3A: Paper Prototype

Overview

Our paper prototype is a 3D model with two components. First, we have a pill dispensing machine ("Pilltender") that dispenses water and pills, and has an interactive UI screen. Second, we have a specialized mug that holds both water and pills dispensed from the machine.

Task 1: Scanning, Reading, and Displaying New Medication Data
In this task, the user will input a new medication into Pilltender. They will need to scan the medication bottle, fix a mistake from scanning, and insert the bottle into the machine.

Figure 1.0: Default state of hardware when not in use (e.g., not ingesting new pill bottle or reminding user to take medicine).

Figure 1.1: User opens top of machine to activate scanner and new medicine prompt.

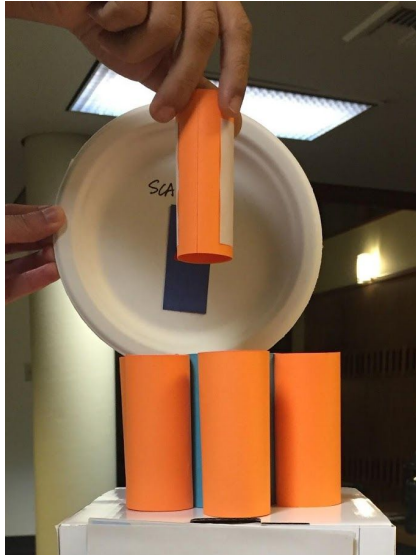**Figure 1.2:** Medicine bottle that is to be inserted and entered into machine.

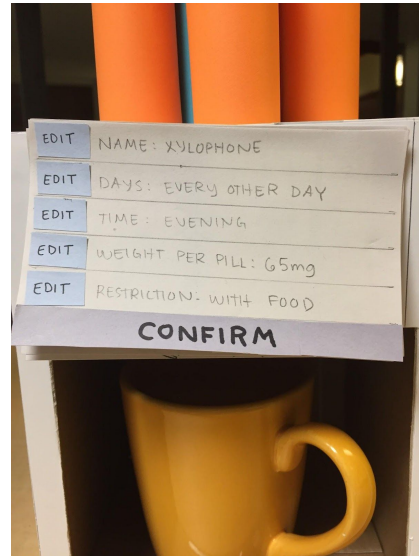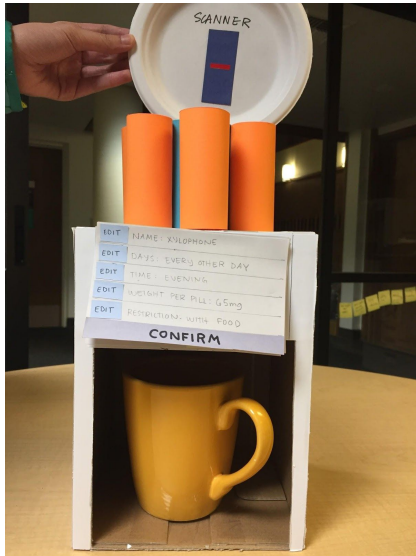**Figure 1.3:** User scans medicine bottle, and machine reads the data.

Figure 1.4 + 1.5: Scanned information is displayed on the screen, asks user to confirm that all the information is correct.
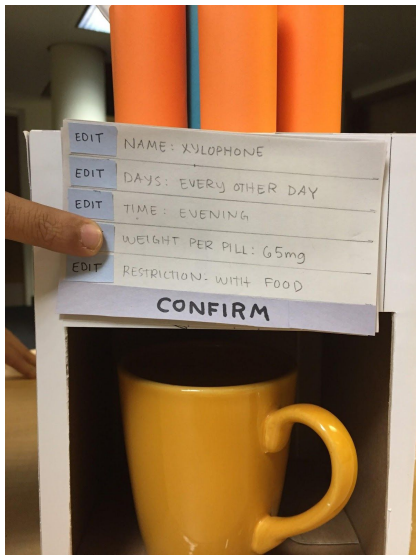

