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HCI Design Brief Group assignment

Task Allocation Table

Section Number	Allocated Author/s	Completed by Author/s	Comments
1.1	Crystal	Crystal	Completed early
1.2	Crystal	Crystal	Completed early
2	Lachlan	Lachlan	Completed early
3	Lachlan	Lachlan	Completed early
3.1	Lachlan	Lachlan	Completed early
3.2	Lachlan	Lachlan	Completed early
4	John	John	Completed early
5.1	John	John	Completed early
5.2	John	John	Completed early
5.3	Crystal	Crystal & John	Completed early
6.1	John	John	Completed work
6.2	Crystal	Crystal	Completed early.
6.3	John	John	Completed.
6.4	John & Lachlan	John & Lachlan	Completed early.
6.5	John & Lachlan	John & Lachlan	Completed work.
6.6	Crystal	Crystal & John	Completed early
6.7	John	John	Completed.
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7.1	John	John	Completed early
7.2	Lachlan	Lachlan	Completed.
7.3	Crystal	Crystal	Completed

8	John	John	Completed
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Alteration and Completion Table

Date	Allocated author/s	Author/s	Section Number	Addition/Alteration
22/08/16	Crystal	John	1.1	Alternate writing, changed some bits to link to other paragraphs.
23/08/16	Lachlan	John	2	Fixed some sentences.
30/08/16	John & Lachlan	Crystal	6.4	Changed a bit of the colours of the designs.
31/08/16	Crystal	Lachlan	6.5	Changed some parts.
25/10/16	John	John	5.1	Edited and added a few sentences.
25/10/16	Crystal	John	6.3	Edited and added a few sentences.
25/10/16	Crystal	John	6.6	Added few sentences.
26/10/16	Crystal	John	6.6	Added picture and paragraphs.
28/10/16	Lachlan	Lachlan	3.0, 3.1, 3.2	Edited and added sentences.
28/10/16	Crystal	Crystal	7.3	Edited and added sentences

Table of Contents

1	Introduction	5
1.1	Purpose of this Document.....	5
1.2	Scope of this document	5
2	Background	5
3	Target audience.....	7
3.1	Audience beliefs	11
3.2	Audience demographics	12
4	Problem Statement.....	13
5	Goals	14
5.1	Usability Objectives	14
5.2	Mandatory elements	14
5.3	Deliverables	14
6	Alpha Design	15
6.1	Design Sketches.....	15
6.2	Chosen Design	19
6.3	Personas and Scenarios.....	19
6.4	Structural Design	20
6.5	Visual Design.....	38
6.6	Supporting Design Tools.....	39
6.7	Theoretical foundations	40
6.8	Foundations User Interface Design	41
7	Testing	42
7.1	Test Plan.....	42
7.2	Test Results and Analysis.....	44
7.3	Findings and Recommendations	49
8	Final Design.....	52
9	Appendix.....	73

1 Introduction

1.1 Purpose of this Document

The purpose of this document is to explain and design a technological solution that uses a person's real environment, and creates a visual overlay for a number of products so that LifeTec customers can see modifications/products in situ in their own and natural environments before deciding to buy the modification/product. In a group of three to four people, the task is to modify an existing product or create one for LifeTec customers. The group's ideal product is believed to help millions of pharmacy businesses worldwide. This product will enhance and simplify the user's experience of collecting and dispensing medications from a workplace perspective, working like a self-serve checkout in supermarkets. The solution can be implemented to hospitals and retail pharmacies.

1.2 Scope of this document

The document will cover why the client needs a solution to a problem within the pharmacy business. The document will explain more from background research, why create a Robotic Computerized dispensing system, target audience, specifying the problem, stating goals, designing and testing it.

2 Background

Throughout day to day life, thousands of people are looking and searching for alterations that can achieve the same goal in a more efficient way whether it being influenced around their home, work environments or even their weekly routines. The problems within the pharmacy industry, which customers also worry about, is the safety, speed, and efficiency of their service. This is a problem because there are hundreds of scripts and medications given over the counter to thousands of people for their wellbeing, and pharmacists always have to worry about giving out the correct medication. This predicament is affecting millions of Australians starting from the young, youth and the elderly. Although this affects customers and large franchises such as Chemist warehouse and Amcal, they have succumbed to the issues that surround their work environment.

Listed below are some of the issues that need to be addressed from a business perspective:

1. Handle the large intake of Scripted Medication.
2. Be aware of the safety of the medicine that may interact with the current health status.

For example, with a schedule 2 over the counter medication, such as Neurofon that contains Ibuprofen, may affect those with severe asthma with it affecting up to 10% to 15% of all asthmatics.

3. Management of employment costs with over employed staff costing franchises more money.

The problems that have occurred from a customer's perspective include the following:

1. The efficiency of the medication and a clear understanding of how to intake a certain medication. For example, The time of day, how many tablets, whether to intake after food or before.
2. The safety and reliability of the medication being served to them will not have and counter effects with other medication.
3. Speed and timely manner of placing and retrieving scripts from the pharmacists.

LifeTec focuses on providing independence and safety to all ages. Those who may suffer from a disability are enabling modifications that are beneficial to the user's experiences. The concept of implementing a Robotic Computerised dispensing system, a self-service system will enhance and simplify the user's experience of dispensing medications to customers. This solution can be implemented to large hospitals in the world to small retail pharmacies and even homes. This Robotic Computerised dispensing system allows to free up pharmacists' time to provide additional patient care and create new revenue services and help patients take the correct medication, amount and time.

3 Target audience

LifeTec's ambition is to provide independency and safety to those of all ages with disabilities or not, and enable users to interact with technology to complete tasks. The Target audience for the computerized Robotic dispensing application system is broken into two main categories, business, and the everyday customer. This is featured below:

Business Aspect:

The Robotic computerized dispensing application system is looked upon as a business opportunity that has beneficial aspects to furthering the success and functionality of dispensing medication. Pharmacies having a huge impact on the health care system with millions of people needing prescription medications to treat a health condition from whether it being the common cold or allergy to those who may suffer from more severe problems such as heart and blood pressure problems. The target group is aimed towards Large Scaled Pharmacies such as Chemist Warehouse, Priceline, and Amcal who have hundreds of scripts being taken in every day. The benefits are listed below:

Business benefits:

1. Manage employment costs and cover peak times without extra staff
2. Automatic printing and applying of prescription and auxiliary warning label
3. freeing up pharmacists' time to provide additional patient care and create new revenue services.

Therefore, the business aspect narrows down on the franchises and reducing costs of employment and looks at assisting Pharmacists with taking pressure off them and enabling them to focus on other work and customers. This all contributing to changing the way that society interacts with the health care system and this giving them a way efficiently and safely dispense medications.

The Second target audience is those everyday customers and those with disabilities who have regular visits to Pharmacies. LifeTec strives to create independence and simplicity to those customers who are looking for an easy transaction. The key human factors that will influence the regular customer to interact with the Robotic Computerised application system are listed below:

Customer benefits:

1. Speed and safety of receiving medication, Example of this scenario: With the elderly needing more medications to fight unwanted health problems, collecting medication can be part of their life with them making weekly to monthly routines in order to stabilize their wellbeing.
2. The simplicity of the transaction and they way the customer interacts with the Application.

The table below specifies the Primary and secondary users within the Computerized Robotic dispensing application system.

Primary Users	Secondary Users
Customer/ Patients	Medical practitioners, example Doctors, local GP's
Pharmacists/ Pharmacist assistants	Medicine Suppliers

Table 1.1 – Primary and secondary users

The research that was undertaken by LifeTec was to analyse whether the need of the product is wanted within Pharmacies. The activities that were explored was with personal interviews with large-scale pharmacies like Chemist Warehouse Coolangatta, Amcal Tweed heads and Priceline, Kingscliff who all emphasized that a common complication of dispensing medications had become a lengthy process and was taking to much their time. Ton Le from Chemist Warehouse quotes “ We receive over 400 – 500 scripts a day ... this is a huge predicament that has impacted our store with customers not being overly satisfied with the time to dispense medications and personal treatment. “. This was also reinforced by other pharmacies along the Gold Coast.

Listed below from a phone call interview with three different pharmacists summarized other problems listed below included:

1. The speed and efficiency of dispensing time.
2. Identifying other health problems that may interact with the prescribed medication.
3. Handling of large sums of scripts during peak hour times.

This giving the basis that this was a perfect concept that all pharmacies wanted and needed to ensure success and functionality to their business. There being a huge demand for this as the Health Care system is growing with hundreds to thousands of new and existing customers need more and more medications in order to live a healthy and stable lifestyle. There has not been a bigger demand for static's display that Primary Healthcare takes 38% of Australia health system. The graphical representation in appendix one is based off Australian institute of health and welfare (AIHW) reinforces this.

As seen in Primary Health Care, a marginal perspective is allocated to Medications that take a majority of that sector. This graphical representation clarifies the need and importance of Pharmacist having a large impact on the health care system.

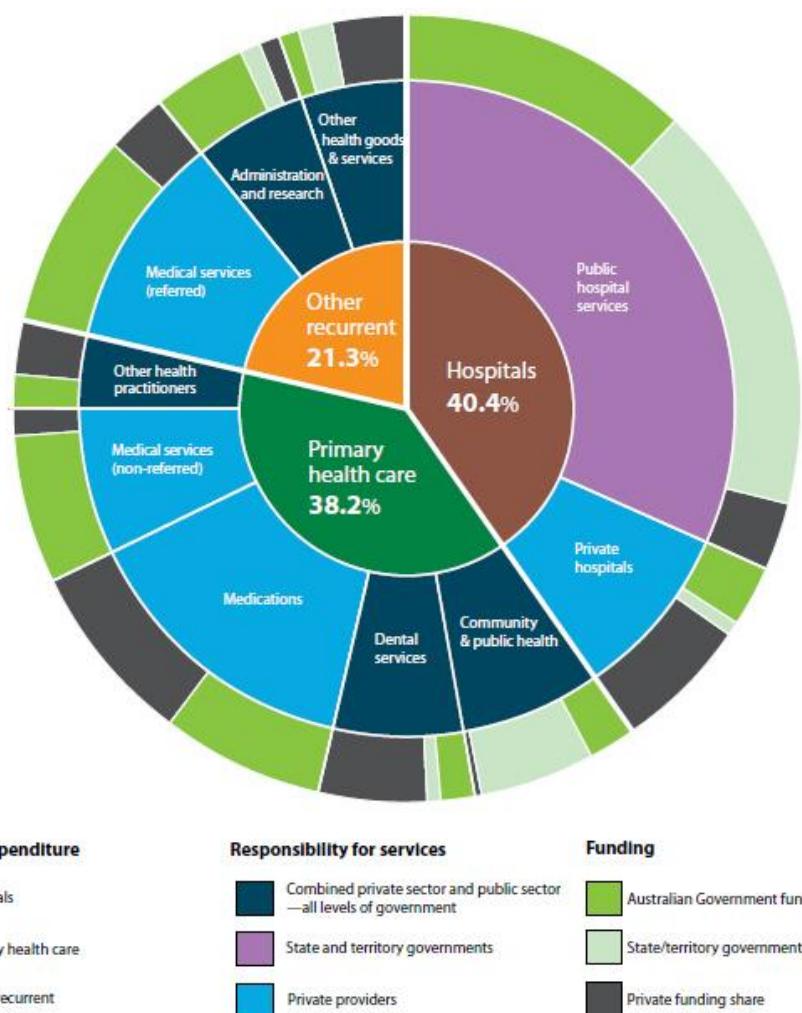


Figure 1.1 – Australia's health care system

The relevant human factors that need to be explored are the visual overlay and the customer's technological abilities. The visual overlay has a vital role and impact to the success and functionality with it having to be user and ergonomically friendly.

The following activities influenced the technological side of a visual overlay and a mechanical interest:

1. The accuracy of the machinery without contaminating drugs with one another.
2. The visual aspect of technology being influenced with an introduction of past technological phases such as the Apple Ipad or Tablet devices and applications.
3. Easily calibrate cells on-site when drugs change
4. Ongoing Restocking of medication if out of stock etc.
5. Ergonomics and positioning of specific instructions
6. Colour friendly

User Group	Familiarity with technology/frequency of use	Knowledge of.....	Age	Gender
Customer	intermediate functionality of technology. Weekly - Monthly visits	Vivid knowledge of medications	18+, the majority would be expected to be in the 18-30 age bracket	M/F
Pharmacist	Extensive technology knowledge with applications. Everyday frequency	DNA structure, anatomy (body), surgery, chemistry, biochemistry, genes and disease, microbiology, physiology, immunology, infectious disease, pharmacology, metabolism, Structural biochemistry.	18+, the majority would be expected to be in the 18-30 age bracket	M/F

Table 1.2 – The user groups

3.1 Audience beliefs

LifeTec's ambition is to provide simplicity, independence and efficient technology to help alter or make new technology that will benefit its customers and businesses. LifeTec having an impact on all ages groups from the millennials and elder generations for instance X, Y and Baby boomers, who have not been brought up with technology, therefore, vast and various opinions of how customer's interact with a tablet device maybe negative. Broken down below examines each group and their response to technology advancement and their thoughts of the interaction between technology and not a pharmacist.

User Group One: Millennials (2000 and onwards)

This generation being fortunate to have grown up with new and active technology being in almost every activity they do. This is evident with Schools introducing tablets to its younger students enabling them to understand and interact with applications and tablets. For several tasks, they are instructed to use educational applications that incorporate a form of a smart device that has further enhance their learning ability and enables them to apply this technological knowledge to the outside world. This contributing to the fact that the dispensing system is, therefore, useful to those in the future.

User Group Two: Generation Y (1980 – 2000)

Generation Y having to be the start of the technological era has a more experienced interaction with technology being the adult stage of learning technology. This having the impact of providing a more extensive understanding of how to interact with the latest technology. Reinforcing that the robotic dispensing application system is a suitable fit with Generation Y.

User Group Three: Generation X (1960 – 1980's)

This era of generation is the undeveloped with technology being basic and not large aspect of the everyday people's lives. Though with them being introduced to new technology and them exploring new areas, they are inclined to experiment with the latest technology. The design aspects will need to be specific and the language will not need to be sophisticated reducing any factor of mistakes.

User Group Four: Baby Boomers (1940- 1960's)

This is the aged group who are not bound by technology and are the least experienced with any form application of tablet. This group would have very few tasks that incorporated any form of application on a smart phone. Therefore this could have a negative impact on the Robotic dispensing application system. The design aspect will need to be simplified with indications on how to proceed to the next page, help button and to enable them to enter details in efficient. The text will have to be of a large size allowing those who are elderly being able to read what is needed and the specifications. If these design aspects are taking into consideration the overall project will be a success.

3.2 Audience demographics

The audience's demographics to use LifeTec's Robotic Computerised dispensing system is very simple and extremely user-friendly with enabling the young youth to the elderly to complete an action with this technology. There is a very low-level amount of technology background needed to use the tablet as anyone can understand the tablet if they have any previous knowledge of using a smartphone and using any other software application. Broken down in the table below explores the user's characteristics:

User Characteristics	Characteristics by Generational intervals			
	Millennial	Gen Y	Gen X	Baby Boomers
Age	12-16	16-36	36-56	56-76
Gender	M/F	M/F	M/F	M/F
Technology capabilities/experience	Ability with technology is very strong with extensive knowledge of basic smart device.	Ability is very much more efficient with extensive knowledge of all Smart devices.	Ability is not as extensive as Gen Y and can complete simply tasks on smart devices.	Baby Boomers having little capabilities struggling with most technological device has the most problems.

Table 1.3 – User characteristics of the technology capabilities/experience

User Characteristics	Characteristics by Generational intervals			
	Millennial	Gen Y	Gen X	Baby Boomers
Social and mental attributes	Application language will need to be defined and simplified for their education level. Visual elements to acknowledge the basics and enable them to easily understand commands. Hearing and Visual impairment.	Technological interface must be made simplified and the ergonomics of the back and front page needs to be displayed in the same spot. May have Hearing and Visual impairment.	Application needs to help station to ensure that if a person is lost they are able to gain help. Also needs to look at the other perspective of low tolerance for bad interface. Similar movements for all activities with limiting how much they can alter. Eg touch, type, swipe.	All areas need to be explored with simplifying terminology and actions within the application. Assistance may be needed so that an employee may need to be ready at all times. Hearing, visual impairment may occur.

Table 1.4 – User characteristics of the social and mental attributes

4 Problem Statement

LifeTec needs a product that will help speed up the customer service at pharmacies. Similar to a self-service checkout at a supermarket or an ATM which dispenses cash, the Robotic Computerised dispensing system should be able to give the customer the requested medication when the customer provides their credentials and a script for medication. This system will be important as it will solve some of the pharmacy's problems such as the excessive amount of employees, making sure given medication is correct and appropriate for the customer's health and customer service speed. The designs of the product and its testing will help deliver the best efficient robotic computerized dispensing system and will be available to the public when it meets up to LifeTec's requirements.

5 Goals

5.1 Usability Objectives

The Robotic Computerised dispensing system the following usability objectives:

- Users are able to navigate throughout the system by using the next and back buttons.
- Visible help button for the user to press if they need assistance with the dispensing system.
- Users are able to tell the system their personal and healthcare details.
- Users are able to put in the details of their script by scanning the barcode or typing manually.
- Users have many options to pay for their transaction.
- Dispense the user's prescriptions after the user have paid fully.

5.2 Mandatory elements

The robotic computerized dispensing system must be safe and reliable for the customers. It must be ensured that it works accurately and dispenses the correct medication. The machine will be able to free up more space in a pharmacy, getting rid of shelves. In transporting this to pharmacies, computer technicians to install it. The product is made for the client:



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Cnr Newmarket and Enoggera Rd
Newmarket QLD 4051

Phone: 1300 885 886

Email: mail@lifetec.org.au

Skype: lifetec.brisbane

5.3 Deliverables

On completion, a Robotic Computerised dispensing system will be delivered to the client where it can be available to their customers. The system is able to dispense the correct medication to the customer and eliminate some problems within the pharmacy business. When customers use the system, a simple navigation and some instructions presented on the screen will help the customer go through the process. The customer must enter their healthcare insurance and personal details to proceed which will then send them through to the next stage of scanning the script which it must have a barcode. When the barcode has been scanned, the machine will be able to pick the correct medication then dispense it to the customer which will then be checked off by a pharmacist.

6 Alpha Design

6.1 Design Sketches

Design sketch 1

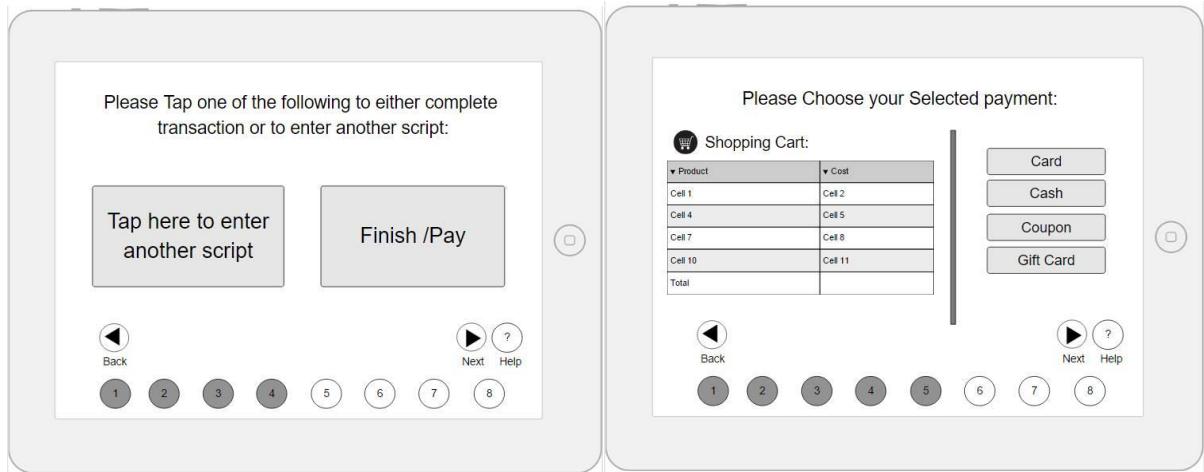


Figure 2.1 and 2.2 – Design sketches 1

The step procedure is shown at the bottom of the screen with the back, next and help buttons above it. Most of the pages will have buttons that will proceed to the next stage. It will include text boxes for the user to enter their personal and healthcare details. The help button will further give more instructions and information and call a staff member. Some pages will have a picture beside showing a picture of the machine or the company logo. For example, the machine will show how and where to insert cash.

Pros:	Cons:
<ul style="list-style-type: none">Has a help button.Layout is outstanding.Easy for people of all ages to see and click.Appealing.Shows the customer which part of the process they're on.Has next and back buttons to proceed to the next stage or go back to the previous page.Shows the customer what they're buying.Help button present.	<ul style="list-style-type: none">Next and back buttons too small to touch.

