2fit

Assignment 5: Low-Fi Prototype

CS 147 Online/Local Community 2019

Introduction

Matthew L.

Akhil J.

Kaughlin C.

Autumn W.

Value Proposition

2fit. fit together.

Mission Statement

To connect people with compatible fitness buddies.

Problem/Solution Overview

Due to conflicting schedules, differing goals, and the intimidating gym atmosphere, exercisers often struggle to find and connect with a workout partner.

2Fit empowers users to connect with others who have similar abilities, goals, and schedules. Once matched, 2Fit helps workout partners reach their fitness goals together.

Sketches

5 Concept Design Ideas (22 Sketches)

Figure 1: Tile Concept Sketch

This idea consists of an interface that uses pictures tiles. With each choice, the tiles got more and more detailed until eventually a match is made.
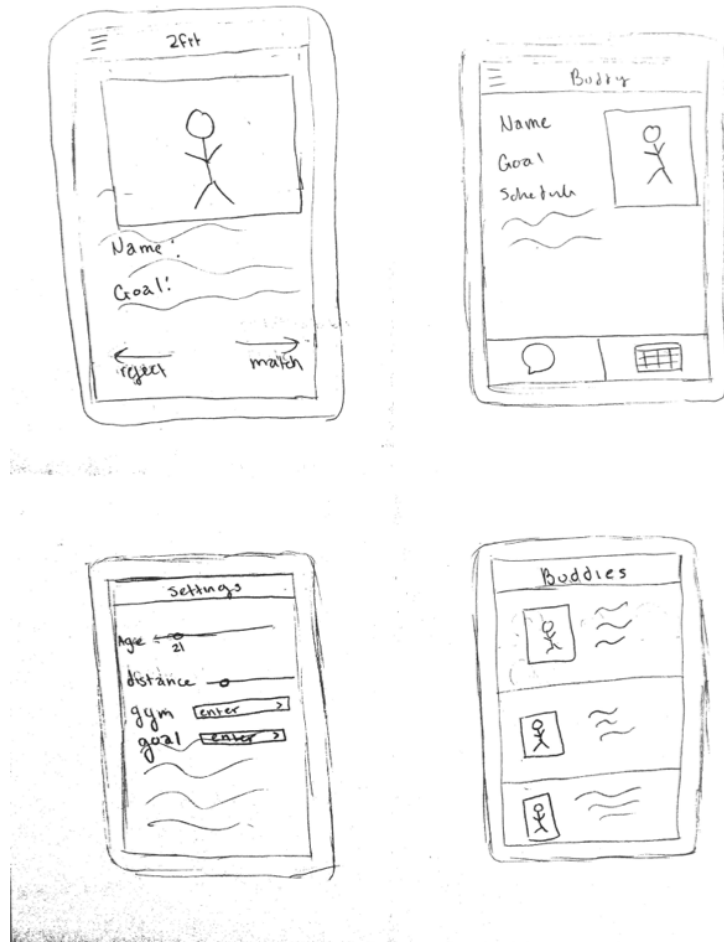
Figure 2: Tinder Concept

This idea is based around a swiping feature where the person can look through the profiles swiping on their preferences.
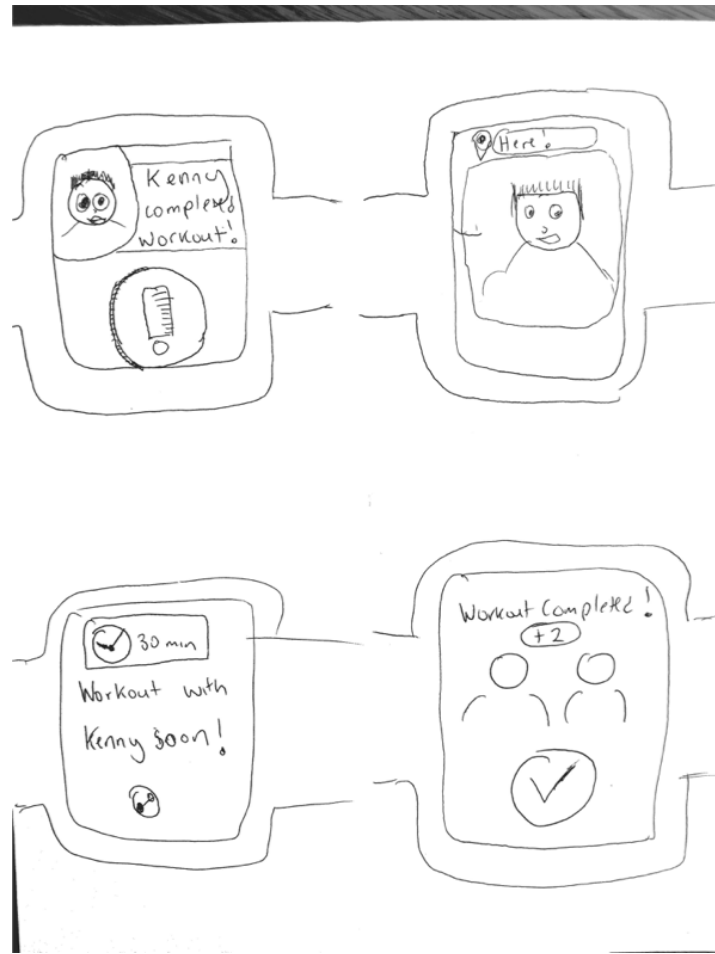
Figure 3: Watch Concept

