6.0 Prototyping Activities

6.1 General procedures in carrying out testing and recruitment (based on Nielsen's Usability Heuristics)

Before we began our testing and recruitment, we read through our persona and our interviewees, with the information already present to us, the group created a rough sketch of our application. After, we set out and asked two of our interviewees to have a look and test out our rough prototype of the application, while the two test subjects were given an explanation of how it worked, we asked questions pertaining to the overall usability of each function that was in the application, and the visibility of the UI. We also asked questions based on the concept of Familiarity as we would have liked to have known if the two users had used any applications with similar functions to that of our own, this helped to ensure that while we keep our concept familiar to the subjects, it also reduced cognitive load as they would already be aware of most of the icons and similar functions of our applications.

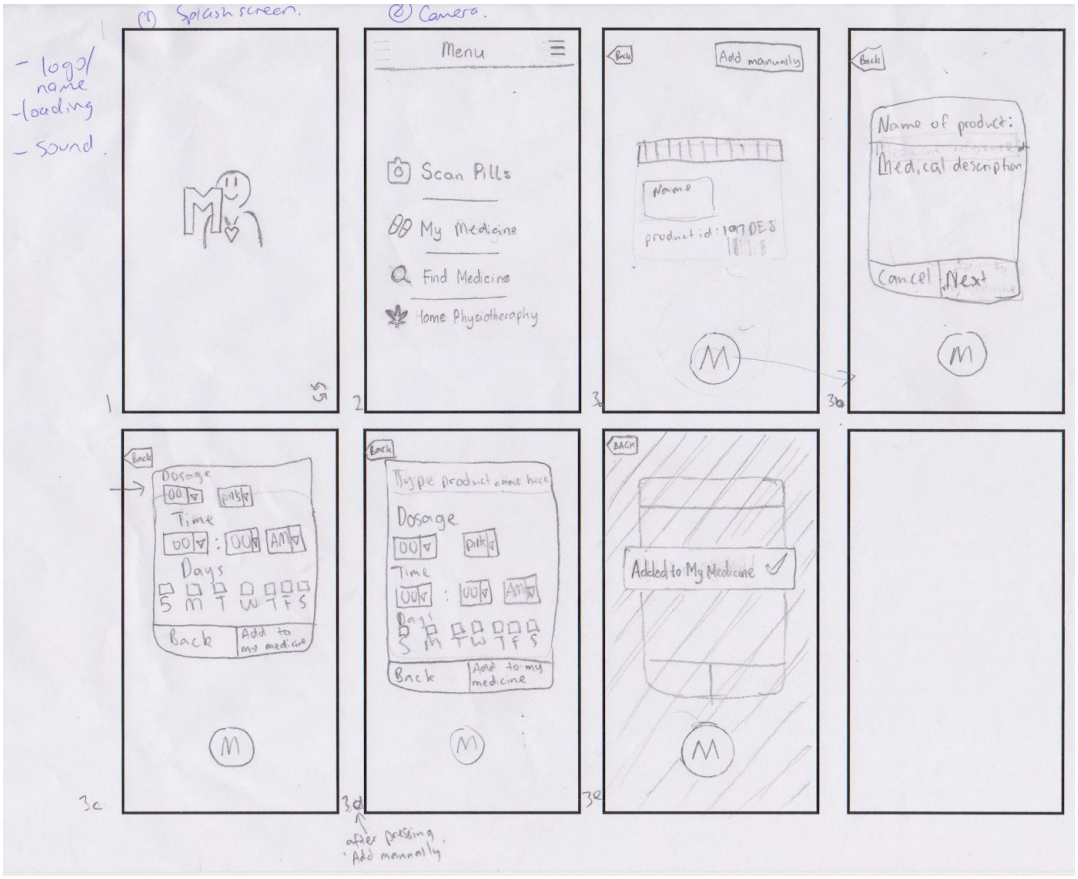
6.2 Paper Prototyping

I. Process

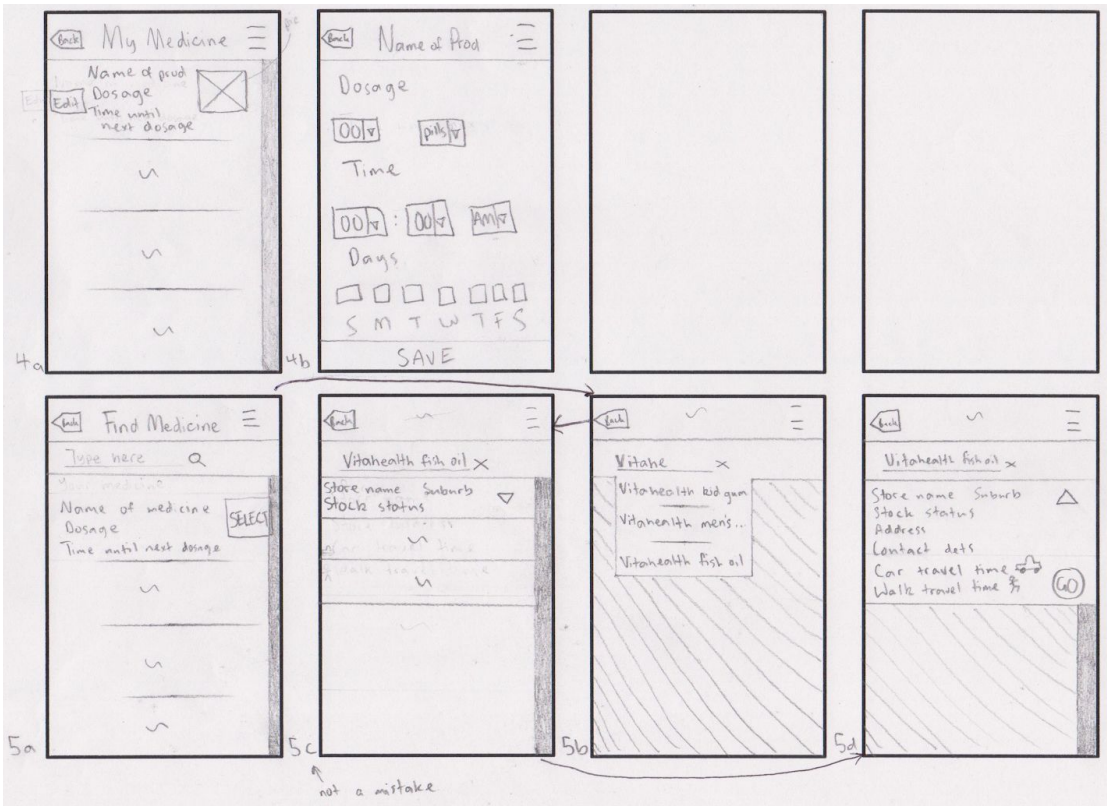
Our paper prototyping involved carefully designed drawn examples of how the UI might look. Together as a group we sat down and brainstormed the overall look of the application, speaking in turns with 2 scribes drawing what we envisioned (alternating).

With each frame we incorporated elements of design commonly seen in other phone applications (e.g. back button on top left) as we believe **external consistency** to other applications is the backbone technique for allowing the elderly to understand how to use the application much faster.

