Meetbright

Meet people, in a bright mood

## Team

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Problem and Solution Overview

Social anxiety disorder is an intense anxiety or fear of being judged, negatively evaluated, or rejected in a social situations (Anxiety and Depression Association of America [ADAA], n.d.). This mental health condition affects approximately 6.8% of adults, or 15 million adults, in the United States (ADAA, 2018), with 28 percent of Americans identifying their workplace as a source of anxiety (Ipsos, 2017). A workplace environment can bring about a host of unique factors such as office politics and hierarchies, lofty expectations from bosses, and competition and conflict among coworkers, each of which potentially contribute to the increased prevalence of social anxiety disorder in the workplace. Meetbright proposes a solution that gives individuals in an organization a non-invasive tool to help them communicate with their coworkers. This is achieved by integrating an intra-company messaging system with self-reported profiles and an easy-to-use notation system for recording notes about the highs and lows of a conversation. Combining these features, users have a quick and easy way to learn about and communicate with new coworkers, as well as keep track of conversation pieces that help them understand and improve their relationship with coworkers.

Initial Paper Prototype
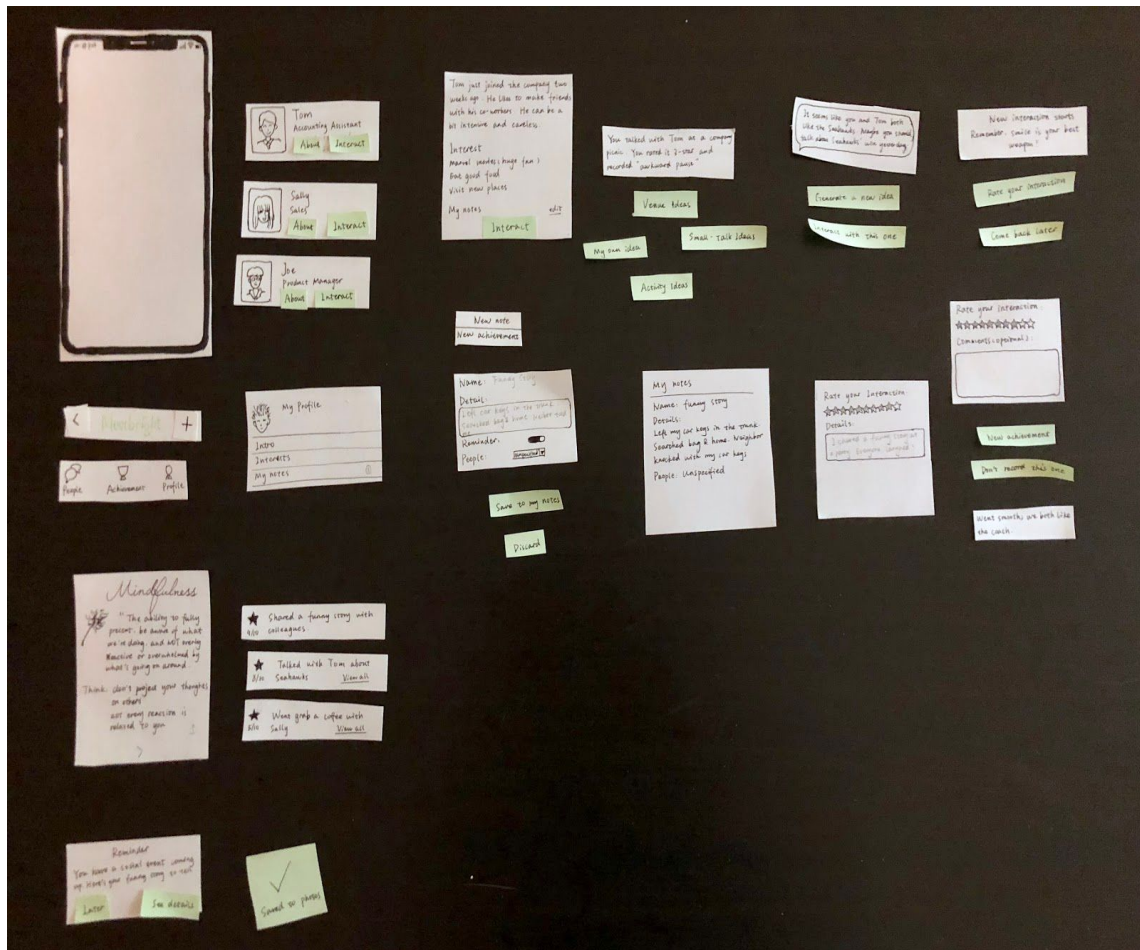
Above is an overall image of the initial paper prototype for Meetbright. There are many pieces to this prototype. The large, white pieces represent images of different screens throughout the application. The smaller, green pieces represent buttons and notifications, which could be swapped/re-configured as needed. The primary tasks performed in the design are as follows:

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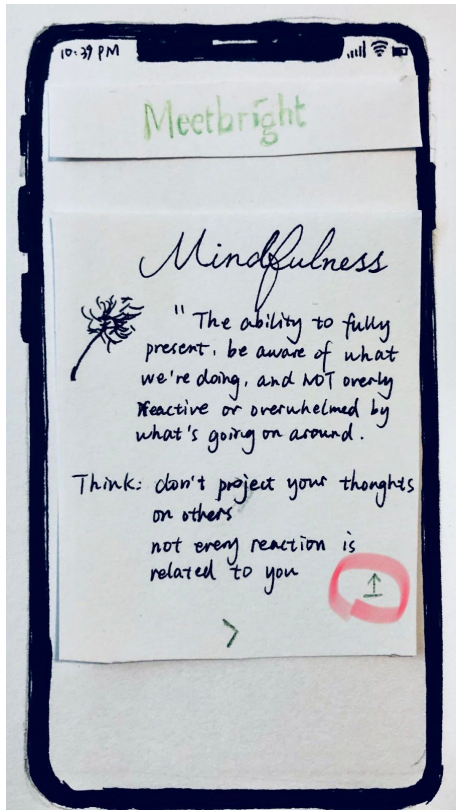| Task 1 (Get help interacting with coworkers) |
|---|

Figure 1-1: The user has received a push notification from Meetbright challenging them to engage in a social interaction. When they open the app, they are presented with encouraging advice. They like the picture, so they tap the arrow button to save it to their phone.
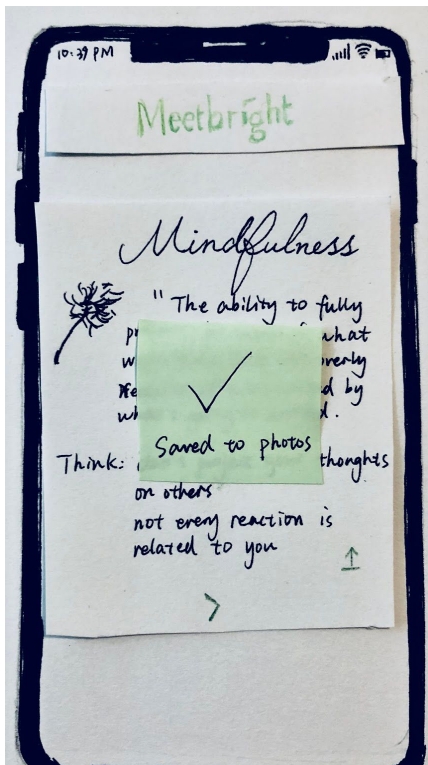

