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3c: Usability Testing Check-In

HEURISTIC EVALUATION
　　　Our group did two heuristic evaluations. For each issue discovered during evaluation, we identified the heuristic that it violates, and assigned severity to the issue. Below is a list of our issues, and our modifications to the paper prototype.

Identified Issues

1. **Missing Water Log**

For our first tasks, we received feedback that users cannot see the water log history, or what drink they just logged. After they finish logging a certain drink, the system has no interaction with users or showing what they have recorded.

Heuristic Violated: This issue violates the issue of visibility of system status that we are not keep users informed about what is going on or give them feedback.

Severity Rating: 4

Revision:
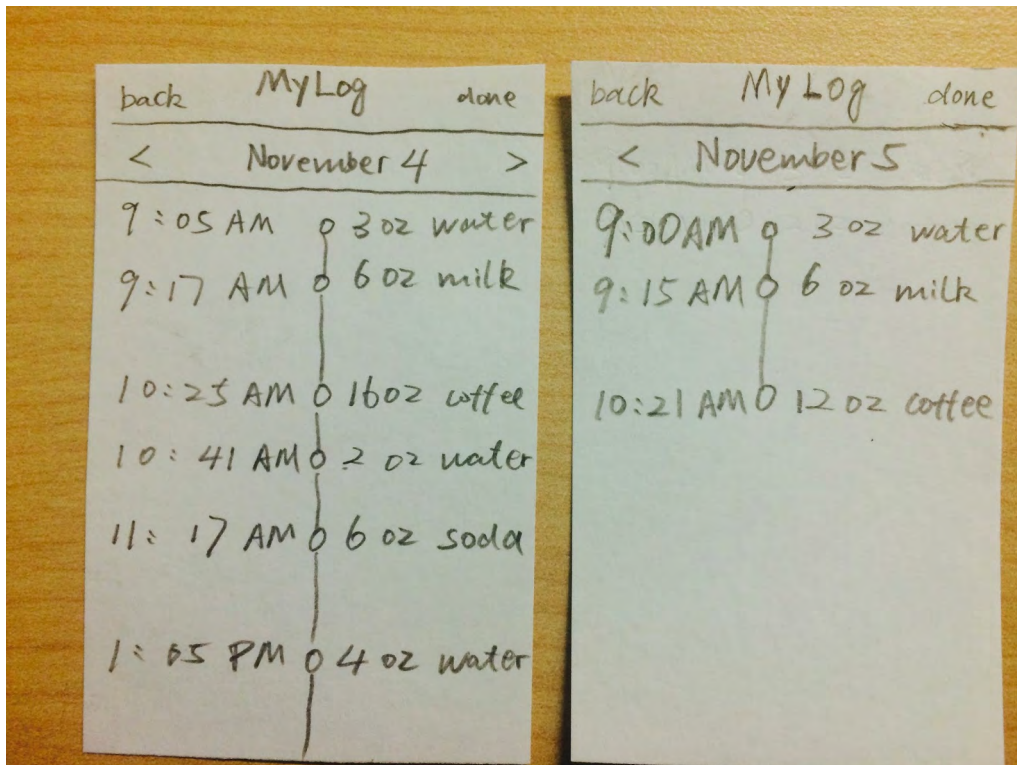
We add a page called MyLog in the menu bar to provide water logging history to users. So users will be able to see today's water log history, and they can also go to other day's.

2. Purpose of syncing calendar unclear

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's the benefits

Heuristic Violated: This issue violates the heuristic of help and documentation. In this case, it would be better to provide clear documentation to users about why should they sync up the reminder with their calendar.