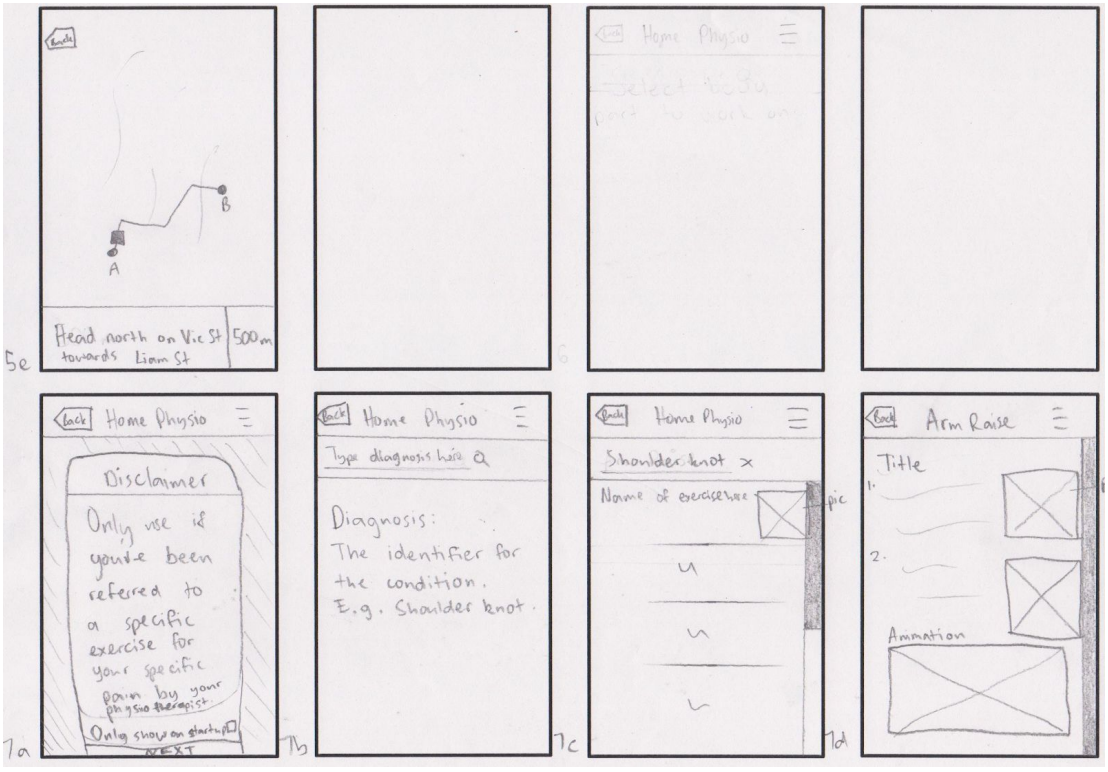
Lo-fi Page 1


(1) Splash screen.
(2) Camera.
- logo/ name
- loading
- sound.
Menu
Scan Pills
My Medicine
Find Medicine
Home Physiotheraphy
Back
Add manually
Name
product id: 1a7DE8
Name of product:
Medical description
Cancel
Next
Dosage
Time
Days
S M T W T F S
Back
Add to my medicine
Type product name here
Added to My Medicine
1
2
3
3a
3b
3c
3d
3e
after pressing Add manually.

Lo-fi Page 2



Lo-fi Page 3 (Note: We accidentally skipped using #6, so pretend '7' is 6!)



Interview Results & Following Improvements

II. Paper prototype evaluation results (how our subjects reacted to the paper prototype).

Subject 1:
Mentioned @ **lo-fi page 1**
-"How do I know if it scans automatically?"
-She felt uncomfortable with how far away all the buttons were (partly due to the 5.5" phone we presented to her)
-She told us, "why do we need a button if it automatically scans?"
-Buttons too small
Mentioned @ **lo-fi page 2 5d**
-Unclear progression, she thought she just had to press the button "GO" instead of pressing on the icons of the car or person before proceeding to press "GO"

Subject 2:
Mentioned @ **lo-fi page 1**
-He said the text was too small
-Buttons too small
Mentioned @ **lo-fi page 2 5d**
-As mentioned earlier for Subject 1, he also tried to press "GO" as it didn't seem obvious that there was a prerequisite button

