

USABILITY TESTS

Overview

For each of the tests, we provided some background on our project and explained what the participants should be doing during a usability test. Then, we described each task we wanted the participant to do before letting him use the application. While the participant was exploring and completing the tasks, we did not answer questions or provide help unless absolutely necessary. After the test, we debriefed the participant, explaining to them the path we were looking for in the tasks and asked them if they had any more thoughts, concerns, or suggestions about the application.

For the first test, Ethan was the computer, Cindy was the observer, and both Ethan and Cindy played the role of the facilitator. For the second and third tests, Ethan was the computer, Cindy was the facilitator, and Maggie and Rick were the observers/notetakers.

First Test

Our first usability test participant was Eric. Eric is an undergraduate student at the University of Washington studying Computer Engineering with a minor in Political Science. Eric represents our typical user, a busy college student who has a full schedule, but is active and wants to stay healthy. We conducted the test in By George Cafe, a place where many students go during breaks in between classes and the kind of place where users of our product might be checking their phones and exploring the application.

Second Test

Our second usability test participant was Stephen. Stephen is an also undergraduate student at the University of Washington studying Computer Science and Spanish. Stephen is a busy college student with many classes and plays some intramural sports in his free time. The test with Stephen was conducted in Mary Gates Hall. Much like in the first usability test, we chose this location because it is a place where some students go to study or spend time before their classes

Third Test

Our third usability testing participant is Gary. Gary is an undergraduate student of HCDE department at the University of Washington and a part-time employee at Symetra. Gary is very busy with his class schedule and work, but still pays a lot attention to stay healthy. Gary works as a front-end developer at work, so he is also very tech-savvy. The usability test took place in the first floor of Allen library, where many students often go to study and have group meetings.

Summary

We did a good job of having participants speak their thoughts out loud and learned a lot from their thought processes. After the first usability test, we moved slower through the process to give observers sufficient time to take notes. Through each usability test, we had the most difficulty with our second task and the format of the notification settings page. Other changes were mainly on system feedback, simplicity, and ease of use.

CRITICAL INCIDENTS

1. “Notification Settings” not visible

When trying to complete the task of setting up his reminders, Eric successfully clicked through “Settings” and then “Notification Settings” to get to the page where he can modify his reminders and set up “Smart Reminders”, but he voiced that he thought the page was hidden and it wasn’t very clear that was where he had to go.

Severity Rating: 2

It is important for users to be able to navigate easily throughout the application, but configuring notification settings is a one-time operation (or done very rarely), so we thought it was not necessary to make the setting page more prominent and make any modifications at this time.

Revision: none

2. Purpose of syncing calendar unclear

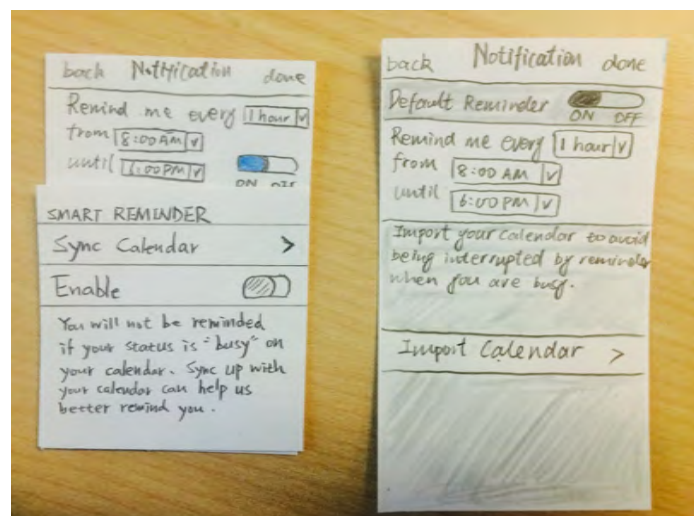
Eric and Stephen both did not know what the purpose of syncing up their Google calendar with the application was. Both participants initially thought the application was going to add events onto their Google calendar for reminders to drink water and did not like that feature. Stephen actually ignored the “Sync Calendar” option completely and failed to complete our second task.