Severity Rating: 3

Revision:
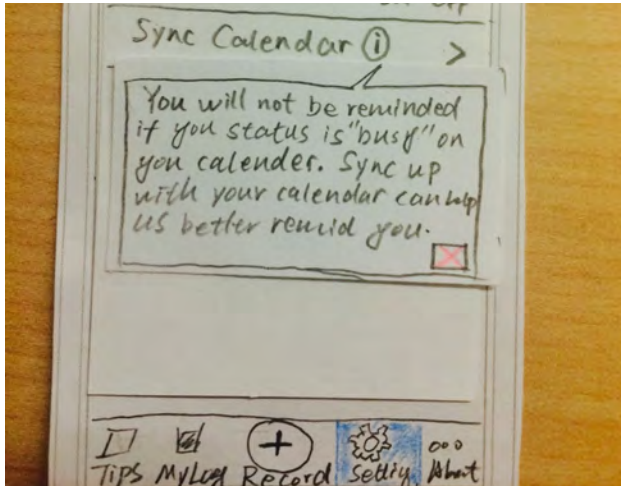
The revision we did is adding a "information" icon after the "Sync Calendar". If users click on that, a dialog box will pop out explaining why do users want to sync up their calendars with the reminder. This design will give users documentation to help them understand why they want to sync their calendar in the reminder setting.

3. Missing Default Reminder Setting

In task 2, we have a default reminder that is working on the backend. Users can not choose to enable or disable the default reminder, or do any setting to the default reminder.

Heuristic Violated: This issue violates user control and freedom because the app doesn't provide users any option to turn off the default reminder or do setting with it.

Severity Rating: 2
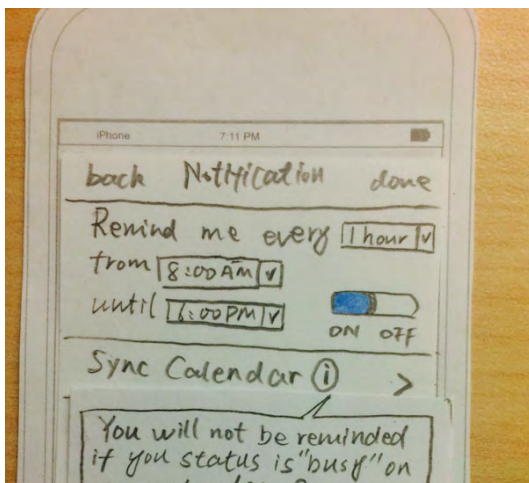
Revision:

We add a interface of the default reminder in the reminder setting that allows user to interact with it. Users can set up how often they want to be reminded to drink water, and the start and end time of the reminder. Also, there is a radio button to allow users to turn on/ turn off the default reminder.

4. Menu Design Not Match User Behavior

Users can not easily find the record button when they want to record which and how much liquid they just drink, since the location of button for record is not obvious in the bottom.

Heuristic Violated: This violates the issue of Match between system and the real world. The system should make information appear in a natural and logical order and follow the real-world conventions. However, our current design doesn't match with users' behavior. For most of the time, users will open this app for water drink record, but the button for that is not highlighted.

Severity Rating: 2

Revision:
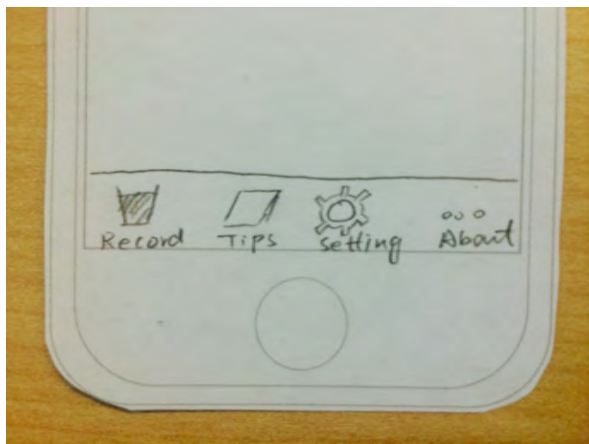
Before   After

We change the bottom menu bar, putting the record menu in the middle of menu bar, since the record task will be used frequently and it is more convenient and easier for users to click on the record button following real-world conventions, making the menu bar appears in a natural and logical order.