III. How the results informed the creation of the low fidelity digital prototype.

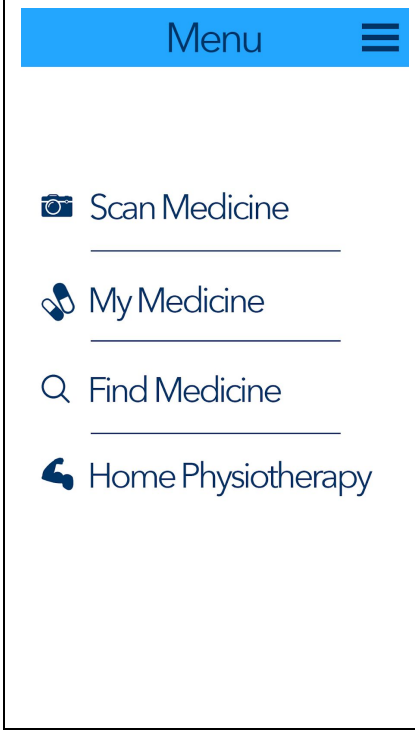
-Thanks to Subject 1's feedback, we understood that we had to create some sort of **visible** prompt or obvious text to remind the user that the application does scan the product automatically.
-Thanks to Subject 1 and 2's feedback, we decided when creating our digital prototype we will be making the overall GUI "bigger", with bigger boxes and buttons (subsequently increasing text size) for the sake of **visibility** and **usability**
-With encouragement of **minimalism**, we removed the scan button for redundancy
-Make specific buttons in page 2 5d more **visibly** appealing. In addition, following Gestalt's law of '**similarity**' we will use a specific shape for both buttons instead of using their icons.

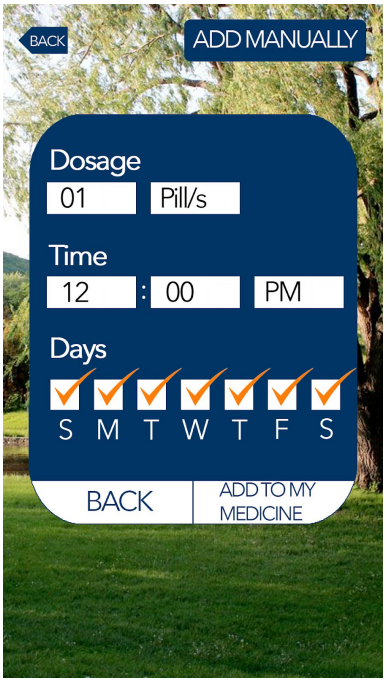
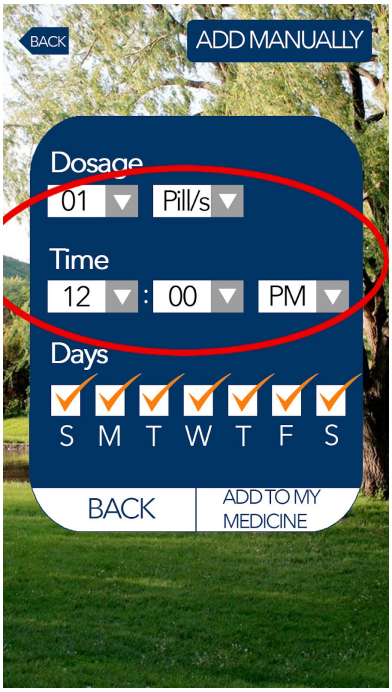
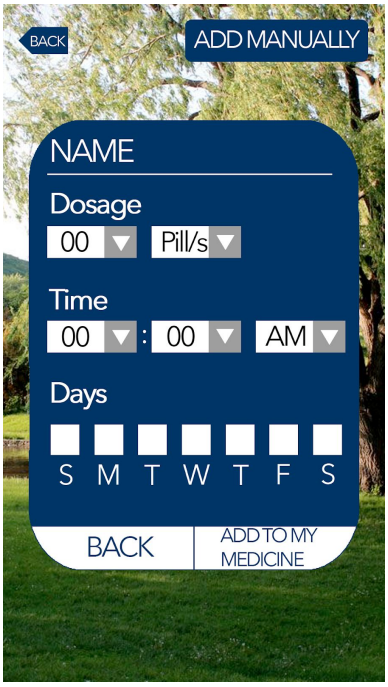
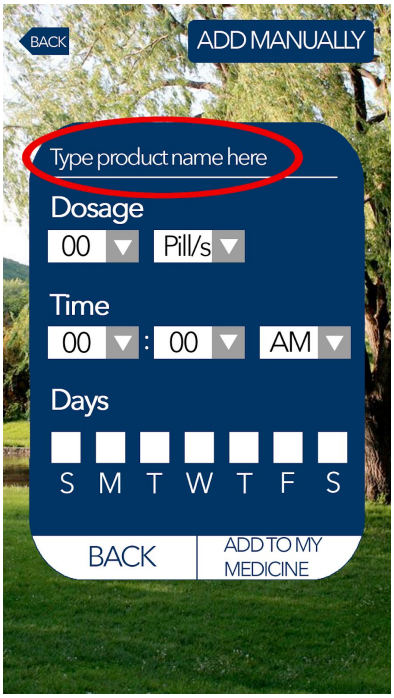
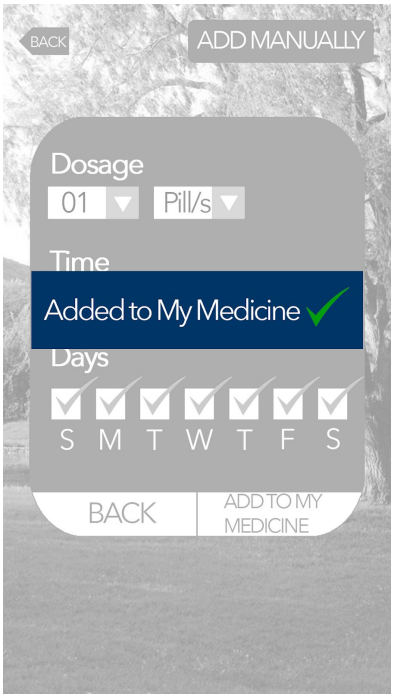
6.3 Digital Prototype