Table 2.1 – Pros and cons of design sketch 1

Design sketch 2

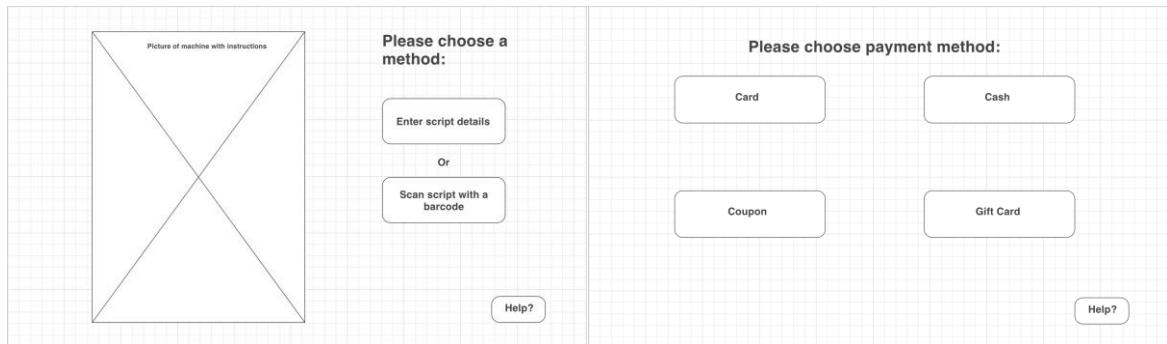


Figure 2.3 and 2.4 - design sketches 2

The design shows a very plain simple layout. Very similar to self-serve checkouts that people use in supermarkets. Almost every page will have a picture of the machine on the left side giving instructions to the user on how to operate the machine. It doesn't have a next or back button. It includes text boxes for the user to enter their details. The help button will further give more instructions, information and call a staff member.

Pros:	Cons:
<ul style="list-style-type: none"> • Very simple layout. • Not hard for the customer to pick method. • Similar layout to supermarket retailer self serve checkout meaning people would know how to use it. • Buttons are big and easy to be read. • Help button is big, visible and available. 	<ul style="list-style-type: none"> • Doesn't have a back or next button. • Customer isn't able to go back to previous page to change something. • Doesn't show shopping cart.

Table 2.2 – Pros and Cons of design sketch 2

Design sketch 3

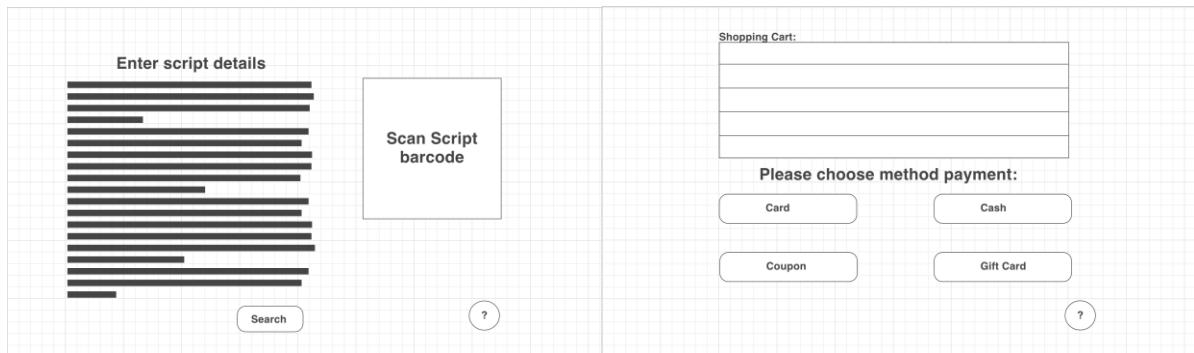


Figure 2.5 and 2.6 - design sketches 3

When the user gets to the script page, users have the option of entering the script details straight up instead of navigating to another page. There are no pictures of the machine with instructions but the help button will call a staff member to come help the user. The user will have to choose a button to proceed to the next stage also there will be text boxes for the user to enter their details.

Pros:	Cons:
<ul style="list-style-type: none"> Layout has a lot of information and shows more on a screen. Entering the person's script details is already in one page with the option of scanning the script's barcode. Buttons are big. Shows customer they're shopping cart. Help button available. 	<ul style="list-style-type: none"> May be representing too many things on a page. Shopping cart is above the method payment doesn't look correct/appealing. Doesn't have a back and next button which prevents the customer going back to the previous page to change something.

Table 2.3 – Pros and Cons of design sketch 3

Design sketch 4

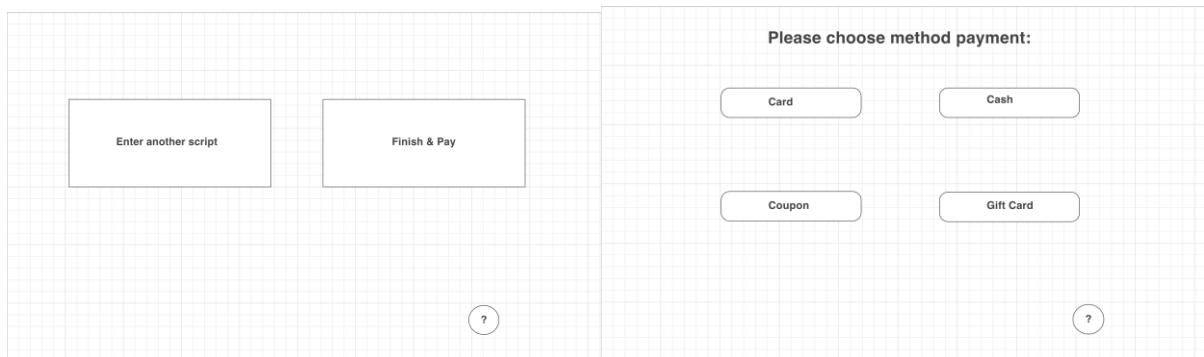


Figure 2.7 and 2.8 - design sketches 4

This design will have fewer descriptions and more buttons. To proceed to the stage, the user will have to select an option. This is a simple layout for the machine and users. The help button on the bottom right will be on every page and when pressed it will call a staff member. There will also be text boxes for the user to enter details.

Pros:	Cons:
<ul style="list-style-type: none"> Buttons are big, easy to see and click on. Help button available. 	<ul style="list-style-type: none"> Some buttons aren't round, not appealing. Doesn't show a lot of instructions. Not a lot of information. May be confusing for the user. Doesn't have a back and next button which prevents the person going to the previous page to change something.

Table 2.4 – Pros and Cons of design sketch 4

6.2 Chosen Design

The four designs were shown to a few people and a majority of them found that design sketch one was the most appealing and user-friendly. Some said that the design was similar to an ATM. The design also had the least negative things about it compared to the other designs. By implemented this onto the app, it should have a welcome screen, a details screen where the user will be able to type in their details

etc, adding scripts screen where scripts are either scanned or entered manually, paying screen, and a thank you screen. It should also have a back, next and help buttons on every screen for the user to navigate through pages and get help. Even so, a numbered stage on the bottom of each screen to show the person what stage they're up to.

6.3 Personas and scenarios

The following personas is an important part on the process of system and why these people need it.

Persona 1: Lawrence Chin is a retired nurse and has diabetes. Aged at 69, she is required to visit her doctor every two weeks to get checked up, and assigned with prescriptions. After seeing the doctor, she goes straight away to the pharmacy to collect her prescription. At the pharmacy, she always has to wait in line to be served which she really hates because there are no seats.

Scenario 1: Once the robotic dispensing system has been added to pharmacies, Lawrence can now use it which she can serve herself without having to wait in line to be served by a staff member.

Persona 2: Popo Ren is a 12-year old child who has asthma. She has to take two puffs a day. When her inhaler runs out, she really hates having to go to the pharmacy and wait for the staff to get her the correct medications. She loves technology and owns computer, and an iPhone.

Scenario 2: With the release of the dispensing system, Popo Ren is now keen to go to the pharmacy and try it out. With her passion for technology, the new system is a great way to pull people to try it out.

6.4 Structural Design

The flow chart below determines the process of the machine getting the customer's needs:

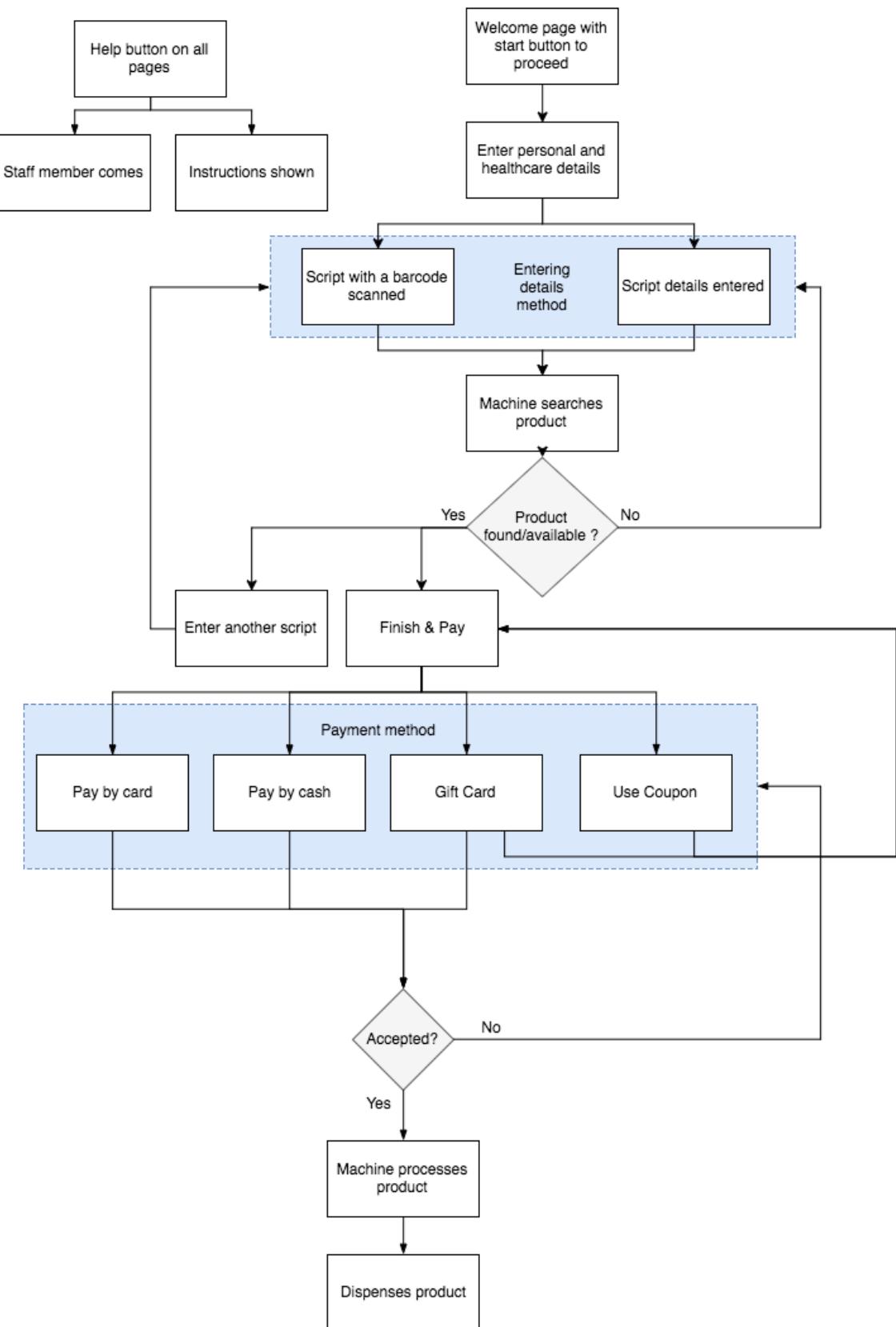


Figure 2.9 – Flow chart of the Robotic Computerized Dispensing System

The Business management process model nation diagram explains how the machine and the customer work:

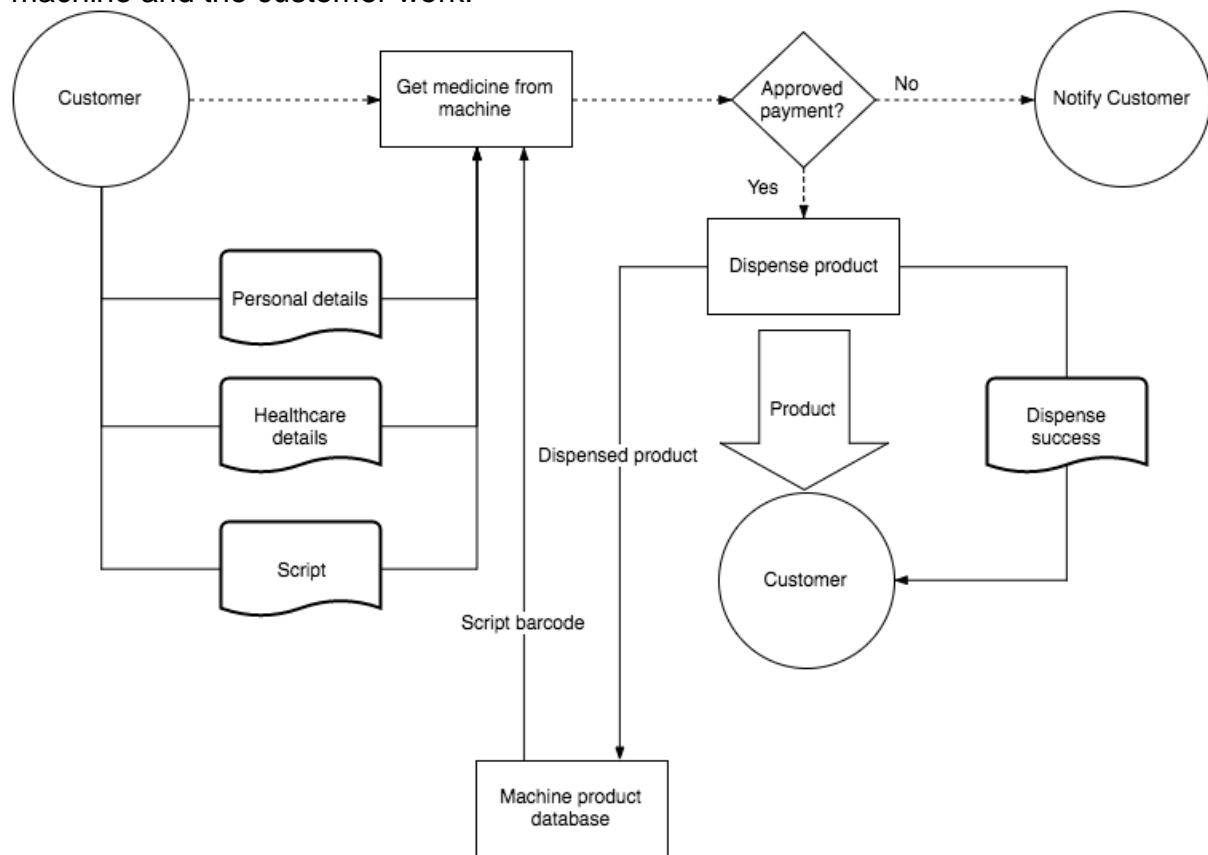


Figure 2.10 – BPMn diagram of the Robotic Computerized dispensing system

The welcome screen:

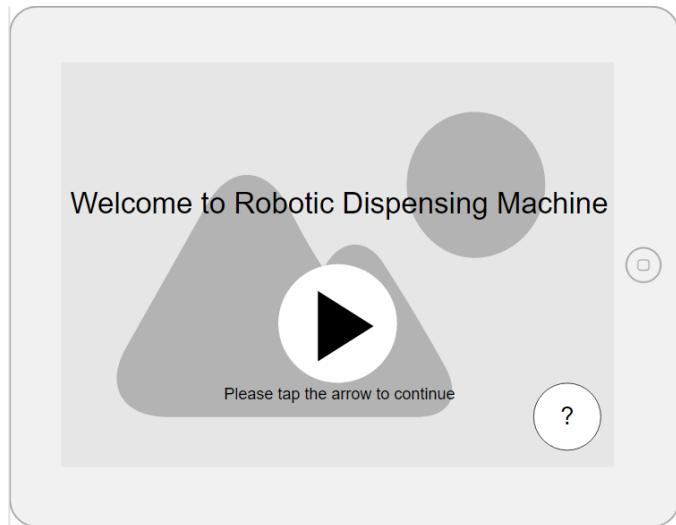


Figure 3.1 – The welcome screen

Explanation:

The homepage includes a welcoming title, the large button that is located in the center of the screen with a large arrow is ergonomically placed to acknowledge to the user to tap here to continue to the next screen. The caption below the button hints the user if they are lost. Also placed in an ergonomically but fixed position in all screens is the button with the symbol “?” to signify that there may need necessary help with this screen and will alert assistance from an employee. The large background image that covers the screen is displayed to represent the company.

Enter personal details screen:

Figure 3.2 – Personal details screen

Explanation:

Ergonomics is a major key in the layout of this design, the process of entering personal details such as your credentials, health care card or any other allergies that may affect or interact with a medicine they may submit. The chronological order of left to right is normal or felt normal to the user. The numbers located at the bottom of the screen that are fixed labeled one to eight, acknowledge the user of how many steps that are left until the completion of the transaction. The use of drop downs will disable and reduce the effect of choosing or type errors to occur, this will improve the accuracy and reduce the risk of any errors especially with the importance of personal details. The use of radio check buttons located beside an allergy enables them to also not type in any unrecognizable words that could be interpreted wrong.

Enter script details method screen:

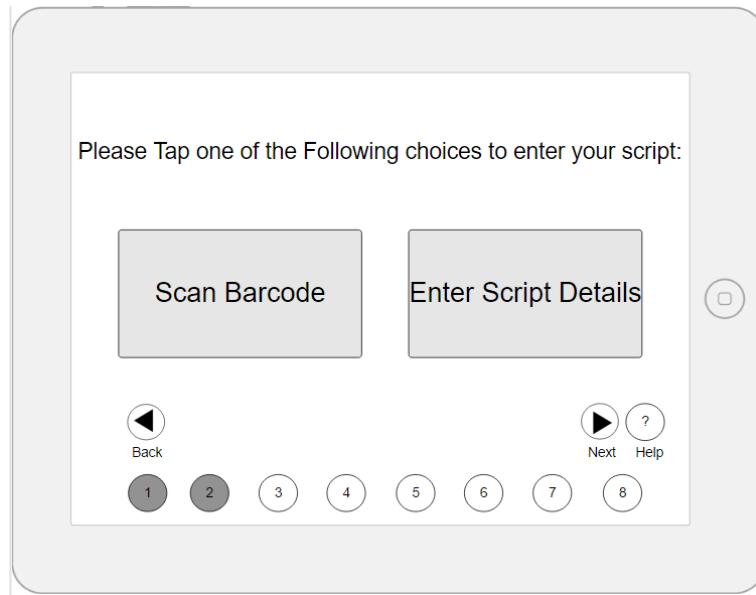


Figure 3.3 – Script details method

Explanation:

The two large buttons located in the center of the screen are to attract the user to select either one method of entering their prescribed script into the system. Another ergonomically positioned button is the back and next buttons that enable the user to either go back or forth along the pages if they're not happy with their details they may have entered. The Shaded steps also a visual aspect of the progression and to display how many steps left.

Scanning Barcode Screen:

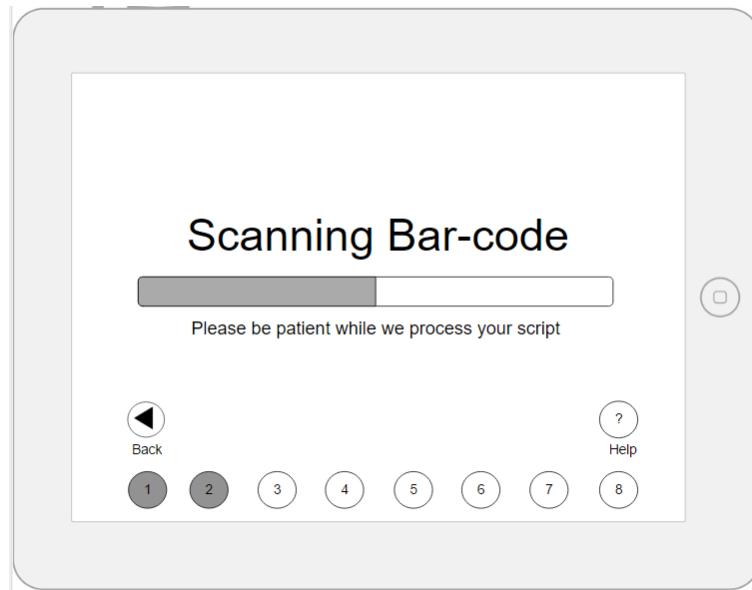


Figure 3.4 – Scanning the barcode screen

Explanation:

This screen displays the script being entered through scanning the with a barcode. The loading / progression bar provides a visual means to the user that there is progression when scanning the script with the barcode. With this, it also provides how long the customer should hold the script in place while the system retrieves information of the prescribed script.