Figure 1-2: The app provides feedback, letting the user know the photo has been saved.
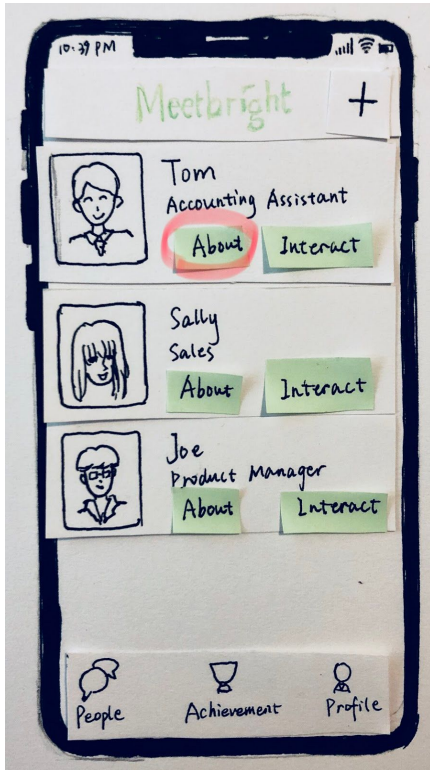
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Figure 1-3: The 'People' screen. Here, our user would like to see information about Tom, so they tap the 'About' button next to Tom's profile
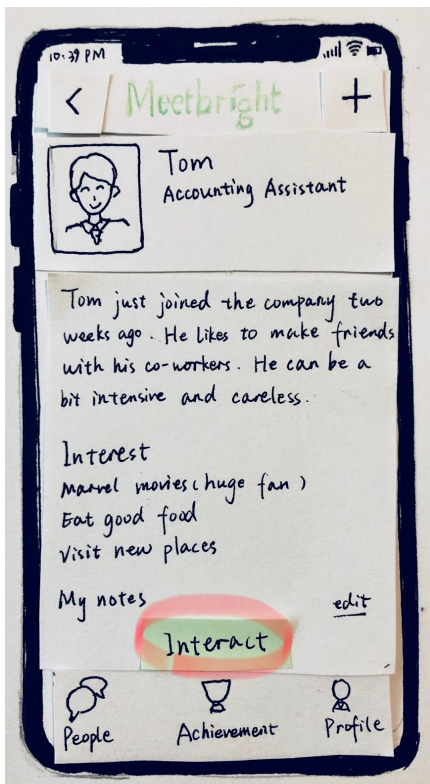

Figure 1-4: The user is taken to Tom's 'About' page. This page shows a brief profile about Tom, including Tom's particular interests. Here, our user would like to find a good way to interact with Tom, so they tap the 'Interact' button.
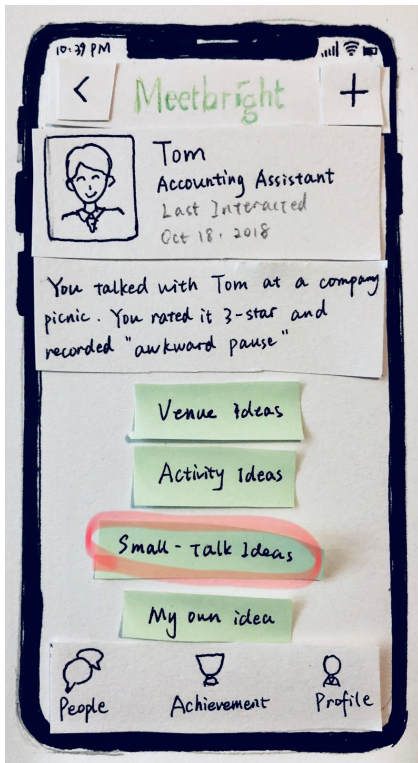
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Figure 1-5: This figure shows the 'Interact' screen. Displayed is a brief history of the user's activity with Tom as recorded in the application. Various options are given as to how the user would like to interact with Tom. In this case, our user is interested in starting a conversation with Tom, so they tap the 'Small-talk ideas' button.
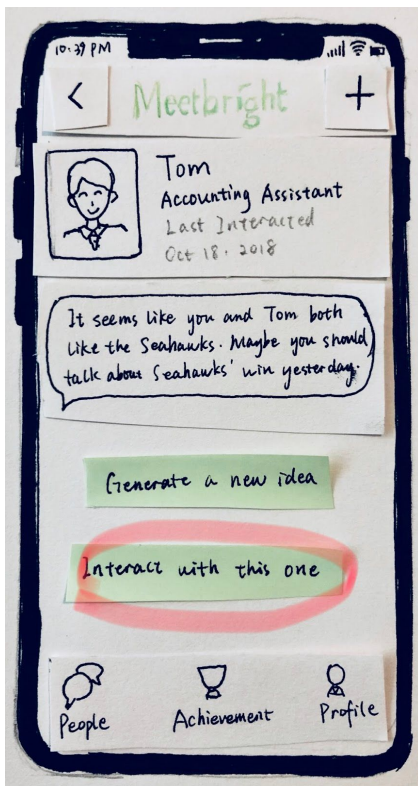

Figure 1-6: This screen is now showing an idea for a conversation starter based on Tom's and the user's similar interests. In this case, they both like the Seahawks, so the application suggests the user talk to Tom about their win yesterday. The idea sounds good to the user, so they tap the 'Interact with this one' button.
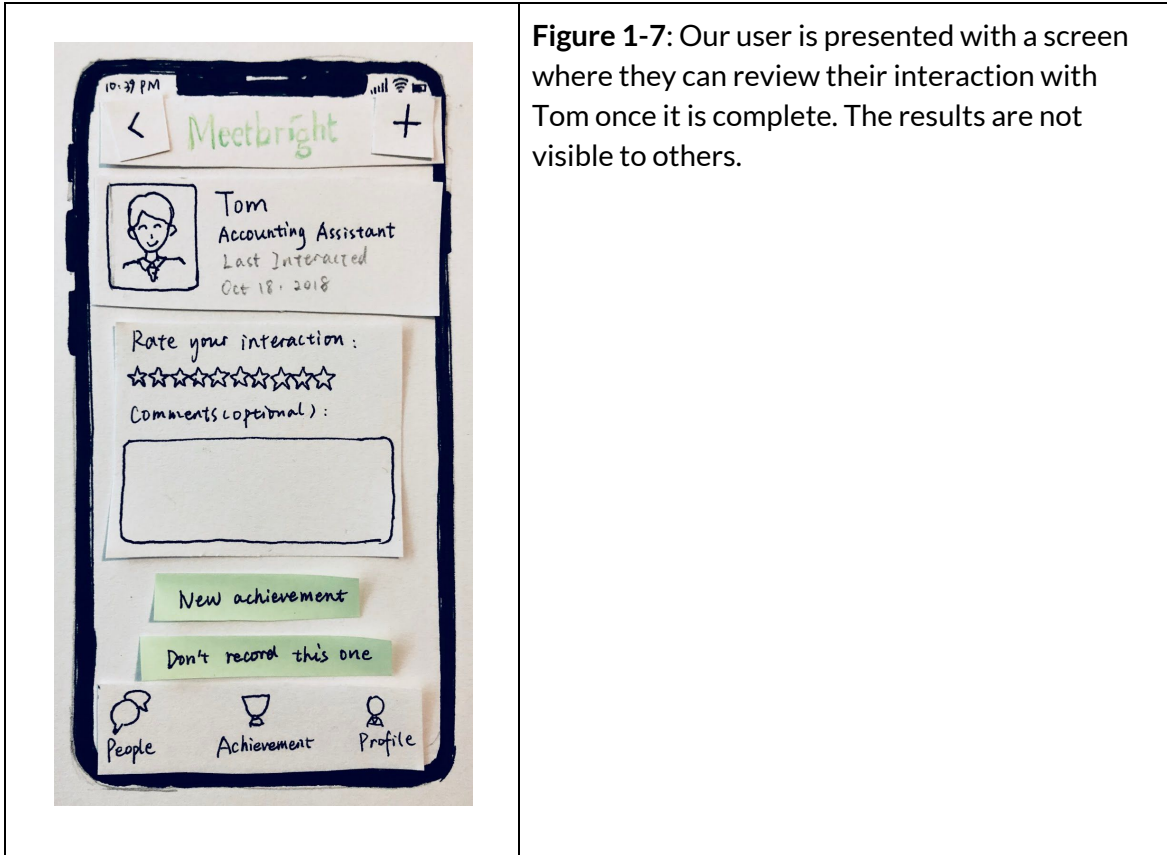
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Figure 1-7: Our user is presented with a screen where they can review their interaction with Tom once it is complete. The results are not visible to others.