Severity Rating: 4

It is critical for users to know why they would want to sync up their calendars and what effects it would have. The whole functionality of “Smart Reminders” is based on knowing the user’s schedule and reminding them at the best times.

Revision:

We renamed the option to “Import Calendar” instead of “Sync Calendar” because it more accurately represents how the app is using the calendar. We also added some documentation below the area where users click to import their calendar to inform them of its purpose.



3. Missing automatic water bottle sync status

After drinking from the Smart Water Bottle, Eric did not know if his water consumption was actually recorded. He was looking for some kind of notification telling him that the application received the information.

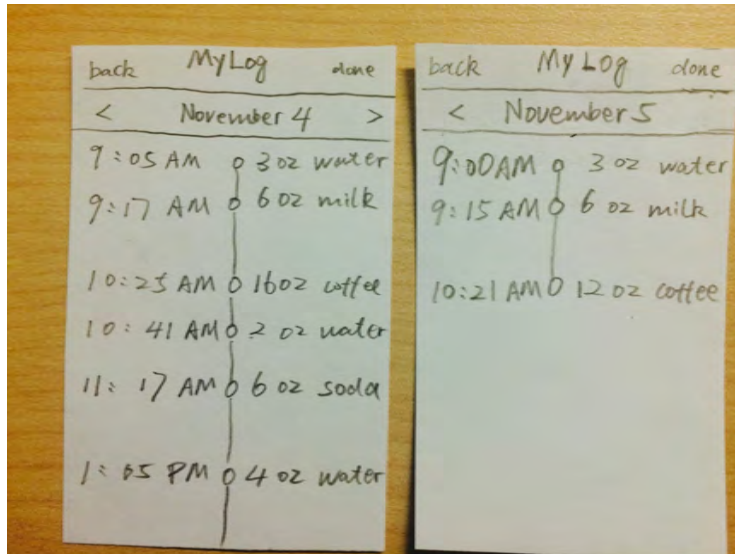
Severity Rating: 2

Since our application is mostly passive, visibility of system status is an important heuristic to follow so we can let users know the app is actually working. It does not hinder functionality and is easy to fix though.

Revision: We added a banner screen that appears for a couple of seconds, letting users know that the application received their drinking information.



4. Impressed with “My Log”



When Eric saw the “My Log” page, he liked the timeline style and the ability to see what he drank throughout the day or on previous days. He liked the ability to scroll through the timeline and thought it was very convenient.

5. Add a calendar to My Log Page

Eric tried clicking on the “My Log” page and expected to see a different view of the water log, like a calendar. He wishes that he could see his water log over a different period of time rather than day by day.

Severity: 1

Having a different view of the water log might be useful and please users but it is not relevant to our main tasks right now. We will consider including some more pages like this in our final product prototype but have decided not to add it to our paper prototype at this stage.

Revision: none.

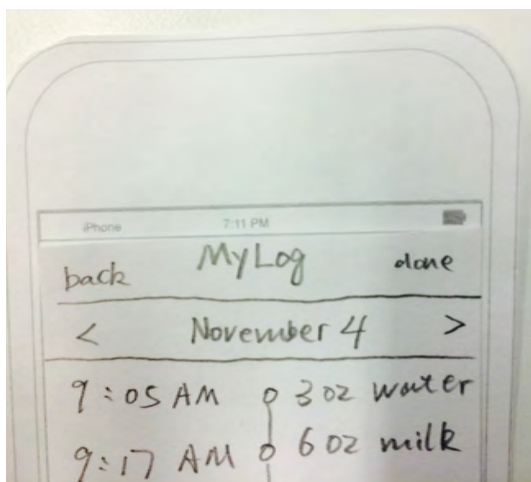
6. Unnecessary “back” and “done” buttons

In the “My Log” view, Eric did not see the purpose of having both a “back” and “done” button, or either of them for that matter, when he is just viewing his water log.