Help Scanning Screen:

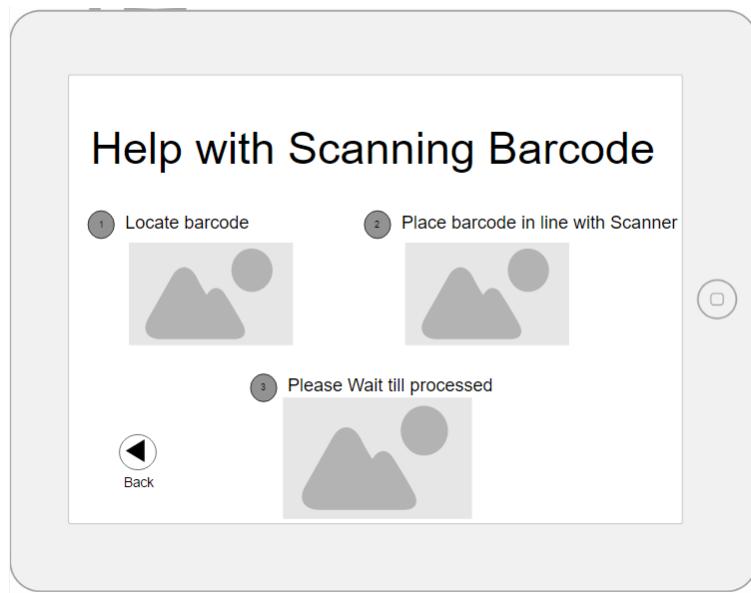


Figure 3.5 – Instructions on scanning the barcode

Explanation:

Help Screen enables the user to self-resolve an issue and provide instructions before they may need to seek more assistance from an employee. Three medium size images all labeled with numbered steps and instructions will assist the user to scan their script the correct way resulting in a faster process.

Manual entering script details screen:

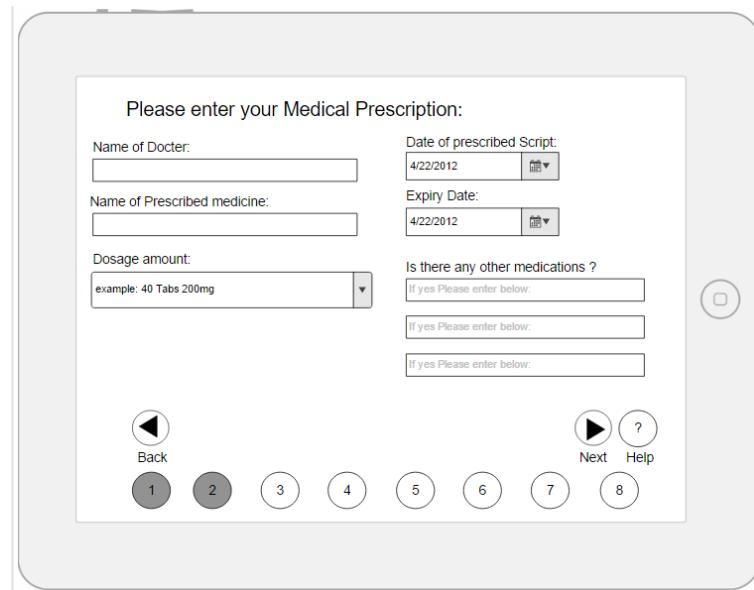


Figure 3.6 – Entering the script manually

Explanation:

Entering script details manual is time-consuming and is another efficient way to enter your prescribed scripts. The use of the drop down boxes for both the “date” and “dosage amount”, disables the risk when entering serious details. The “dosage amount” will ONLY recommend the correct range of dosage amounts to the name or item placed above in the text field.

Manual entering script details Error screen:

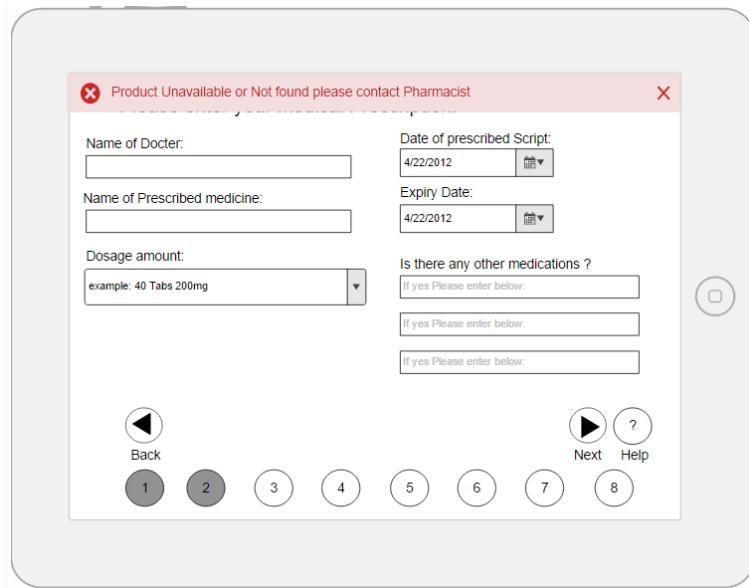


Figure 3.7 – Error message when the details have been entered incorrectly

Explanation:

This error banner signifies the user that there is an error that occurred within entering details or if there may be a stock shortage from the supplier, they are then recommended to seek assistance from a pharmacist to identify the problem.

Processing Script Screen:

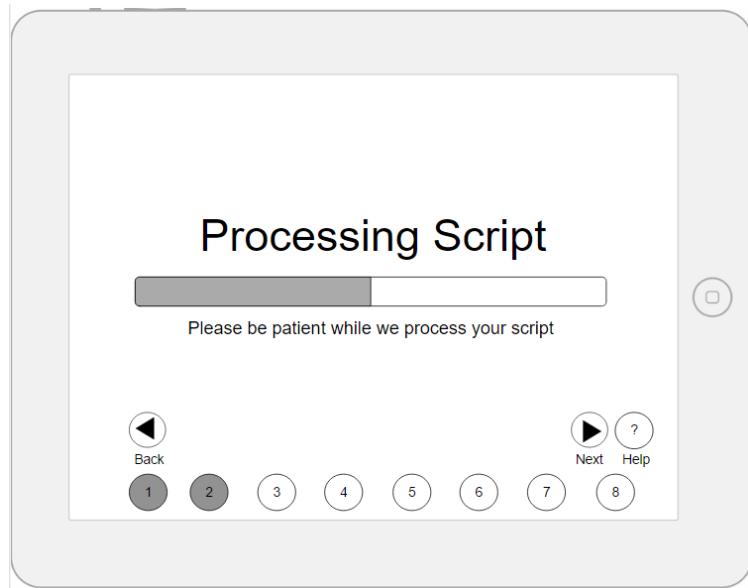


Figure 3.8 – Processing the script screen

Explanation:

The scanning the script progression screen, this screen provides a loading / progression screen that enables the user with the visual means that there is progression and that there has not been an error or the application has stopped.

Choice of adding or finalising transaction:

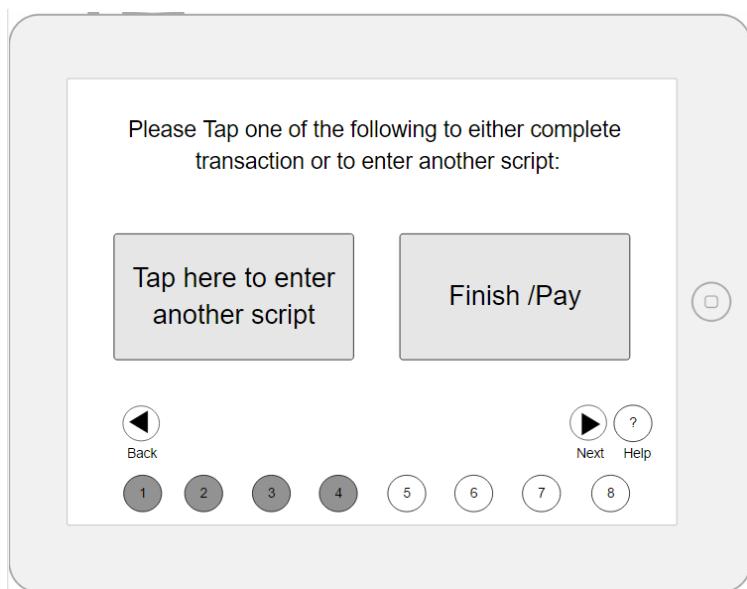


Figure 3.9 – Adding or finalizing transaction screen

Explanation:

The finalizing screen that either ends the transaction and leads the user to the payment screen or to add another script. The choice is presented with two large optional buttons that are positioned in the center of the screen to provide only two options.

Payment method screen:

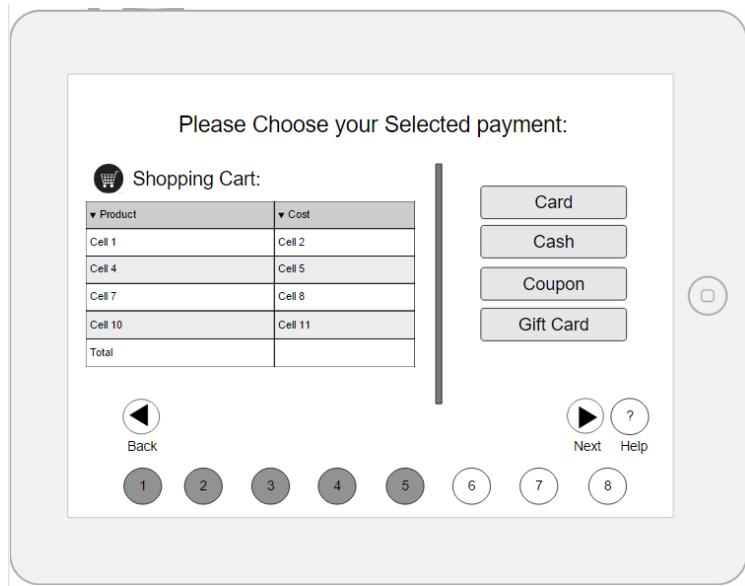


Figure 3.10 – Payment method screen

Explanation:

Payment method screen provides a series of payment methods that enable the user to choose from. Located on the left of the screen is a table that represents the items that you wish to purchase, this is an important aspect as customers are always curious to know how much they are paying and to also check off all items before purchasing. The choice of Card, Cash, Coupon and Gift card provide various ways to purchase their medicine.

Card/ Eftpos Screen:

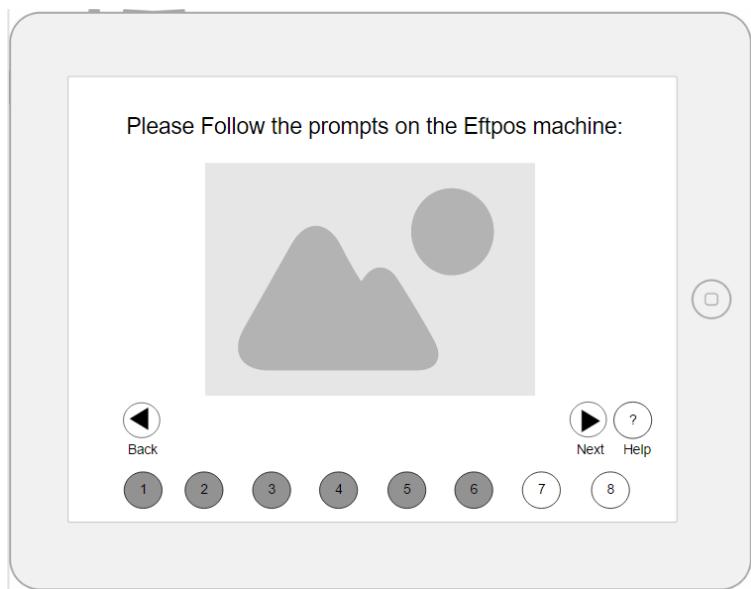


Figure 3.11 – Paying with Card/Eftpos screen

Explanation:

This payment method is linked up with the Eftpos machine that provides all the instructions needed. The title clearly stating that as well as the image that will signify that the user must locate the Eftpos machine to conclude the transaction.

Insert cash:

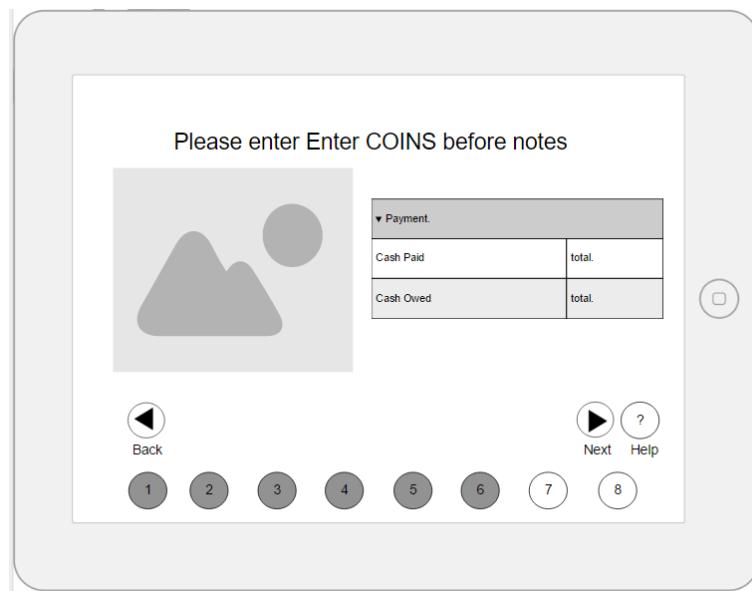


Figure 3.12 – Paying with cash screen

Explanation:

The process of paying cash can be confusing as you use the self-service, however with the heading “Enter COINS first before notes” clearly stated, enables the user that coins take a longer process to proceed and to implement the counter on the screen with real time incriminations. The table provides how much is needed and how much is paid by the customer. This allows the user to see how much more is needed with the transaction.

Entering Coupon Codes/ error screens:

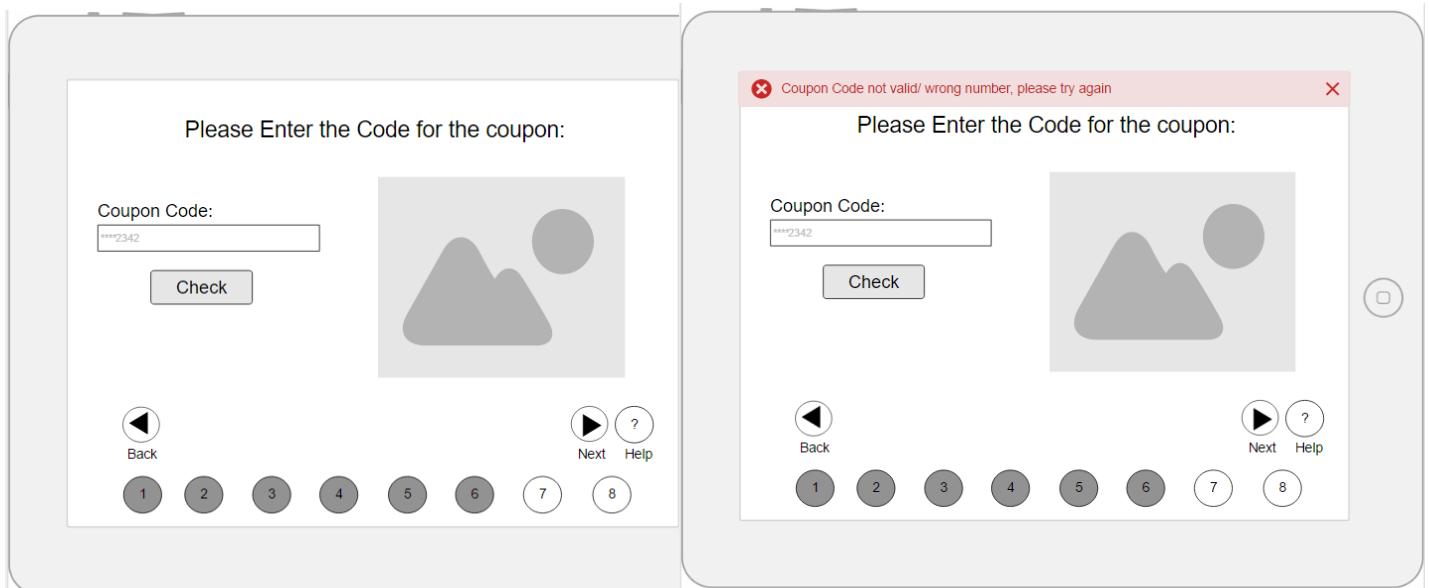


Figure 3.13 – Entering the user's coupon with the error message

Explanation:

This screen enables the client of paying through coupons, the user will need to input numbers into the text input and to check they will click on the button “Check” to see if the coupon is still valid. If yes, the user will click yes which will redirect to the payment method screen with the discount attached to it. A banner/ prompt will pop up at the top of the screen if there is an error that may occur with it being a typo or if it's still valid. This is ergonomically banner will appear at the top of the screen where it's most visible without going over the top of any other area.

Entering Gift card /error screens:

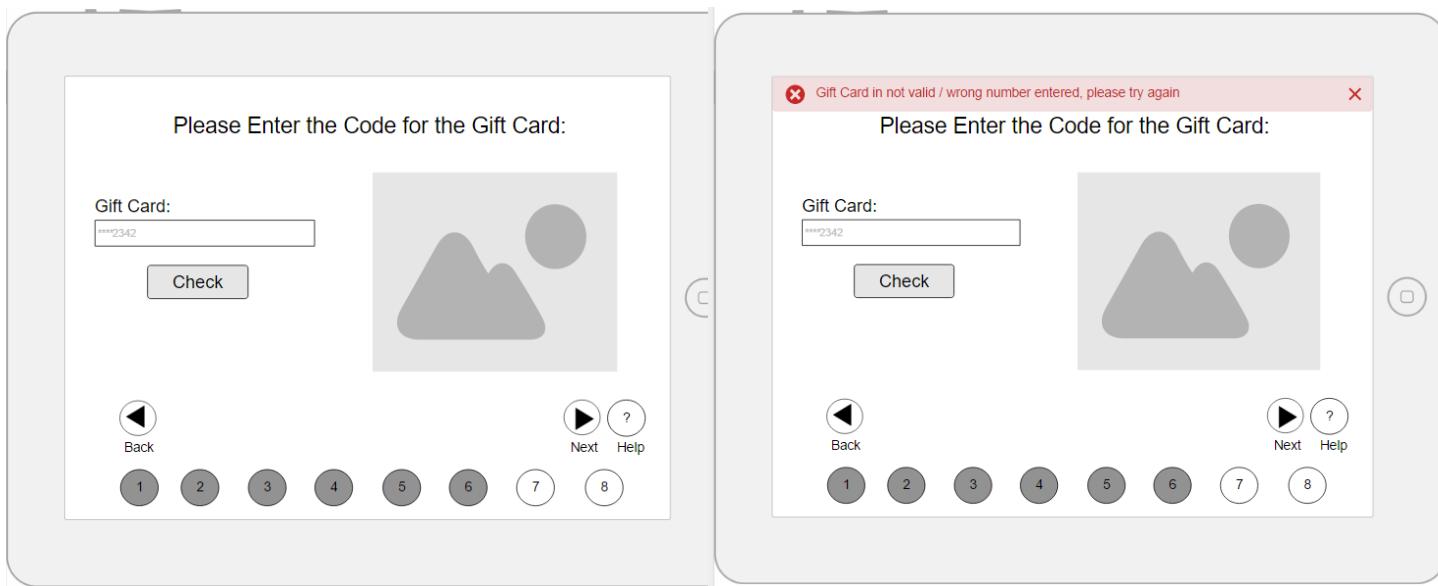


Figure 3.14 – Entering the user's gift card with the error message

Explanation:

Similarly to the coupon screen, it repeats the process with checking that the gift code is valid if not will drop down a banner/ prompt to notify the user that there is a problem.