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Task 2 (Keep track of progress and ideas over time)

Figure 2-1: Our user taps the '+' button. They now select the option to create a 'New note'.
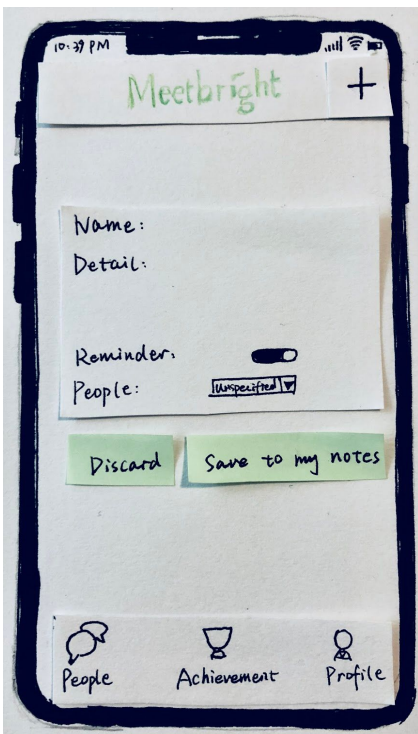

Figure 2-2: The 'New note' screen. Using the device's keyboard, our user can enter their note as well as set a reminder and associate the note with particular coworkers.
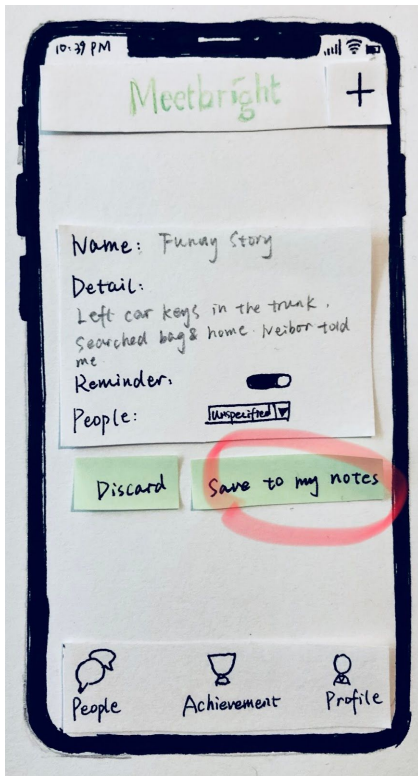
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Figure 2-3: The user has entered the information they would like to save in the note, so they tap the 'Save to my notes' button.

Figure 2-4: After saving the note, the user is now taken to the 'My Profile' page, which indicates that there is a new note under 'My notes'.

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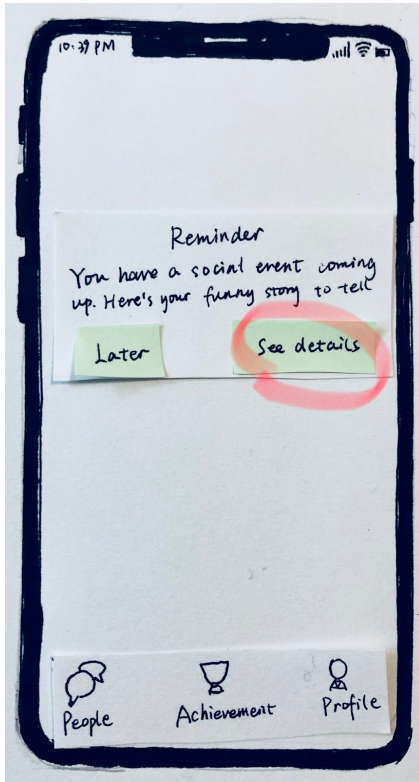
Figure 2-5: As an event nears, the user is presented with a notification reminding them of the helpful note they created. The user forgot what was in the note, so they tap the 'See details' button.
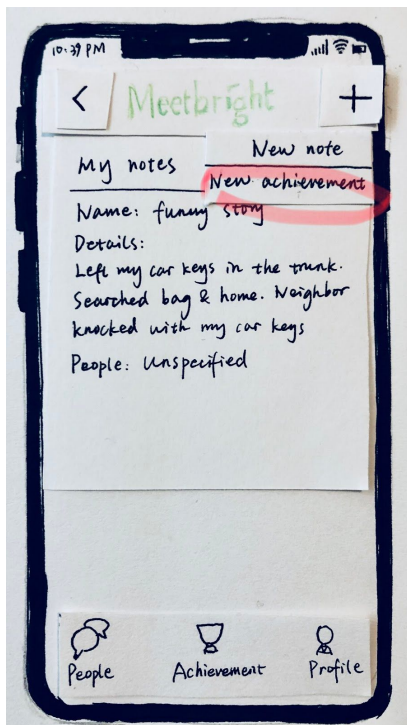
Figure 2-6: The user selects the 'New achievement' option.

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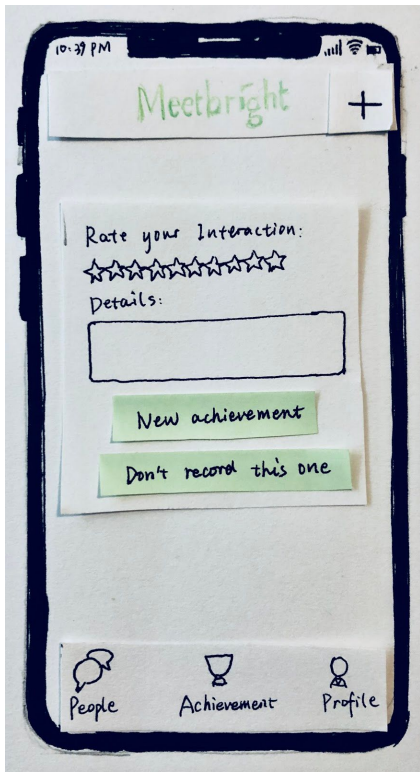
Figure 2-7: The 'New achievement' screen. The user can enter how many stars they feel their achievement is worth, and enter a description about it.

Figure 2-8: The user has entered the information for their achievement. They click the 'New achievement' button to save it.

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Figure 2-9: The user is taken back to the 'Achievements' screen, where they will see the list of achievements they have completed.

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Testing Process

For our first test, we allowed the participant to scan through our initial paper prototype. As they progressed through the various screens, the participant noted their thoughts aloud about the different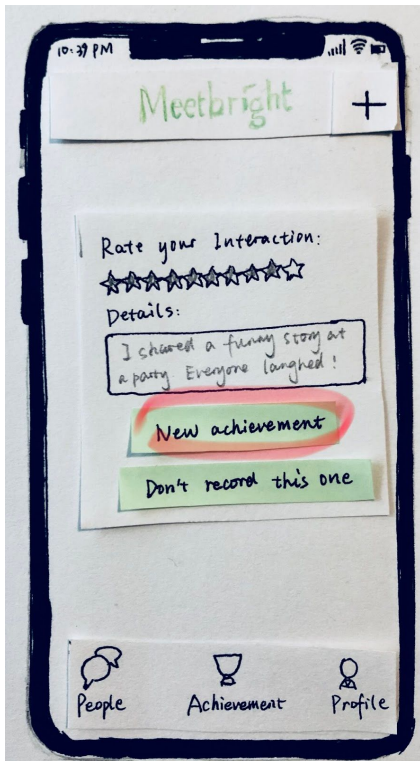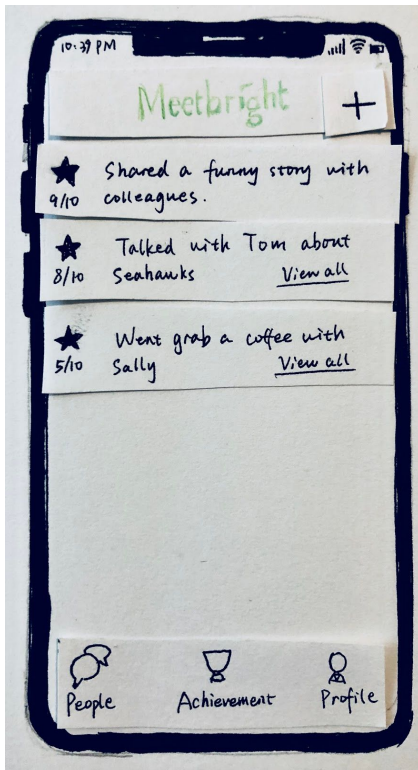 elements of the UI including buttons/icons, textual information, and results from taking actions. Occasionally, the participant would pause testing to discuss their thoughts with us about a particularly confusing or inefficient element of the design. We took notes on elements or concepts that needed to be removed, refined, or re-designed. The test was conducted in section, and our participant was somebody who is knowledgeable in the process of UI design. Based on our reading, an expert-based test was a good choice of testing to begin with. By having an expert opinion, we were able to pinpoint the major flaws with our UI design, and to correct them before future testing.