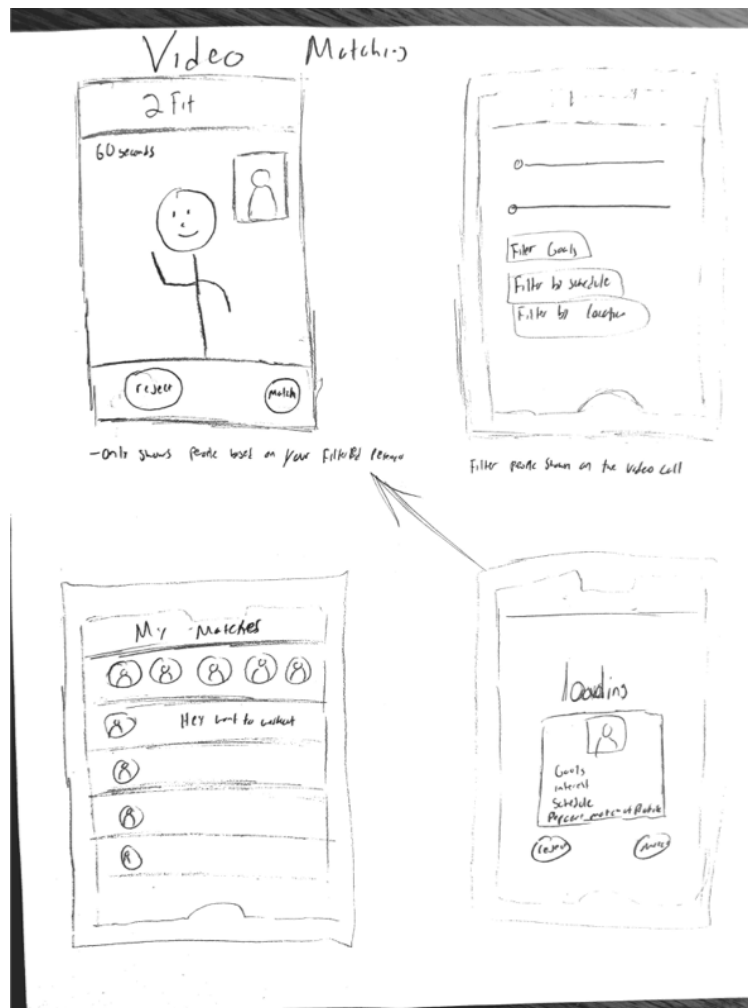This idea carries out the app entirely on a smart watch.

Figure 4: Video Call Concept

This idea uses short video calls to match people with their fitness buddies.

Figure 5: Scheduling Interface

This brainstorm idea centers around scheduling to make the app work.

Top 2 Sketches

The top two designs were the tile design and the schedule centered design. See figures 6 and 7.
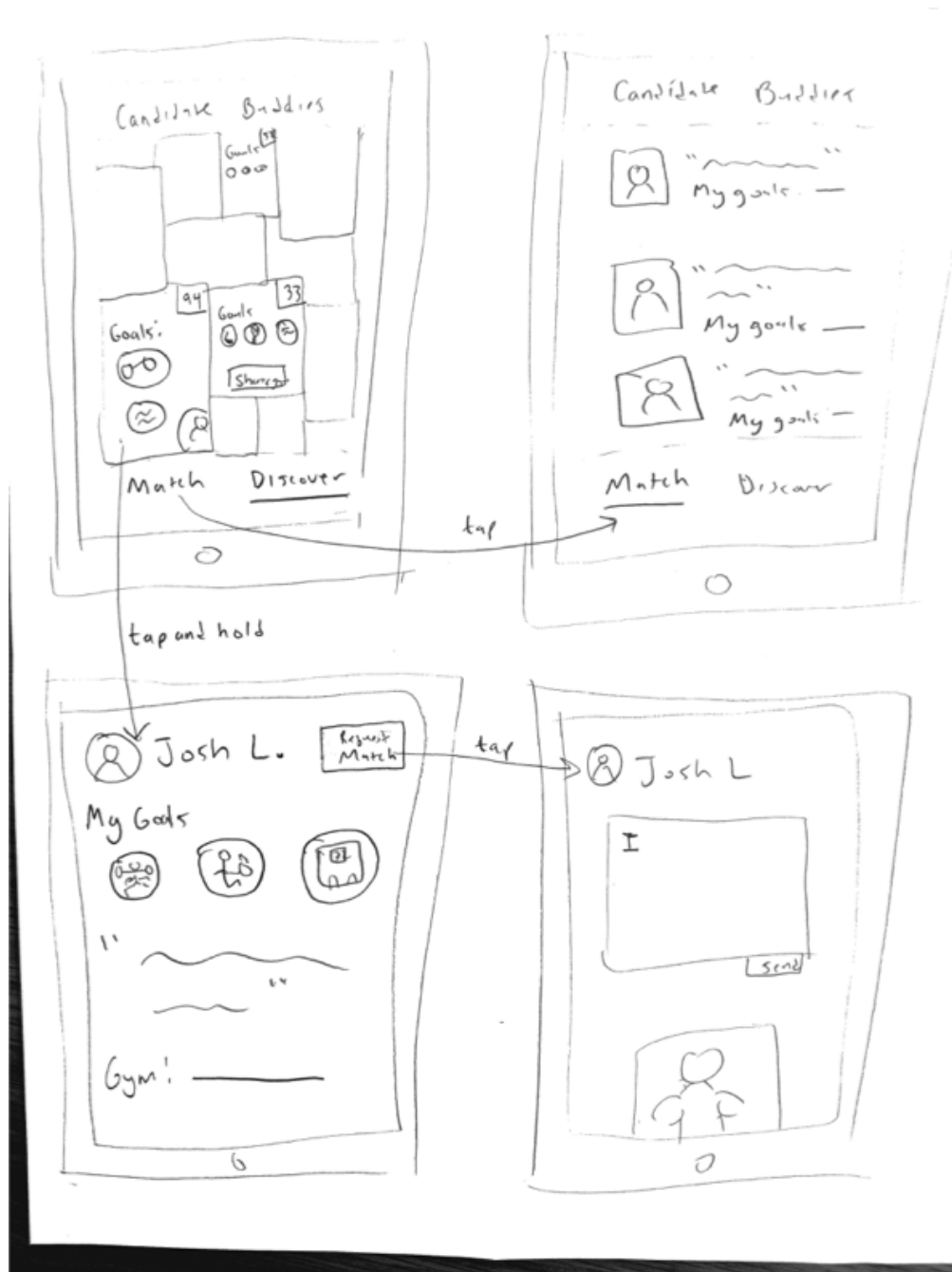