Finalising payment screen:

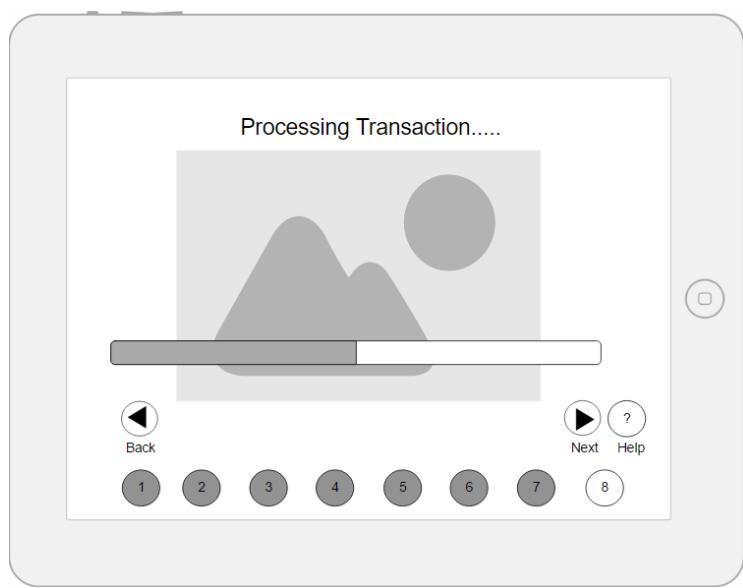


Figure 3.15 – Payment being processed

Explanation:

This screen notifies the user that the transaction has gone through and that it is dispensing their chosen medications. The loading bar as seen before allows the user to track its progression.

Final Screen:

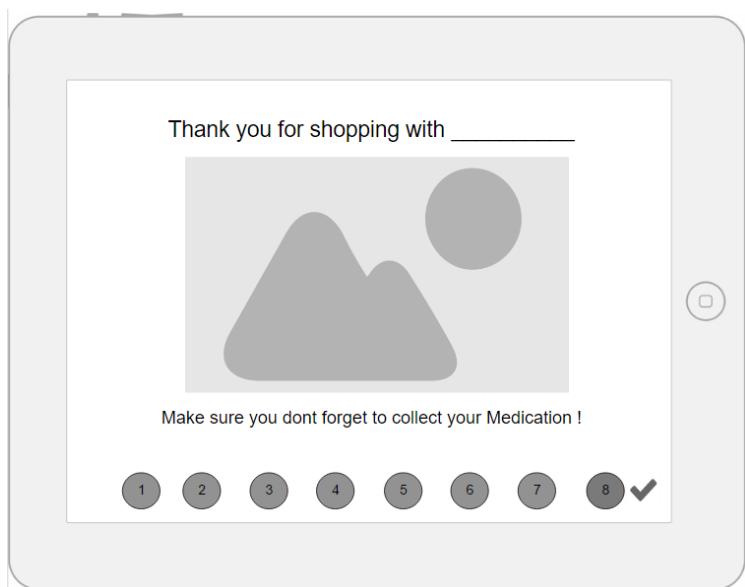


Figure 3.16 – Final screen

Explanation:

The final screen displays the completion of the sale with a thank you at the top of the screen with a photo in the center to display the company logo to recognize who they purchase their goods from. The simple prompt below the image alerts the customer to make sure they collect their goods and don't leave anything behind.

6.5 Visual Design

The figure consists of four screenshots of a mobile application interface arranged in a 2x2 grid.

- Screenshot 1:** A form titled "Please enter your Medical Prescription:". It includes fields for "Name of Doctor" (with placeholder "4/22/2012" and a calendar icon), "Name of prescribed medicine" (with placeholder "4/22/2012" and a calendar icon), "Dosage amount" (with placeholder "Example: 40 Tabs 200mg" and a dropdown arrow), and three "Are there any other medications?" input fields. Below the form are "BACK", "NEXT", and a help button (?). At the bottom are numbered circles from 1 to 8.
- Screenshot 2:** A form titled "Please choose your selected payment:". It shows a "Shopping Cart" table with columns "Product" and "Cost". Rows include Cell 1-Cell 2, Cell 3-Cell 4, Cell 5-Cell 6, Cell 7-Cell 8, and a "Total" row. To the right are four buttons: "Card", "Cash", "Coupon", and "Gift Card". Below the cart are "BACK", "NEXT", and a help button (?). At the bottom are numbered circles from 1 to 8.
- Screenshot 3:** A progress bar with the text "Processing Transaction....." above it. The progress bar is yellow and grey, with a yellow section at the top and a grey section below. Below the bar are "BACK", "NEXT", and a help button (?). At the bottom are numbered circles from 1 to 8.
- Screenshot 4:** A screen titled "Please choose one of the following:" with two yellow buttons: "Scan barcode" and "Enter Script Details". Below the buttons are "BACK", "NEXT", and a help button (?). At the bottom are numbered circles from 1 to 8.

Figures 4.1, 4.2, 4.3, 4.4 – Visual designs of the product app.

The background of each page will contain a half dark blue and the other half a darker blue. A dark background will allow the other parts of the screen to pop out and be seen clearer to the person. The text boxes will be plain white as it will look like a normal typing area. For the buttons, it will have a yellow background and a blue text in the middle. Same with the titles/instructions at the top of each page.

A darker text on top of a bright background stands out and allows the user to read it. At the bottom shows the user's progression with the darker colors of the circles, it shows they've completed the stage and show where they're up to. The back and the next buttons have a green background and it shows the user to proceed to the next page by clicking on it. The green background is the best choice as to many, green means go, the same as being at a stop light. The help button has a light blue background with a white question mark in the middle. The light blue shows a calming effect. It presents the understanding of the system. This shows that the user can use the help button that can help them understand more and learn how to use the system.

6.6 Supporting Design Tools

By firstly, we needed to get the best design for the future users of the robotic dispensing system and with the help of random people, they were able to give us a quick small feedback on our designs. They picked design one which was the most attractive. Design one was chosen to further improve and develop it. In designing and developing the screens, one of the tools used was wireframe.cc/dipGql. This tool helped create the initial wireframe designs for the application. Their functions were reliable and easy. It helped us look and work further on the designs. Another website that was used was www.draw.io, this site helped draw and designs the flowchart for the application which helped vision each page layout of designed system. It also enabled the user to present the app's content and how it processes the medication. App.moqups.com was used to do the designs of the application. This helped present the vision and layout of the application. Lastly, Photoshop was used to add and finalize the colors and design the pages of the application. All the screens were combined, developed and ready for user testing.

Brainstorming was also the supporting design tool. This was commenced very early in the design process to get a better idea of what is necessary for the system application and what the user needs to do.

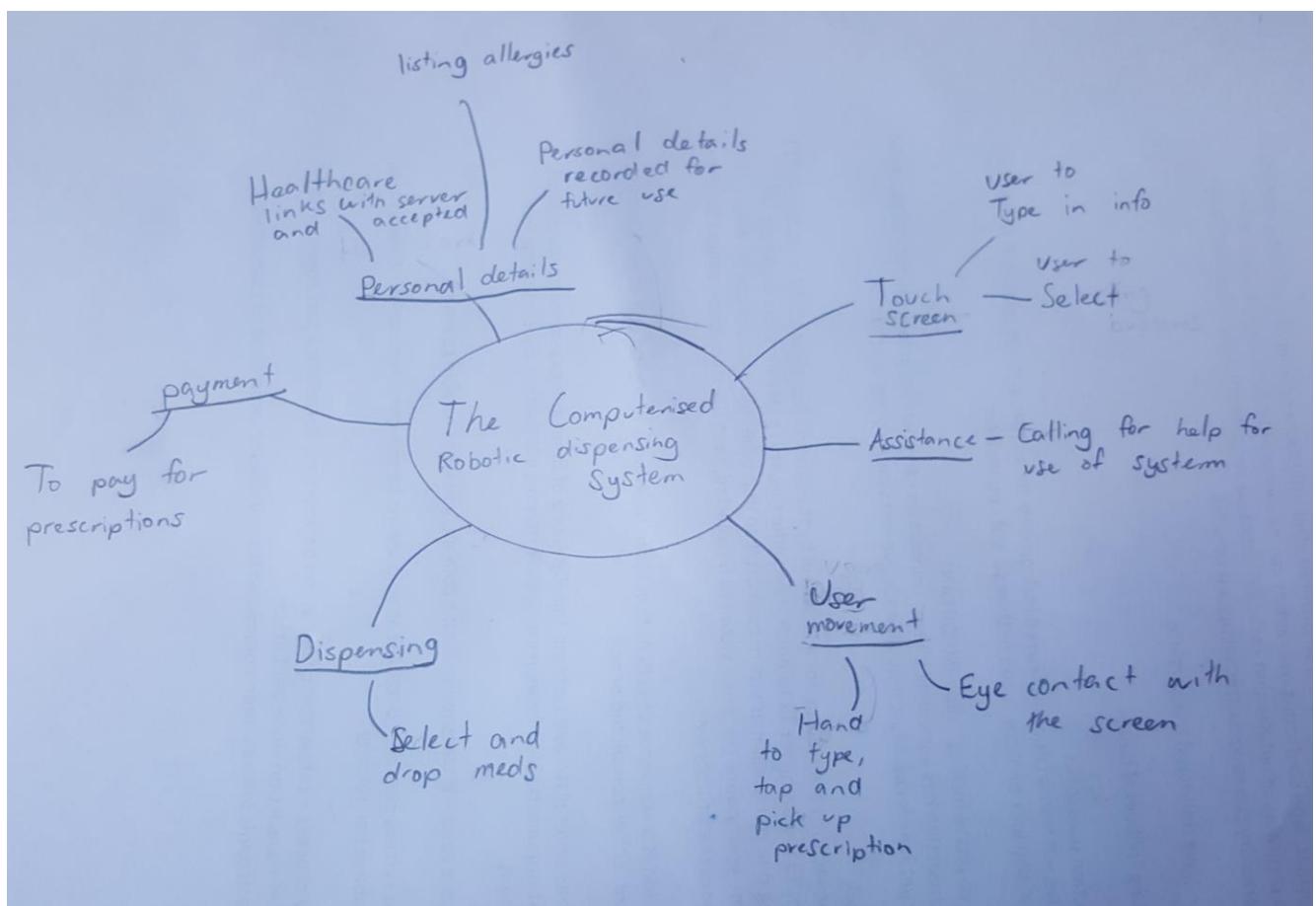


Figure 4.5 – Brainstorming ideas for the Computerised robotic dispensing system

The personas and scenarios were also helpful in the design to see why some people go to the pharmacy and what they hate about it. By adding the robotic

computerized dispensing system, it would speed up customer service in the pharmacy and bring people to try the new technology. The flow chart helped order the screens.

6.7 Theoretical Foundations

Theory	How is this theory is used?
Human Factors	A majority of users are expected to follow the instructions shown on the screen of the dispensing system. The system will require the user to type with their fingers in the text boxes provided on the screen or tap a button to proceed to the next page.
Human Action Model	The human action model is based on the user's goal to collect their medications from a machine that scanned and produced the product. The screen of the machine is extremely user-friendly as it tells the user instructions. By following the instructions, going from entering the user's details, adding the script barcode and paying for the medications, the machine will dispense the medications for the user to collect at the end of the process. The outcome of this system should make the user feel very satisfied, comfortable, recommend to others, and use it in the future.
Cognitive structure of tasks	As designers, we thought about the kind of instructions that users would want to read on the screen as it would tell them what to do. By having the stage numbers on the bottom of the screen, it will notify them what stage of the process they're on. Even so, arrow buttons on the bottom of the screen are labeled for the user to select whether they want to go to the next page or the previous page.

Table 3.1 – Theoretical Foundations and how the theories are used.

6.8 Foundations User interface design

Principle	How is this principle used?
PARC Principles of layout	<p>Proximity – Stage number of process is on the bottom of the screen, followed by a back, next and help button right above it. This is presented on almost every page. Every page has instructions on the top and either text boxes or buttons underneath. The welcome screen ,however, has a greeting, and an arrow button to proceed.</p> <p>Alignment – The back, next, help buttons along with the stage numbers are placed in the same spot for every page. Same with the Titles.</p> <p>Repetition – Every page has a dark blue background for the other elements on the page to stand out. The text boxes stood out, the yellow buttons also did. The next, back and stage numbers were visible.</p> <p>Contrast – Every element on the page had to have different colors so it wouldn't blend into the background. It was meant to stand out and be visible to the user.</p>
Scanning patterns	The user is able to scan the script barcode. If a barcode is not present on the script. The user will have to enter the script details manually. When the barcode is scanned, the machine will process it, check the product's availability and then add it to the transaction list.
Usability principles -Efficiency -Memorability -Satisfaction -Errors/effectiveness -Learnability	<p>Efficiency – The system will go through the whole process if the user doesn't have any problems and follows each instruction correctly. The user would be able to get his/her product when there aren't any problems.</p> <p>Memorability – Instructions are shown on the top of each page for the user, and will stay there until the task has been completed. If the system has been idle for a while, the whole process will be canceled and every detail will be erased. The system can list down many scripts.</p> <p>Satisfaction – If the system is able to produce the user's needs, the user will be satisfied and would maybe want to use it in future. Even so, if the whole layout is attractive.</p> <p>Errors/effectiveness – If the system has been idle for a while, it will cancel the whole process and go back to the welcome screen. If the user remembered that they made an error on a previous page or just want to go back, they will be able to use the back buttons. Details of the scripts could not be accurate.</p> <p>Learnability – The user will be able to get their need if they follow each step on the use of the system. The system is extremely user-friendly and layouts should be easily read.</p>

Table 3.2 – Foundations User interface design and how its principles are used.

7 Testing

7.1 Test Plan

Purpose of testing session:

The goal of the Robotic Computerised dispensing system app is to help the user get their medications without having to go to the pharmacy looking for it and wasting time. The purpose of this testing session is to evaluate the use of the app, how easy, effective, and efficient it is.

The main goal of the tasks was to see how the user was able to go through the whole application without any help. The way the user goes through each task, timing each procedure and seeing how much mental effort was put in could be taken as a guide to further improve the application.

Test objectives:

Overall, this evaluation will enable us to:

- Find obstacles that make tasks difficult.
- Witness the use of the app, find bugs and problems.
- Use results to further improve the app.
- See the effectiveness of the app in allowing the user to achieve the task.

Specific objectives:

How effectively and efficiently is the user able to:

- Go to the next page/task.
- Go to the previous page/task.
- Add and delete text/information.
- Accept their Medicare details.
- Add the script details.
- Pay for the medication.

Methodology:

Number of participants = 8

Length of session = 30 minutes

Location = Griffith University

Test procedure:

The test procedure is a controlled process where each participant will experience the same testing conditions. Participants will be invited into a room where there will be an app running on a smart tablet connected to the Robotic Computerised dispensing system, a test moderator, and an observer. The test will be focused on the app which controls the whole process. The app will have the same test conditions for each participant to ensure that there are minimal errors. To ensure that the test procedure is consistent, a script for the moderator will be provided and an observer sheet is used. The tools used in the test are outlined below:

Tools used (copies of each data gathering instrument is included in appendix 1):

Tools	Main purpose
Robotic Computerised dispensing system app	Gives the user experience. The use of the app will tell the system what medication needs to be dispensed to the user.
Pre-test questioner for the user	The pre-test will have information about the participant like their age and the use of technology etc. This will help designers find differences and problems between other people.
Moderators Script	The script guides the moderator of the test making sure each participant does the same test and use of the app. The script will help the moderator give the user procedures, observe and write down results.
Post-test questioner for the user	The post-test will be about the user's review on the Robotic Computerised dispensing system app. The test will help designers make improvements on the app.

Table 4.1 – The tools used in the testing of the app with its purpose

The test procedure will follow the following steps:

Stage 1 briefing (5 minutes)

1. Moderator follows the script (*appendix 1*) by welcoming and orientating the participant.
2. Participant fills out the consent form (*appendix 1*).
3. Moderator explains and administers pre-test questionnaire to the participant.
4. Introduce testing sessions according to moderator script.

Stage 2 conduct test (20 minutes) using different questions and scenarios.

Stage 3 Closing (5 minutes) post-test questionnaire (*appendix 1*).

7.2 Test Results and Analysis

The Computerized robotic dispensing system has been trialed by numerous participants, all have engaged in a series of procedures in order to form an understanding of the errors and benefits that impact the success and functionality of this system. Through a series of procedures, our team timed various different people of all ages to complete the same actions and questions in order to further their knowledge of the reaction between the youth and elderly. These tests overall explored the different aspects that people use technology within everyday activities and their interaction with new familiar software applications.

The first component that is explored is the Pre-Test, this will enable us to gather key information about our participants from a range of different aspects. They were broken down into different elements as displayed below:

Personal Details:

The first independent variable that was collected was the participant's age. In this section of the pre-test, we explored different aspects of the devices that the participants used, the occupation and their age. This knowledge informs us of their technological abilities and capabilities. This is later evident that Marge Davis and Nancy Bailey had the greatest difficulty with the robotic dispensing system as this is defined through the visual graphical representation in figure 5.4 with both elderly ladies taking the most time to complete the task.

Technical model:

The following section of the Pre-test enabled us to examine what category of applications they use and their physical movements with the application. This enabled us to gather data on how the majority of the participants interacted with the application. With the results, most people would tap the application to open it. Also, they would tap the arrow on the screen to proceed to the next page. A minority of participants would use a speech to open an app. With observation of the physical movement, it was found that the taping of the indicated arrow was the most common procedure to go to the next page. Within the users, the most common use of apps was social, games, news and health applications as shown in Figure 5.5. This helped us gain the knowledge of what functions those apps have and to incorporate those features into our own.

Moderators/ Time Trails:

In this element of the testing phase, we examined how fast and efficiently our application is with the participants. We timed the participants allowing us to observe their approach with simple tasks throughout the trail. It was evident that the elderly struggled the most with the inexperience with technology, However, there were some younger participants who had very little experience with the technology and struggled on completing some actions. See *Figure 5.4* for timed actions. See *Figure 5.6* to see where the test was most affected.



Figure 5.1 - Image of John observing Tyler Mok as he completes the time trails on a computer software version.



Figure 5.2 - Image of Markus Daniswara completing the ratings form.



Figure 5.3 - Image of Lachlan Holmes conducting an interview gathering comments by the participant.

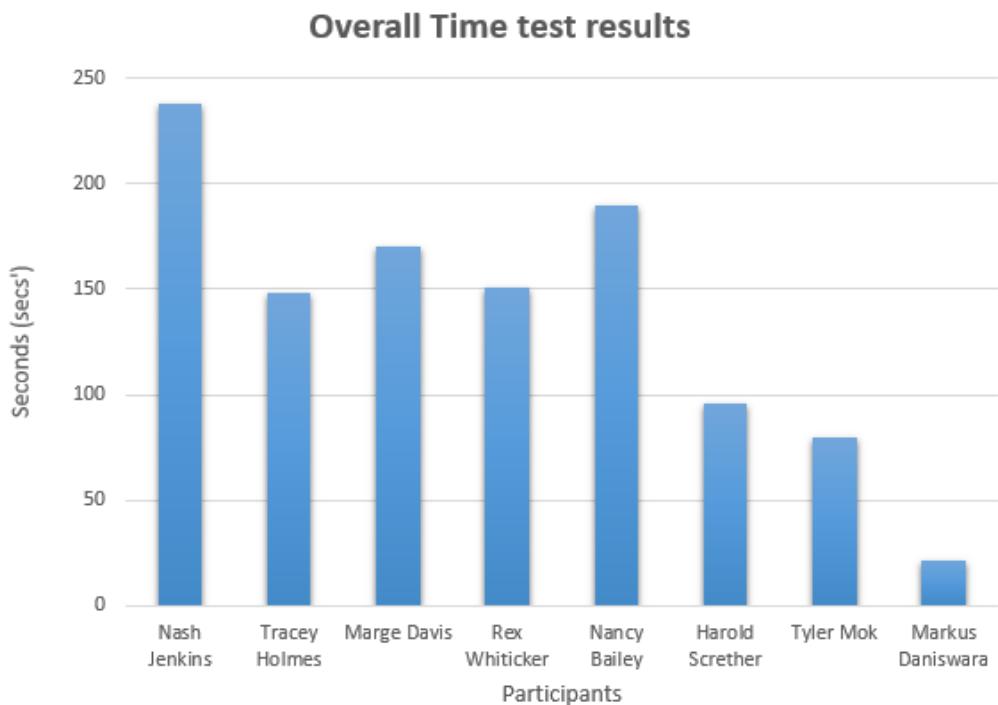


Figure 5.4 – The overall time test results of the 8 participants

The Bar chart in *figure 4.4*, reinforces that the elderly participants', Marge Davis and Nancy Bailey, interaction with the application took the most time consuming their inexperience with technology. However, with the outlier of Nash Jenkins, she struggled with one of the tasks due to technical difficulties. It was clearly evident that both elderly women has had the most time spent when following these basic tasks with them completing the task between two minutes fifty seconds (2:50 mins) and three minutes ten seconds (3:10 mins).