Similar to the first test, our second test involved allowing the user to roam our paper prototype freely, while communicating their thoughts on the design aloud, as we took notes about their observations. Unlike the first test however, our participant was a second-year graduate student whom we had interviewed earlier during our user research, and the test was conducted in a library team research room. The participant closely resembles our target users, and thus was a good choice for our first user-based test. In addition, the paper prototype had been updated from the previous iteration. As the test proceeded, the participant completed the tasks we hoped our design would help them to accomplish, adding rationality to the two primary tasks we chose to target at. The participant expressed that they would use our design actively (e.g., rate themselves high for good interaction), and that our design would help them cope with daily interaction by adding some social perspectives to a workplace environment. They also gave some suggestions on how we could further improve the functions of our design.

Our third test was another user-based test. The participant involved is a young employee in a stressful work environment, who noted that they often experience social anxiety that revolved around their job. For this test, the user was again allowed to roam our updated paper prototype freely for a few minutes, exploring the various screens and UI elements. However, this time, the participant was then given four tasks to complete within the design (add a new person to the people list, view a conversation with somebody on the people list, add a new note, and view achievements). They were asked to comment on the ease and clarity of each task. The participant was also asked to comment on any issues (functional or aesthetic) noticed within the interface in general. The tasks were accomplished relatively easily, but there were a few general issues the participant noted.

Throughout our testing process, we gradually transitioned our testing goals from more general to more refined. Our first test involved a general evaluation of the elements, styles, and concepts of our design. The second was a general test of design functionality, but focused more on how a user might navigate and interpret our design. The third test was

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more specific, and more closely represented a true user case, as we evaluated how easily the participant completed the tasks that the application was designed to allow for.

Testing Results

The critiques we received from another group's heuristic evaluations during class had common themes among them, namely having far too many buttons resulting in too many steps to perform tasks, as well as confusing/ambiguous button text or terminology. Our updated paper prototype addressed these concerns by consolidating information in order to reduce the number and use of buttons, as well as converting many of the worded buttons to icons that we felt were generally universally recognizable. However, we ultimately ended up removing many of these buttons after future tests revealed more efficient, simpler solutions.

Our first usability test resulted in some major changes to our design. Initially, we had focused on helping users to communicate and interact with their coworkers by implementing a system that uses AI to infer what communication topics, places, or activities they might be able to enjoy with that specific coworker based on their self-reported common interests. Our participant noted that this relied too heavily on AI rather than genuine interaction. They suggested we just let the user directly connect with the coworker. We agreed, and replaced the idea-generation system with a simple chat/messaging system. They also noted how confusing the buttons could be in our design, particularly the extra set of buttons that appear when browsing a coworker's profile. We removed the buttons and replaced them with a simple swipe system, with dots that indicate which tab the user is currently viewing. This simplified both the look and function of our interface, as users needed fewer steps to access the same information, and removed any confusion over button icons. Other suggestions involved changing terminologies or ambiguous/confusing buttons icons or placements.

In our second usability test, our participant noted that although they enjoyed the achievement system we implemented (which automatically generated achievements based on number or frequency of communication with others, communicating with new people, etc.), they would like to be able to add their own achievements as well. We implemented this by adding a floating button within the messaging screen that users could tap to rate the conversation/interaction they are currently having, which contributed to our achievement system. They also mentioned that they like the ability to add new people from the company directory to their list, rather than having the list already populated with all employees. However, when adding new people to their list from the company directory, they also expressed that they would like to be able to filter people based on interests, in order to find coworkers they felt they might connect with better. We implemented this

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filtering system in the "Add People" section, as we felt this would be beneficial for those with social anxiety.

Our third usability test revealed some minor remaining issues. Until this point, our "Notes" tab had been completely separate from the other areas of the design, despite the fact that users had the ability to make notes related to specific people in their list. Our participant suggested that the ability to add and view notes about a person from directly within that person's profile would greatly simplify the process of creating such notes, as well as facilitate reading notes relevant to a particular person when the user is viewing that person's profile. We added a new "swipe" tab when viewing a person's profile, indicated by a third "swipe" dot indicator at the bottom. The participant also mentioned some confusing terminology regarding history of conversation ratings, which we re-wrote to avoid the confusion.

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Final Paper Prototype
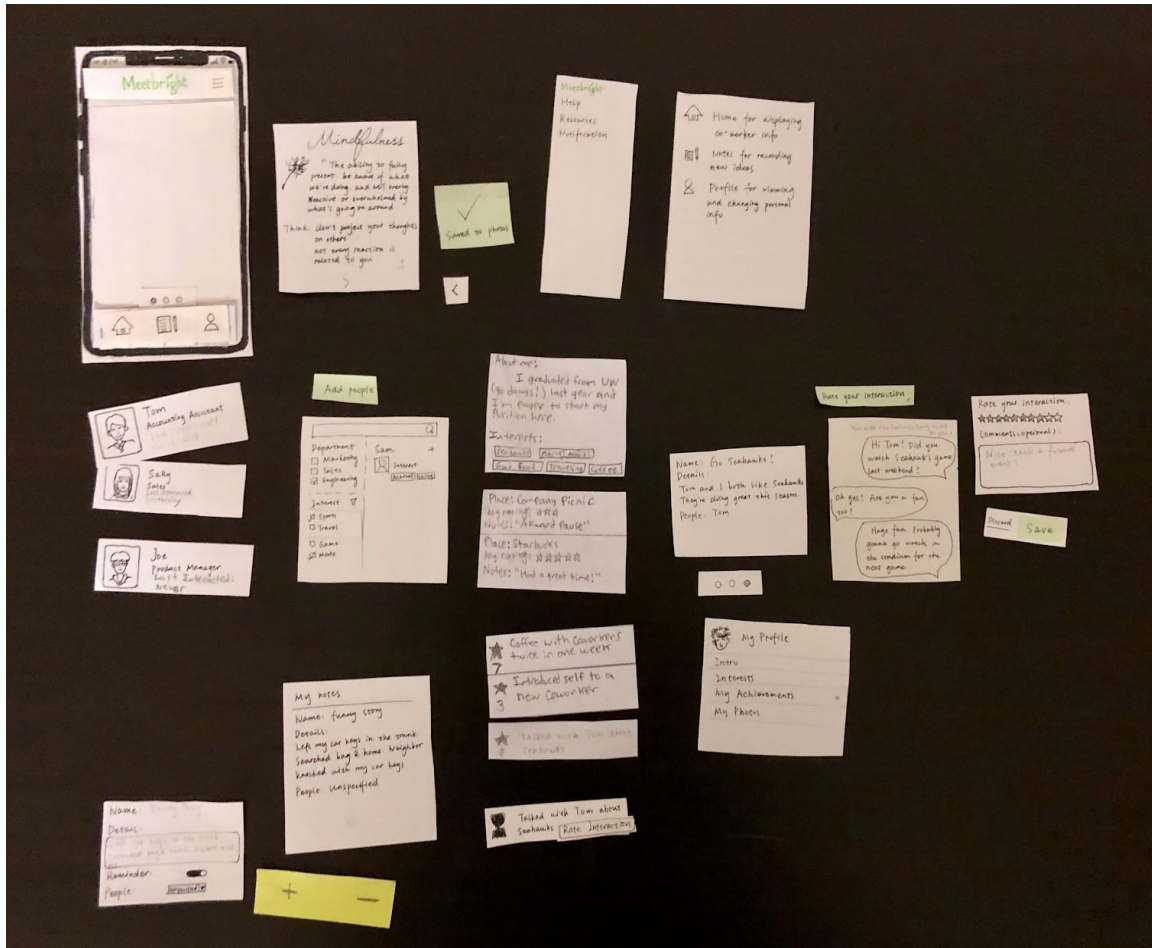
Above is an overall image of the final paper prototype for Meetbright. This paper prototype was greatly simplified from the initial one, indicated by the much lower count of pieces, particularly small pieces that had previously represented the (far too many) buttons of our original design. Navigation, clarity, and visual appeal has greatly improved through the feedback we received on our iterations of the paper prototypes. The primary tasks of our design are performed as follows in the final paper prototype:

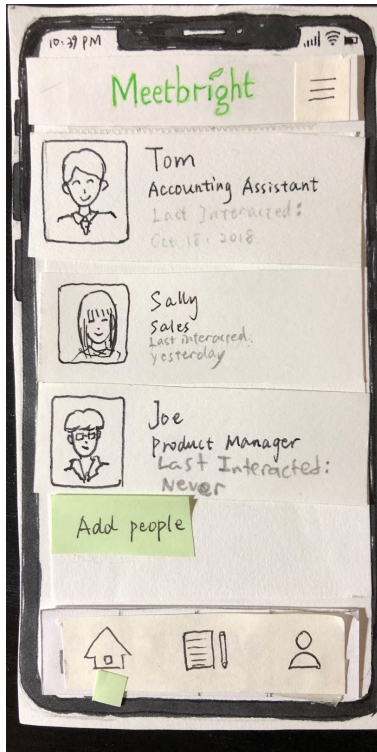Meetbright

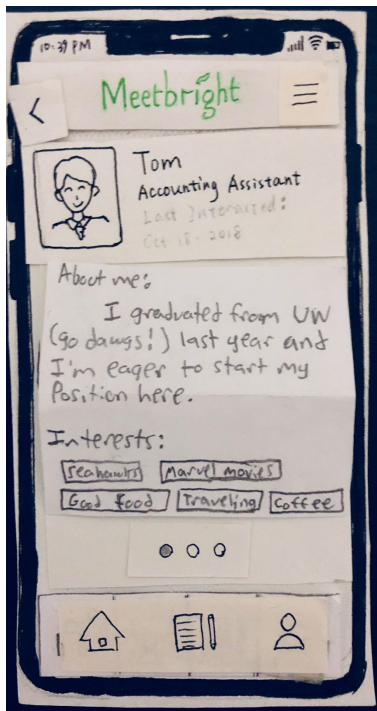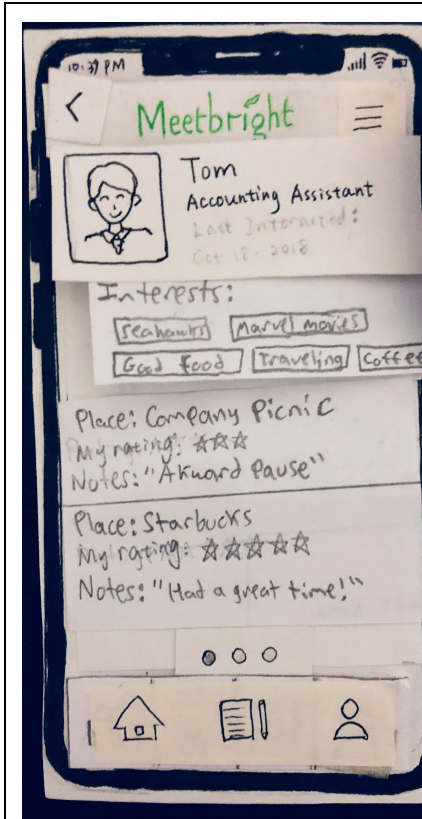| Task 1 (Get help interacting with coworkers)	
	Figure 3-1: On the home screen, the user taps Tom's name card
	Figure 3-2: The user sees Tom's bio and interests

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Figure 3-3: The user scrolls down to see previous interactions
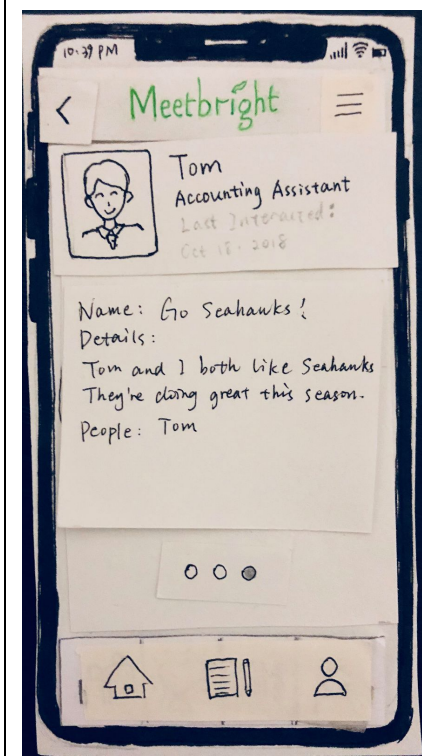

Figure 3-4: The user swipes to the right to see his/her notes about Tom

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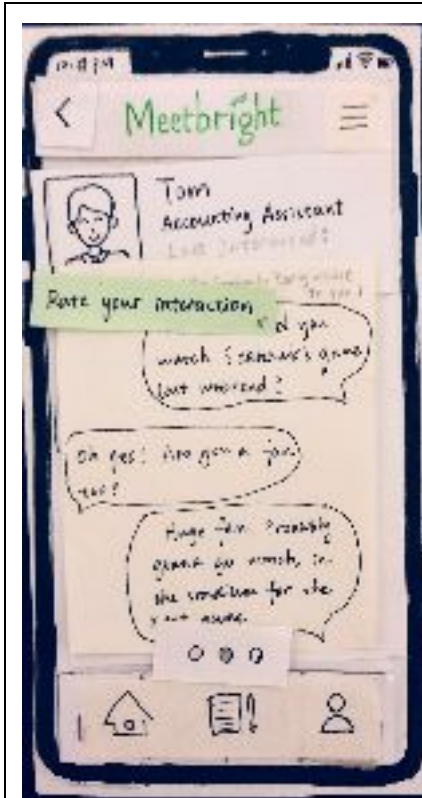
Figure 3-5: The user swipes to the conversation window and starts messaging.
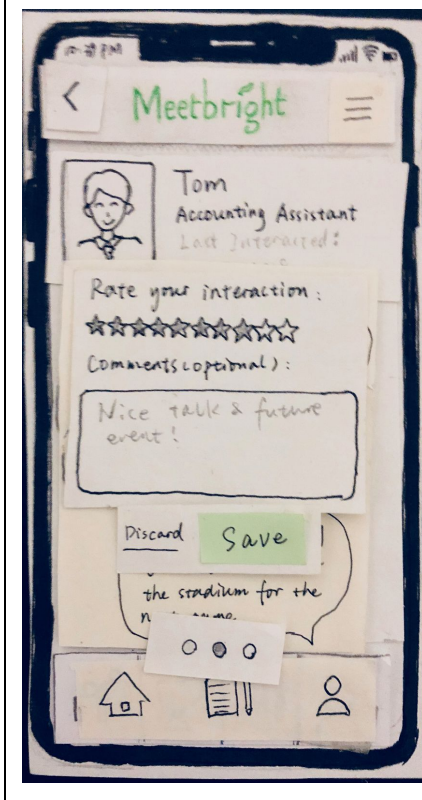
Figure 3-6: The user enjoys the result of the latest conversation with Tom, so they tap the floating button and rate the interaction.

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Task 2 (Keep track of progress and ideas over time)	
	Figure 4-1: The user goes to notes screen to add new idea.
	Figure 4-2: The user writes a new note in a pop-up window

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Figure 4-3: The new note is recorded and is placed at the top.

