FITAX
a simple fitness enabler

Group 19
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Introduction

Within America alone, around [less than a quarter of the population](#) exercise regularly. This means that a little less than a quarter of Americans have successfully integrated some sort of physical activity into their lifestyle. Taking a step back, it should follow that while the actual ratio of physically active individuals on a global scale is a little harder to quickly ascertain, it should reasonably follow that it's also objectively non-trivial.

We make this point because we came to the realization that the divide between the fit and the couch potatoes isn't black and white, but rather a spectrum of individuals, and that there is an equally non-trivial amount of individuals who need some infrastructure to begin living healthier lifestyles.

Hence, Fitax hopes to enable these individuals into developing the routines they've always been daydreamed of adhering to by allowing them to take the first step that most fit people keep track of: their nutrition intake and weight progression.

The Design Process

When we were first presented with the theme "Accountability", we came up with a dozen ideas ranging from a personal scheduler, to a philanthropic crowdsourcing tool, and to a skillset development journal. We eventually held an anonymous vote where each individual picked three of their favorite choices, and then we kept iteratively eliminating the least popular ideas until we ended up with a fitness themed application.

We liked this idea because we all related to different types of individuals with unique mindsets about physical health. This diversity in perspectives was something that we recognized as important because it meant that we wouldn't be tunnel visioned on building an application that we wanted.

Initially, our first iteration of Fitax was going to be a crowdsourced application where users could share information about their fitness progression, share original food recipes, check out videos on proper form for exercises, while also maintaining a nutrition log. This iteration came from the idea that maintaining a healthy lifestyle can be daunting to get into, and perhaps sometimes lonely as well. By integrating some social aspect into it while also providing users the tools to control the factors that govern their health i.e. diet, amount of miles ran, we figured that this would help users

Fortunately, through some guidance from CS160's teaching assistants as well as feedback from some group members of varying physical backgrounds, we realized that we were shooting a little too wide in terms of features, which was bad at the time because that meant that the broader our features, the broader our target audience, and hence the harder to captivate a dedicated set of users. Instead, we decided we had to pick a feature from our first iteration and then decided to polish it as much as we could.

We also did several 10-min interviews to learn more about our users. Our target users are anyone who tried to maintain healthy habits or wants to improve their health, especially nutrition and workout beginners. By interviewing them, we've learned that most people care about their health conditions very much. They just didn't know how to insist on healthy habits and track their calorie intake. Also, many people would adjust their meal preferences based on their exercise routine, so we should allow flexible scheduling of meals/exercises. What's more, users may prefer an application that is concise and simple. We should only keep the necessary features and hide the additional features (for example nutrition articles) in a hidden place.

Weight loss progression tracking was the feature we decided to build on. It was practical, and we agreed that it was simple enough to build an intuitive interface for users to navigate through. Upon settling on this idea, we brainstormed on how we could divide this feature into three primary tasks.

User Tasks

1) A way to set a target weight by a certain date, and a long term progression tracker. This could mean the user would want to lose 6 pounds in 5 weeks, for instance, and then based on the user's height and current weight, there would be a calorie threshold for the user to use as a guideline. Then, through weekly weight logging, our application would graph the user's weight progression in an "overview" page.

2) Keep a log of the user's food consumption. Losing or gaining weight is ultimately a numbers game, and no matter which of the two the user aims for, they're always going to need to have a precise idea of how much calories they've consumed. Our users would have two options to keep track of their nutrition intake: either through manually inputting what they ate if they cooked, or through querying our APIs for a good approximation.