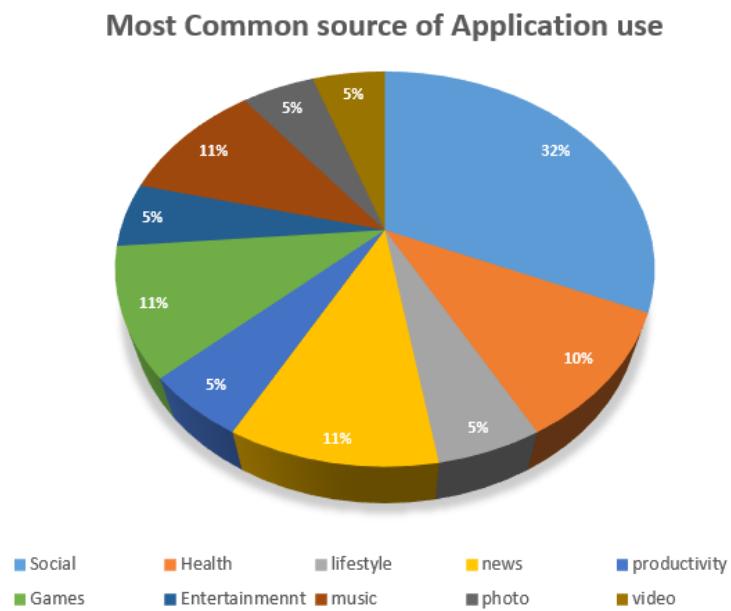


Figure 5.5 – The pie chart of the most common source of application used.

In *figure 5.5*, We explored the data collected and formatted it to represent what most of our participants use their smart devices for, ranging from a serious of category applications. The most common application downloaded within the participants was Social media. This was where most of the participants learned how to use the functionality of a smart device and incorporate their knowledge with our application.

Part 4.1 Timed

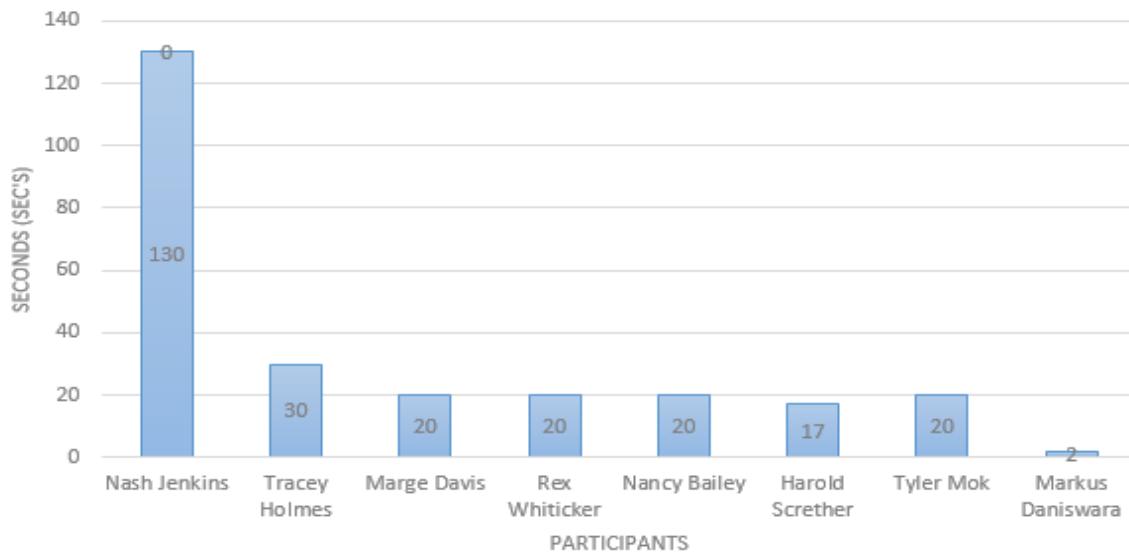


Figure 5.6 – Time taken to enter the user's details.

Throughout these time trials of all the participants, the slowest and poorest executed trail was Test 4.1 (see appendix 1) with deciding which method to enter script details in. This test was the most time affected with us now focusing our attention on providing a solution for incorporating a faster alternative to achieve faster efficiency to the robotic dispensing system.

Post-Test/satisfaction results:

At the end of the test, all participants completed a Post-Test form to acknowledge the faults and the areas that they were satisfied on a scale from one to five (1-5). This form permitted us to further our knowledge in what the key areas that we need to focus on and which areas that the customers like. In the appendix, you will gather a graphical representation of which participants liked which parts and who didn't with them all stacked together enabling us to see who and what parts need to be altered. The results gave us the aspect that all areas were mostly well thought out and were executed well, however, the comment and overall ratings of 1.11 felt strongly that there were too many text boxes. This area will need to be targeted and that maybe another alternative may be drop boxes in replacement of some text boxes. Another area that reflected with multiple opinions was the overwhelming interface when entering scripts. This also contributed to the comment of text boxes and will need to be simplified as much as possible to ensure satisfaction to the customer.

Overall the test results mostly had a positive impact on the success and functionality of the robotic dispensing machine. These tests were designed to engage a range of participants and analyze their interaction with the dispensing system. This involved age difference and occupation to explore the abilities of those who are technologically advanced and those who are not. The time trials explored the physical movements and time efficiency with those interacting with the

application. This overall was a success with them being able to perform small tasks in a timely manner ensuring that this did shorten the time of the overall objective and take pressure off the pharmacists.

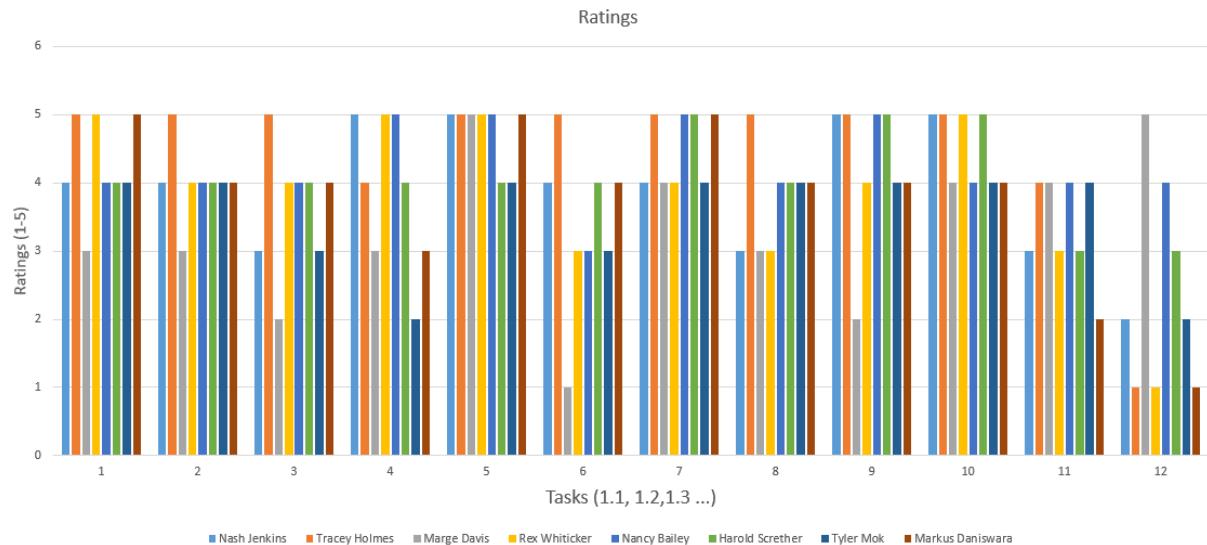


Figure 5.7 – The user's ratings on the use of the product and the application

7.3 Findings and Recommendations

The aim of the test was to see how the application can be improved and to see if people would even find it useful. Judging from the test results and analysis in 7.2, the overall design of the system was a success. The users that tested it found it easy to use and navigate around. Most users found the centered next button to be helpful and clear as to what they needed to go. The colors that are used were very user-friendly and appealing to the customers.

Accessibility Principle	How it has been addressed	Screen number reference
Users asked for the help button to be labelled.	The help button now has a label on the first page and more users will be able to know what it is.	The help button on screen 1
Users thought the title in the middle of the page was inefficient and not aesthetically pleasing to them.	The title has been positioned at the top of the screen instead of the middle of the screen.	The title on screen 1.
Users did not like how the details page has so many text boxes and details.	We have split the details onto separate pages as there was too much on the page.	The details page on screen 2.
Some users thought there should be an audio option	The audio has been added to each page as an	Added an audio option to all screens.

so they could be guided more.	option for users if they need it.	
The next buttons present of some of the screen would confuse the system on what the user wants the system to do next.	Next buttons were excluded on some screens to prevent the user skipping a screen or skip paying for the prescriptions.	No next buttons on screens 3, 6, 7, 8, 9, 10, 11, 11a, 11b1, 11b2, 11c, 11d1, 11d2, 12,

Table 4.2 – Accessibility principles and how it was addressed.

Findings summary:

Home screen – The first thing that the users saw was the home screen. The buttons were clear and big enough for them and were very impressed with the overall colors and designs of the screens.

Buttons – These were very important for the user as helped the user navigate throughout the application. The users were mostly satisfied with the buttons as they were clear and noticeable. Users did not have any problems with it. It stood out and was labeled.

Text Boxes – The text boxes allowed the users to put in their details into the machine. It was used a few times throughout the application. With the test results, some users thought there were too many text boxes in the details screen and were very overwhelmed by this as there were too many places they had to type in. A number of text boxes in the application was reduced for the user to get through the application quicker.

Help button – The help button enabled the user to ask for help and get instructions. As some users suggested in the tests, including Nancy Bailey (*Appendix 6 Post-Test questioner question 13*), labeling the question mark button would tell the user what it is. Nancy said that she had never seen a question mark before on a machine and did not even know what it was for.

Audio – Audio was added to all pages of the application. The user, Tyler Mok (*Appendix 8 Post-Test questioner question 13*), suggested that adding audio would also help the person further understand how to use the machine. The audio helps guide the user how to use the machine and where to go next.

Detailing screen – The detailing screen seemed overwhelming to most of the users. Markus Daniswara (*Appendix 9 Post-Test questioner question 13*), did not like the way the detailing screen was set out. The user said the address straight after the name was uncomfortable and said that should be rearranged so the user isn't putting in their life details in a machine.

Recommendations for further development:

Overall, the users were very impressed with the machine. There were some comments that could be taken into consideration to make the machine better and more user-friendly. Some users didn't like the layout. They suggested that the title on the welcome page should be at the top of the screen and not be so big which is something that can be changed for the final design. The background image was also said to be too big and take up too much room which will also be taken into serious thought for the final.

Some users were unsure of what some buttons meant e.g. they did not know what the '?' (help button) was at the bottom of the screen. To improve this, there should be a name of what it is when the users first see the button. This will ensure that users will know and understand what each button means.

Some users were a bit overwhelmed with how many text boxes were on the details screen. Some user suggested having the details page be split into two pages to make it less overwhelming and easier to look at. This change will be very helpful to users when they use the machine in the future so they aren't as overwhelmed.

8 Final Design

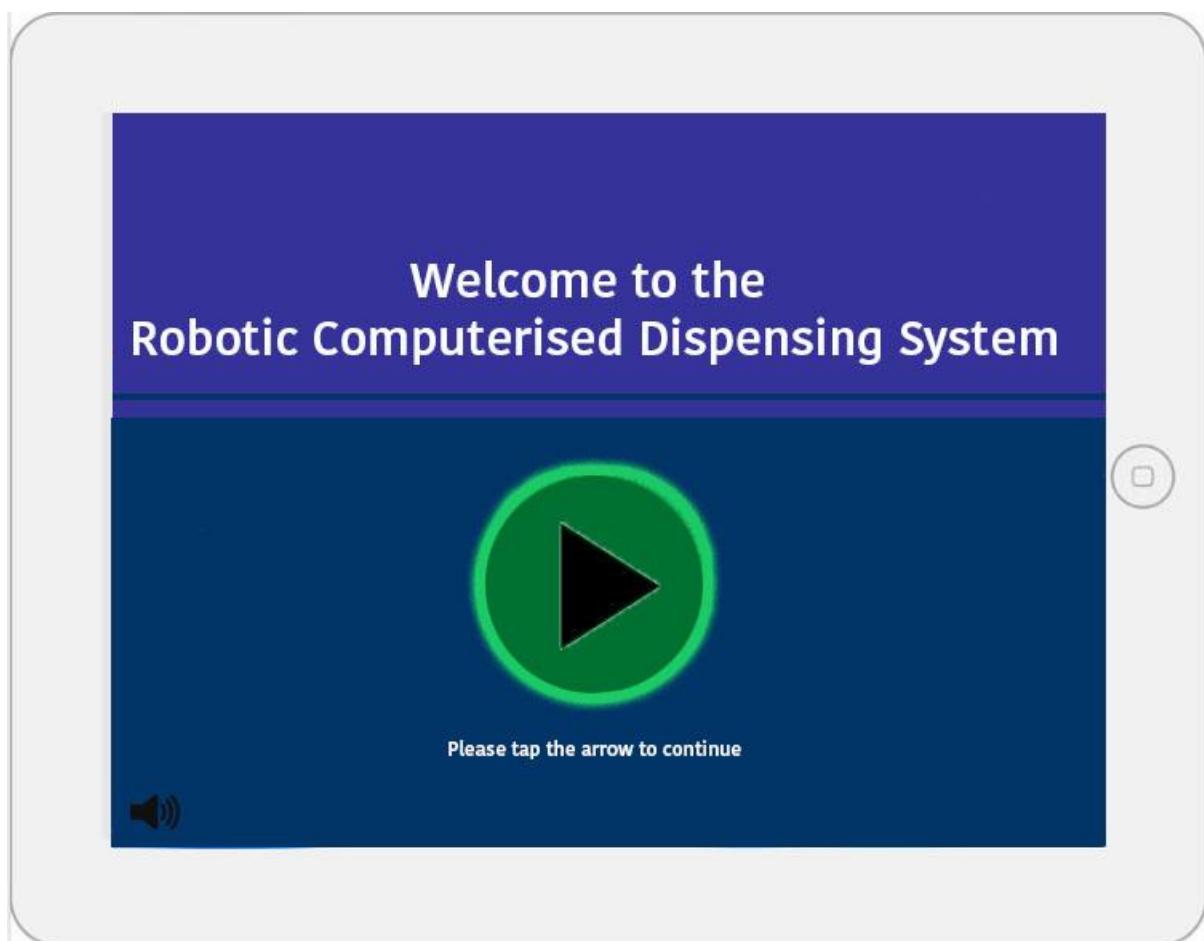


Figure 6.1 – The welcome screen

It was found in the test results, that a majority of users would use an arrow button to proceed to the next page, very few prefer to swipe right. There were minimal changes to the welcome screen. The title was put to the top of the screen and the instruction was a bit further away from the arrow as users suggested. The audio icon was added to every single screen located on the bottom left. The help button was on the bottom right, it isn't included in the final design because some users felt that the help button wasn't necessary for the welcome screen.

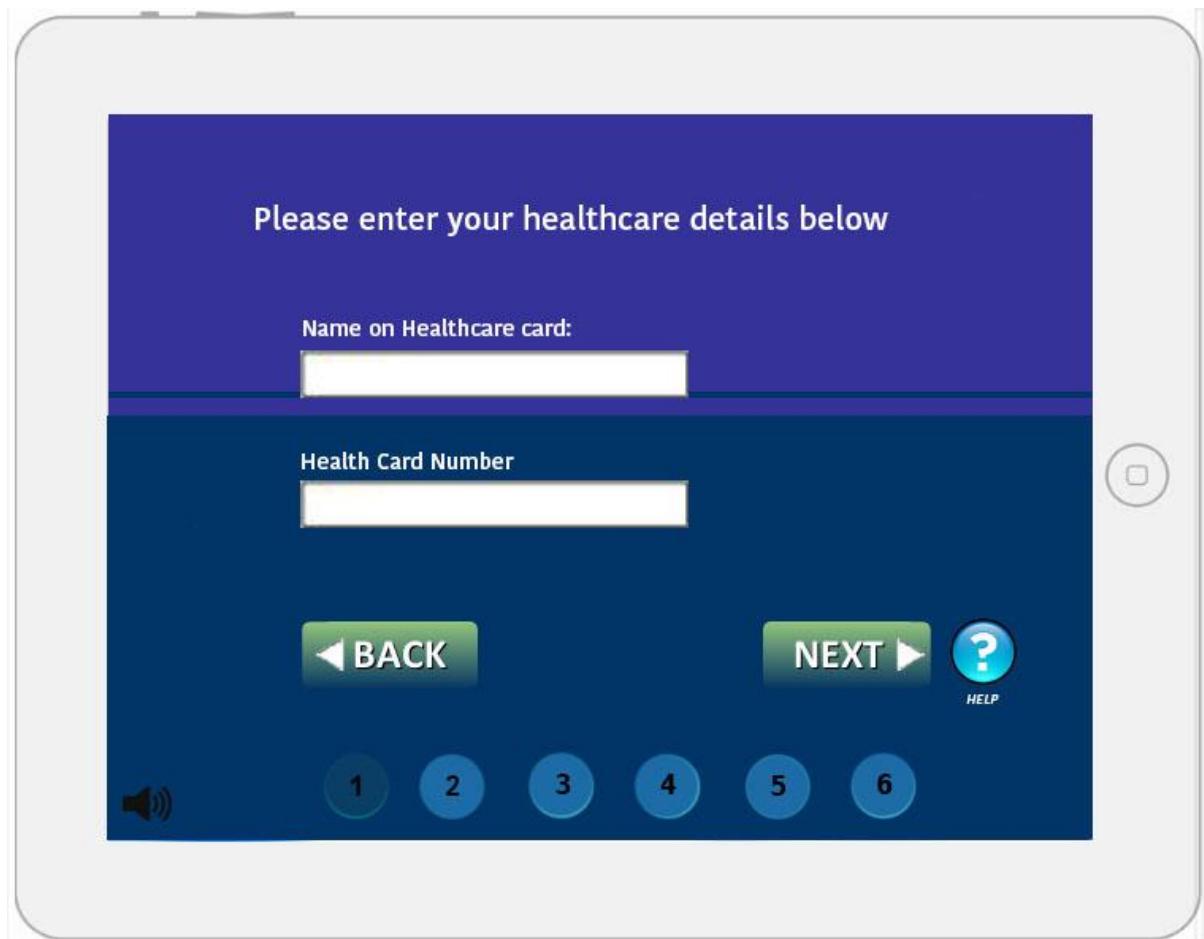


Figure 6.2 – Entering details screen

There were big changes to this screen. Many users said that there were too many test boxes on one screen and were compact. One user even said that he didn't like being asked for their details (*Appendix 9 Moderators Script 3.1*) We reduced the text boxes to just two where instead of asking for the user's every detail, the system will just ask for their healthcare card details. The help button will now be labeled in each screen to tell the user it is for. The audio icon was added to the bottom left of the screen. Number stages on the bottom of the screen were reduced from eight to six stages because previously, the loading screens were also counted as a stage to show the user what part of the process they were on.

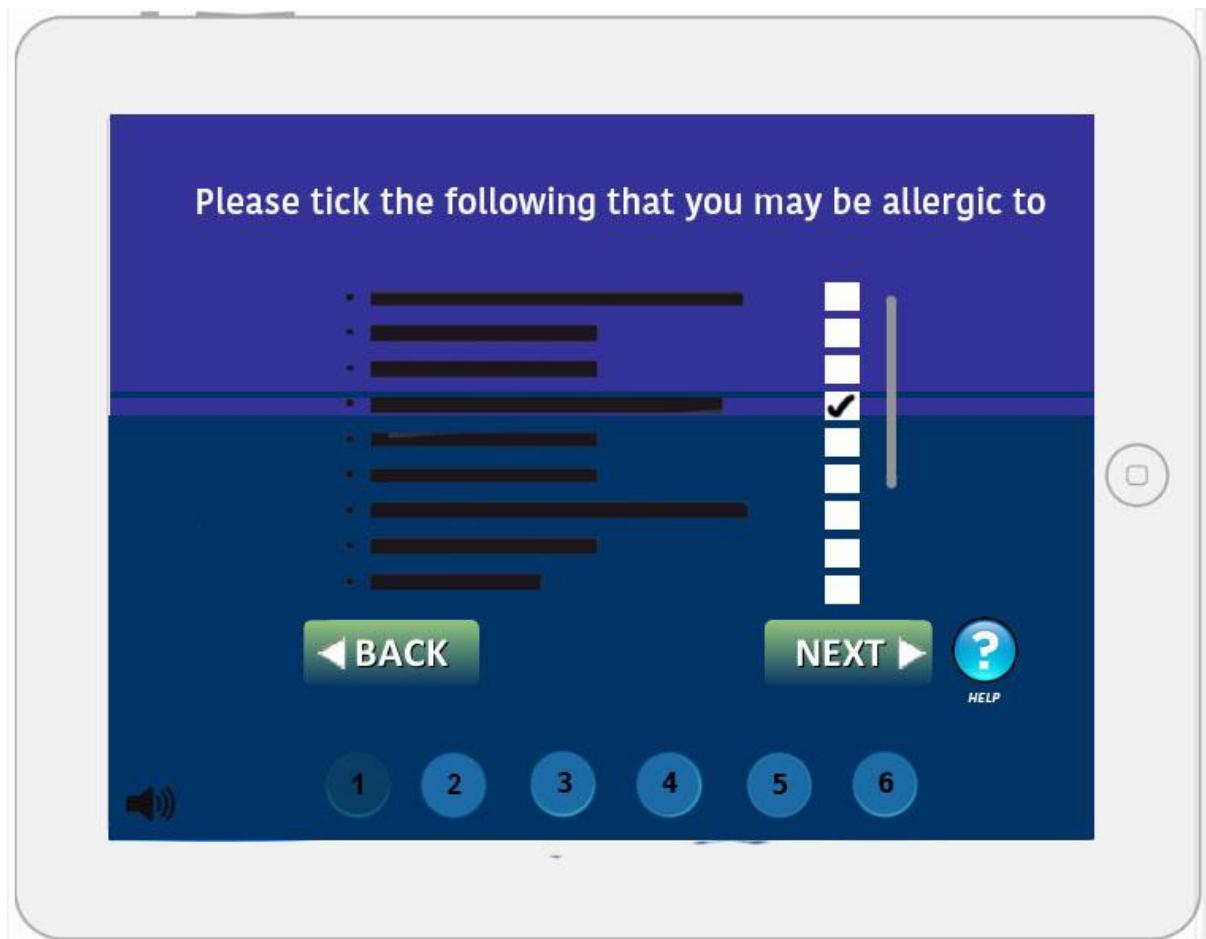


Figure 6.3 – Selecting allergies

The selection of allergies was originally combined with the personal details screen. The list of allergies was separated because users found it that having multiple text boxes and a list in one screen was too compact. Therefore, they were separated. The audio icon was added to the bottom left of the screen.