Figure 4-4: A view of the user's profile screen. Here, the user has tapped the "My Achievements" row, which expands to show progress made through achievements

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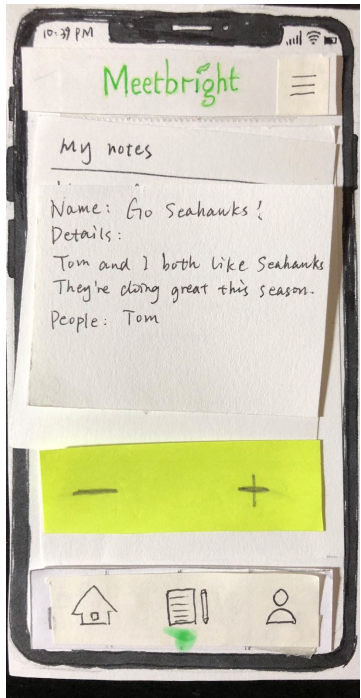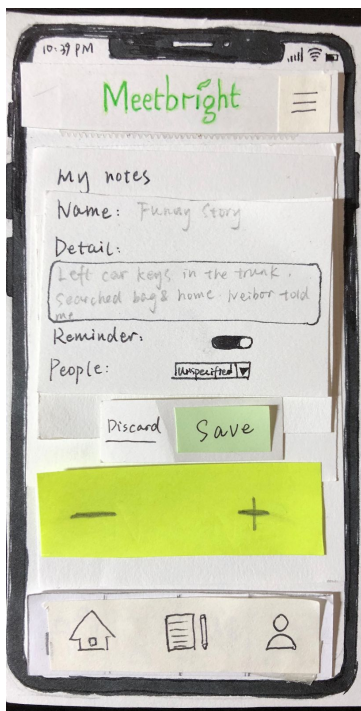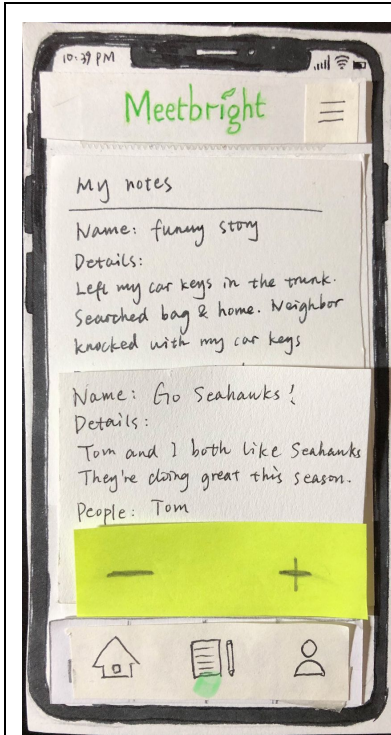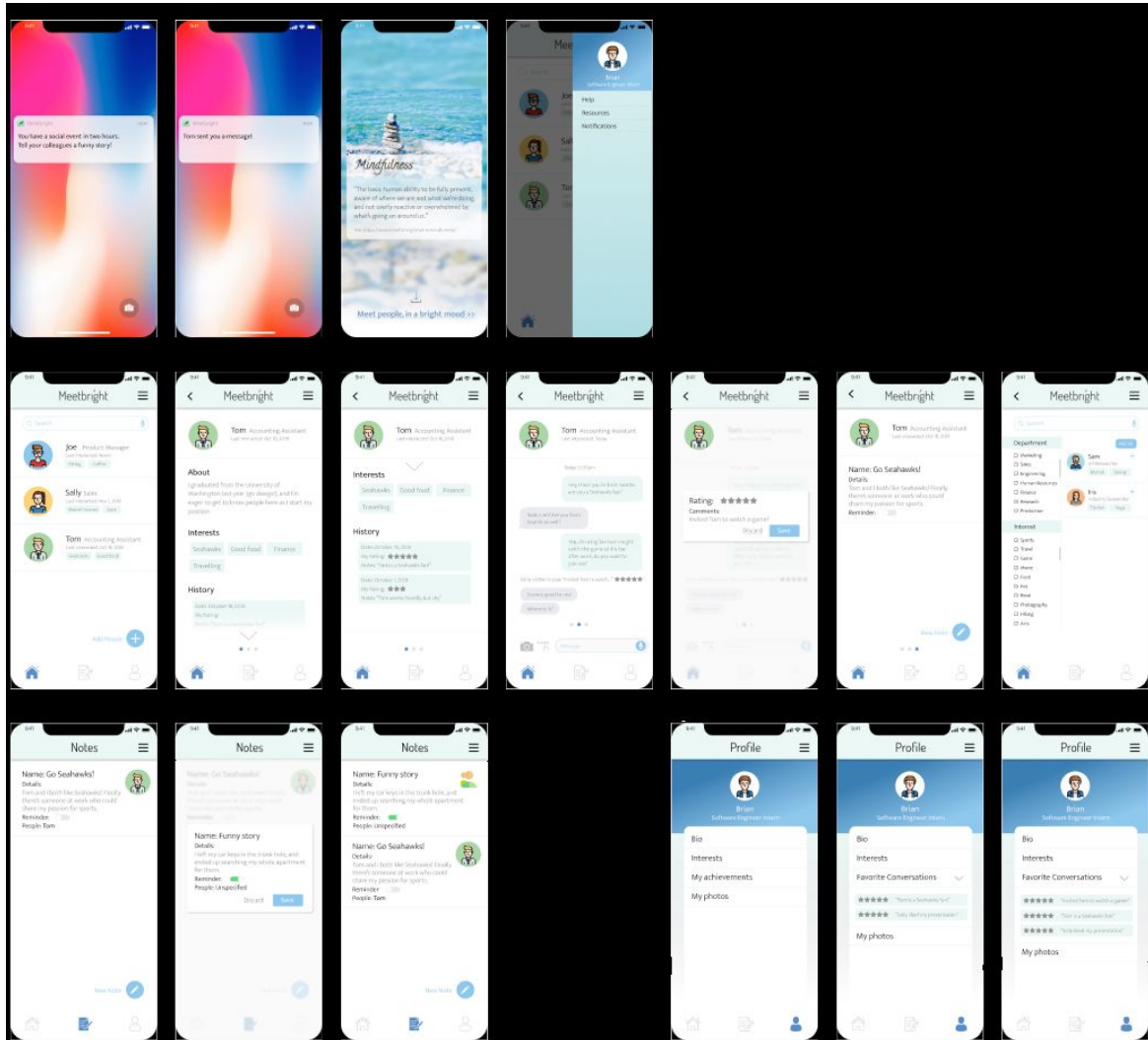# Digital Mockup

Above is the final digital mockup of our design for Meetbright. The design transferred nicely over to a digital medium, which allowed us to take advantage of a standardized color scheme and to express professional-looking buttons and icons from a wide array of options. These features helped us to address issues found in previous paper prototype iterations, such as consistency and confusing or excessive use of buttons and icons. Using digital tools allowed for a hi-fi prototype which helped us to recognize and address subtle remaining issues with our design. We also modified the achievement system as described below, based on feedback we received in section that achievement systems are often brushed away or annoying.

Our digital prototype assists users in interacting with coworkers by affording a simple, quick one-on-one chat/messaging system. The ability to quickly switch between viewing a

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person's profile information and chatting with them, as well as make and review conversation notations helps users recall important information quickly when conversing with coworkers. The end effect is users being able to learn how to better interact with a given coworker, an issue that people with strong social anxiety constantly face.

In our digital prototype, tracking progress is a bit different. Rather than having an explicit "Achievements" tab, when a user makes a conversation notation, they can rate the notation from 1-5 stars. All conversation notations the user has made for a person are visible when viewing the person's profile under the "History" heading, and tapping a given notation will take the user to the point in the conversation that the notation was made. 5-star conversation notations are added to the user's profile screen, where "My Achievements" used to be, it is now "Favorite Conversations". By moving to this system, we created a simple, non-intrusive way for users to keep track of helpful conversation pieces, as well as highlight the good moments, which still resembles an achievement system but in a simpler, more useful, and less annoying way. The process for recording notes is largely unchanged from the previous prototype, as it was fairly simple and straightforward to begin with.

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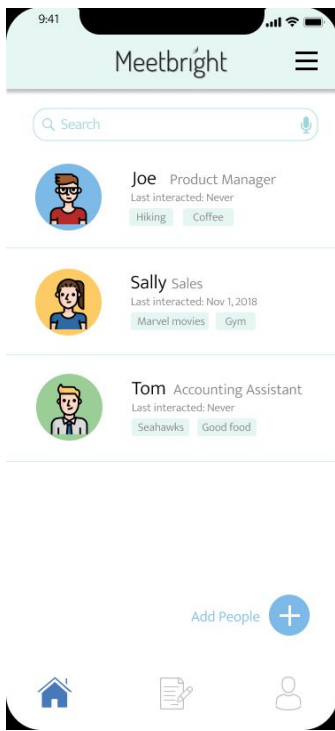| **Task 1 (Get help interacting with coworkers)**	
	Figure 5-1: Our user opens Meetbright, and is greeted with a helpful message about Mindfulness (A different/random card is shown every time the app is opened, and can be turned off in settings).
	Figure 5-2: Our user is taken to the main "Home" tab, showing their list of people. They have met Tom briefly in person, but decide they want to find out more about him, so they tap his profile in the list.