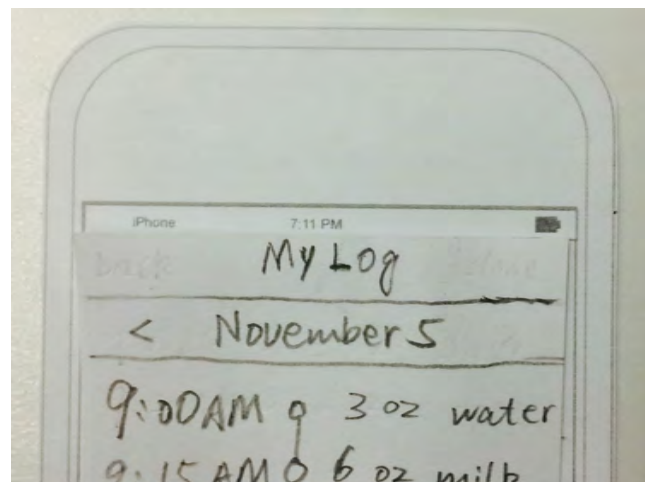
Severity: 3

Having unnecessary buttons makes it confusing for the user to navigate through the application. This might lead them to make errors or reduce the efficiency of use.

Revision: We removed “back” and “done” button on pages that did not need them to reduce confusion.



Before



After

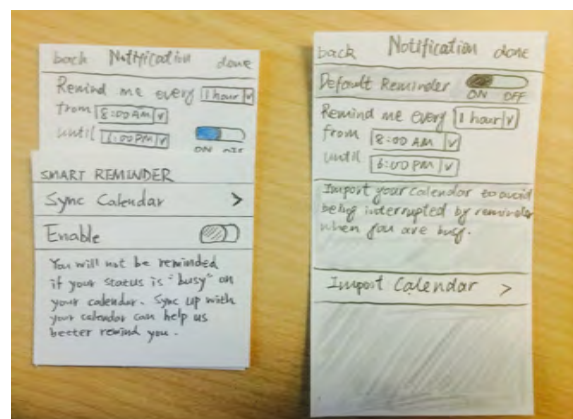
7. Confusing Default Reminders with Smart Reminders

Stephen had trouble telling the difference between the setting options of the default reminders and the smart reminders. Since smart reminders is like a sub-component of all reminders, it does not make sense to display them at the same level.

Severity: 2

“Default Reminder” and “Smart Reminder” configurations are two different things with different format and options. Making it more distinguished that they are separate features is important for ease of use.

Revision: We moved the setting options for Smart Reminders into a sub-page to keep it separate from Default Reminders options.