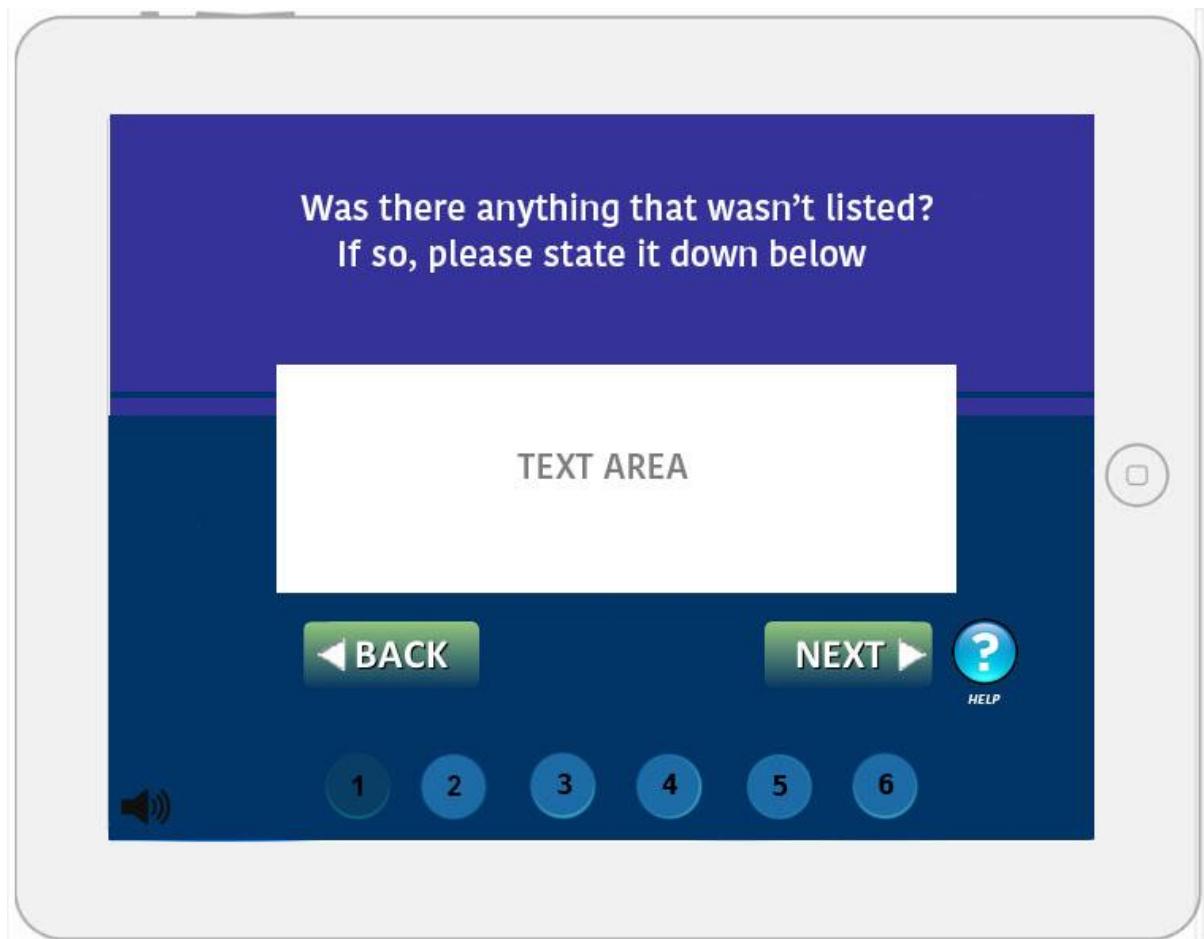


Figure 6.4 – Stating more allergies

The text box was previously combined with the personal details text boxes and list into one screen. We decided to also separate the text box which users can see that it is a text box and see what they're typing in. The user doesn't have to enter anything to proceed to the next page. The audio icon was added to the bottom left of the screen.

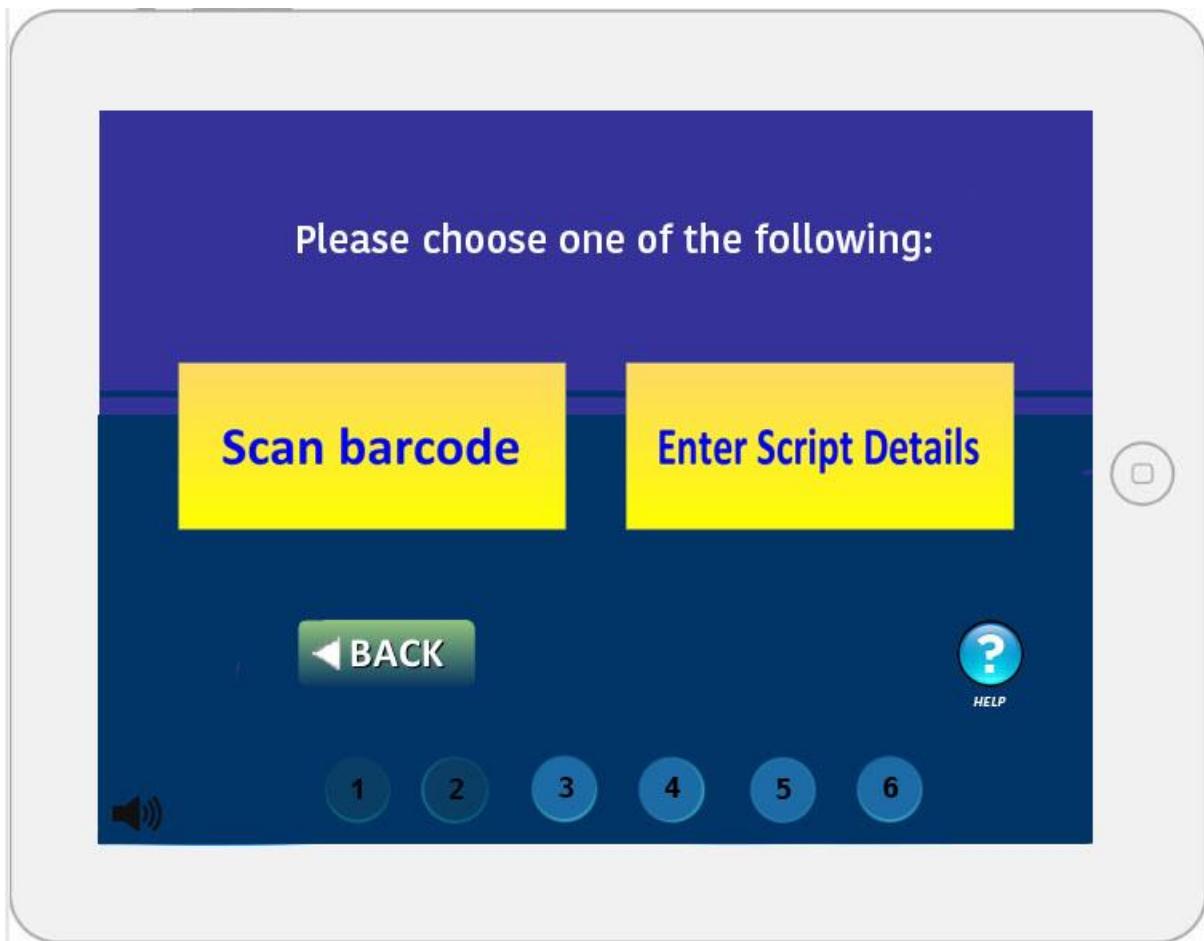


Figure 6.5 – Scan or manually add script

The back and the next buttons were excluded in the final design of the app as it was unnecessary to have it with the buttons. Users would have to select a button to proceed to the next page. By selecting the next button, it won't take them anywhere as the system doesn't know what the user wants to do next. Users can go to the previous page to edit details. Users were pretty satisfied with this screen. The audio icon was added to the bottom left of the screen.

Please enter you Medical Prescription:

Name of Doctor:	Date of prescribe script:				
<input type="text"/>	<input type="text"/> 4/22/2012 <input type="button" value="▼"/>				
Name of prescribed medicine:	Expiry Date:				
<input type="text"/>	<input type="text"/> 4/22/2012 <input type="button" value="▼"/>				
Dosage amount:	Are there any other medications?				
<input type="text"/> example: 40 Tabs 200mg <input type="button" value="▼"/>	<input type="text"/> If yes Please enter below: <input type="text"/> If yes Please enter below: <input type="text"/> If yes Please enter below:				
<input type="button" value="◀ BACK"/>	<input type="button" value="NEXT ▶"/> <input type="button" value="?"/> HELP				
<input type="button" value="1"/>	<input type="button" value="2"/>	<input type="button" value="3"/>	<input type="button" value="4"/>	<input type="button" value="5"/>	<input type="button" value="6"/>

Figure 6.6 – Manually adding script

Users did not find any problems. The audio icon was added to the bottom left of the screen. Users will need to fill up all the boxes to proceed to the next page or go back to the previous page.

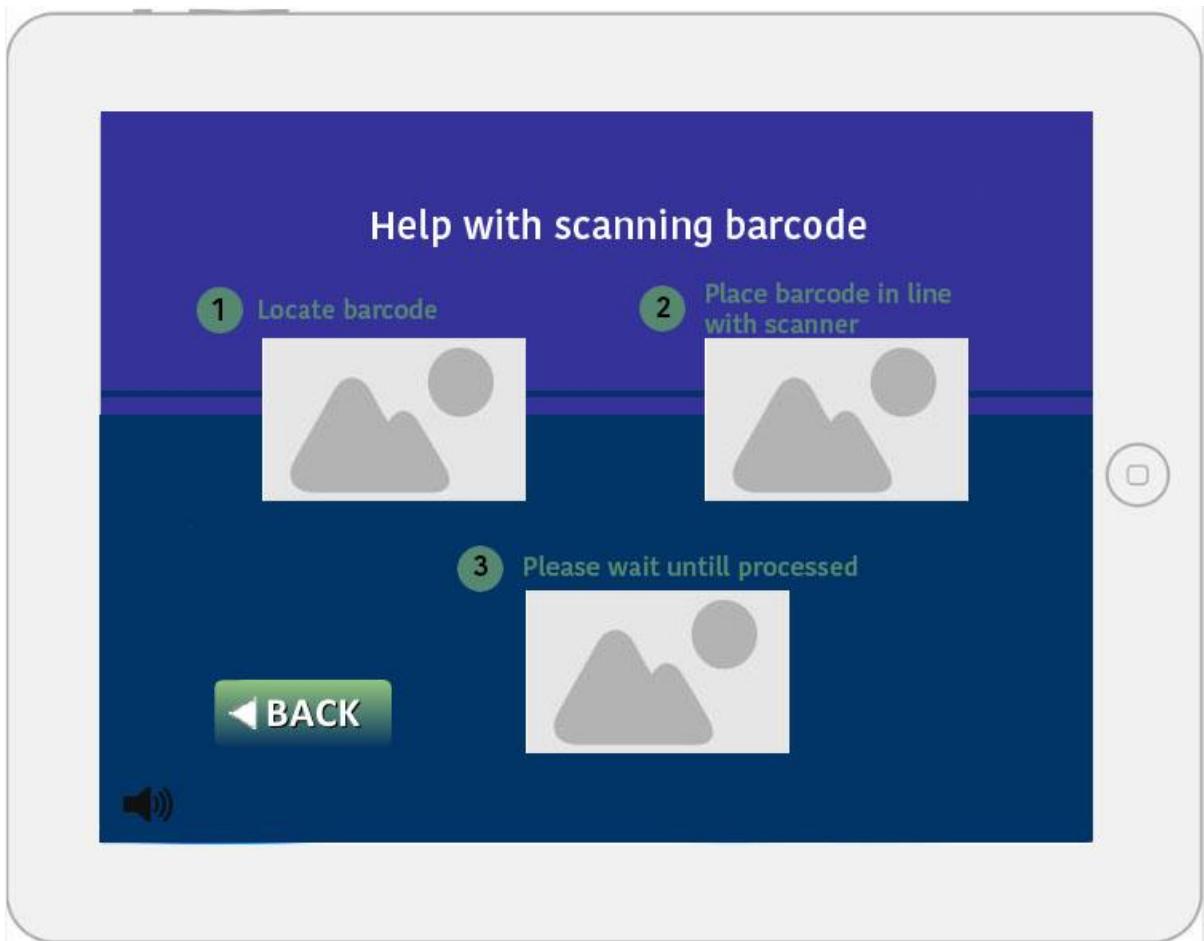


Figure 6.7 – Scanning barcode instructions

When the user selects scan barcode on the ‘Scan or manually add script’ screen it will show instructions on how to scan the script’s barcode. By pressing follow the instructions it will proceed to the next page. Pressing the back button will return to the previous page. The audio icon was added to the bottom left of the screen. Users were satisfied with this screen.

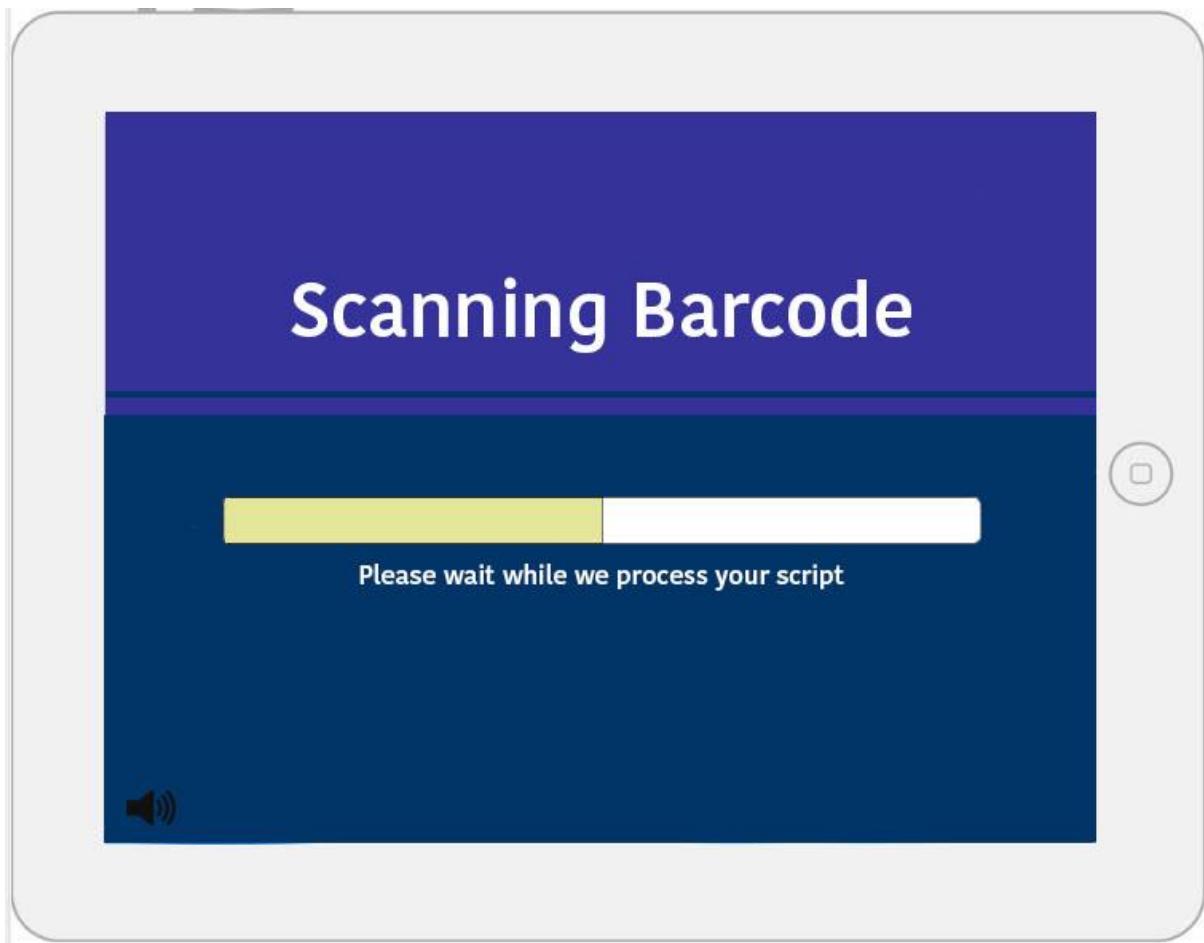


Figure 6.8 – Processing the barcode

After the barcode has been scanned, the machine will process it and then find the product. The audio icon was added to the bottom left of the screen. Back and next buttons were excluded as it was pointless having it. The user was satisfied.

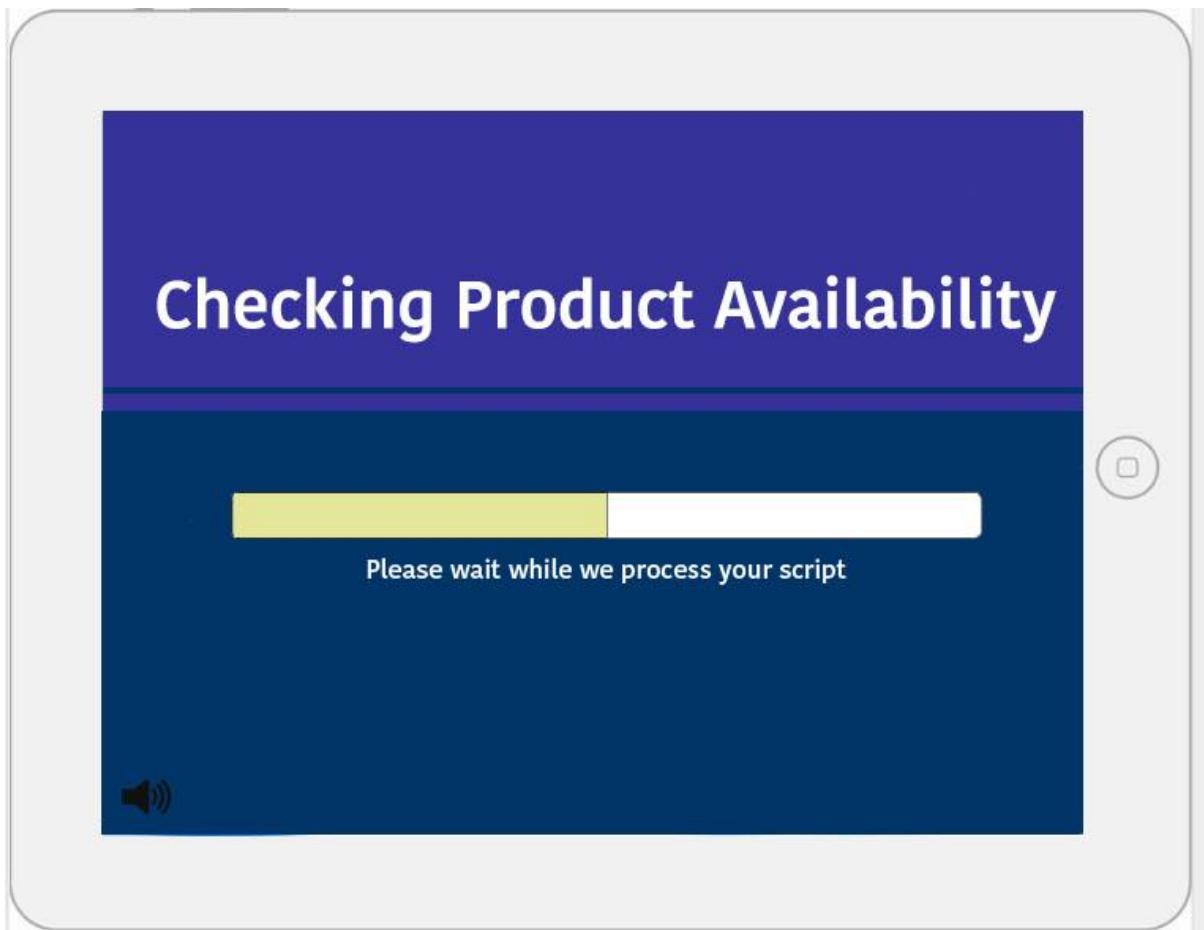


Figure 6.9 – Checking the product availability

After the system processes the barcode, it will find the product's availability. The audio icon was added to the bottom left of the screen. Users had no problems. Back and next buttons were excluded because unnecessary.