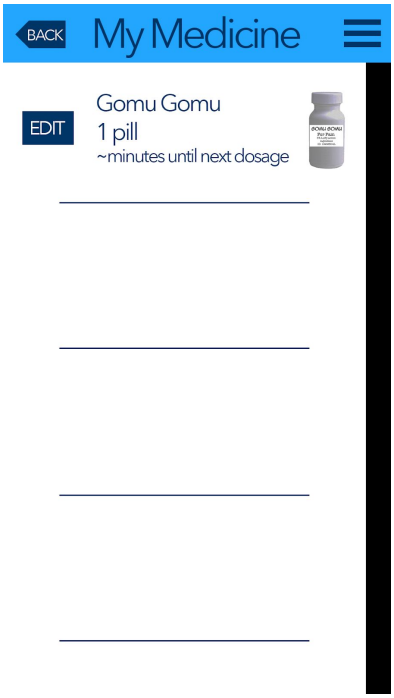
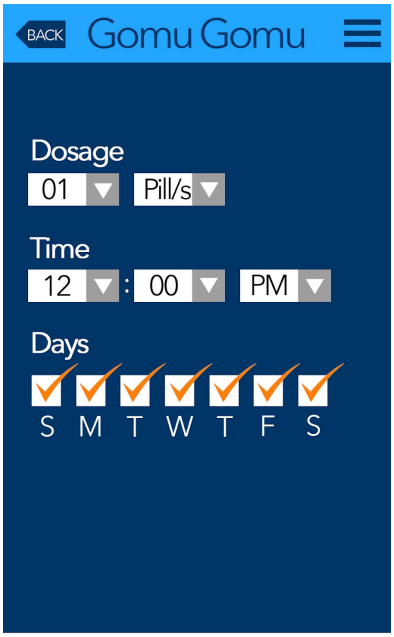
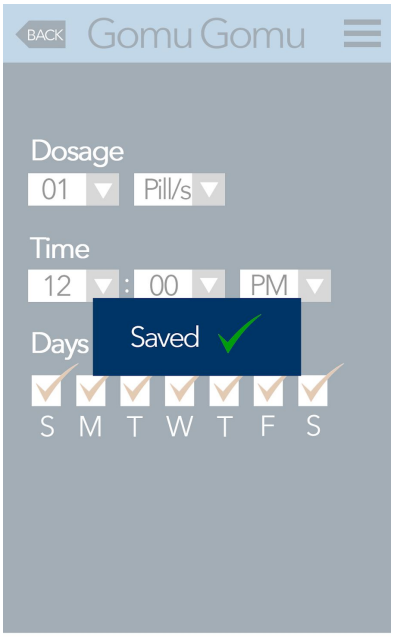
I. Procedures for evaluating the lo-fi digital prototype.