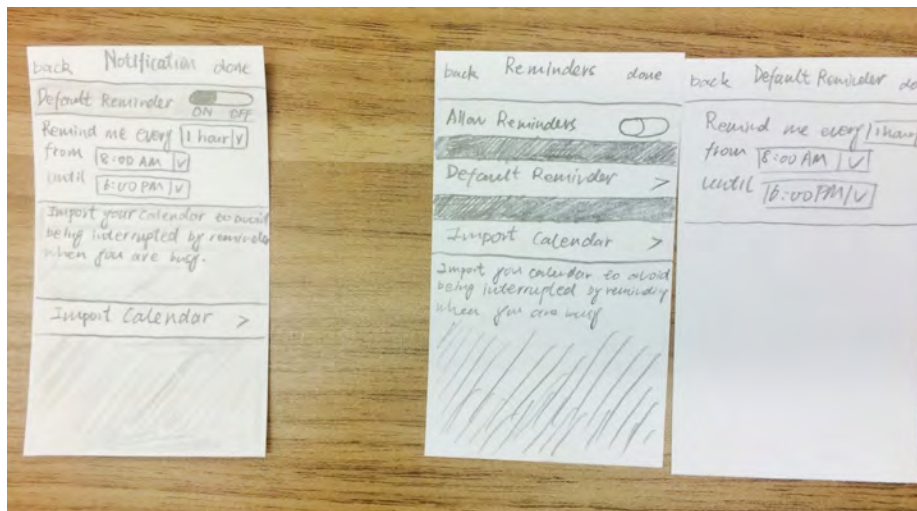
8. Reminder Settings Page Too Cluttered

On the settings page, Gary got lost by all the text and details. He saw that the default reminder was on and thought he had finished the task to set up smart reminders (which he didn't). He later commented that it would be nice if we made the page more simple.

Severity: 2

Putting the default reminder settings and import calendar option (plus the annotation for it) together seems too much for our users to understand. Making the page clear and easy to navigate is important for ease of use.

Revision: On the setting page, we moved the default reminder setting to a sub-page, so users will not see details about that on the reminder setting landing page. Instead, they will see three two selection bars, and a radio button, which looks much cleaner than before



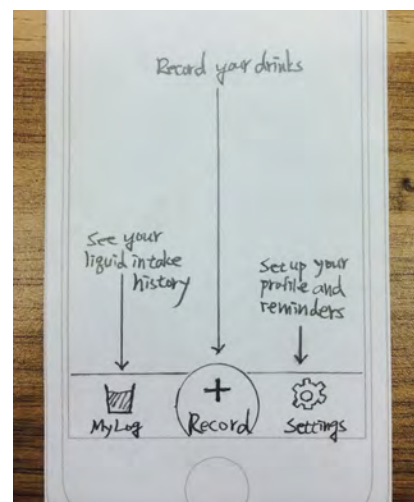
9. Confused About Menu Bar

Gary got confused about the menu bar after he opened up the app. He didn't realize know that this menu bar is designed as a tab-based bar, that he can tab to change pages. Gary is also confused about where to go for reminder settings and water-logging.