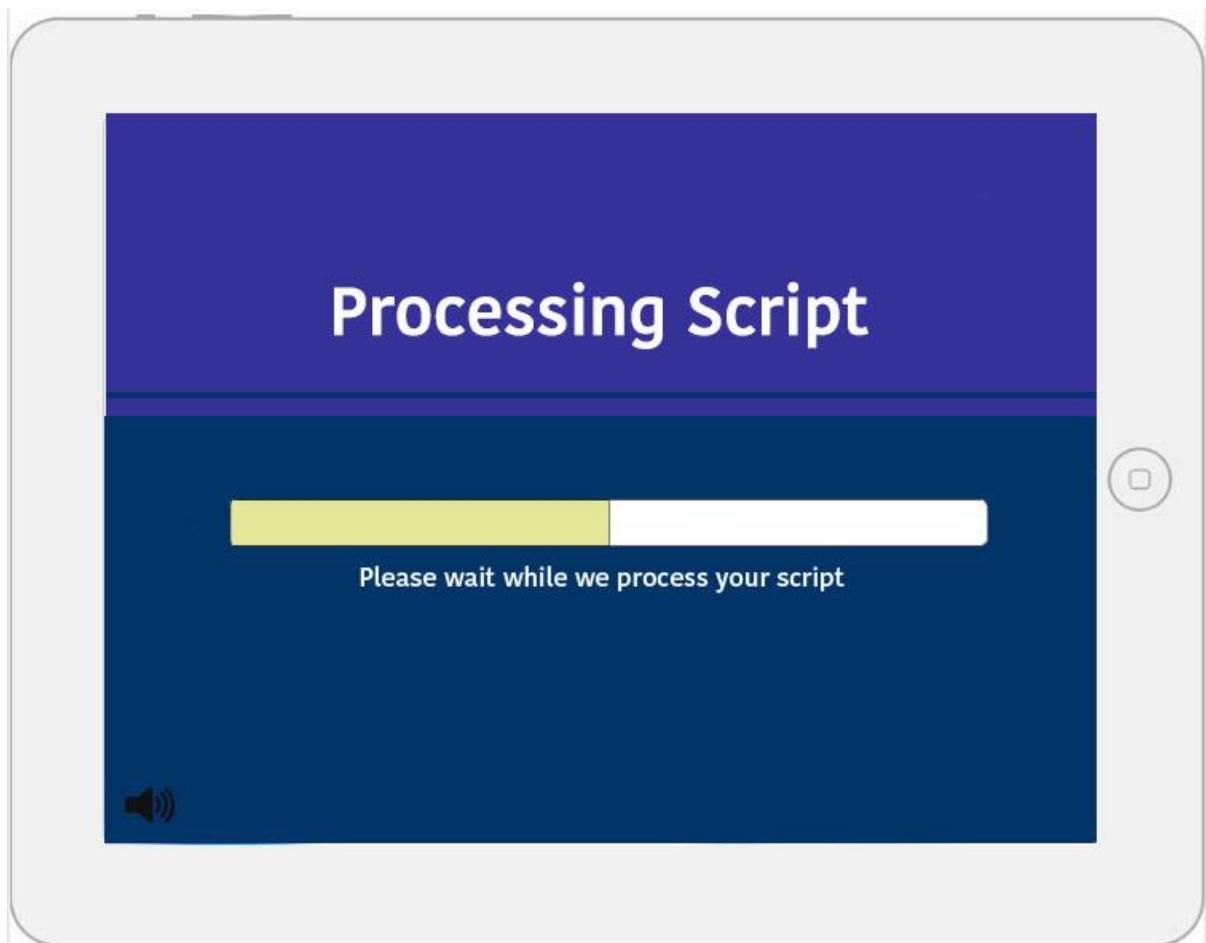


Figure 6.10 – Processing script

After the system finds the product it will process and add to the transaction. The audio icon was added to the bottom left of the screen. Back and next buttons were excluded because unnecessary.

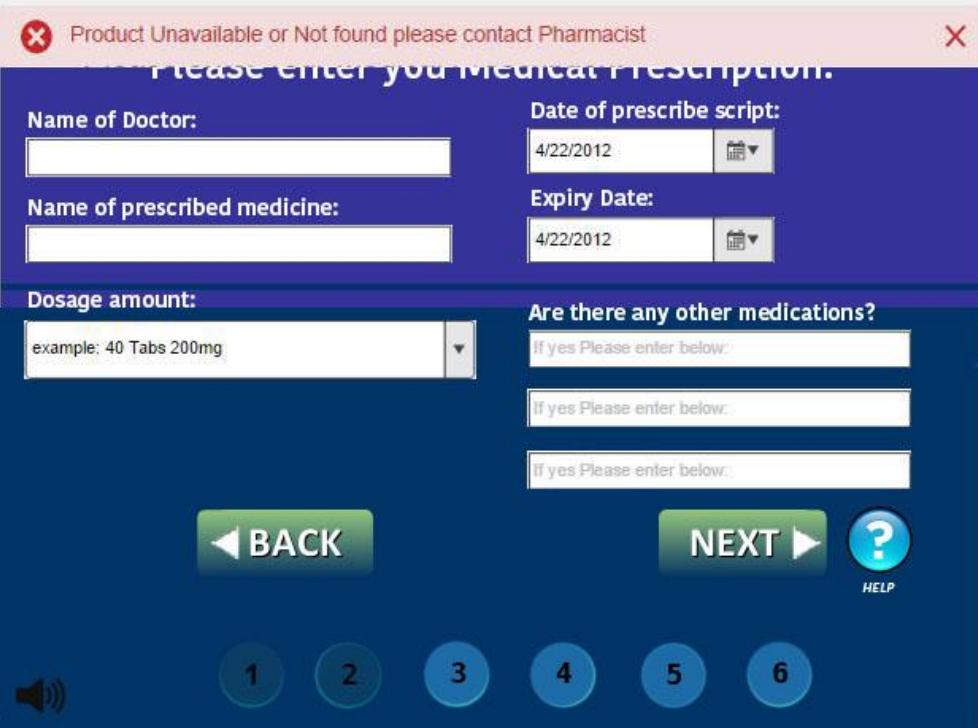


Figure 6.11 – Error of process

If the system doesn't find the product or it's unavailable, it will take the user back to this screen with a message on the top. The audio icon was added to the bottom left of the screen.

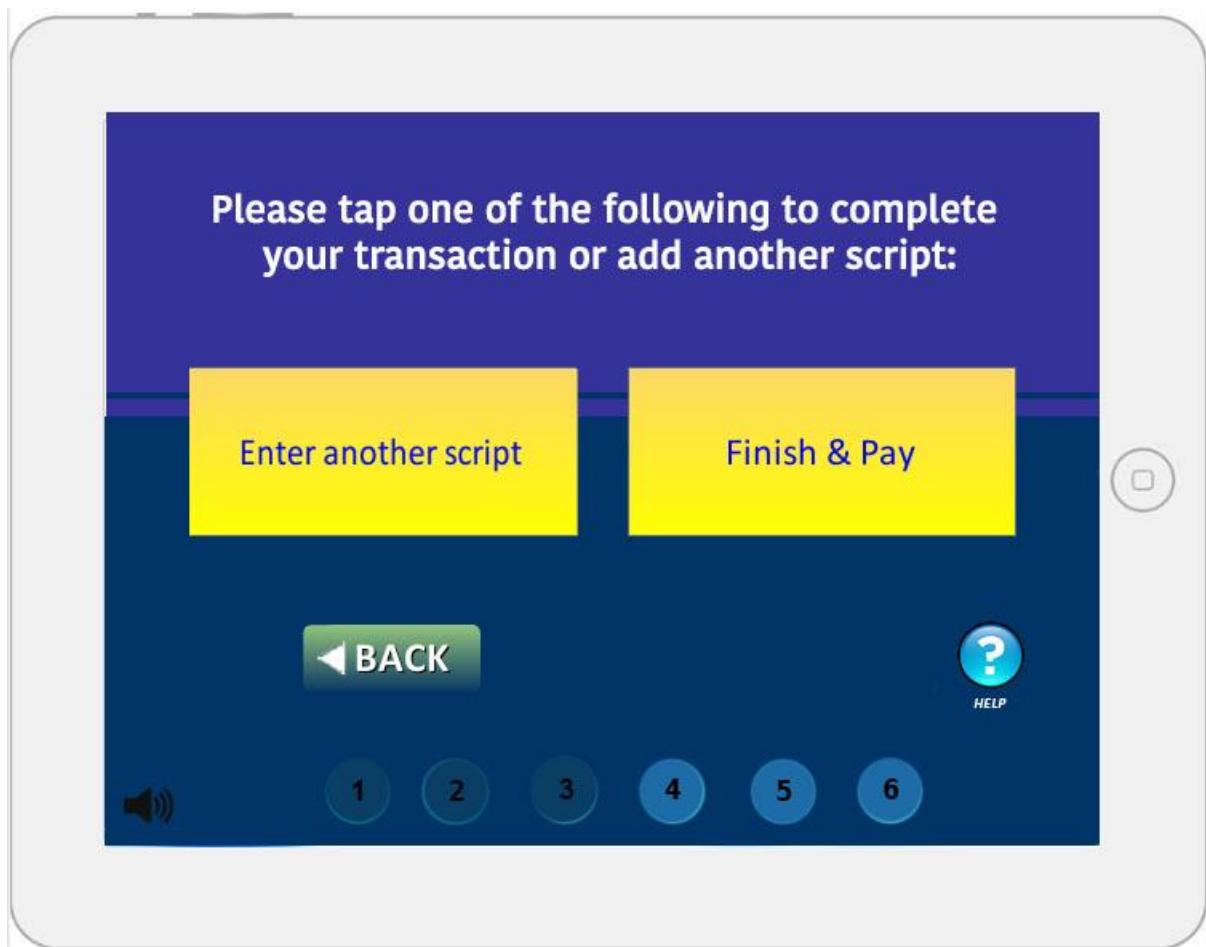


Figure 6.12 – Entering another script or finalizing transaction

By selecting the button on the left, it will take the user back to the ‘Scan or manually add script’ screen. Selecting the button on the right will take them to the next page where the user will have to pay for the listed products. The next buttons were excluded as it won’t take the user anywhere because the system doesn’t know what the person wants to do next. There were no comments on this screen. The audio icon was added to the bottom left of the screen.

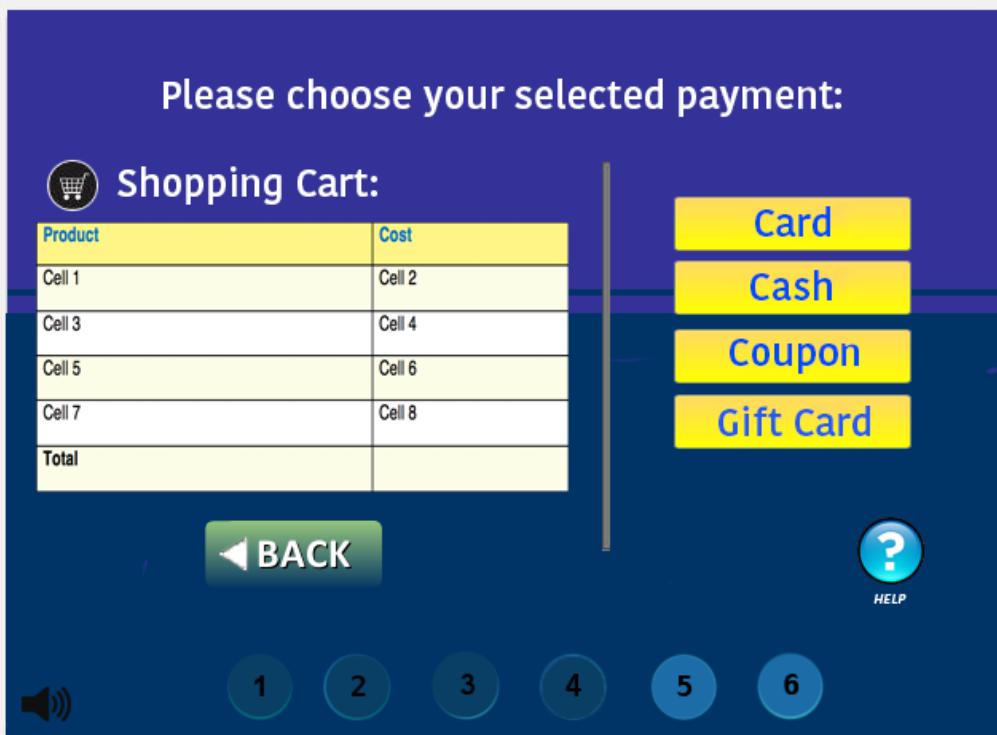


Figure 6.13 – The selection of payment

In this screen shows the listed products that were asked from the script. It also shows the cost of each product and the total amount. Users have four choices in paying for their products. The next button was excluded. The user has to pick one of the four yellow buttons to proceed. Test users did not have any problems or comments. The audio icon was added to the bottom left of the screen.

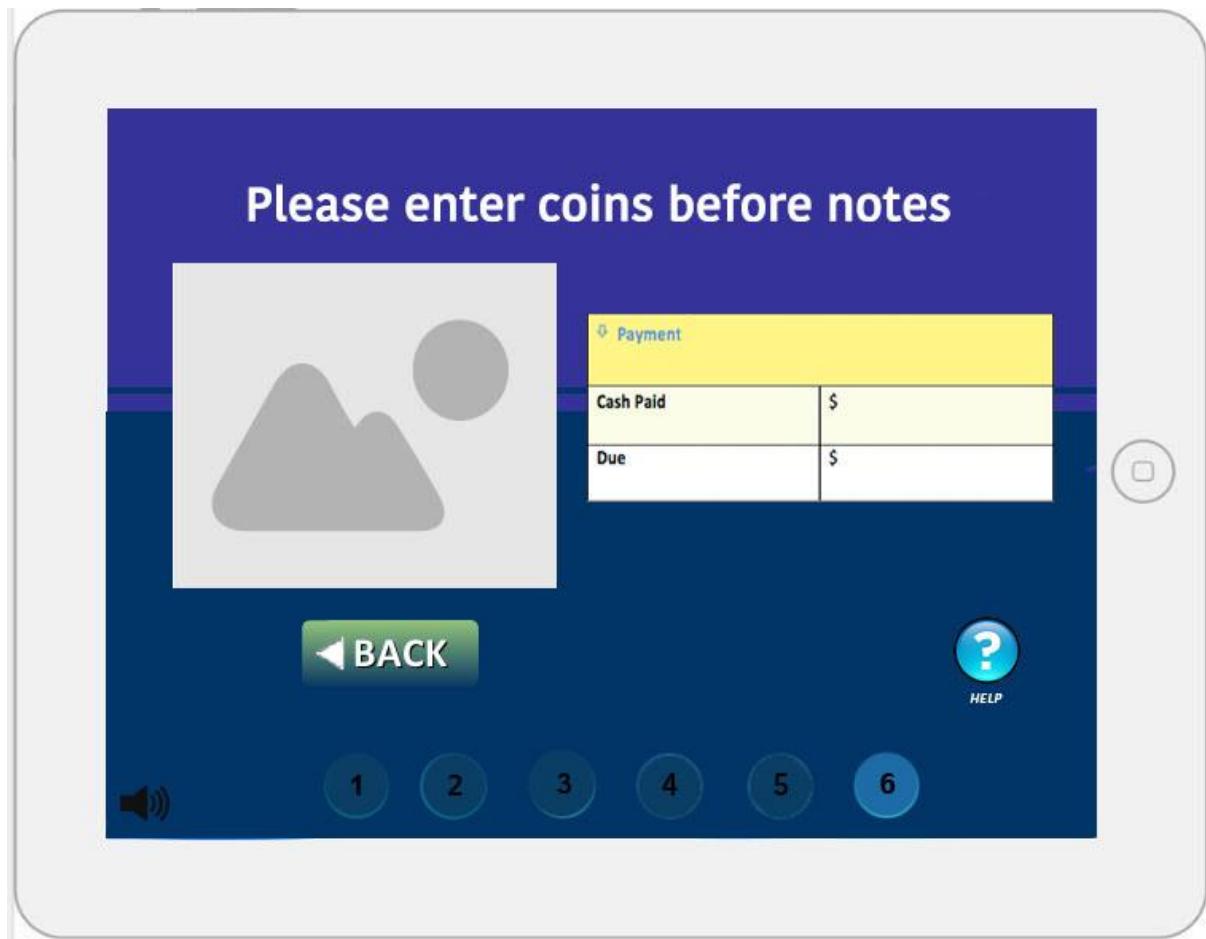


Figure 6.14 – Paying in cash

The system will take the user to this screen when the user selects the cash payment method. The image on the left side of the screen shows the user where to insert cash. The table on the right side tells the user the amount due and amount paid. Users were satisfied with this screen. The audio icon was added to the bottom left of the screen. This time the next button was excluded to prevent the user skipping the payment. Users did not have any problems or comments.

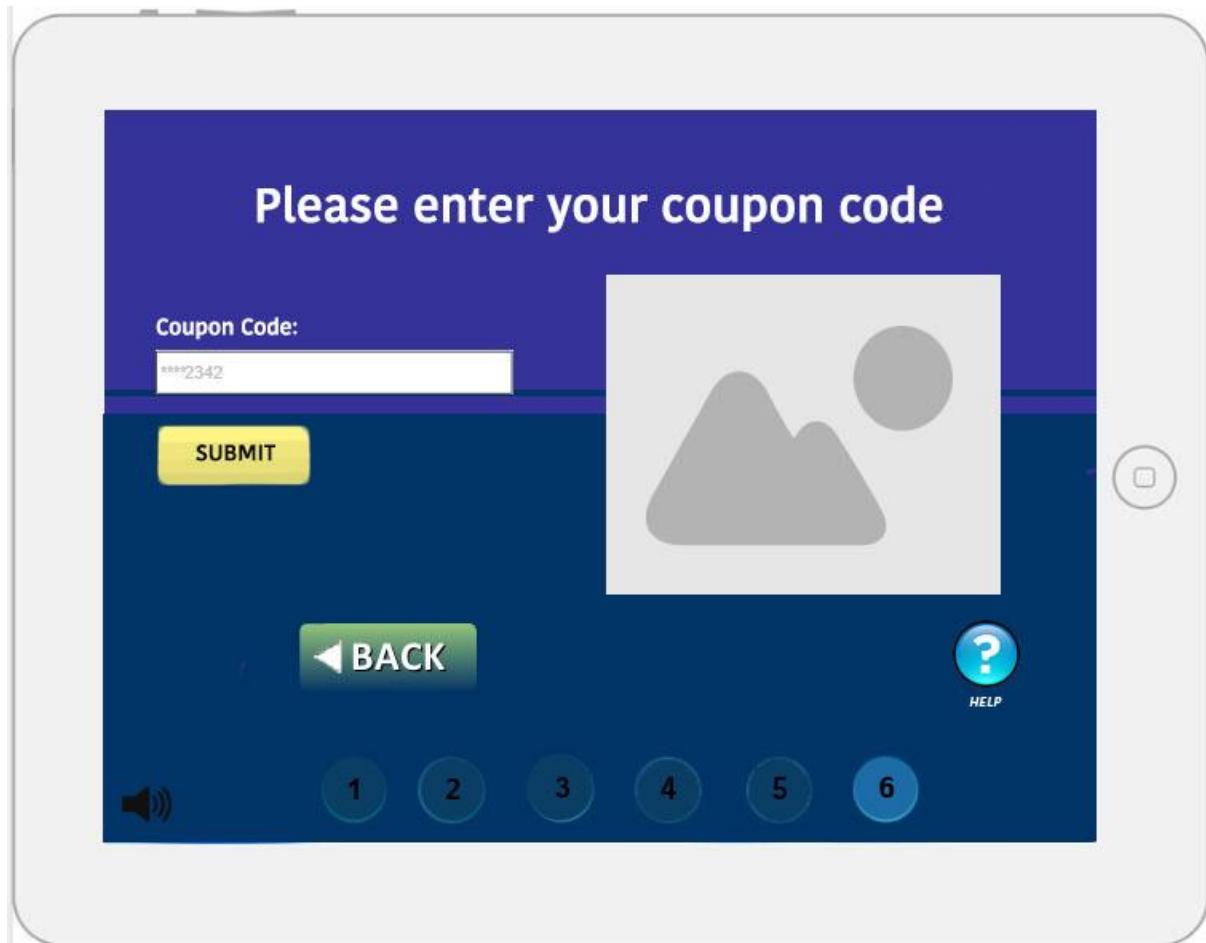


Figure 6.15 – Entering the coupon code

When the user selects the coupon payment method it will take the user to this screen. By pressing the 'submit' button, it will take the user back to the 'select payment' screen to select another payment method. The coupon will not pay for the whole transaction. The coupon will apply discounts. The next button was excluded as it wasn't necessary. Users could skip a payment. Users were satisfied. The audio icon was added to the bottom left of the screen.