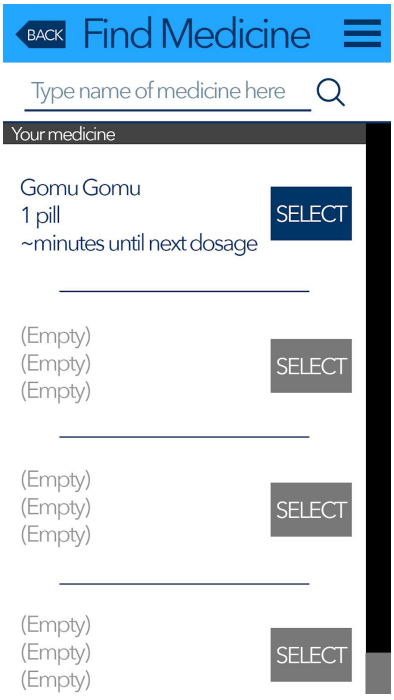
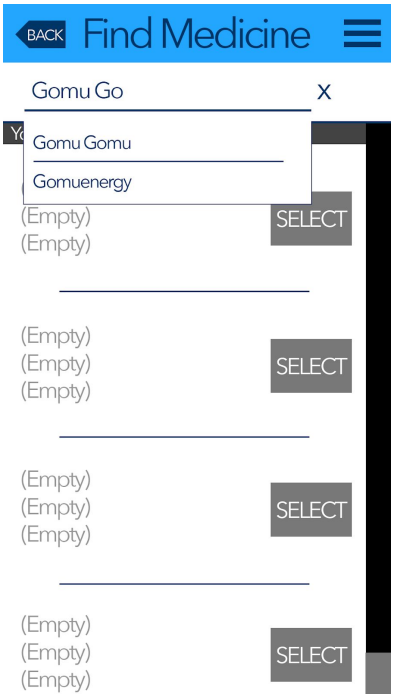
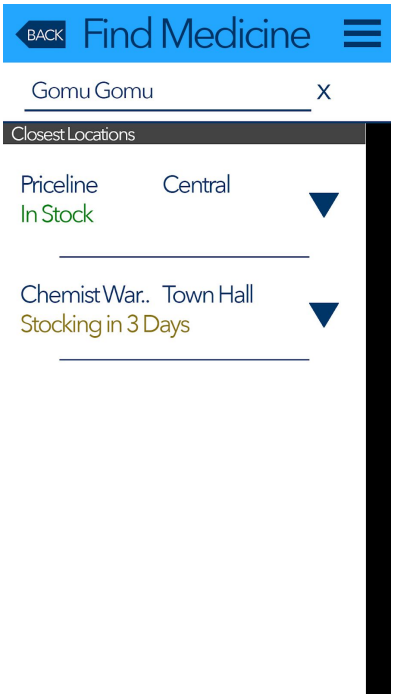
Incorporating the information we learnt from our paper prototype evaluations, and techniques such as Nielsen's usability Heuristics and Gestalt's laws, we attempted to create the digital prototype while making it more user friendly and visually enticing.
After the creation of the screens, we imported them into the phone application called "POP by Marvel" to create an interactive version of our prototype to be used by our subjects.
They then attempted to use the app as they understand it to be.

