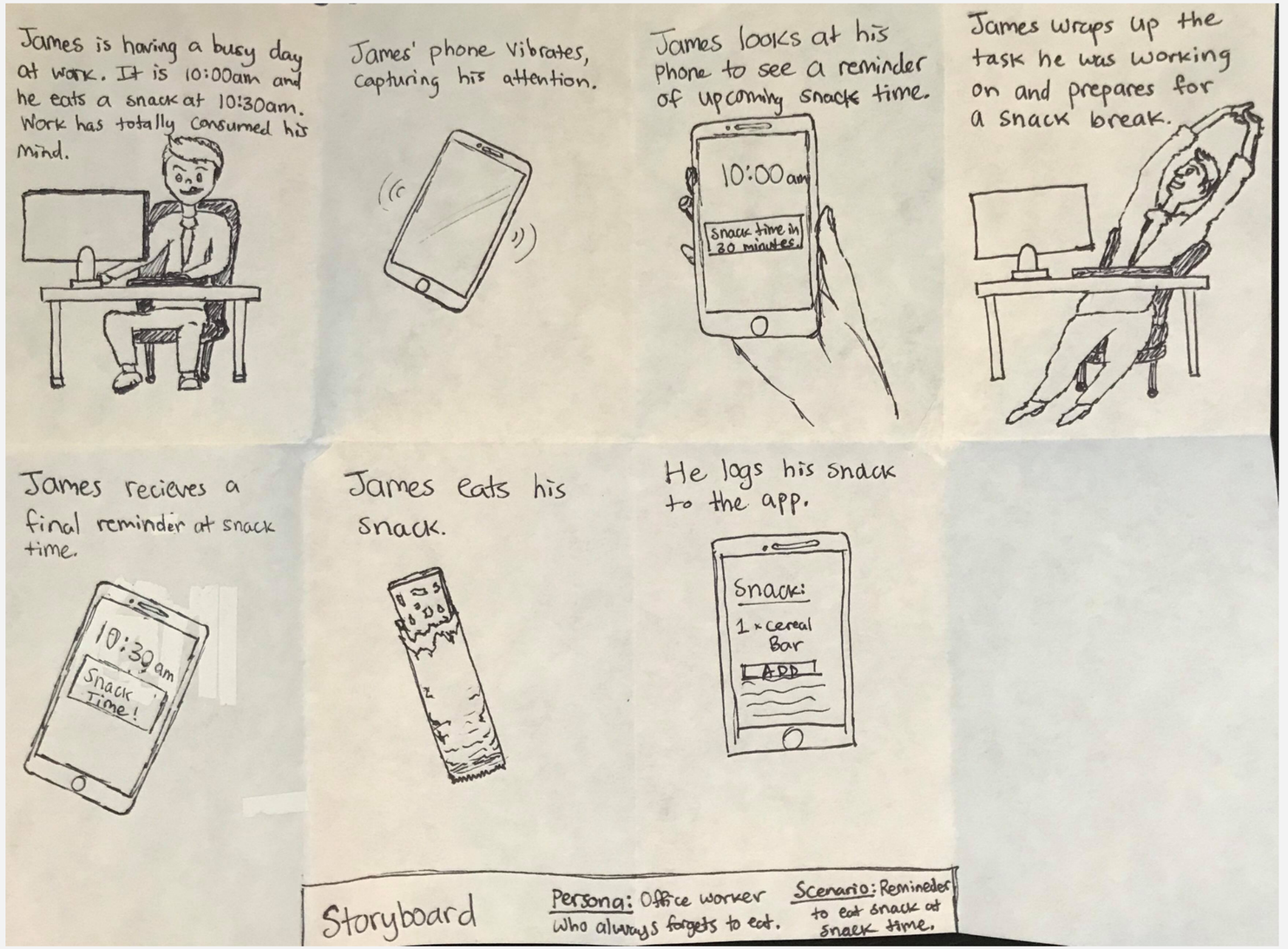
Build an eating schedule.