FIRST USABILITY TEST

Our first usability testing 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.

For the test, we provided some background on our project and explained what he should be doing as the participant in a usability test. We described each task we wanted Eric to do before letting him use the application and did not answer questions or provide help as

he was performing the tasks. Ethan was the computer, Cindy was the observer, and both Ethan and Cindy played the role of the facilitator.

We did a good job of having Eric speak his thoughts out loud and learned a lot from his thought process. The testing moved very quickly though, so Cindy had a hard time taking notes on Eric's behavior. For future tests, we will continue to encourage participants to speak their thoughts, but slow down the pace of the testing and task completion.

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 (still) unclear

Eric did know what the purpose of syncing up his Google calendar with the application was. He initially thought the application was going to add events onto his Google calendar for reminders to drink water.

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 added some documentation below the area where users click to sync up their calendar to inform them of its purpose.
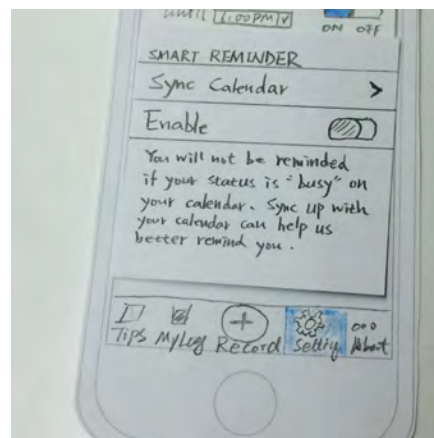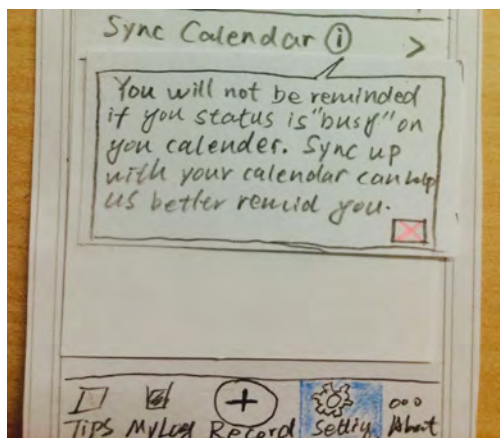
3.   Missing automatic water bottle sync status

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 recieved 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 like 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
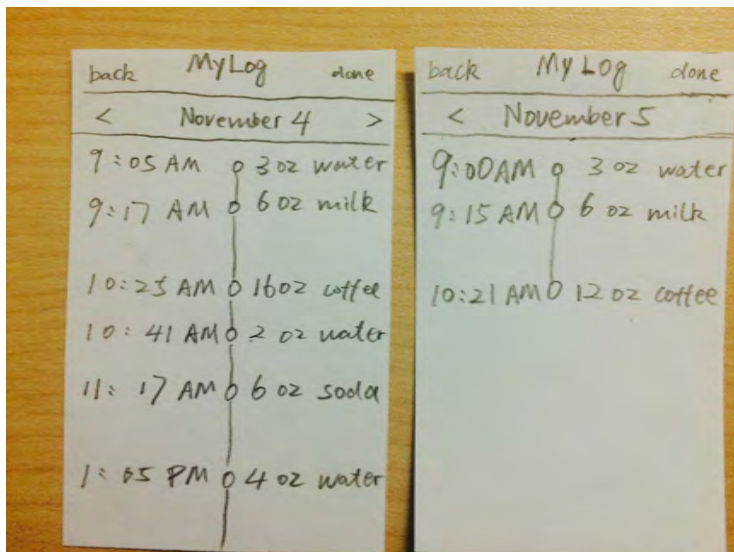