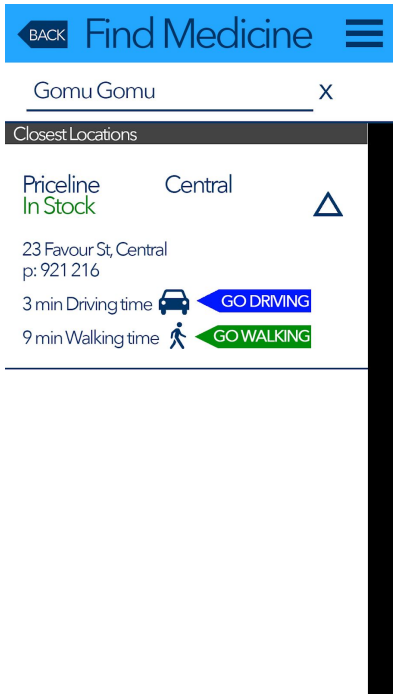
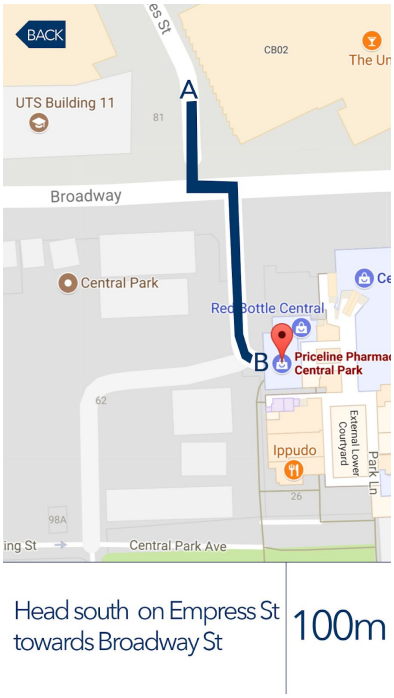
Screens below:

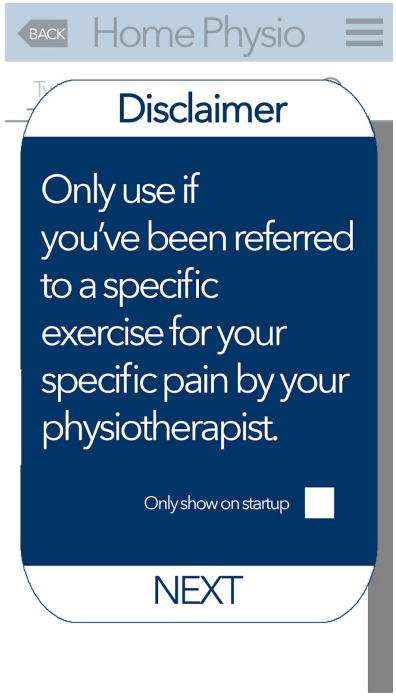
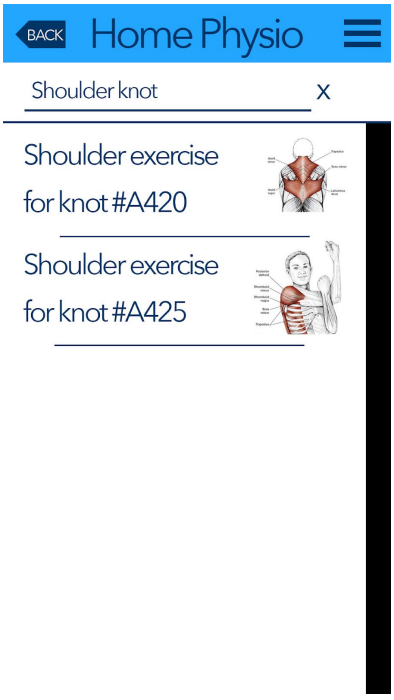
2	3a	3b
		