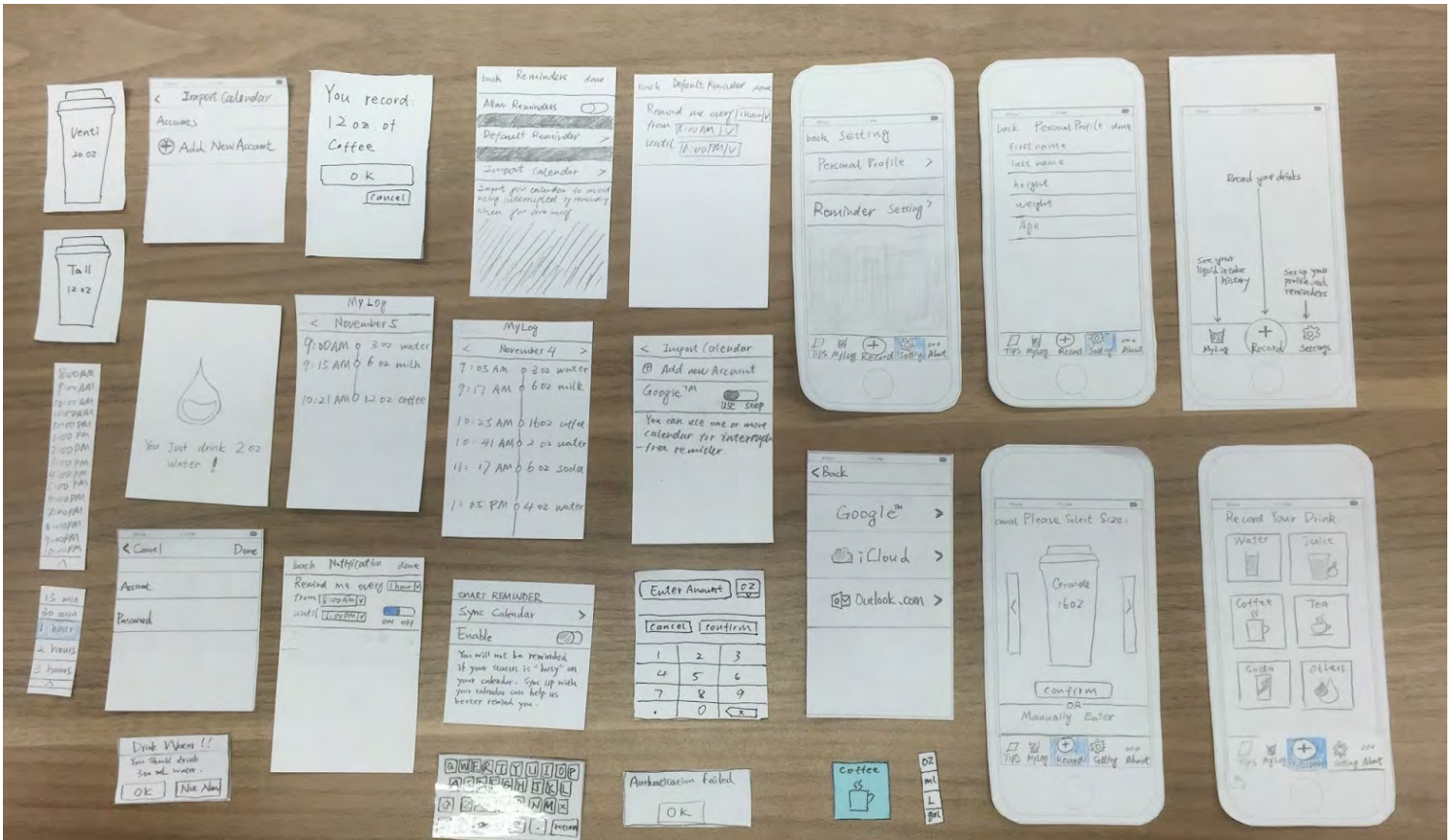
Severity: 3

Users will have a hard time if they didn't understand how can they interact with the menu bar. So adding a tutorial explaining the design and navigation is important in this case.

Revision: We added a simple tutorial overlay that shows users how to use the menu bar, and where to go for certain tasks that could be helpful. This page will be shown to users on their first time opening the app.