5.   Unnecessary "back" and "done" buttons

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.
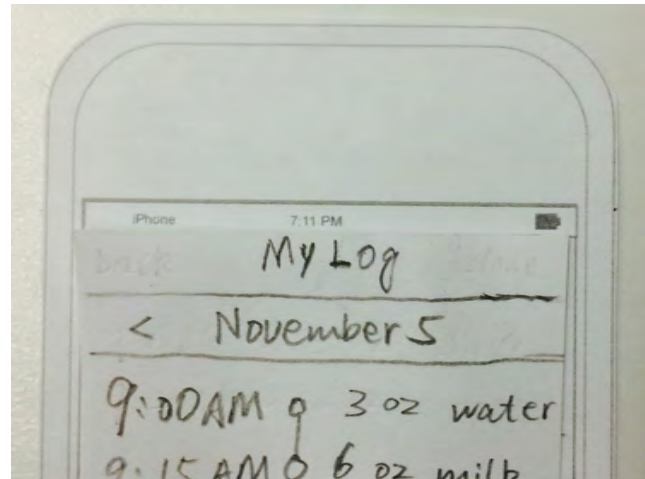
Severity: 3
Having unnecessary buttons makes it confusing for the user to navigate through the application. This might lead them to make errors or reduce the efficiency of use.

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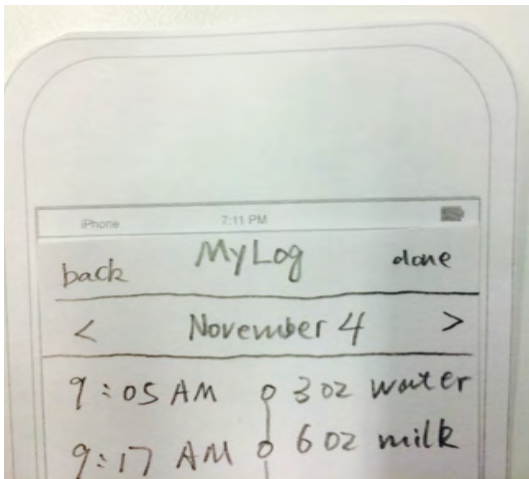

Before

After

6. 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 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.
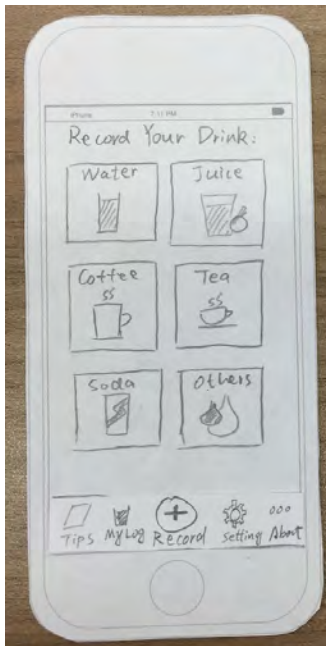
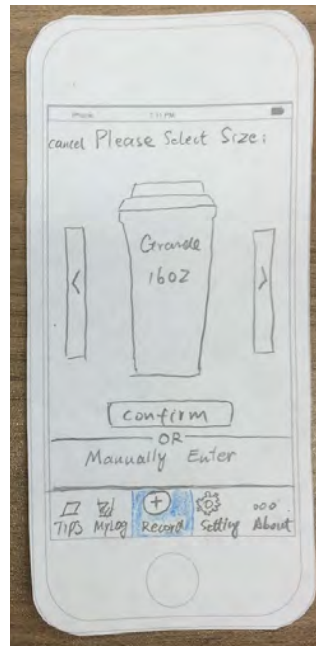Revision: none