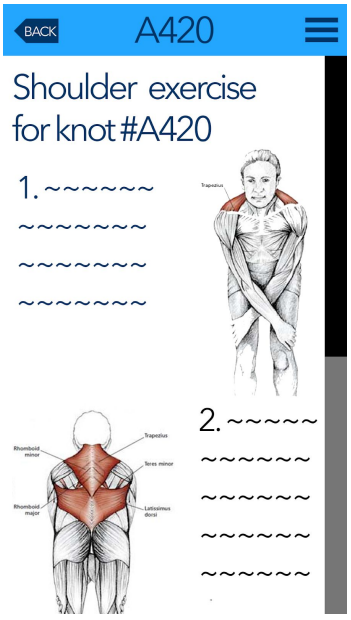
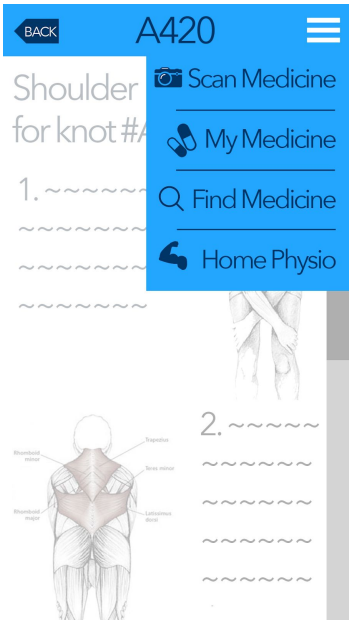
3c	3d	3e
Lo-fi  ***Hi-fi*** 	***Lo-fi***  ***Hi-fi*** 	

4a	4b	4c
	 SAVE	 SAVE

5a (Gomu Gomu is registered in this screen for demonstration purposes)	5b	5c
		

5d	5e	
 BACK Find Medicine Gomu Gomu X Closest Locations Priceline In Stock Central 23 Favour St, Central p: 921 216 3 min Driving time GO DRIVING 9 min Walking time GO WALKING	 BACK A B UTS Building 11 Broadway Central Park Ippudo Central Park Ave Head south on Empress St towards Broadway St 100m	

6a	6b	6c
 BACK Home Physio Disclaimer Only use if you've been referred to a specific exercise for your specific pain by your physiotherapist. Only show on startup NEXT	 BACK Home Physio Type diagnosis here Diagnosis: The identifier for the condition. E.g. Shoulder knot	 BACK Home Physio Shoulder knot X Shoulder exercise for knot #A420 Shoulder exercise for knot #A425

6d	7	
		

II. Evaluation results.

Subject 1:

Mentioned @ **Screen 3c**

-”I take a prescribed amount of calcium tablets with this one brand, so can I change the amount even if it’s automatically scanned?”

Mentioned @ **Screen 7**

-”Will there be video for the exercises? Sometimes I don’t want to read”

Subject 2:

Mentioned @ **Screen 3d**

-This user isn’t as familiar with phone application usage and did not know that he had to type the name of his medicine where ‘NAME’ was located

III. How the results entailed changes in the hi-fi digital prototype.

-Subject 1’s first response pertaining to screen 3c resulted in us changing the text boxes to dropdown boxes in order to allow the user to modify their desired intake - despite using the automatic scan feature.

-According to Subject 1’s feedback, an embedded videoplayer would be visible when scrolling down (screen 6d), with the video sourced from the internet to prevent inflating application size

-Thanks to Subject 2’s feedback, we added a **signifier** in screen 3d to aid in ensuring the field gets filled