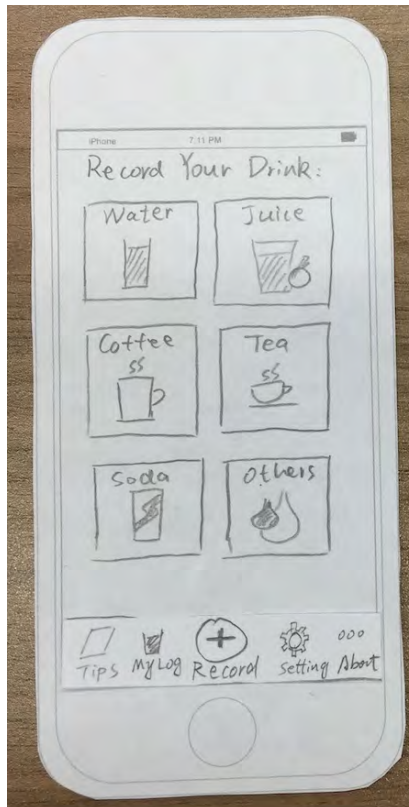


FINAL PAPER PROTOTYPE

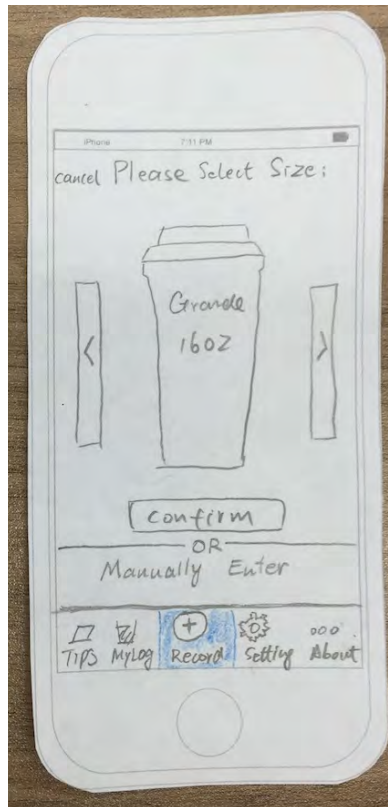


Overview Image

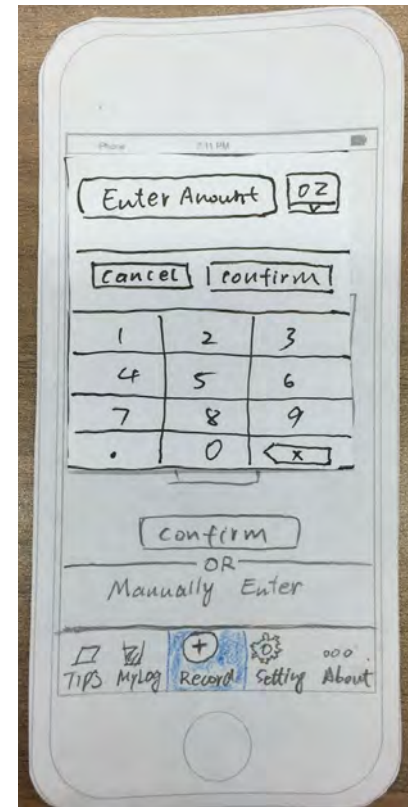
Task 1: Record Water Intake



screen 1.1



screen 1.2

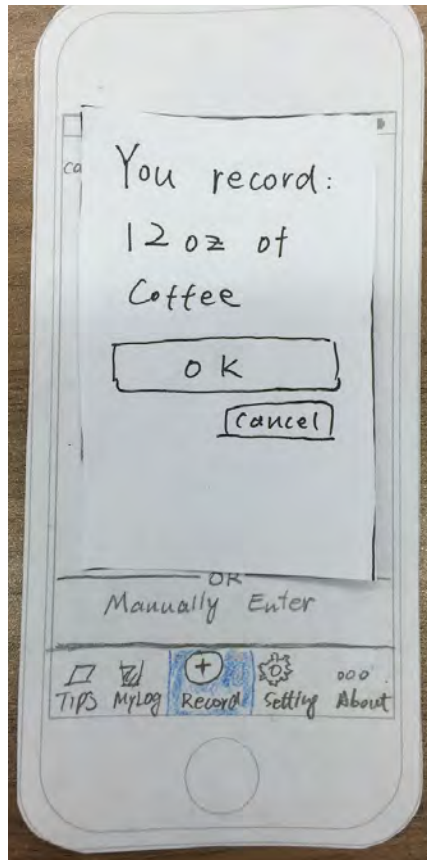


screen 1.3

Screen 1.1: The home page of the app, at the tab menu on the bottom, the current page will be highlighted (now the record page is being showed). After clicking on one of the beverage choices (coffee, for example), user will be taken to next screen (Screen 1.2).

Screen 1.2: In this screen, user can select the size of the beverage they just chose. The default size for coffee is 16 ounce. User can also manually input what he or she is drinking by clicking "Manually Enter".