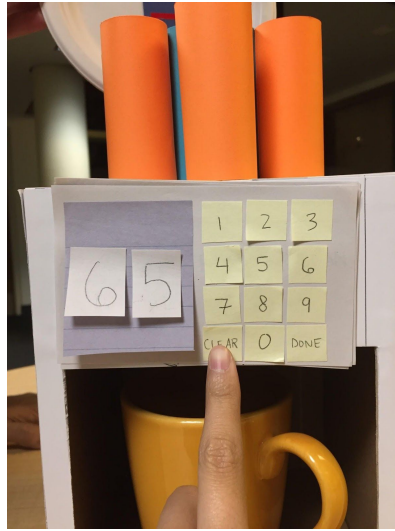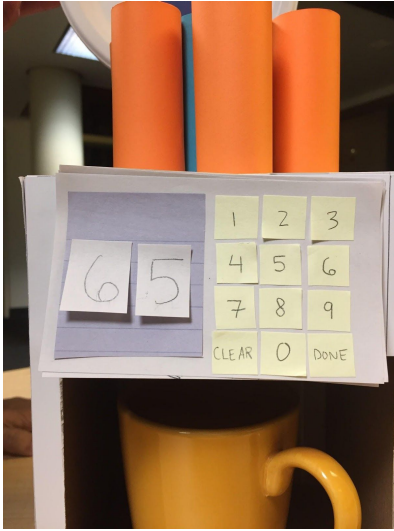**Figure 1.6:** The the weight per pill field is incorrect, so the user selects Edit.

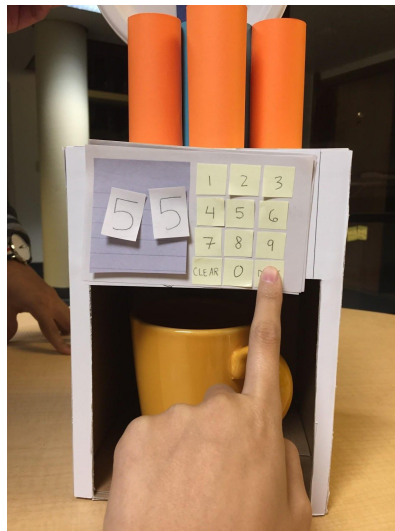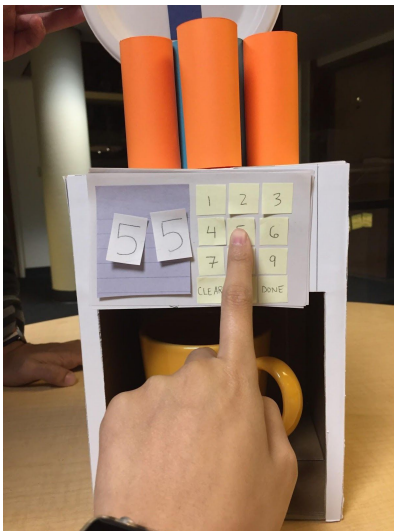**Figure 1.7 + 1.8:** The user clears the incorrect data.

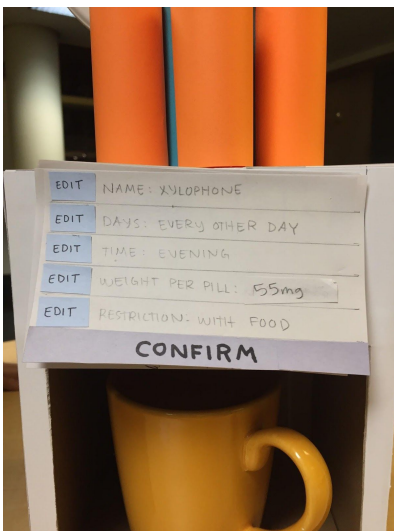**Figure 1.9 + 1.10:** The user enters the correct data.

Figure 1.11: The correct information is displayed on the confirmation screen.
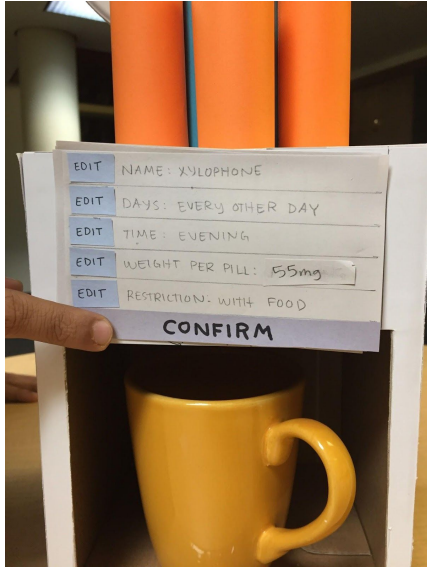
Figure 1.12: The user selects confirm when all the data is correct.