Figure 6: Storyboard of Tile Design

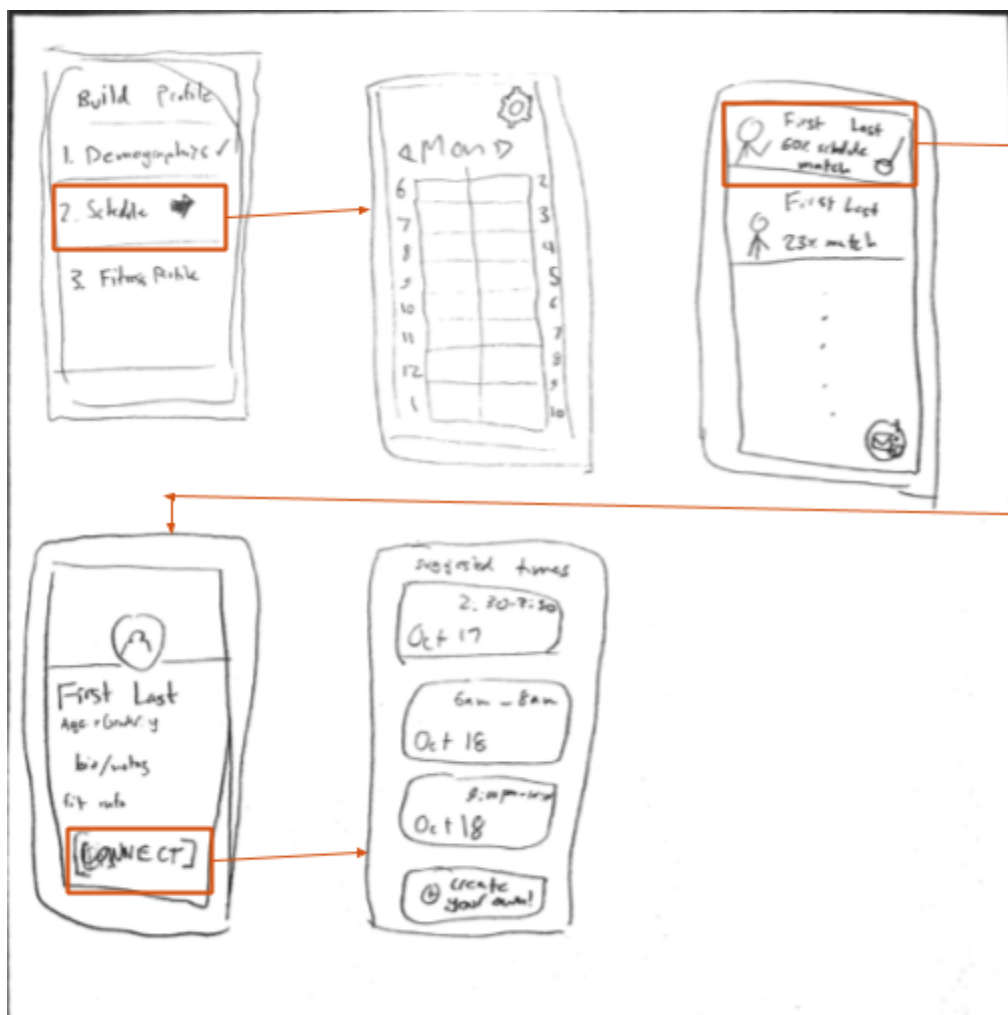This design uses tiles as the main interface design and narrows down the buddy matching with each selection.

Figure 7: Storyboard of Schedule Design

This design centers around using people's schedules as the main filter.

Pros and Cons

Tile Design

Pros	Cons
➔ Most of the profiles are viewable at once ➔ Intuitive scrolling system	➔ Long process to match with a buddy ➔ Interface could be overwhelming

Scheduling Design

Pros	Cons
➔ Makes it easier for buddies to schedule ➔ Simple interface to input schedule	➔ Does not focus on other features ➔ Hard to tell if the person is a match at first glance

Selected Design

Decision Reasoning

We chose to focus on the scheduling design because it is a defining factor during the process of choosing a workout buddy. We also liked the design aspect of the tile interface, so we tried to incorporate the tile/card looking design without overcomplicating the interface.
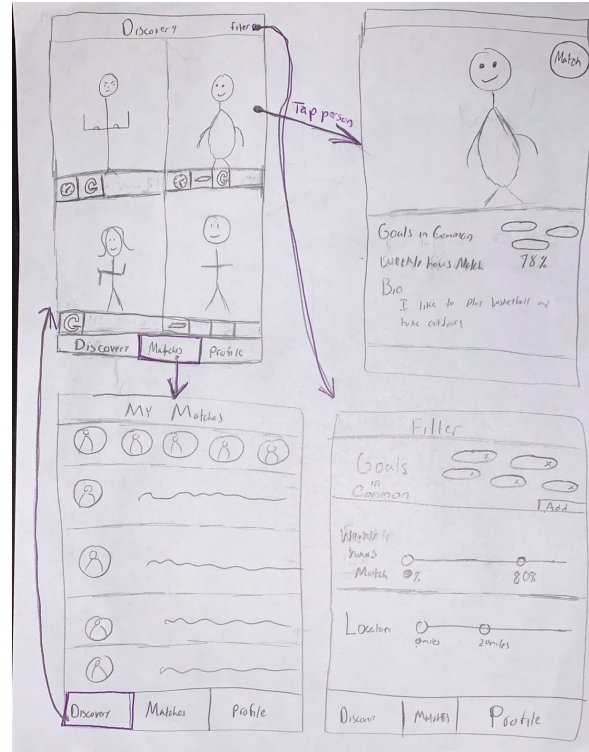
Task Storyboards

Figure 8: Task 1- find a compatible buddy

Use the discover tab to view potential buddies profiles and match with them.