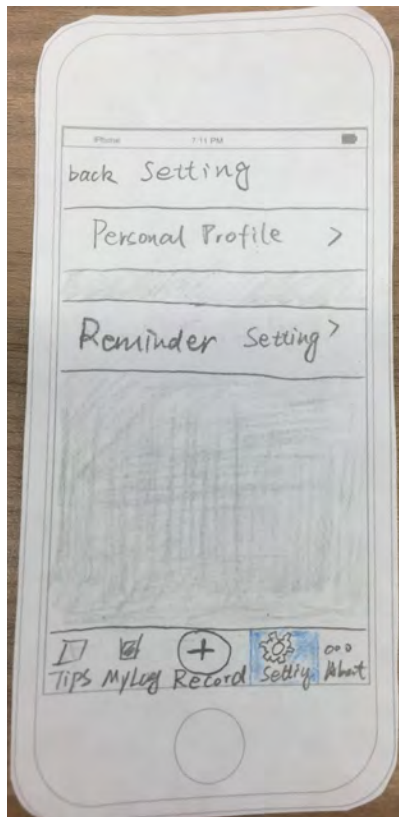
Screen 1.3: User manually inputs the amount of water and then clicks "Confirm" to log the record.



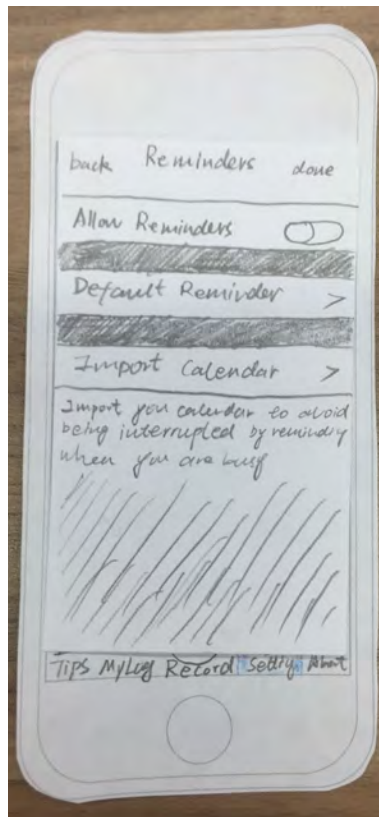
screen 1.4

Screen 1.4: Application will show a confirmation dialog. User can click "OK" to log the record or click "Cancel" to back to previous screen.