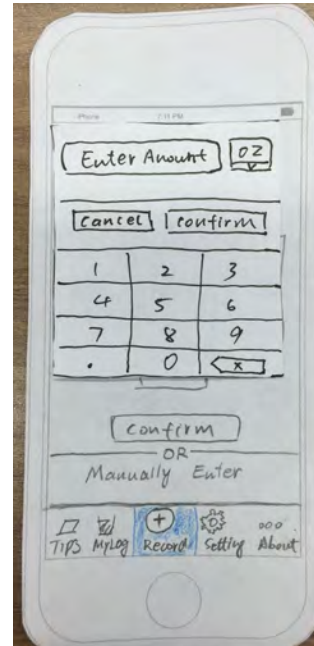**REVISED PROTOTYPE**
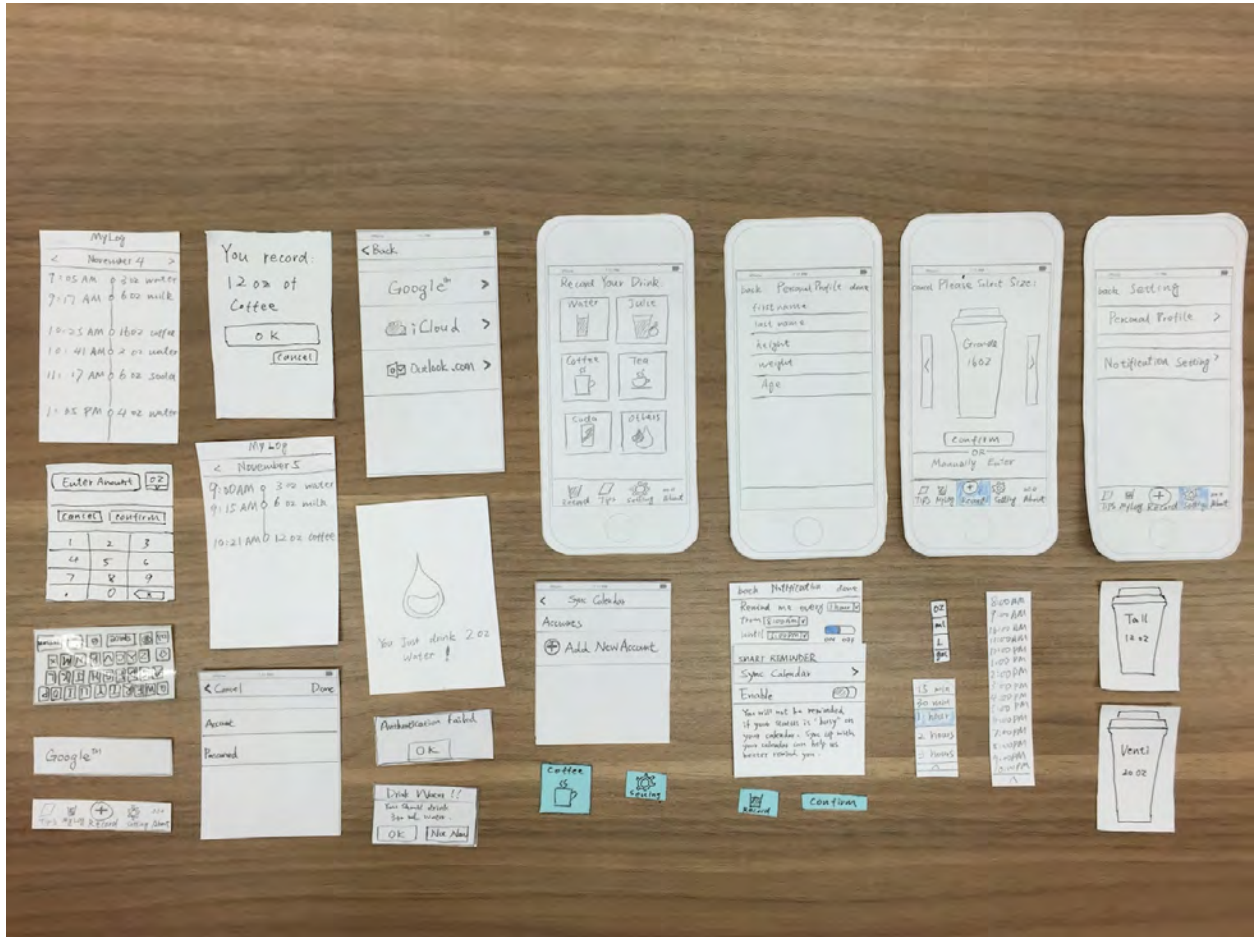
Overview Image