Early Design Methods

Storyboarding

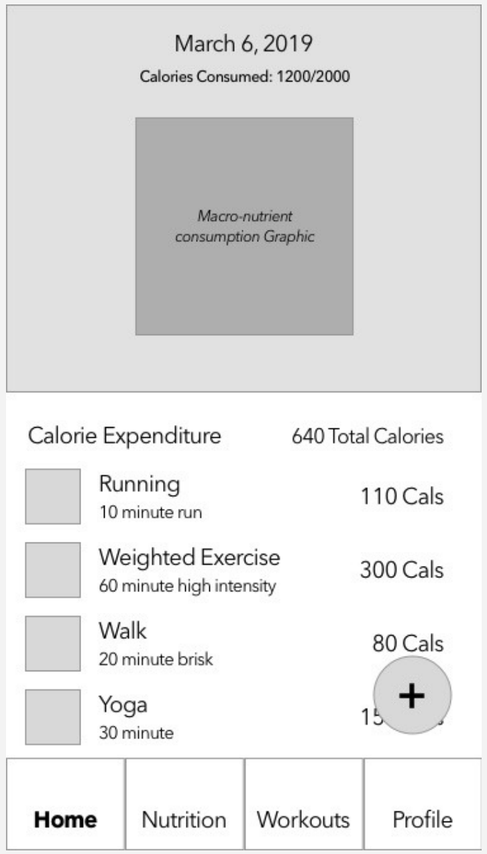
Storyboarding visually helps in predicting and exploring the user's experience with the product. This tool was effective in thinking about how the solution would be useful to the user when incorporated into their daily lives.



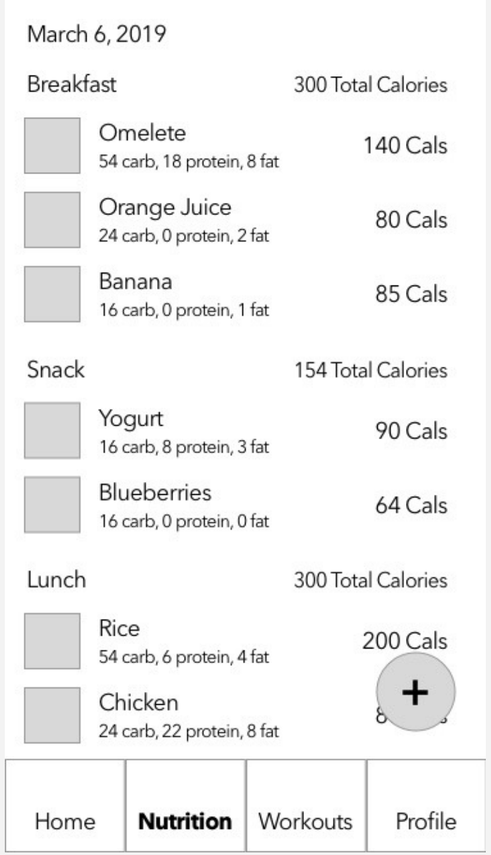
Early Design Methods

Wireframing

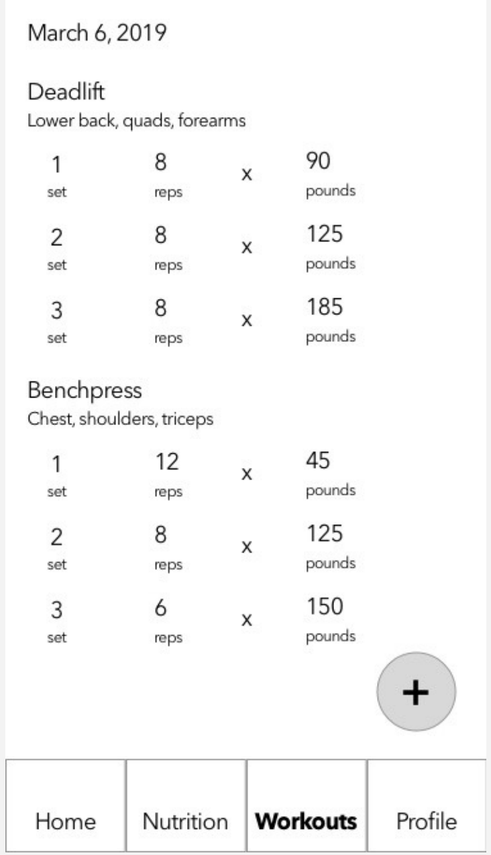
Wireframes are very useful for outlining how elements will be laid out on the interface as well as how the navigation will function. They are kept very simple - adding colour and typography is avoided so that the focus can be kept on layout.



Shows overview of important metrics - visualized nutrition consumption, and most recent physical activity.



Nutrition tab specializes in logging new food items and tracking full day eating history.