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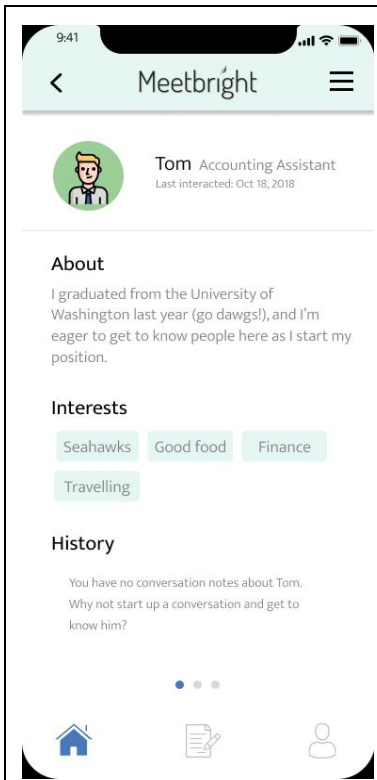
Figure 5-3: The user is taken to Tom's profile page, which shows information including his description, his interests, and any conversation notations that have been made about conversations with Tom. They see that Tom is a Seahawks fan, so they decide to use it as an icebreaker. They swipe left to go to the conversation tab, and start a conversation about the Seahawks.
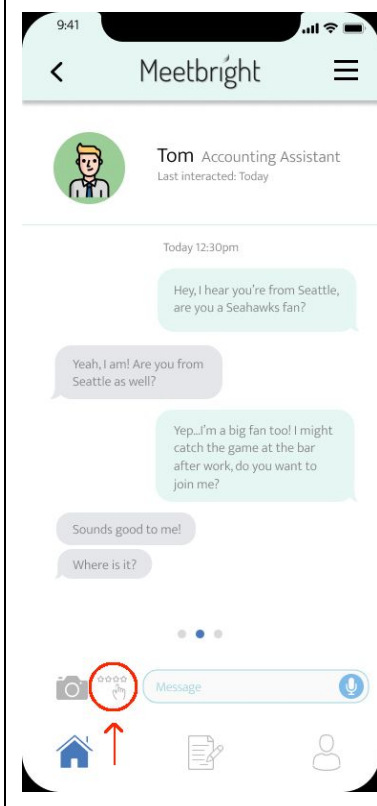
Figure 5-4: Tom is excited about the idea of hanging out with the user to watch the Seahawks game. To make a note of the positive conversation, our user decides to rate it by dragging the rating icon to the point in the conversation they want to note

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Figure 5-5: The user fills out the rating fields, and clicks the "Save" button so save it.

Figure 5-6: Our user now has a record in the conversation that marks a positive point. This note will be shown when the user views Tom's profile information as well, under the "History" heading. Since it was a 5-star rating, it will also show up under the user's "Favorite Conversations"

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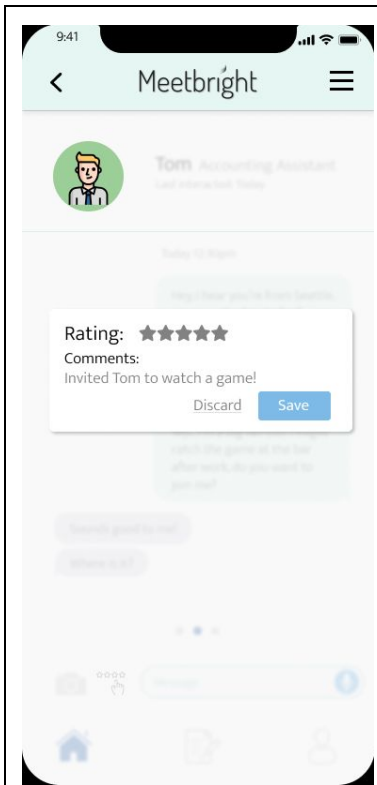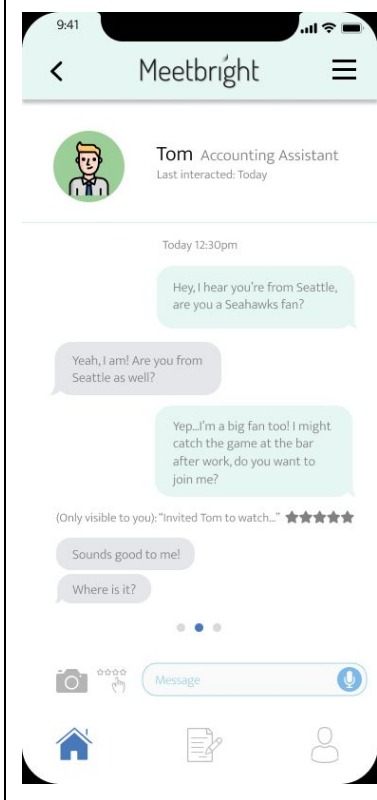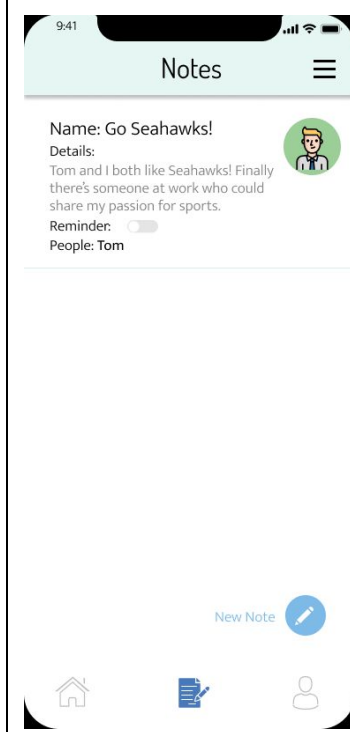| Task 2 (Keep track of progress and ideas over time)	
Figure 6-1: The user opens Meetbright, and taps on the "Notes" icon to record a funny episode that happened earlier.	
Figure 6-2: After tapping on the "New Note" button at the bottom, the user is presented with a modal to describe the note. They fill out the note name, the note details, set a reminder for the note, and click "Save".	

Task 2 (Keep track of progress and ideas over time)

9:41

Notes ≡

Name: Go Seahawks!
Details:
Tom and I both like Seahawks! Finally
there's someone at work who could
share my passion for sports.
Reminder:
People: Tom

New Note ✎

Figure 6-1: The user opens Meetbright, and taps on the "Notes" icon to record a funny episode that happened earlier.

9:41

Notes ≡

Name: Go Seahawks!
Details:
Tom and I both like Seahawks! Finally
there's someone at work who could
share my passion for sports.
Reminder:

Name: Funny story
Details:
I left my car keys in the trunk hole, and
ended up searching my whole apartment
for them.
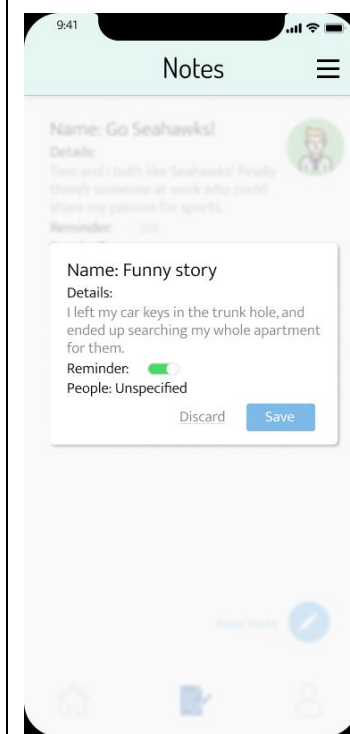Reminder:
People: Unspecified
Discard   Save