Figure 9: Task 2- schedule a workout

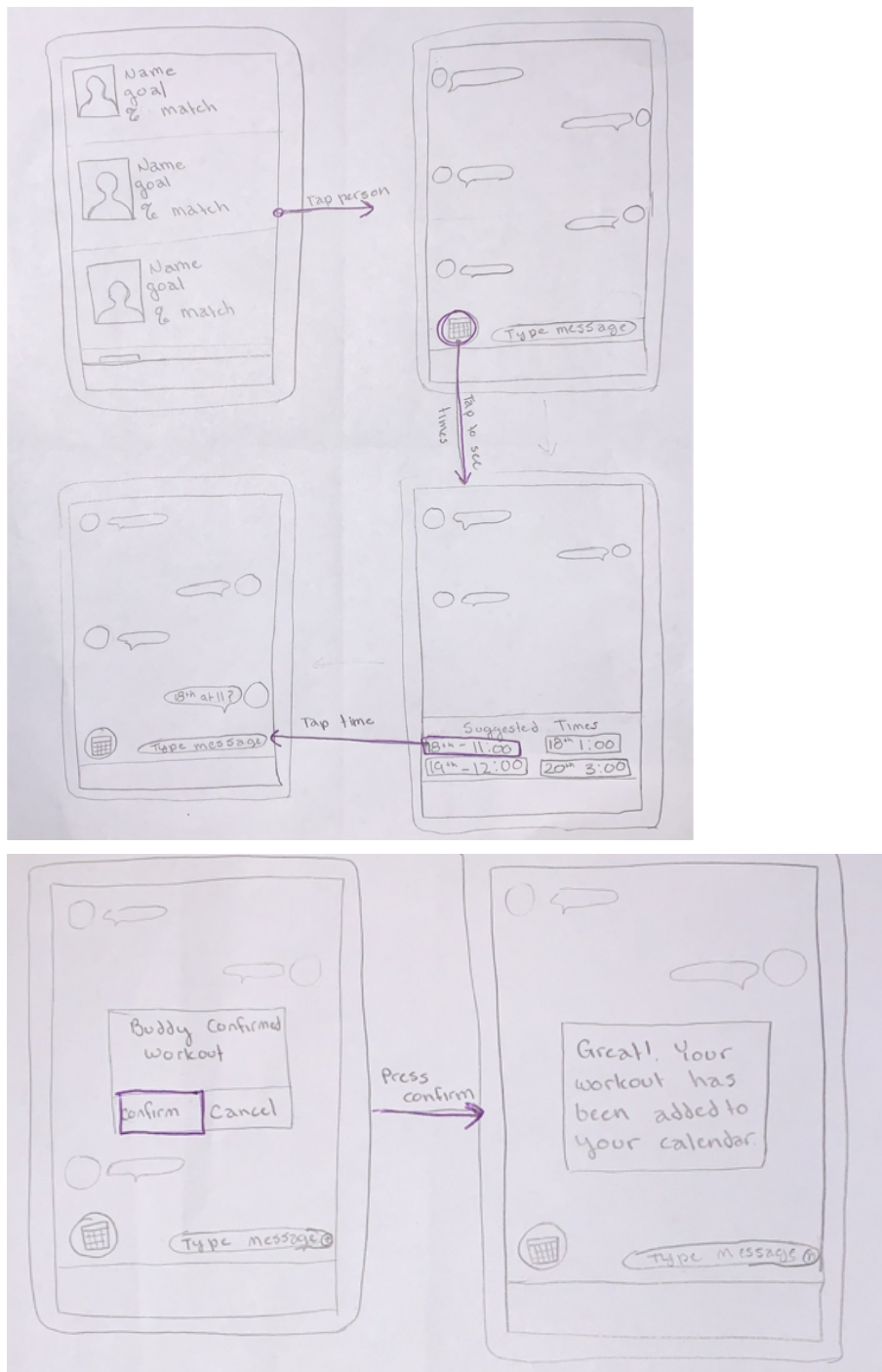Use the calendar button on the messaging page to choose from a list of times that work for both of the buddies.
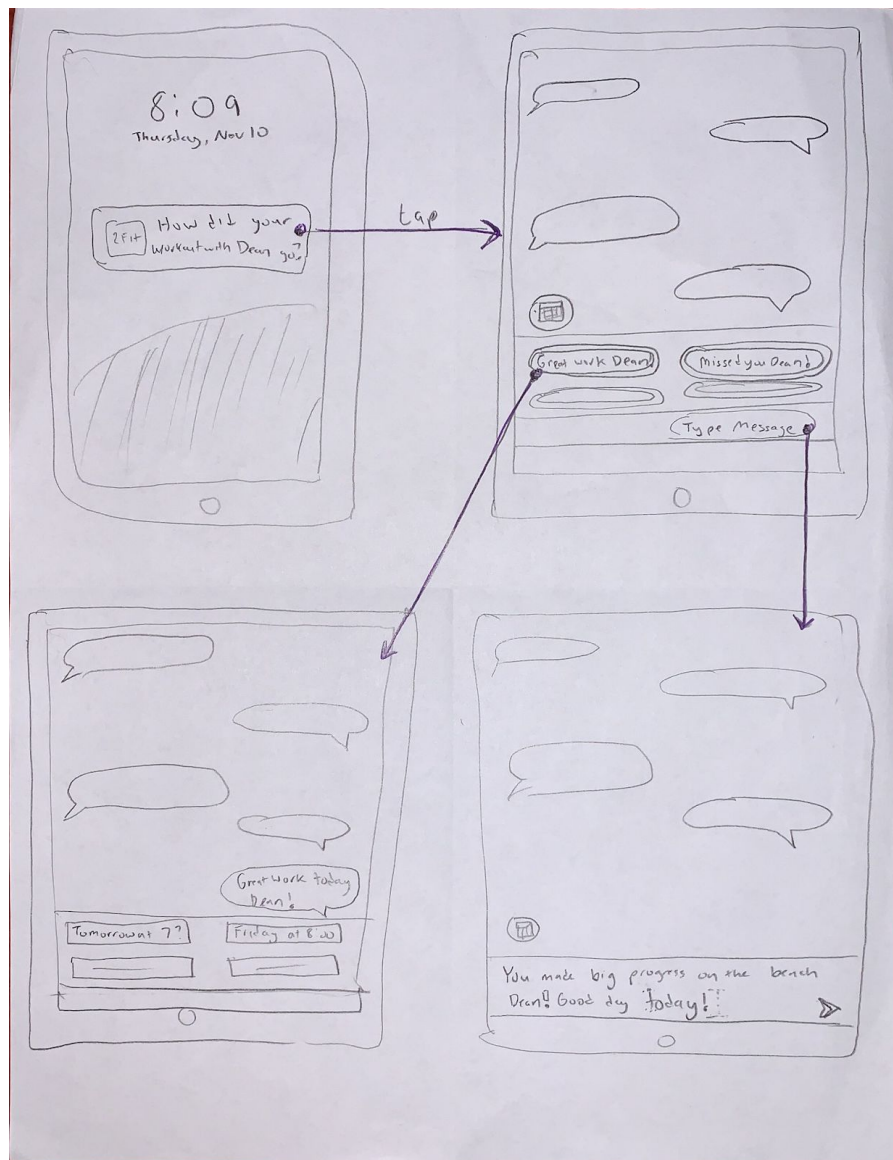
Figure 10: Task 3- send words of support