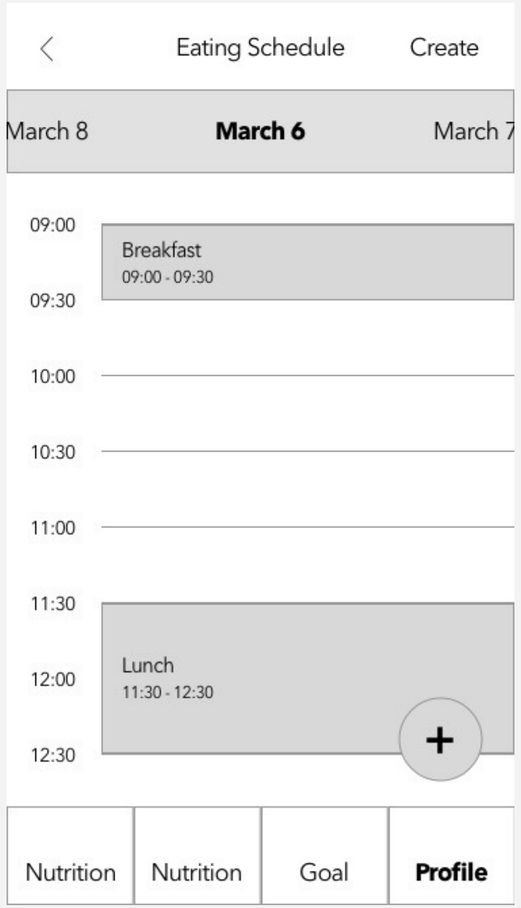


Workout tab shows the day's workout routine. Workouts can be edited.

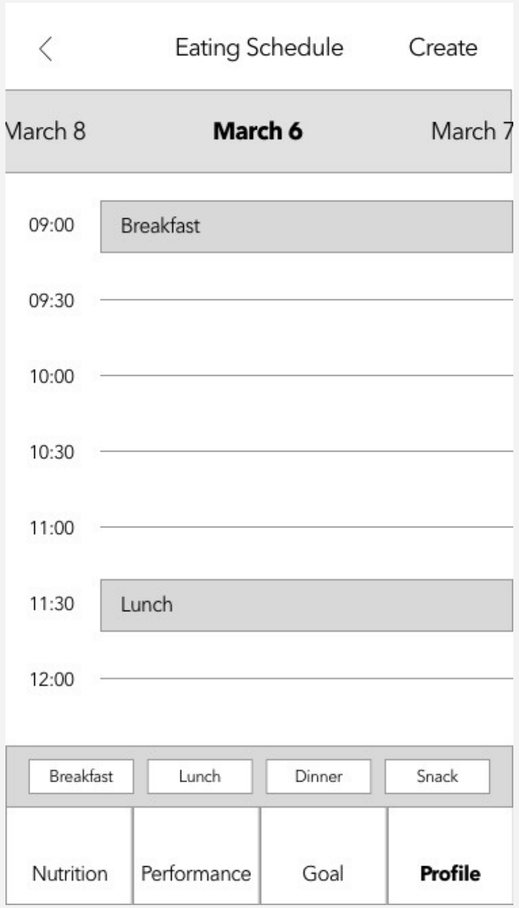
Early Design Methods

Wireframing

Scheduler



Started off with basic calendar. Using common patterns allows users to learn through experience.