Figure 1.13: The system prompts the user to insert the pill bottle into an empty pod. All empty pods flash to indicate availability.
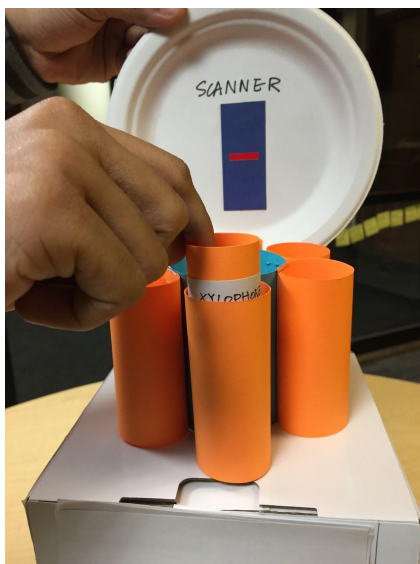

Figure 1.14: The user inserts the pill bottle into a pod and closes the lid.

Task 2: Alerting the User and Taking Pills

In this task, the user is alerted that it is time to take their medicine. They then proceed to take their medicine from the specialized Pilltender mug.

Figure 2.0: Default state of hardware when not in use (e.g., not ingesting new pill bottle or reminding user to take medicine).
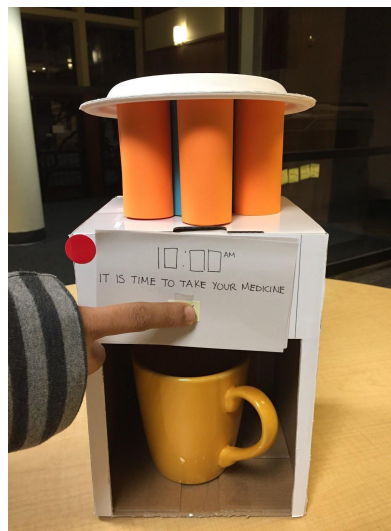

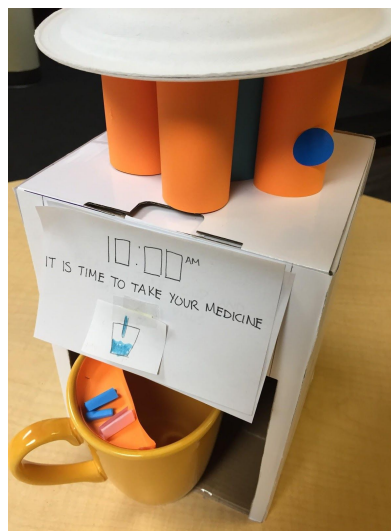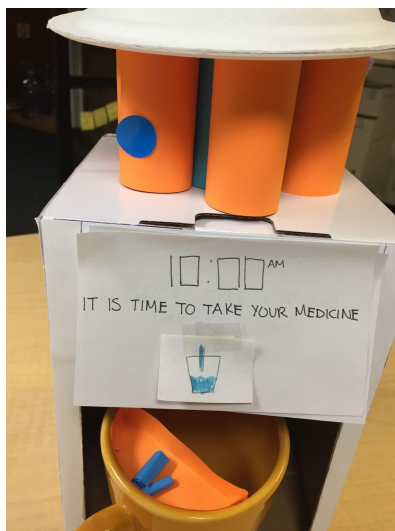**Figure 2.1**: Alert the user to the system, and the user presses that they have been notified.

Figure 2.2: The system fills the cup with water and distributes the pills for the user to take.

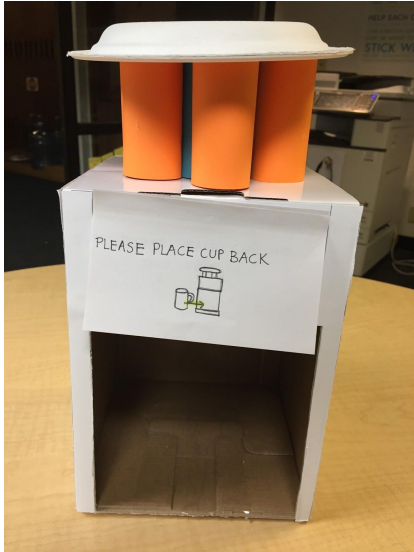**Figure 2.3**: The system prompts the user to take the cup and the pills.

Figure 2.4: The system asks the user to put the cup back.

Figure 2.5: The system prompts the user that the process is complete.