Use the post workout push notification to send a message to your buddy.

Functionality Table

Element	Function
Discover Page	Scroll through pictures and summaries of profiles. Click on a profile for more information.

Buddies Page	Look at the current buddies. Can click on a buddy to get to the messaging screen.
Profile Page	Shows the user's profile indicating their interests, intensity level, and bio.
Match Button (Discover Page)	Connects the user with the buddy they selected.
Message Screen	Allows the user to message their buddy.
Text Input (Messaging)	Allows the user to personalize messages to their buddy.
Schedule Button (Messaging)	Shows suggested times that they have in common with their buddy to workout.

Prototype

Our prototype mimics a mobile app that allows the user to find fitness partners, schedule workouts, and send words of encouragement. This functions mainly through touch input on visual screens. We used index cards for pop up screens and sticky notes for name changes/text inputs.

Task 1: Find a compatible fitness buddy
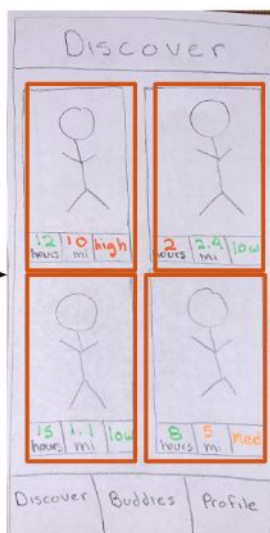
Tester's profile page

Click "Discover" to go
to the discover page

Discover Page

Click on a person to
view their full profile

A buddy profile page
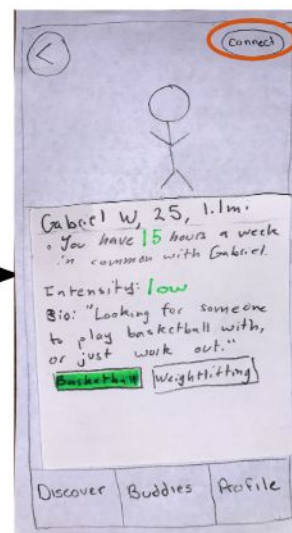
Click on "Connect" to
connect with a buddy

Connected with buddy page

The buddy also
connected, so the task
is complete

Possible profiles
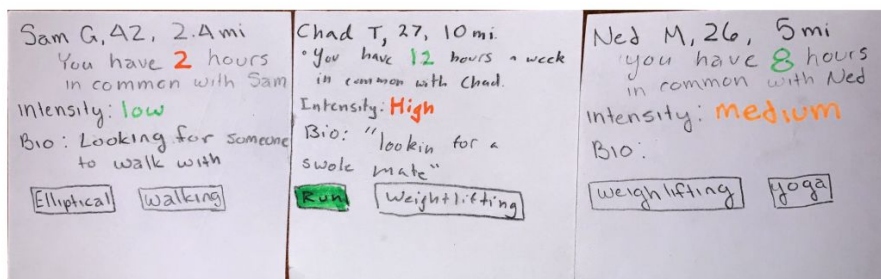
Figure 11: Choose a compatible fitness buddy

Task 2: Schedule a workout

Buddy message screen

Click the **calendar button** to schedule

Calendar Screen
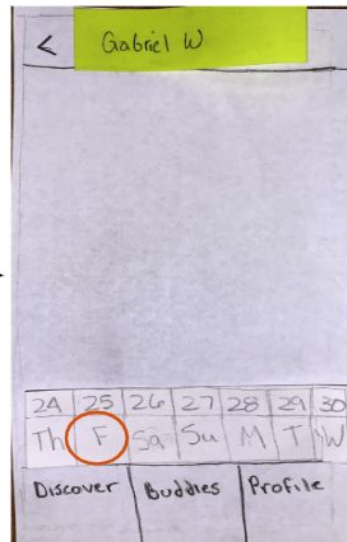
Click the **Friday** to find suggested hours