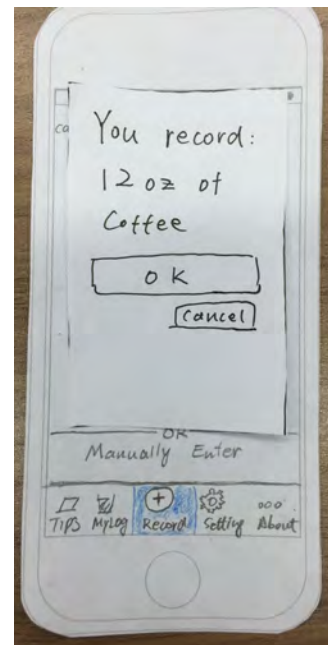**Task 1: Record Water Intake**

screen 1.1   screen 1.2   screen 1.3   screen 1.4

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".

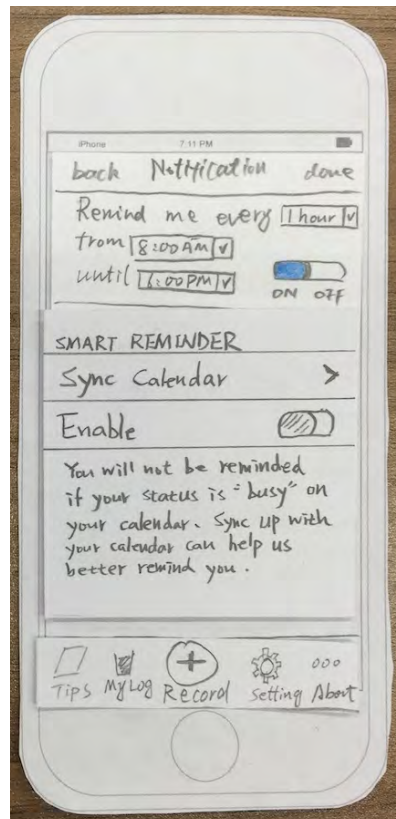Screen 1.3: User manually inputs the amount of water and then clicks "Confirm" to log the record.