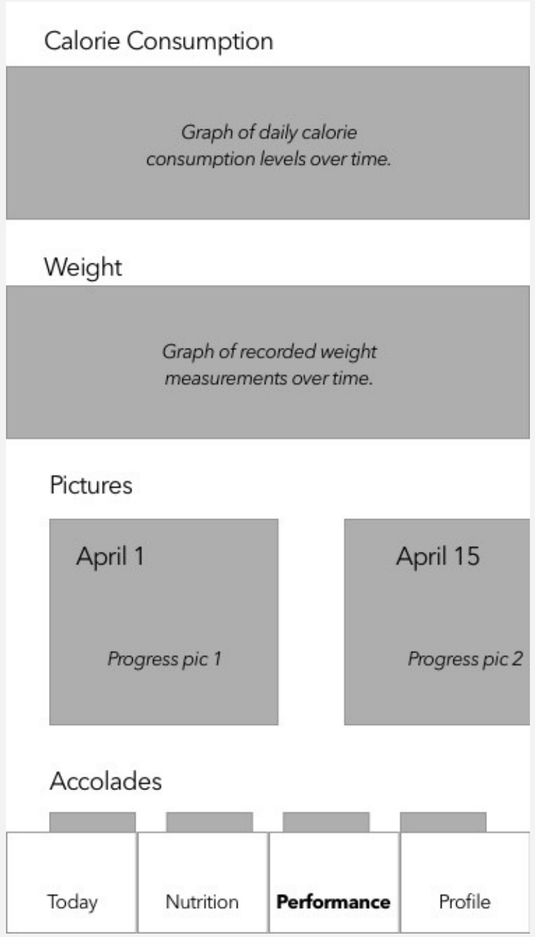


Make some decisions on behalf of user to reduce workflow.

Early Design Methods

Wireframing

Performance

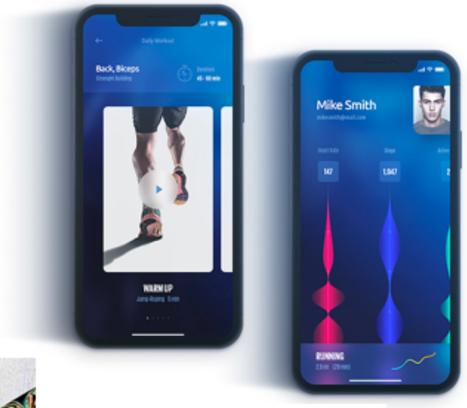


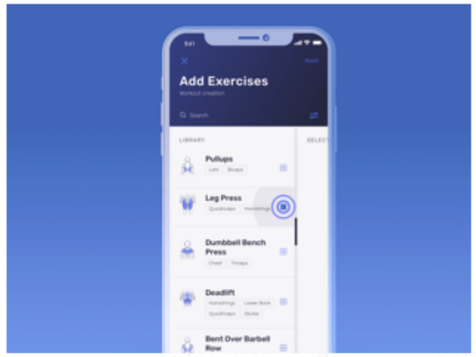
Overview of user's ability to meet target goals over a period of time.

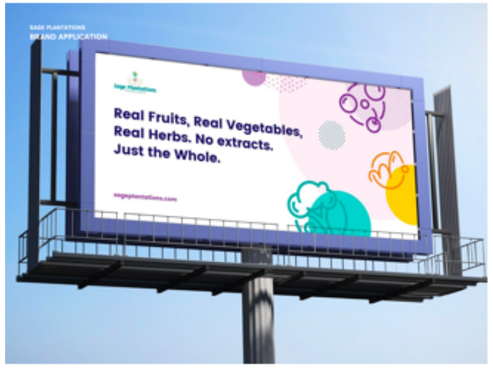
DESIGN REFINEMENT

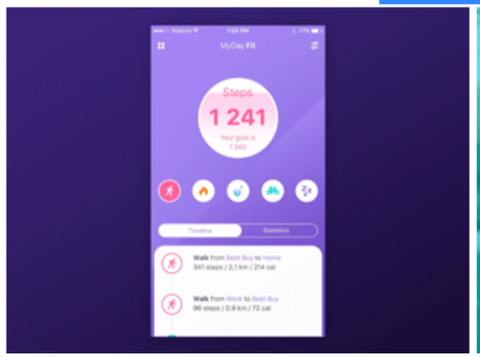
Early Design Methods

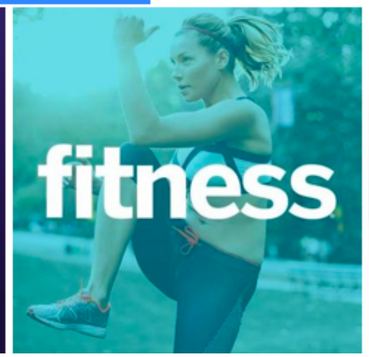
Moodboard











Design Refinement

Styleguide

Avenir Next makes a good typeface due to its simplistic and clean appearance. Sans serf fonts are better for digital experiences for their easy readability. Avenir (French for "future") was designed to have a futuristic feeling. This is relevant in a health promoting app because we want the user to be focused on achieving there goals in the near future. Therefore, a futuristic feeling provides a sense of presence and actionability.

TYPOGRAPHY

Avenir Next

h1 - 18px - Demi Bold

The quick brown fox jumps over the lazy dog.

h2 - 16px - Demi Bold

The quick brown fox jumps over the lazy dog.

body - 16px

The quick brown fox jumps over the lazy dog.