Calendar Screen
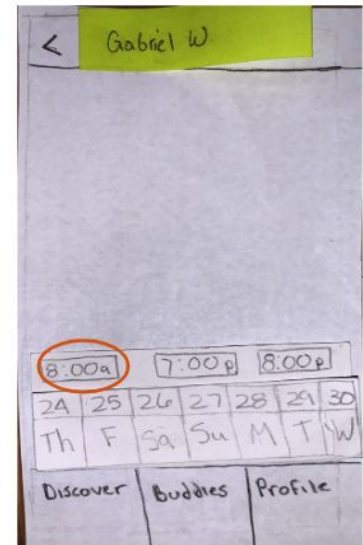
Click **8am** to choose the time to workout

Message Screen
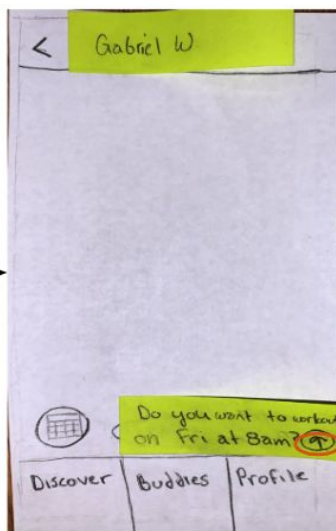
Click **send button** to send the message to schedule

Workout confirmation
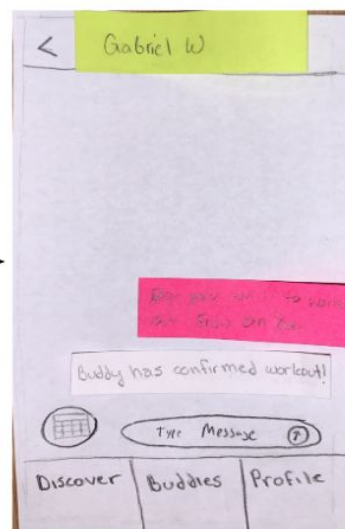
Figure 12: Schedule a workout

Task 3: Give words of support
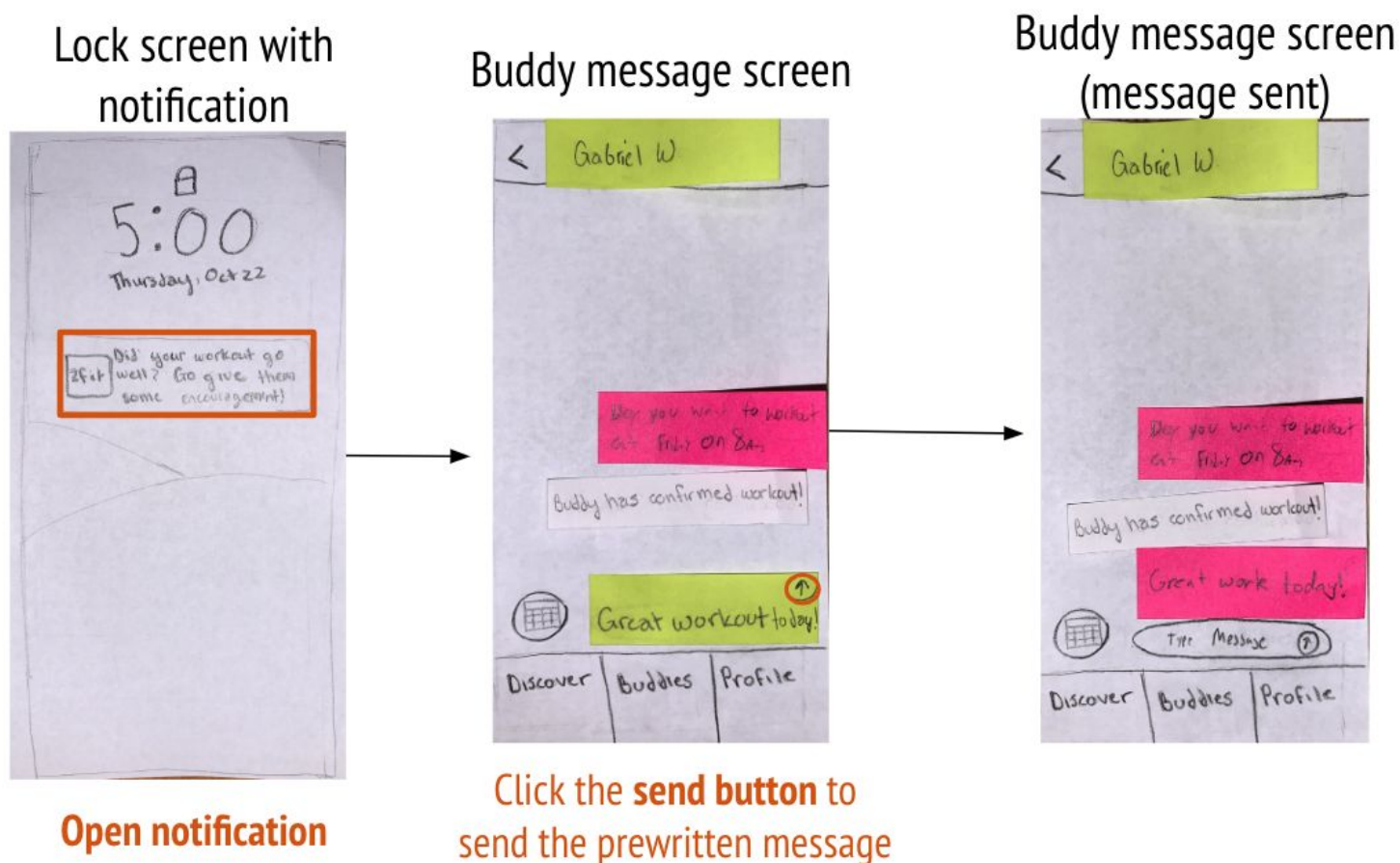
Figure 13: Send words of support
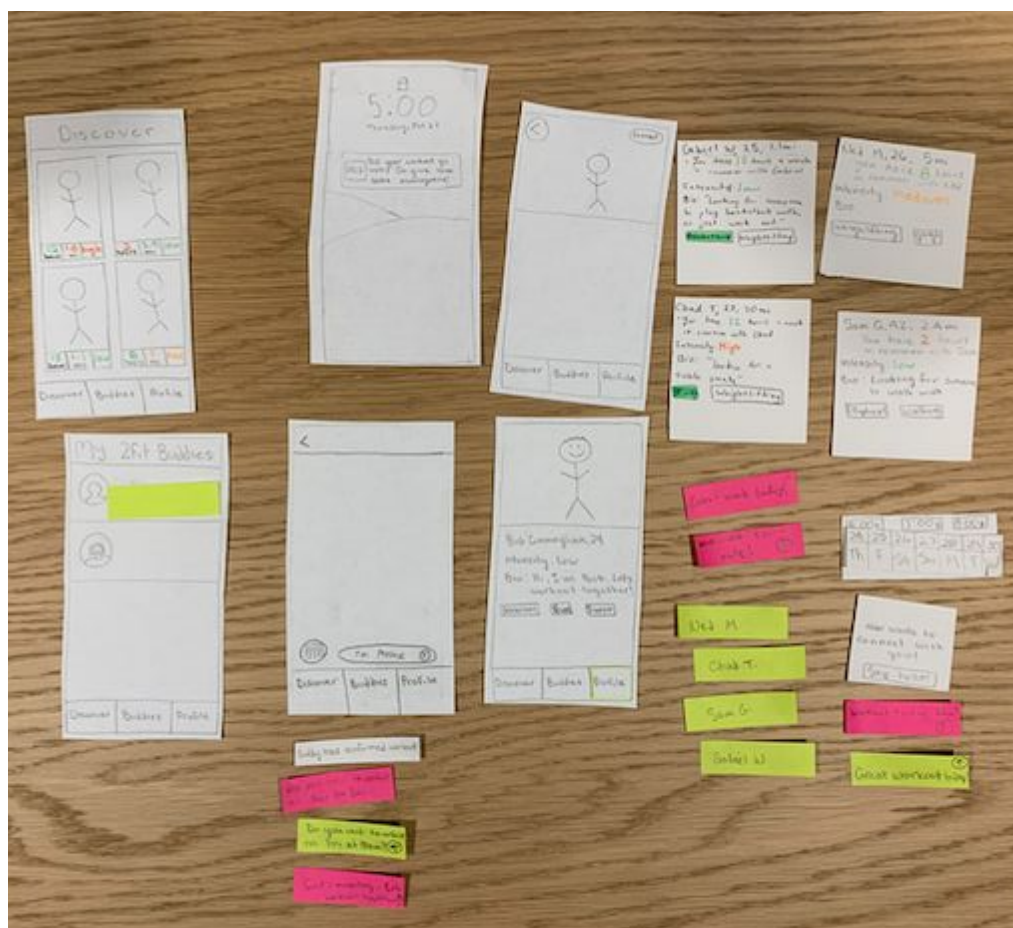
Figure 14: Full Prototype