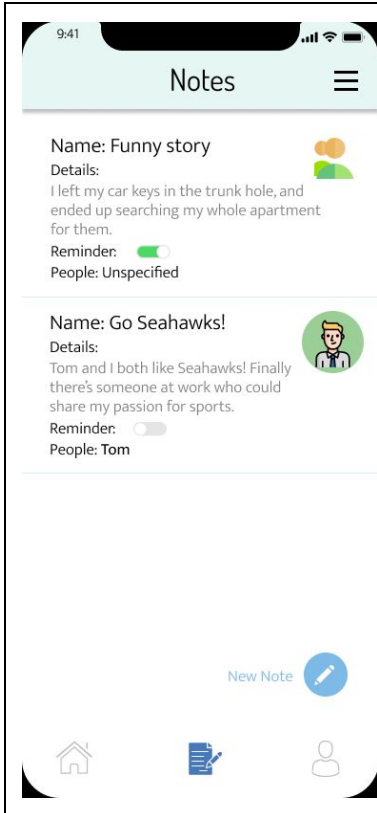Meetbright

Figure 6-3: The new note is saved in the system.
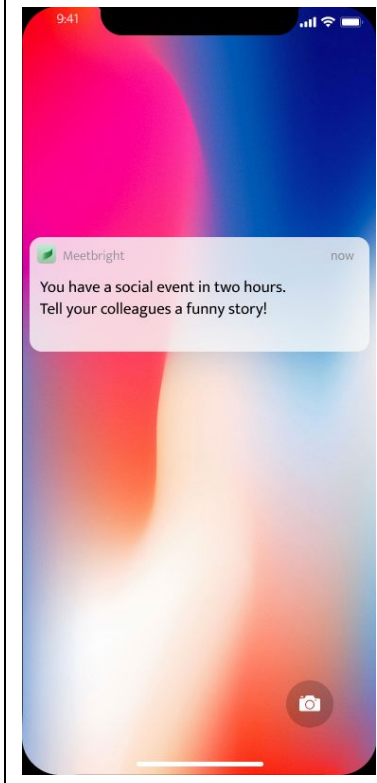
Figure 6-4: When an event is near, Meetbright sees that a reminder is attached to a note and sends a push notification reminding the user to tell their funny story.

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Figure 6-5: Users can keep track of conversation highlights from within a person's profile, allowing them to quickly recall the important information from those moments when conversing with the person

Figure 6-6: Users can also view their best (5-star) conversation moments from within their own profile tab.

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Discussion

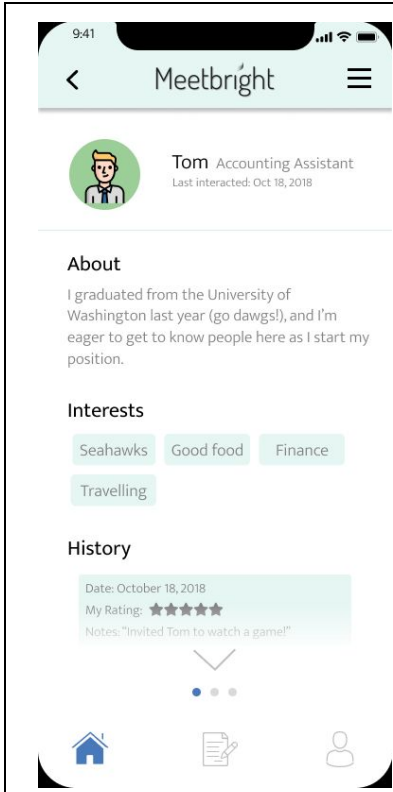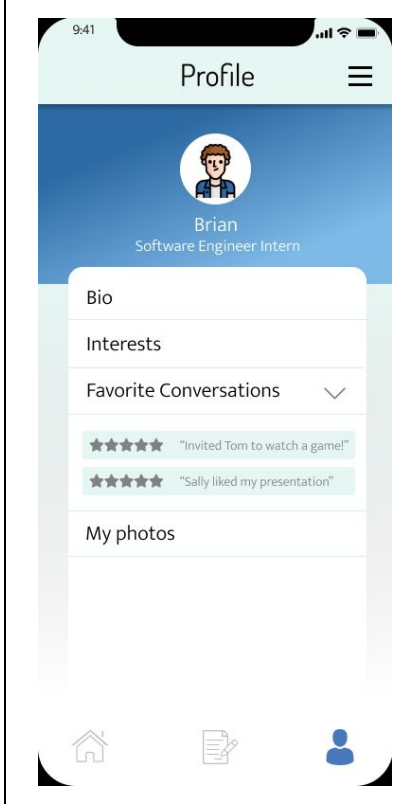From the process of iterative design, we realized that it's really important to get users involved in the design process as early as possible, i.e. "fail fast, fail often". The way users understand the problem and hence the preferred solution could differ greatly from us designers. For instance, our initial solution emphasized heavily on "encouraging offline/in-person interaction", that users should consider our design as a tool to facilitate face-to-face conversation. Although the group in heuristic evaluation suggested we include a chatting function, we held back on this suggestion as we believed off-line interaction is what we really want from the design. However, our participant of the first usability test pointed out the problem again, and explained that nice conversation online could naturally lead to offline interaction and meetups, whereas the idea generation was not "human" enough. Therefore, we included a chatting screen next to the profile screen, and swiping between the two tabs has actually become a unique feature for our design, according to the later usability tests. If we didn't test our design at this early stage with multiple users, we wouldn't realize such important flaw timely, and a major change of functionality at later stages could be too "expensive".

In addition, we managed to test our digital mockup with one user, and the advice we received on UI elements really helped improve the overall look-and-feel of our design. Should we have more time, we'll conduct more tests and make more iterations to make the design more intuitive and desirable.

The usability tests also helped us to reflect on the task design. We thought of "interacting with co-workers" and "keeping track of ideas" as two relatively separate tasks when we designed them. However, one of our participants pointed out that it would be nice to see the ideas/notes about one person when they're chatting, and since we already had a swiping feature under each person's profile, we could add a third tab to see ideas users recorded about that particular person. This comment made us recognize the link between the two tasks we designed, and the third tab made the user flow smoother.

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Appendix

Usability testing script

Hello,

We're two students from CSE440 – Introduction to HCI. We're designing an app for people suffering from workplace anxiety, we will make dating more efficient, targeted, meaningful, and interesting. In this section, we will test the matching/interaction phase of our product, in which you will use our prototype to perform the tasks(s) that we will assign you later. Please remember to talk aloud about what you think about the app during the test.

This is aimed to test the product; we are not testing you. If you find something difficult to use, chances are that others will as well, so your feedback helps everyone. This usability test is simply a means of evaluating the product, and to discover any issues we need to address.

If you feel uncomfortable we can stop at any time during the study.

Task list
- add a new person to the people list
- view a conversation with somebody on the people list
- add a new note
- view achievements

Feedback
- Open ended & follow-up questions
  - What is your attitude towards this type of service or app?
  - Is the profile helpful for you to come up with topics to talk about?
  - How do you feel about achievement feature?
- Exit interview
  - On a scale of 1-10 how much did you like our app?
  - What aspects did you like about our app? What you don't like about it?
  - Would you recommend this to a friend?
  - Would you like your profile to be creative (the way the profile is presented)?
    - Yes
      - How much effort would you put into it? (1-10)

Thanks for participating in our usability study. This concludes our test.

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Heuristic evaluations of our design

[H2 Match between and the Real world] [severity
[Interact] button makes users think ~~they~~ tha
they can have actual interaction with.
the person, but it is actually just
topics and ideas.

[H9 Help users recognize, diagnose, and recover fromem
When ~~the~~ user tries to rate the Interaction,
they might accidentally press "Don't record
this one" but there is no going back of
this action.

[H10 Help and documentation] [severity 1]
Instead of just learn the app as the
user presses each button, maybe it
will be better to have an breif introduction
page to help user understand the app.

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[H4 consistency], 2

→ On the About page,
instead of the new
term " my own idea"
using " my notes" can
be less confusing cuz
we have been using
" my notes".

[H2

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[H7 efficiency of use] [severity 2]

When a user is trying to navigate to a specific action
it takes a lot of clicking to get there. Might loose int
very soon because too much
clicking

fix: ~~put~~ list all actions at main ~~vertical~~ menu screen
or a hamburger button that will create a list
of items

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[Help and documentation HIO] [severity: I]

.A lot of buttons on each screen so might take some trial and error for users to be ab to figure out what the buttons are for.

Fix: ⓘ button that will ~~label~~ label all buttons and what they're for.