BRANDING & COLOURS

primary

secondary

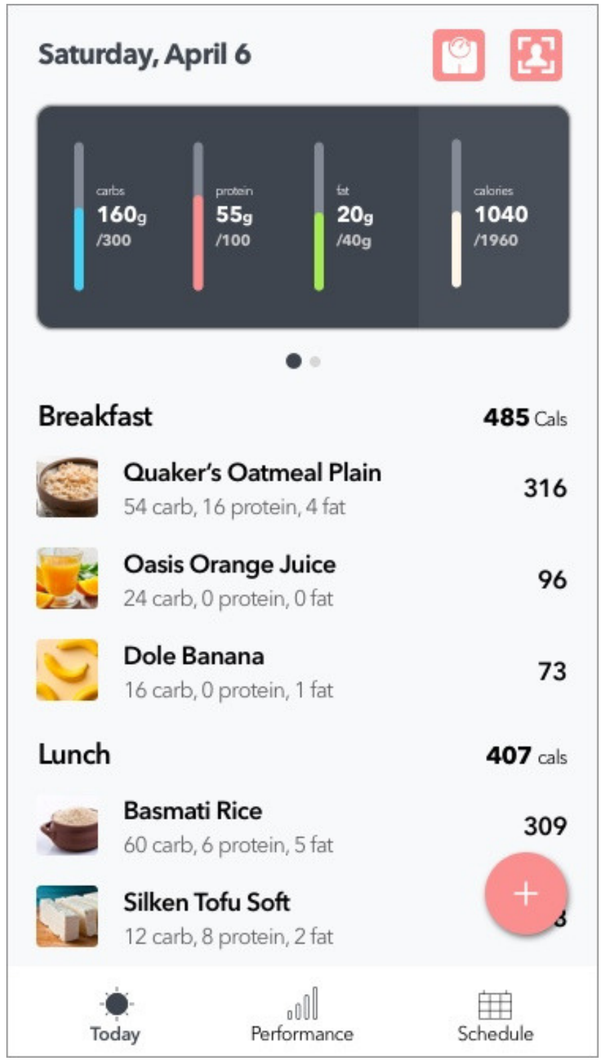
The colour pallete is selected to have a bold colour to provide the user a feeling of power and strength. In addition, red is used to provide sense of health. The secondary colours are mostly used for data visualization, so having vibrant and distinct colours is important to make data readability easier.

ICONOGRAPHY

Flat icons are modern and minimalistic therefore providing a clean feel, which is important in a health app to express the idea of clean health and purity.

Design Refinement

High-fidelity Mockup



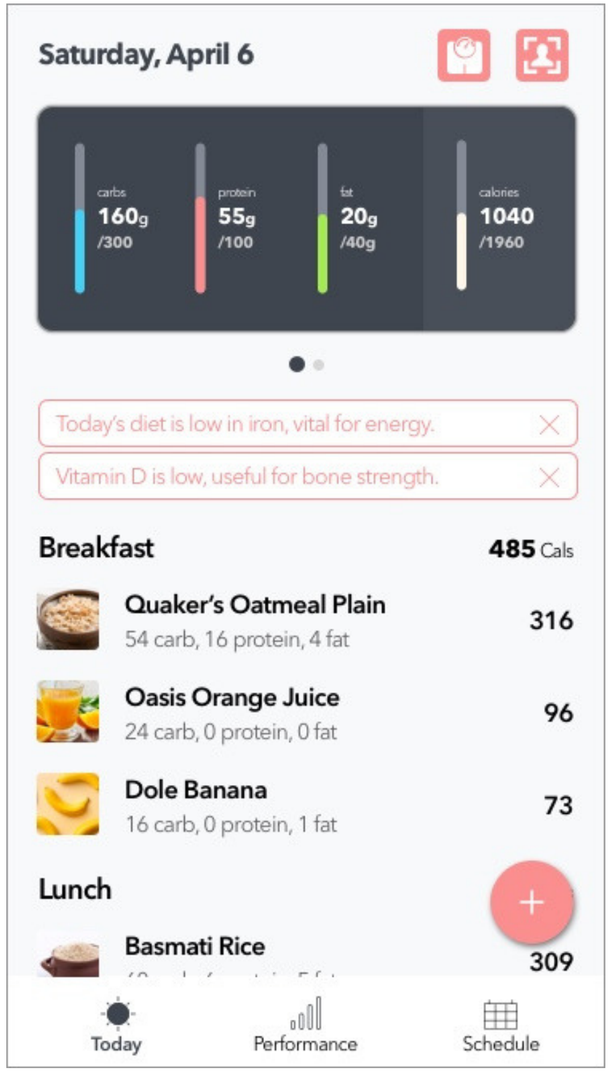
The user is presented with an immediate view of their macro nutrition and caloric consumption. The caloric expenditure is also displayed on the Today tab because this is the most frequently performed tasks on a daily basis are performed here.