Method

Tasks

Participants were asked to test the paper prototype by assuming the role of a persona and completing three tasks.

1. Get in touch with a compatible fitness buddy
    a. Browse listings of fitness buddy profiles
    b. Review profile details of potential fitness buddies
    c. Connect with a fitness buddy
2. Schedule a workout with a fitness buddy
    a. Select a workout date and time
3. Send an encouraging post-workout message to your fitness buddy

Procedure

1. Setup. Facilitators cleared testing space and fixed video camera on working space.
2. Orientation. Participant welcomed and introduced to the project. Participant informed they would be recorded on video asked to sign a consent form (Appendix B).
3. Tasks. Participants were asked to complete each individual task, speaking out loud along the way.
4. Feedback. When complete, participant asked for feedback on task completion.

Measures

Each subtask was evaluated based on two primary measures.

- Error rate. The number of errors committed in the flow of the subtask.
- Question rate. The number of confused remarks about the interface.

Facilitator Roles

Three experimenters hosted each interview.

- Experimenter 1: Hosted the test and read through the testing script. (See appendix A)
- Experimenter 2: Operated the paper prototype
- Experimenter 3: Note taker (see appendix C)

Subjects

Three testers were recruited to participate in the paper prototype testing on October 23, 2019. Participants selected were physically active young adults in the South Bay Area. The participants are described below.

#	Participant Demographic	Compensation	Test Environment
1	Female in early 20s. Asian American Stanford science student. Regular dancer.	None	On campus residence lounge
2	Male in mid 20s. Asian American tech employee at startup in	doughnuts	Cafeteria, place of work

	Mountain View. Consistent soccer player.		
3	Male in early 30s. Indian tech employee at startup in Mountain View. Passionate runner.	doughnuts	Cafeteria, place of work

Results

Task 1 - Connect with a buddy

Subject 1 found the home screen confusing, so we opted to swap the default landing page to the home screen for the following tests.

Subject 2 failed to complete the task. He stopped on the discovery screen and expressed he could not make a decision with the information provided.

Subject 1 committed three errors: one during navigation to the discovery page and two when selecting the most compatible buddy. All subjects expressed confusion about what the "hours" and "miles" profile details meant.

Task 2 - Schedule a workout

Subjects 1 and 2 committed one error on the messaging screen, messaging a match directly about a fitness time as opposed to working through the structured scheduling button. Subjects 1 and 3 did not notice the calendar button at first glance.

