Overall Problem

- 60% of human body is water *

- People should drink eight 8-ounce glasses of water each day (8 × 8 rule) **

- People often forget to drink enough water

- Up to 75% of Americans suffer from chronic dehydration ***

* http://www.medicaldaily.com/75-americans-may-suffer-chronic-dehydration-according-doctors-247393
** http://authoritynutrition.com/how-much-water-should-you-drink-per-day
*** http://water.usgs.gov/edu/propertyyou.html
Initial Paper Prototype

Smart Water Bottle
Initial Paper Prototype

Task 1 - Set Up Smart Reminders
Initial Paper Prototype

Task2 - Record Water Intake (1/2)
Initial Paper Prototype

Task 2 - Record Water Intake (2/2)
Heuristic Evaluation

Main violations:

• Purpose of syncing calendar unclear
• Users don’t have total control and freedom with the system
• Users don’t have visibility of system status
• Match between system and the real world is not good
Purpose of syncing calendar unclear

Missing default reminder setting
Testing Process and Results

Refinements after Heuristic Evaluation (2/2)

Missing water log

Menu design not match user behavior
Usability Testing

Method
- Did not answer questions or provide help unless absolutely necessary
- Debriefed participants after tests

Summary
- Test 1 - settings page and some UI elements
- Test 2 - settings page documentation and naming
- Test 3 - layout and simplicity
Usability Testing

- Purpose of syncing calendar unclear (Test 1)
- Unnecessary “back” and “done” buttons (Test 1)
- Purpose of syncing calendar unclear (Test 2)
- Confusing default reminders with smart reminders (Test 2)
- Confused about menu bar (Test 3)
- Reminder settings page too cluttered (Test 3)
Purpose of syncing calendar unclear

Unnecessary “back” and “done” buttons
Usability Testing

- Purpose of syncing calendar unclear (Test 1)
- Unnecessary “back” and “done” buttons (Test 1)
- Purpose of syncing calendar unclear (Test 2)
- Confusing default reminders with smart reminders (Test 2)
- Confused about menu bar (Test 3)
- Reminder settings page too cluttered (Test 3)
Testing Process and Results

Refinements after Usability Testing 2

Purpose of syncing calendar (still) unclear

Confusing default reminders with smart reminders
Usability Testing

- Purpose of syncing calendar unclear (Test 1)
- Unnecessary “back” and “done” buttons (Test 1)
- Purpose of syncing calendar unclear (Test 2)
- Confusing default reminders with smart reminders (Test 2)
- Confused about menu bar (Test 3)
- Reminder settings page too cluttered (Test 3)
Testing Process and Results

Refinements after Usability Testing 3

Confused about menu bar

Reminder settings page too cluttered
Final Paper Prototype
Task 1 - Set Up Smart Reminders (1/2)
Final Paper Prototype

Task 1 - Set Up Smart Reminders (2/2)
Final Paper Prototype

Task2 - Record Water Intake

![Prototype Screenshots]

1. Record Your Drink:
   - Water
   - Juice
   - Coffee
   - Tea
   - Soda
   - Others

2. Please Select Size:
   - Grande (16 oz)

3. Enter Amount:
   - Numbers input screen

4. Confirm or Manually Enter

5. You record: 12 oz of Coffee
   - OK
   - Cancel
Digital Mockup
Task 1 - Set Up Smart Reminders (1/2)

- Personal Profile
- Reminder Setting
- About this app

Reminder
From: 9:00
To: 6:00
Repeat: Every 1 hour

Import Calendar
When your calendar is imported and enabled reminding notifications will be cancelled if your status is busy on calendar.

ACCOUNTS
- Outlook (Inactive)
- Add Account
Digital Mockup

Task 1 - Set Up Smart Reminders (2/2)
Digital Mockup

Task2 - Record Water Intake (1/3)
**Digital Mockup**

**Task 2 - Record Water Intake (3/3)**

### My Drinking Log

<table>
<thead>
<tr>
<th>Time</th>
<th>Drink</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 AM</td>
<td>3 oz Water</td>
</tr>
<tr>
<td>10:21 AM</td>
<td>16 oz Coffee</td>
</tr>
<tr>
<td>12:00 PM</td>
<td>8 oz Soda</td>
</tr>
<tr>
<td>12:32 PM</td>
<td>8 oz Soda</td>
</tr>
<tr>
<td>3:00 PM</td>
<td>8 oz Soda</td>
</tr>
<tr>
<td>3:10 PM</td>
<td>6 oz Water</td>
</tr>
<tr>
<td>5:35 PM</td>
<td></td>
</tr>
<tr>
<td>6:00 PM</td>
<td></td>
</tr>
</tbody>
</table>

### Your Drink Category

<table>
<thead>
<tr>
<th>Drink</th>
<th>Volume</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>4 oz</td>
<td>20%</td>
</tr>
<tr>
<td>Coffee</td>
<td>16 oz</td>
<td>80%</td>
</tr>
<tr>
<td>Total</td>
<td>20 oz</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Timeline

- **Today**
  - Water: 4 oz (20%)
  - Coffee: 16 oz (80%)
  - Total: 20 oz (100%)

- **Wed Nov 12**
  - Water: 9 oz (16%)
  - Coffee: 16 oz (30%)
  - Tea: 8 oz (15%)
  - Juice: 8 oz (15%)
  - Soda: 8 oz (15%)
  - Total: 53 oz (20%)
Summary

- Iterative design is very effective and powerful
- The initial design is always not the best design
- It is important to get reliable feedback from users
- Users WILL NOT always understand your design
Thank you!
Questions?