3) A passive cardio listener. What this means is that there's a component within the application that will track the user's current velocity, and from there infer the user's current activity. The purpose is to provide users the amount of calories they've burnt throughout the day, either on purpose or through routine walks.
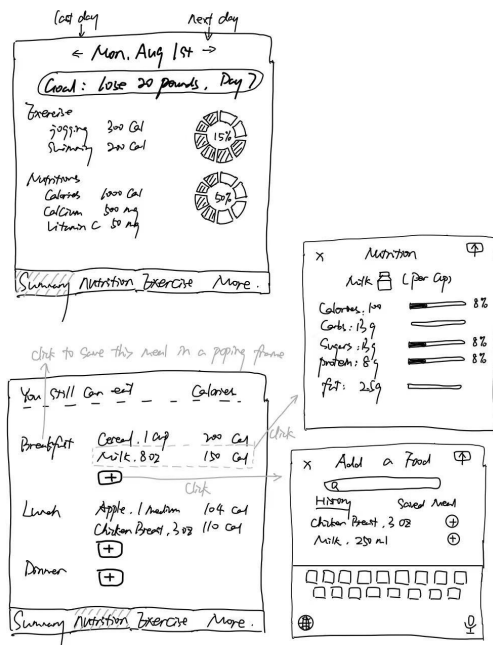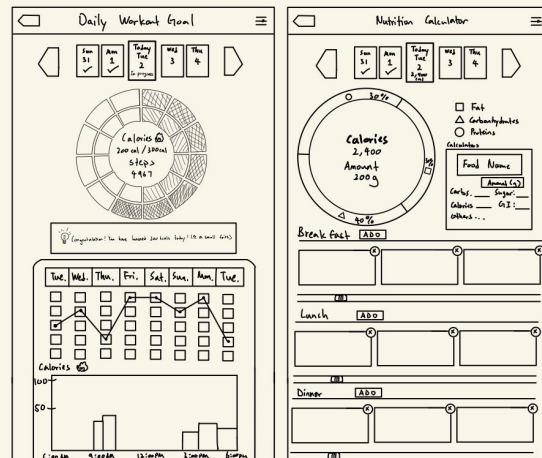
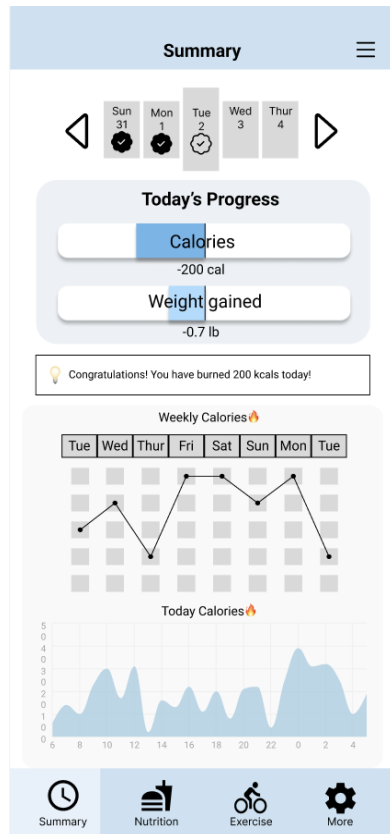

Prototyping the UI with Sketches, Wireframes, and Figma
Iteration One
Our first sketch focused on nailing down the general layout and their functionality. The top left page is meant to represent the first user task: a page that provides users a high level overview of their progress. We figured that our application should begin with this task since it's most likely going to be frequented the most. After all, the entire purpose of Fitax is to be a lightweight fitness progression tracker. The subsequent pages were simply fleshing out the user workflow for task 2 and 3.

Iteration Two
After some discussion, we revisited our approach to how we were designing task 1. We felt that it didn't convey enough information for the user as we originally planned. For instance, how would the user know how they've been making satisfactory progress? There are no graphs, no logs, and no noticeable indicators that convey we had such a feature. Hence, we revamped our first page through a different

Summary

Sun 31   Mon 1   Tue 2   Wed 3   Thur 4

Today's Progress

Calories
-200 cal

Weight gained
-0.7 lb

Congratulations! You have burned 200 kcals today!

Weekly Calories🔥

Tue	Wed	Thur	Fri	Sat	Sun	Mon	Tue

Today Calories🔥

Summary   Nutrition   Exercise   More

sketch and then wireframes it into the refined image above. Here, the user has obvious prompts that they can interact with or view. Also, another issue with our sketch was that it was frankly quite bland. We addressed this concern by thinking about how we could get creative with the macros a user consumes. How could we use that to make our frame for task 2 prettier? Then, we realized something crucial: we're working with data, and data can always be used to augment charts, graphs, and all other fanciful visual statistics! With this, we arrived at the design of Fitax's frame for task 2, which is used in implementation.