In a nutrition tracking app, these are the metrics that interviewed users expressed were the most important.

In summary, the information required for completing the user's most frequent task is provided to them with the least effort required.

Design Refinement

High-fidelity Mockup

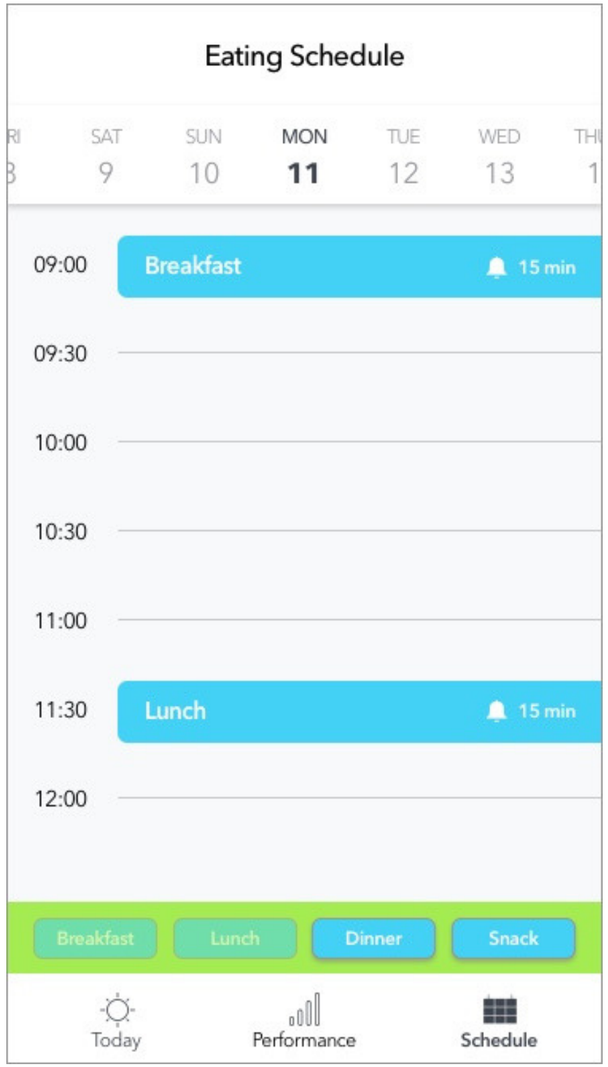


Users showed very little concern for vitamin and mineral tracking. Based on research in nutrition and healthy living, vitamins and minerals play an important part in overall well being as well as aspects related to fitness goals.

The boxes begin to sneak awareness to the user's life regarding this aspect of health.