Task 3 - Note of encouragement

While no errors were committed, we were surprised to find that Subjects 1 and 3 preferred to send a personal note instead of using the default message text. One subject expressed confusion that his custom message did not add to the default message text. Another subject expressed confusion that the default proposed text was actually a status message from the app.

Discussion

Our paper prototype testing revealed that there were several opportunities for improvement.

Task 1 - Connect with a buddy

- Detail clarification. Subjects were confused by the 'miles' and 'hours' details which were supposed to indicate distance away and hours of schedule compatibility. For the next prototype, we would like to move to a schedule match tiering (low, medium, high). Distance away was an unuseful detail, which we will fold into pre-filtering.
- Pre-filtering. Subjects wanted to know if the match partner was available to work out at their preferred workout spot. We will change the location filter to a pre-filter location match based on workout places that are identified during profile configuration.
- Connect quick button. Participants wanted to be able to match right away from the discover screen, so we will add a connect button to each card.

Task 2 - Schedule a workout

- Schedule button prominence. Subjects forewent the schedule button in favor of sending their own unstructured time request. We will improve the visual prominence of the button.
- Time selector. Subjects didn't understand where the proposed times came from. We will add an intermediate schedule screen with a visual interface to provide additional context.
- Place selector. Subjects were confused where they were working out. We will remedy this with a workout location selector atop the new intermediate schedule screen.

Task 3 - Words of Support

- Proposed default text. Participants were confused about the behavior of the default proposed text. We will adjust the proposed text flow to populate the message box to allow for message extension.

Strengths

The notification to messaging interface is a familiar layout that subjects recognized immediately. The bottom bar navigation was very familiar and subjects were able to navigate swiftly between screens. Finally, the colors in the Discover details view was mentioned as a useful design tactic to recognize compatible attributes.

Our testing also revealed some insights into user behavior. Two of our three users preferred to personalize their outbound message. Subjects also told us in the feedback section that the details we had chosen were not the details subjects wanted most, such as goals, workout style, experience, and exercise personality.

Unfortunately, the testing methodology did not allow us to test repeat user behavior. We also did not have the opportunity to test account creation, connecting from the receiver side, and indicating a no show.

Appendix A - Testing Script

Low Fidelity Prototype Script
October 24, 2019

Intro (Show participant the 'profile page')

"For this test you're going to step into the shoes of Bob Cunningham. You've just started getting into fitness and you're looking for a new partner to work out with. You prefer **low intensity workouts**, you'd like to **find someone that's close to you**, and you enjoy **basketball, running, and swimming.** We're going to have you perform three tasks using this paper prototype."

Task 1 (Show participant the "My 2fit buddies" page, with only Kristen S.)

"You want to find a new partner to work out with, and so your first task is to **use our app to get in touch with a fitness buddy that you think is a good fit for you.**"

(Task ends when participant hits "Say hi" upon choosing a match. At this time, we should write the chosen name on a sticky note, put that sticky note over the name in the chat message screen, and show it to them)

Task 2 (Show participant the message screen with their new match)

"Okay, now that you've matched with your partner, you need to schedule a workout with them. Use our app to **schedule a workout with (name) for Friday at 8AM.**"

(Task ends when they suggest a time and press send message). Once they choose a time, write the time they chose onto a post it note, and place that post it note over the "type message" box.

Task 3 "Okay, you went and worked out with them and an hour after that, you get this push notification on our phone. **Send an encouraging message** to your partner."

Appendix B - Consent Forms

Consent Form

The 2FIT's prototype is being produced as part of the coursework for Computer Science course CS 147 at Stanford University. Participants in experimental evaluation of the prototype provide data that is used to evaluate and modify the interface of 2FIT. Data will be collected by interview, observation and questionnaire.

Participation in this experiment is voluntary. Participants may withdraw themselves and their data at any time without fear of consequences. Concerns about the experiment may be discussed with the researchers Akhil Jariwala, Kaughlin Caver, Autumn Warren, Matthew Landis or with Professor James Landay, the instructor of CS 147:

James A. Landay
CS Department
Stanford University
650-498-8215
landay at cs.stanford.edu

Participant anonymity will be provided by the separate storage of names from data. Data will only be identified by participant number. No identifying information about the participants will be available to anyone except the student researchers and their supervisors/teaching staff.

I hereby acknowledge that I have been given an opportunity to ask questions about the nature of the experiment and my participation in it. I give my consent to have data collected on my behavior and opinions in relation to the 2Fit's experiment. I also give permission for images/audio records/video of me using the prototype to be used in presentations or publications as long as I am not personally identifiable in the images/audio records/video. I understand I may withdraw my permission at any time.

Name _____

Participant Number _____

Date _____

Signature_____

Witness name _____

Witness signature_____

Appendix C: Raw data

Critical Incident Logs

0 (No Problem) - 4 (Usability Catastrophe)

Red = problem, green = success

Participant #1

Incident	Severity Rating
Task 1	
Went straight to chatting instead of searching	2
Mistook hours for hours away instead of hours available	3
Didn't know what two hours in common meant	3
Liked that they could see all the people at once	
Task 2	
Messaged to schedule instead of pressing button	2
The send button wasn't obvious for them to press	1
Task 3	
Enjoyed typing their own message	

Participant #2

Incident	Severity Rating
Task 1	
Didn't know exactly what "discover" meant	1

Didn't understand what hours or miles meant	3
Did not finish the task because he was too confused	4
Task 2	
Messaged to schedule instead of pressing button	2
Task 3	
Didn't like that the app assumed the workout was good	1

Participant #3

Incident	Severity Rating
Task 1	
Did not know exactly what hours or miles meant	3
Liked the navigation bar	
Task 2	
Messaged to schedule instead of pressing button	2
Wanted some sort of location confirmation	1
Task 3	
Enjoyed typing their own message	