Iteration Three
We kept most of the original design in Iteration Two, barring a few changes that came from a necessary re-evaluation stage that followed a day after. Using Figma, we brought more life into our wireframe and implemented our first user workflow. We were satisfied with the overall workflow we had in place, but knew that our application was still lacking in some aspects.
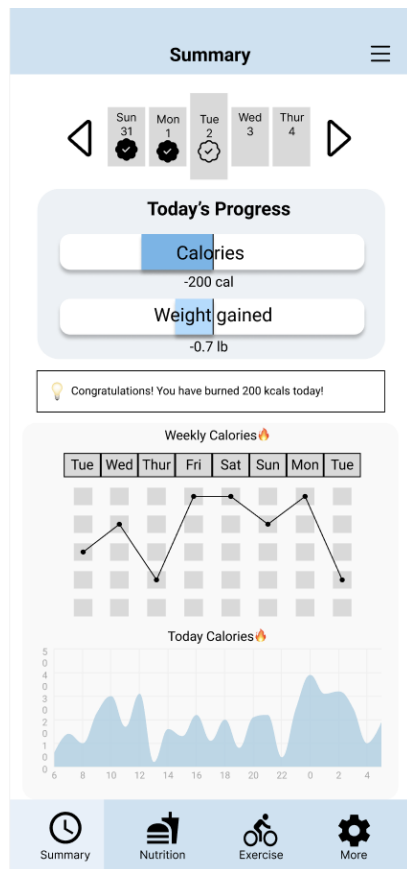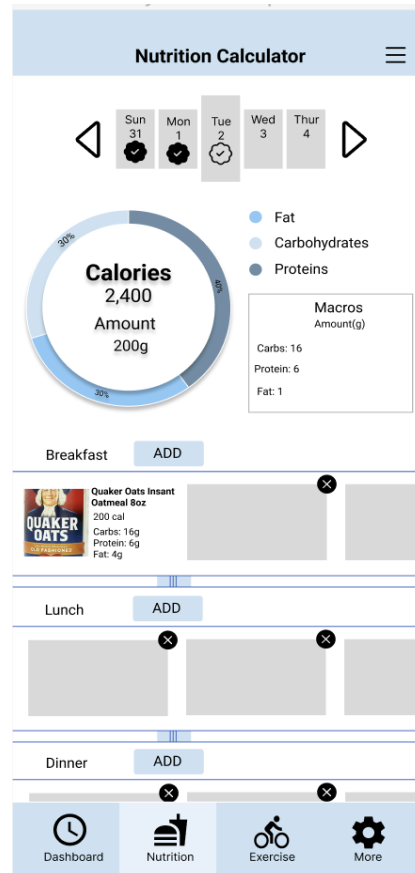
Evaluation

Through applying the ten usability heuristic**,** Fitax's lack of safeguards such as an undo feature, or a confirmation prompt to prevent user mistakes became a glaring issue. **No one** likes using an application that's difficult to work with, and immutability is oftentimes a common proponent of user frustration.
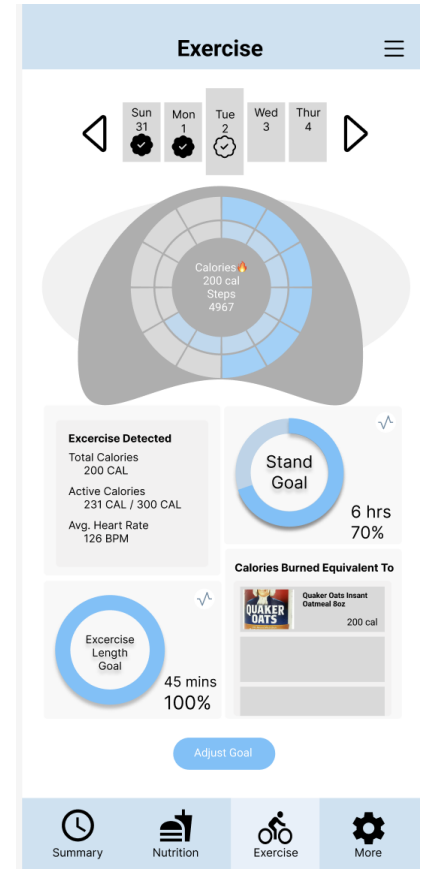
How It Works

User Task 1

User Task 2

User Task 3

Task 1 - A Progression Recap
This is the landing page of Fitax and is essentially the main hub. Here, users are supplied with information relevant to the goals which they supply to Fitax.