Design Refinement

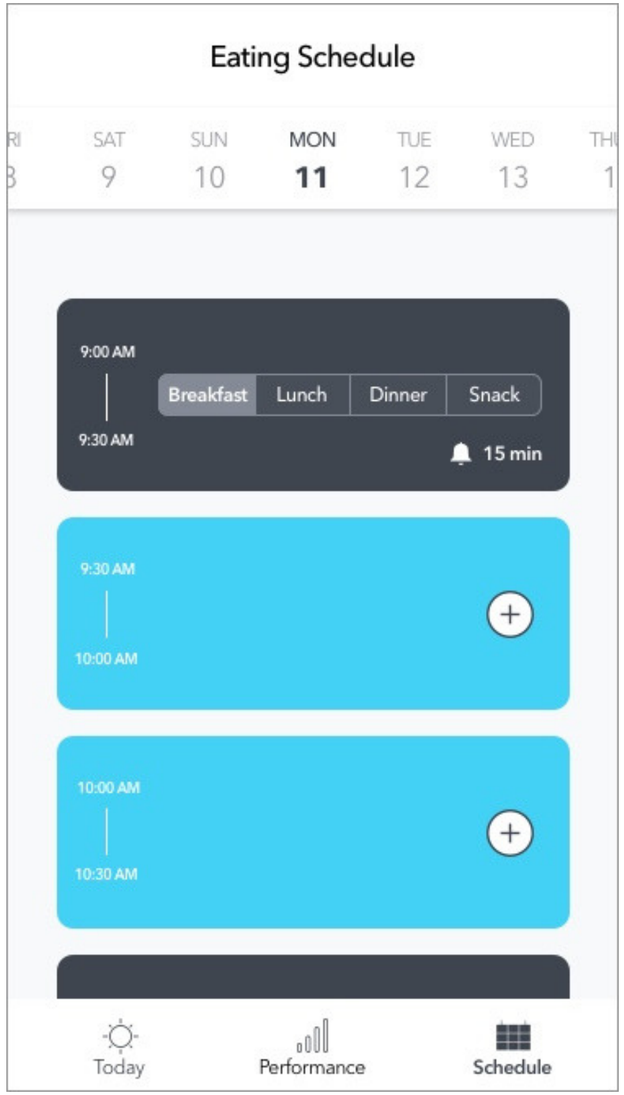
High-fidelity Mockup



Designed to focus on eating schedule.
Reduced workload by eliminating redundant information from traditonal schedulers.

Design Refinement

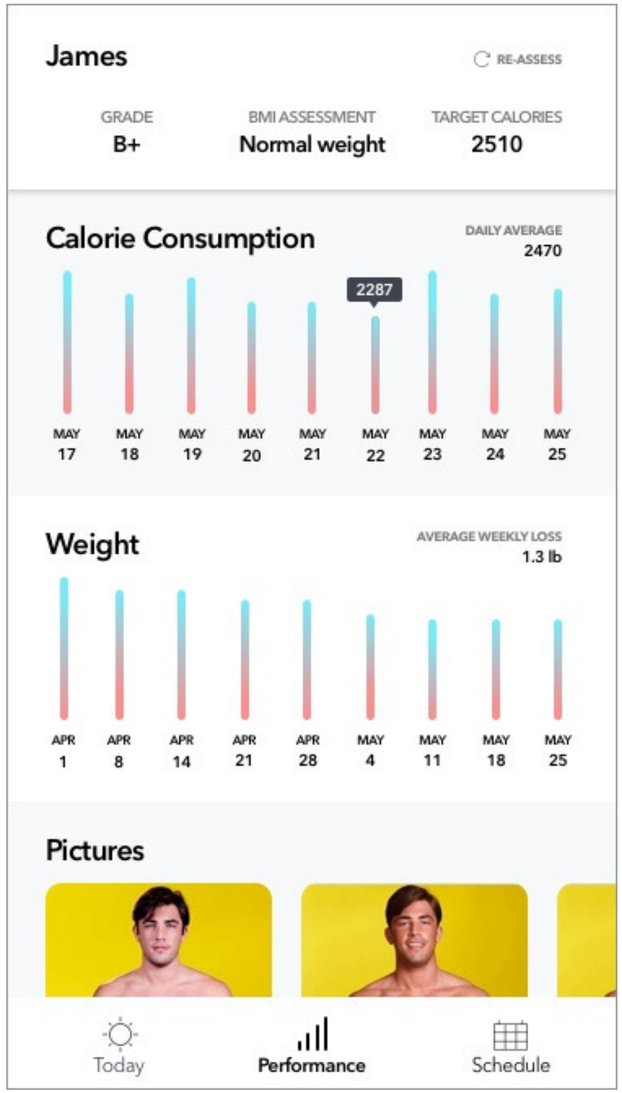
High-fidelity Mockup



Further reduced clicks and task time.
Cleaner designed and improved aesthetics.