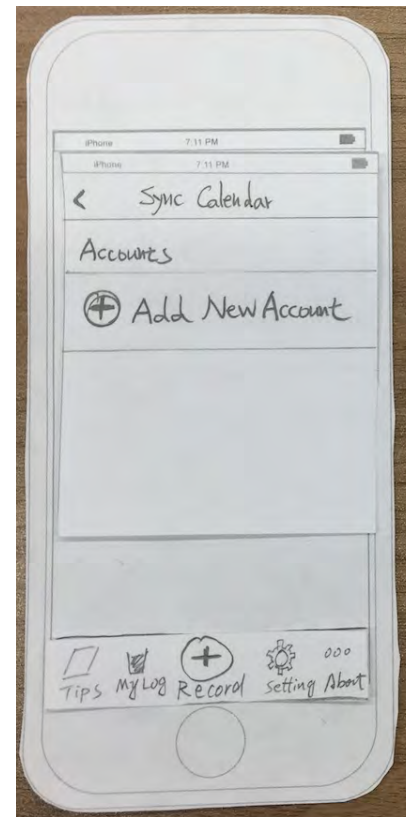
Task 2: Set Up Smart Reminders



Screen 2.1



Screen 2.2

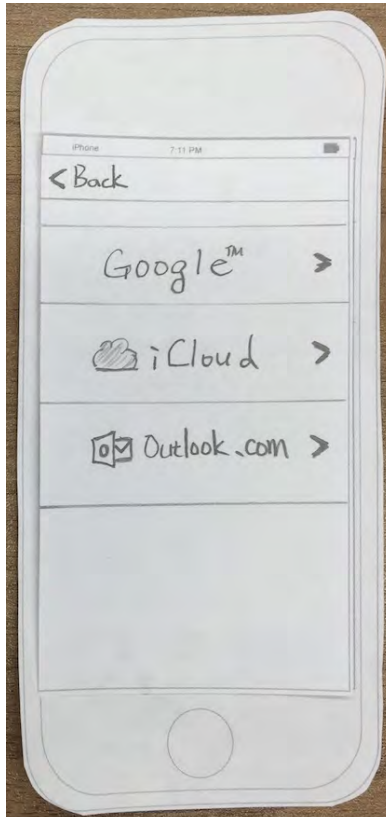


Screen 2.3

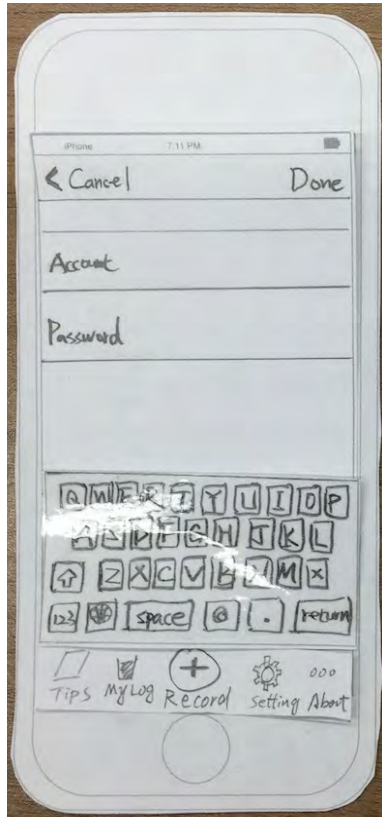
Screen 2.1: When user clicks the “setting” page, the “setting” icon will be highlighted in blue color and the user will see the setting page. User then clicks “Reminder Setting” and application will show next screen. (Screen 2.2)

Screen 2.2: Application shows the “Reminder” screen. User can set a default reminder which can be customized with interval, starting time, stopping time and enable status. User can also clicks “Import Calendar” to enable “Smart Reminder” and application will show next screen. (Screen 2.3)

Screen 2.3: In order to import a new calendar, user clicks “Add New Account” and application will show next screen. (Screen 2.4)



Screen 2.4



Screen 2.5



Screen 2.6

Screen 2.4: Application shows three supported calendar services and user clicks one of them. In this case, user clicks “Google” calendar and application will show next screen. (Screen 2.5)

Screen 2.5: User inputs authentication information about his or her calendar service and clicks “Done”. After successful verification, application will go back to “Import Calendar” screen.

Screen 2.6: Application shows a new added calendar service, add user can use the toggle button next to the calendar name to turn on or off the smart reminder.

Main Revisions

Usability testing revealed a number of problems with our interface design and these three revisions are the most salient and important to our paper prototype.

1. Reminder Settings Page

We modified several times for the setting page. In the second task of reminder set up, users are not aware why should they sync up their calendar, the app is not telling people why should they do that, and what the benefits are. In this case, we provided a clear documentation below the area where users click to sync calendar about why should they sync up the reminder with their calendar. After our second usability testing, we found that purpose of syncing calendar still unclear. The user initially thought the application may read and modify their google calendar and the explanation was too long to read. Thus, we renamed the option to “Import Calendar” and made the documentation shorter and clearer in our final design,

2. Redesign of Menu Bar

We did several design and interaction of re-design for the menu bar. Although we didn't receive much negative feedback about the design of menu bar, we are trying to optimize the design to highlight the function/features that users use for most of the time. For the first redesign, we put the “recording” button in the middle to highlight it. For our second redesign, we hid the “about” and “tips” page into two other pages (“settings” and “mylog”). So there are only three buttons on our final design of the menu bar, making it clearer and more optimized for users.

3. Adding Tutorial Overlay

We also found that one user was confused by the tab-bar menu after entering the home screen. When we asked the user doing the first task, import calendar, he could not figure out where to go to proceed with this task, instead he started looking around and actually doing the other task. We decided to add a tutorial overlay that will popup when users open the application for the first time. We hope the tutorial overlay will help our users understand each function inside the tab-bar menu and guide them to the right place without any obstacle.