Task 2 - Logging Consumption:
Here, users get to query their foods and input it into the nutrition page, where an automatic offset to the user's recommended calorie which is calculated by Fitax. The goal was to be neat and informative. By utilizing CalorieNinjas' API, we provide users a rich database to query nutrition from.

Task 3 - Cardio Tracker :

In the Exercise page, users get to check on the amount of calories they burn throughout the day.

More Evaluation
We tested our application with a couple of other students in CS160 to solicit some feedback on our product, and received the following notable ones:

Anonymous Wombat: I think it does a pretty good job at doing what it's supposed to do. Some parts are a little bit confusing though, like the blocky looking matrix. I have no idea what that's supposed to do. Everything else looks good to me.

Anonymous Chinchilla: Functionally, I think it's structured pretty well. Things that should be obvious are obvious, and I like the cute little chart you guys have for the food calorie thingy page. I think the color scheme might be a little too uniform though. Maybe consider changing that if you guys have time.

Due to time constraints however, we failed to address the feedback provided by our peers, but we took it as a lesson to carry onto our future projects that we should consider holding user evaluations more consistently.

Reflections

Working on this final project over the last two weeks of UC Berkeley's summer session was a wonderful, albeit stressful experience. Through the sustained efforts of the CS160 course staff, their responsiveness bred a culture from the beginning of class that, in our opinion, successfully encouraged collaboration despite the challenges of fostering such an environment in a hybrid class. This culture subsequently bled into our team, and it showed through early morning and late night meetings we held to discuss our project at lengths.

There are a few lessons that we've taken from this project, and in no particular order of importance, they are as follows:

- **Working in a group is challenging, but rewarding if done correctly**. The foundation of any team environment is built on communication and trust. Fortunately, we didn't lack trust, but we could've communicated better on some ends. This manifested itself in redundant work, and sometimes a lack of clear direction in the beginning of our project. In retrospect, we should've been direct towards the tail end of our meetings. Questions like "Does anyone have any questions about who the target audience is" or "should we go over the specifications again" or even something broad like "could someone repeat to me what we're trying to achieve?" Majority of the group needs to be on the same page, otherwise any lingerie ambiguity renders it impossible to distribute work.
- **Approximated a time for how long it would take to build a minimally viable product, and triple that.** Most people who create deliverables, especially in a group setting, should be able to understand this one. Firstly, it should go without saying that ETAs for working on big projects without a comfortable background on the tech stack is never what's expected. Secondly, after the application is built, it needs to be evaluated. Where are the bugs? Are we happy with how this is implemented? What about runtime or latency issues? Thirdly, it's important to let a product sit for a while and reevaluate it at a later time. Emotions are a thing to be aware of and as consistently objective as some people may like to think themselves, they're probably not.

Conclusion

When we started our project, we dreamt big of what our application would do. Through deadlines and wisdom, we learnt to narrow our scope and suspend our ambitions. What would have been a hodgepodge of underdeveloped features and a messy user workflow, instead turned into something more refined: **a simple application that people can rely on to stay on track, to stay motivated, and to stay driven,** in pursuit of their fitness goals.

Appendix

Github Repo: https://github.com/tigerisbigcat/CS160_Final_Project
Github IO Page (search API would not work because API keys will not be accessible):
https://tigerisbigcat.github.io/CS160_Final_Project
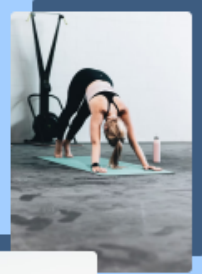**Presentation Slides**:
https://docs.google.com/presentation/d/1whea4AFP39MI9AcCNgtrveVnBiDz9Jd43pg7vghXv1g/
edit#slide=id.g14535789980_8_0
Poster: https://www.figma.com/file/zisvQ786ilgnjhFR3bbR1u/Poster
Video: https://www.youtube.com/watch?v=Ii7hwRNuZc4

FIT AX

Your thoughtful assistant that makes you fit

Calculate

Summarize

Query

Easily get your **BMI value** based on your weight and height

Use the **Macro Calculator** to get the overview of nutrition intake

Monitor users' daily exercise and health data

Summarize daily/weekly calorie intake and burned

Search for any food by simply **query** their name and adjust their amount

The **history** feature make you quickly add the recent added food

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