Screen 1.4: Application will show a confirmation dialog. User can click "OK" to log the record or click " Cancel" to back to previous screen.
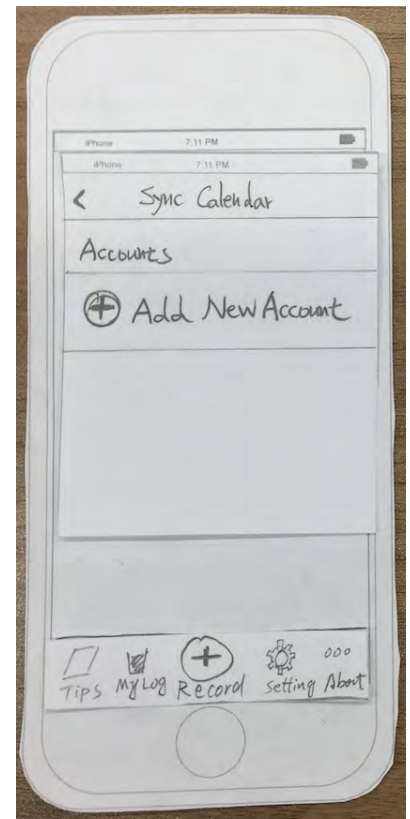
Task 2: Set Up Smart Reminders
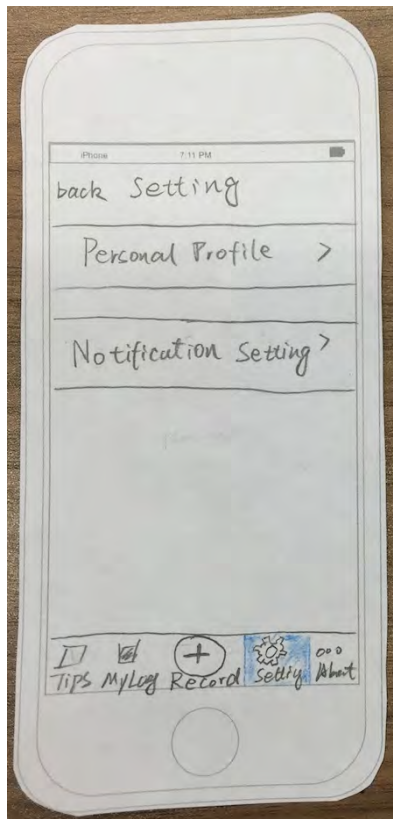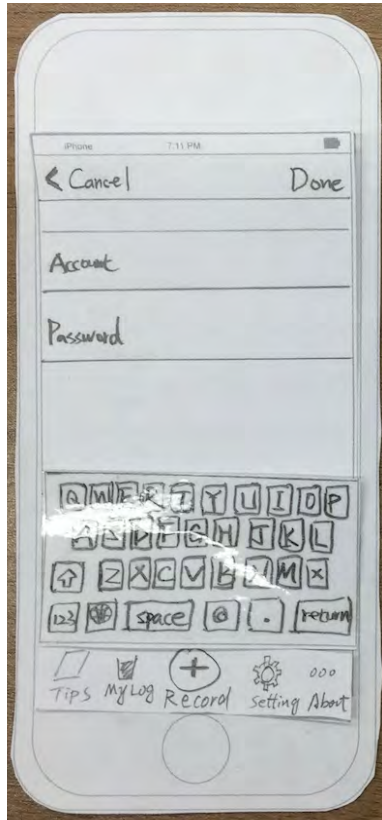

Screen 2.1

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 "Notification Setting" and application will show next screen. (Screen 2.2)

Screen 2.2: Application shows the "Notification Setting" screen. User can set a notification which can be customized with interval, starting time, stopping time and enable status. User can also clicks "Sync Calendar" to enable "Smart Reminder" and application will show next screen. (Screen 2.3)
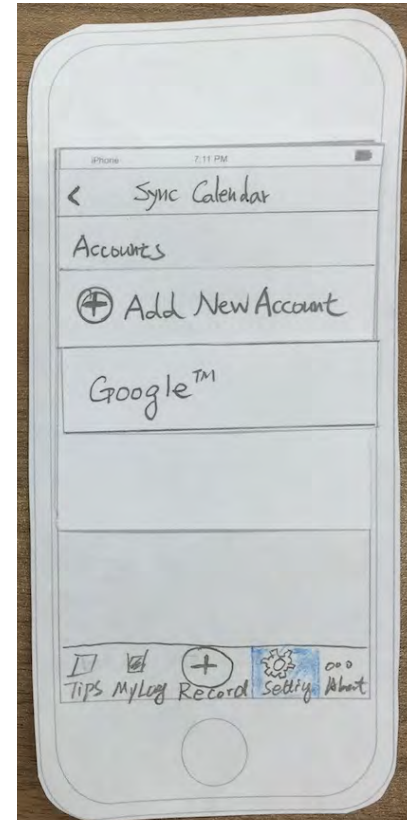
Screen 2.3: In order to synchronize a new calendar, user clicks "Add New Account" and application will show next screen. (Screen 2.4)

| 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 "Sync Calendar" screen.

Screen 2.6: Application shows a new added calendar service.

Future Plans

Our target participants will be those who spend most of their time working indoors. In particular, we are going to focus on full time students and employees. These two groups of people are generally very busy with their study or work schedule. The goals for our future tests will focus on finding more design issues and evaluating the revision of our current prototype. In the future usability tests, Cindy will play the role of the facilitator, Ethan will be the computer role, and Maggie and Rick will be observers and take notes.