Design Refinement

High-fidelity Mockup

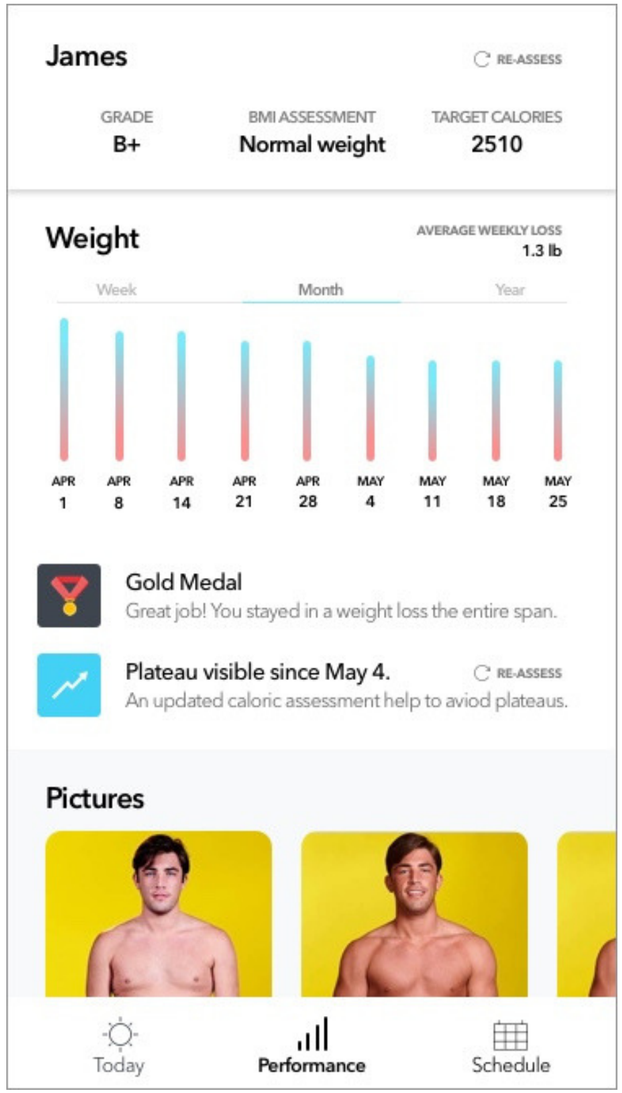


Provides view at performance of important tracking metrics to user in a single view to reduce navigation efforts.

Various performance measures can allow user to have a better understanding of their results.

Design Refinement

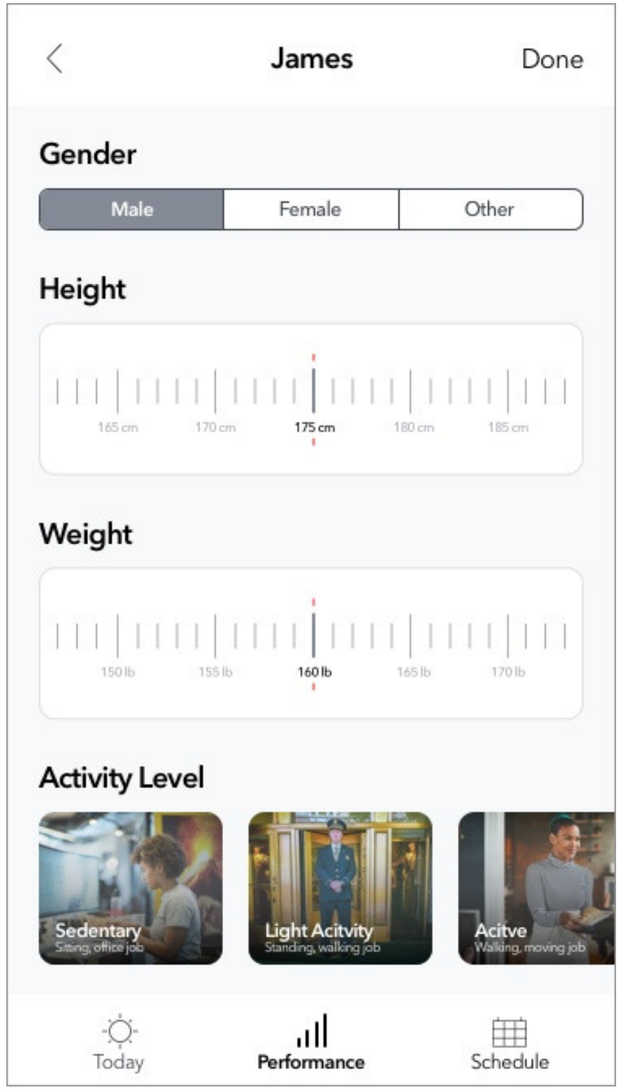
High-fidelity Mockup



Additional details provided upon tapping an individual performance measure to expand the region.
User remains on same tab to allow for smoother exploring between various performance measures.

Design Refinement

High-fidelity Mockup



Smooth design for target building experience.
Helps novice dieters calculate important measurements and goals without requiring background knowledge.
Users are provided guidance towards achieving their goal rather than doing guess work.

Happy Tracking!