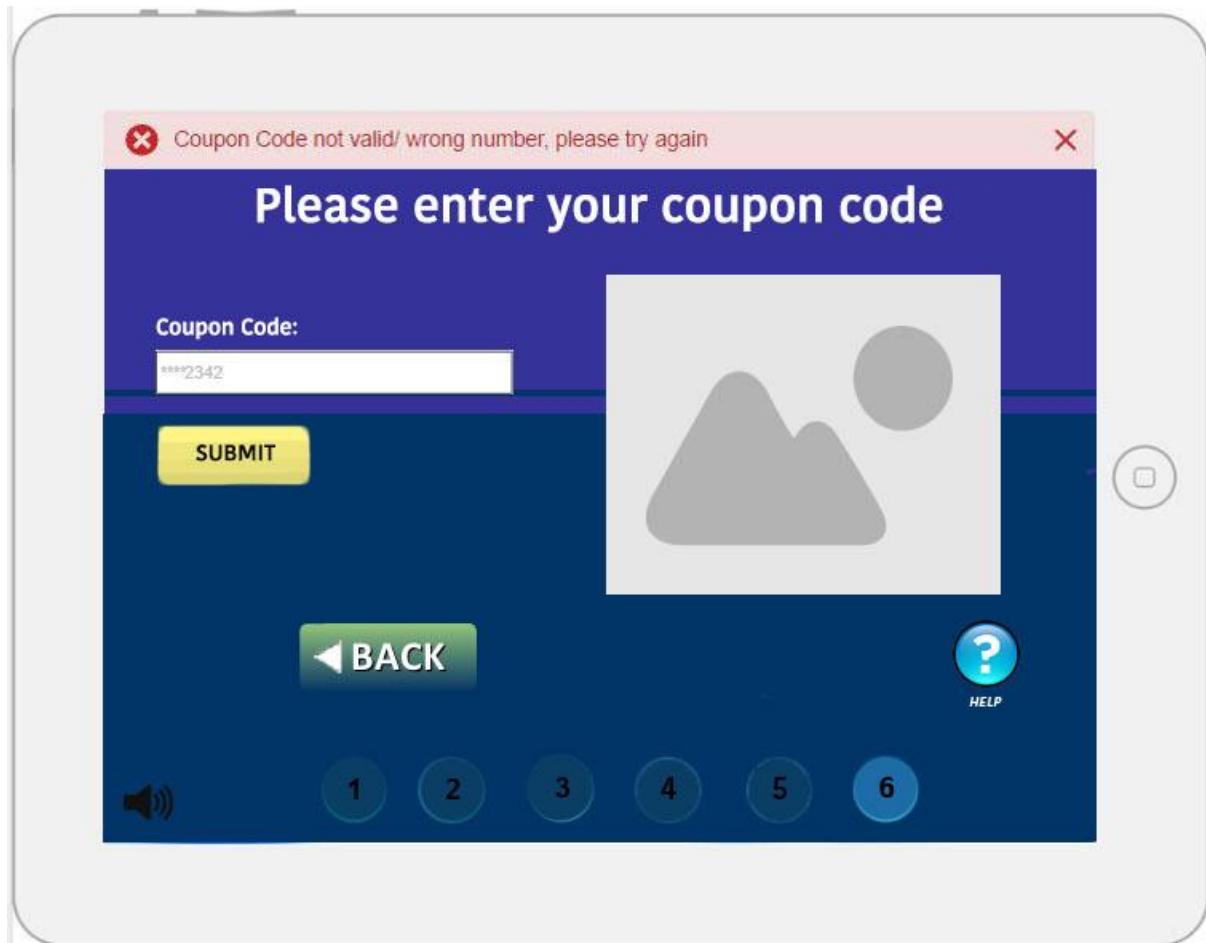


Figure 6.16 – Error message for coupon

An error message will pop up at the top of the screen if the system doesn't accept the coupon. The user will be able to try again or go back to the previous screen. Users had no problems with this screen. Users satisfied. The audio icon was added to the bottom left of the screen.

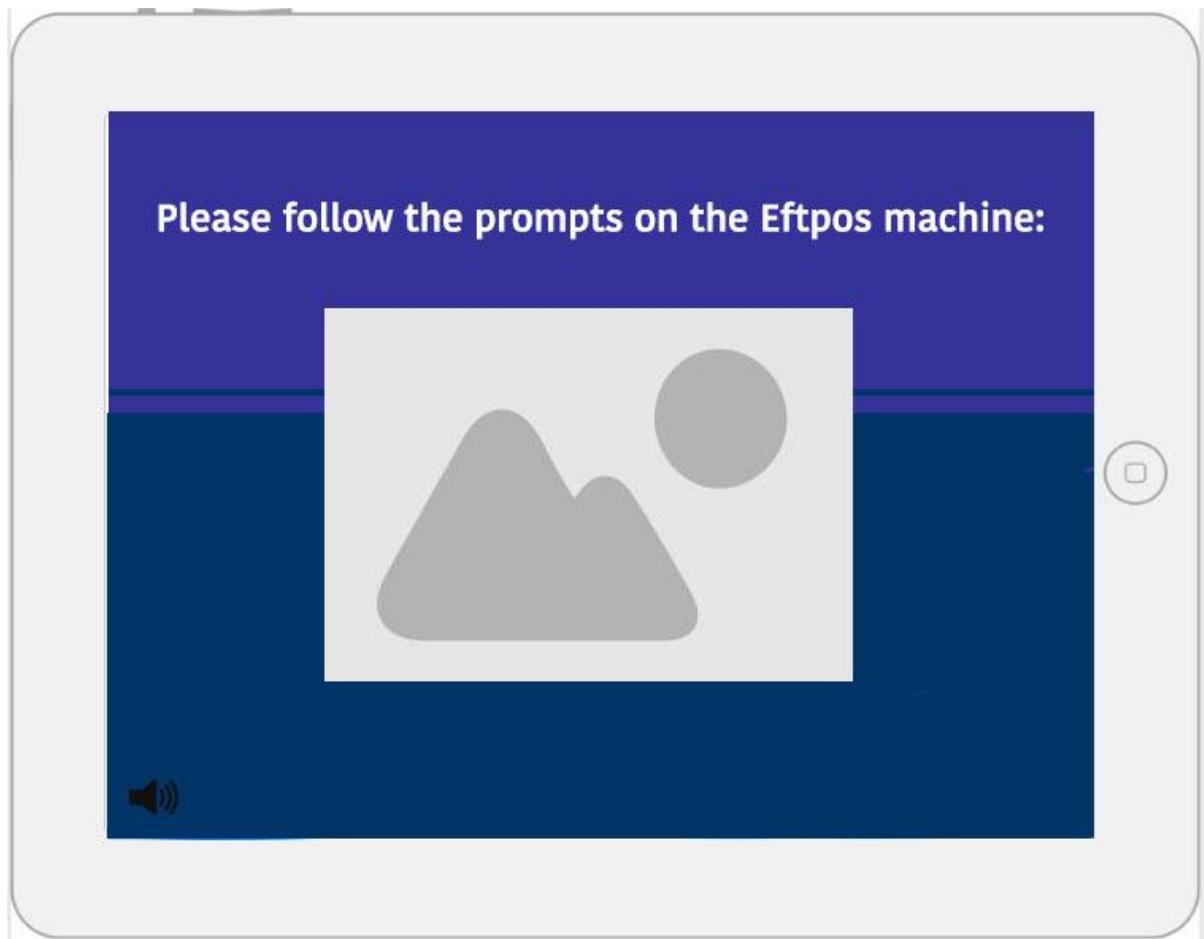


Figure 6.17 – Eftpos payment method

When the user selects EFTPOS payment method from the 'select payment' screen, it will take the person to this screen. An EFTPOS machine attached to the machine will give instructions to the user. Users were satisfied with this screen no problems or comments. The audio icon was added to the bottom left of the screen. Back and next buttons were excluded because unnecessary.

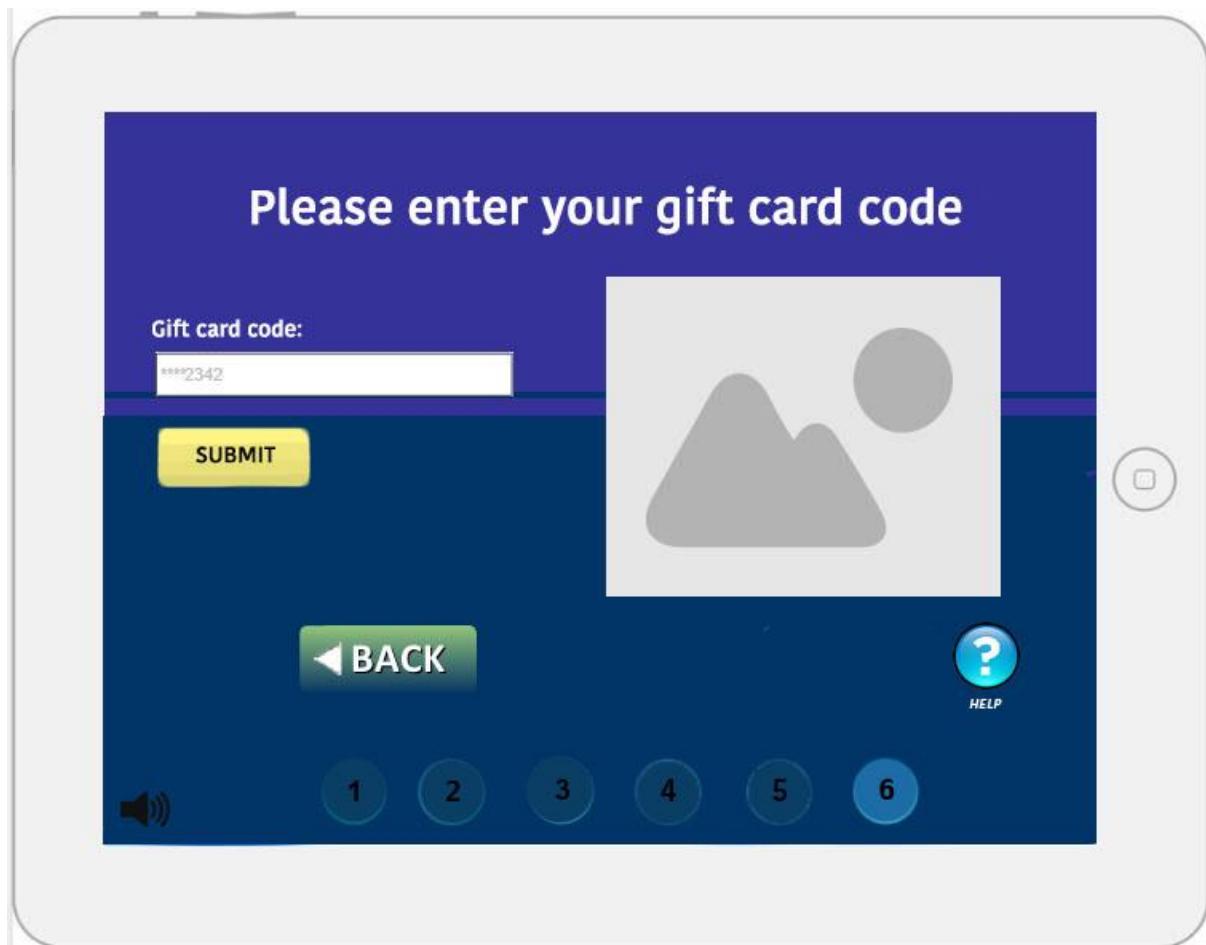


Figure 6.18 – Entering gift card code

Selecting 'gift card' from the 'select payment' screen it will take the user to this screen. Pressing the submit button will take them to the next page. The next button was excluded as it was unnecessary and the user could skip the transaction . Users were satisfied with this screen. No problems or comments. The audio icon was added to the bottom left of the screen.

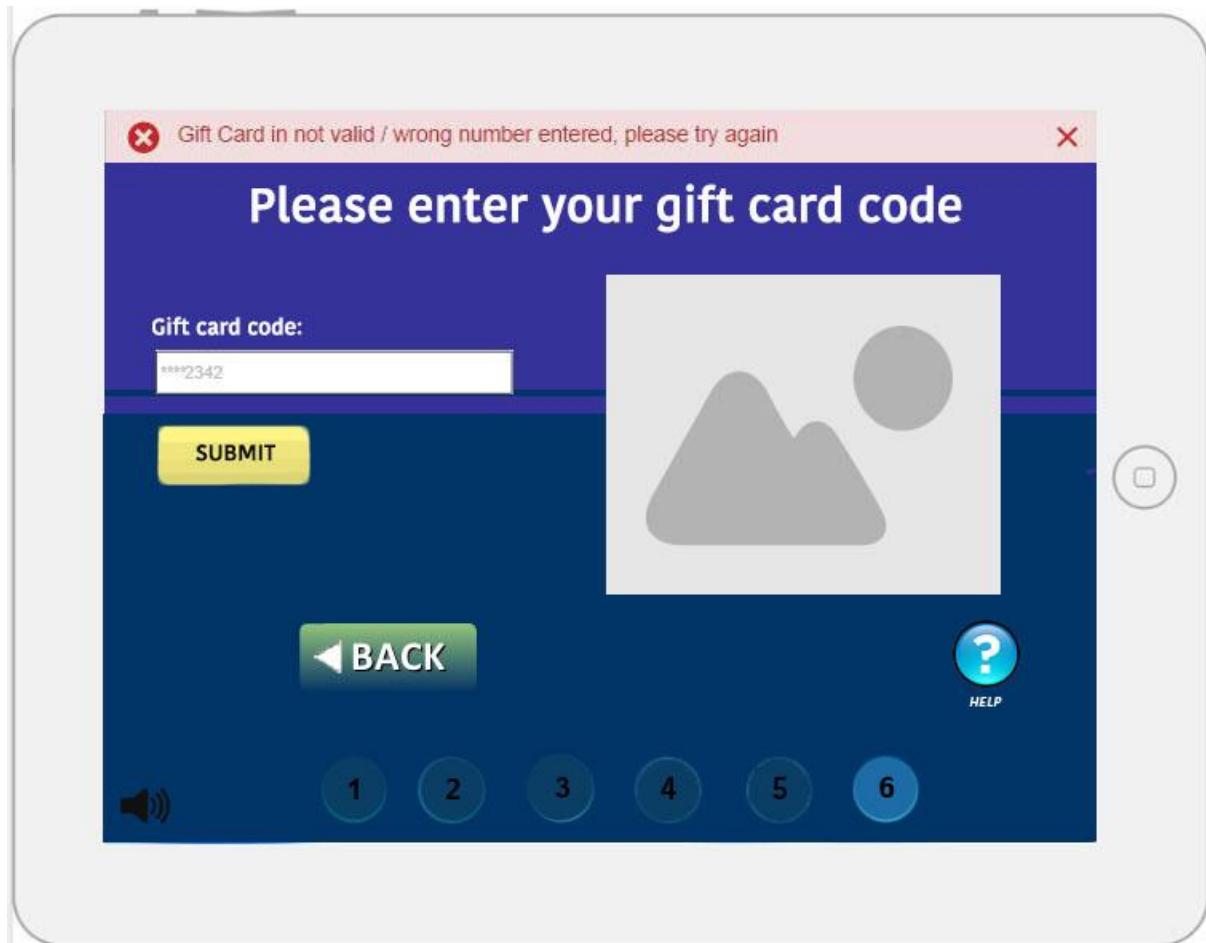


Figure 6.19 – Error message for gift card

An error message will pop up on the top of the page if the gift card is rejected by the system. It will not take the user to a different page. The back button is available for the user to select if they want to change their payment method. The next button was excluded because the user could skip paying for the products. The users were satisfied, no problems or comments. The audio icon was added to the bottom left of the screen.

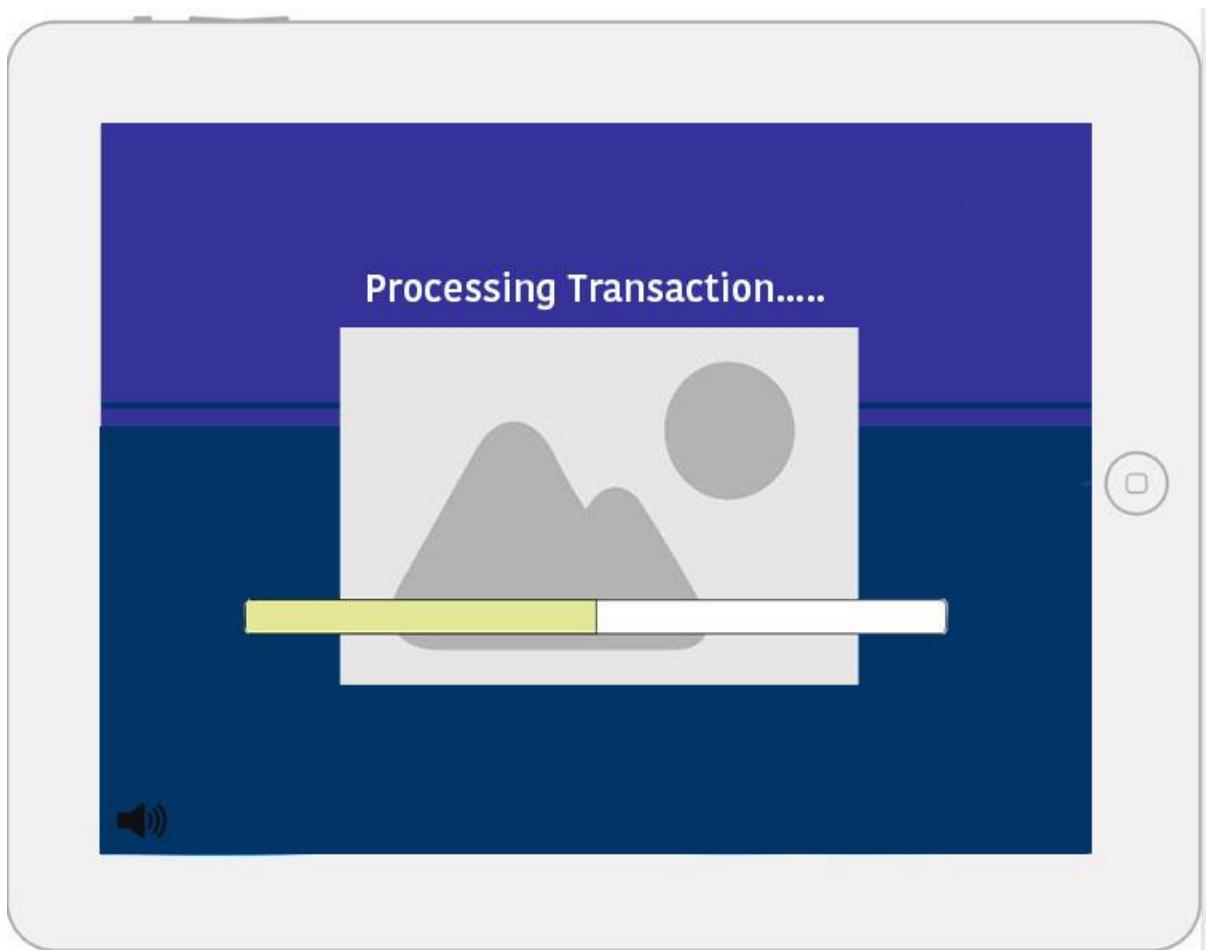


Figure 6.20 – Processing transaction

When the system accepts the user's payment, the system will collect the product, and dispense it to the user. The audio icon was added to the bottom left of the screen.

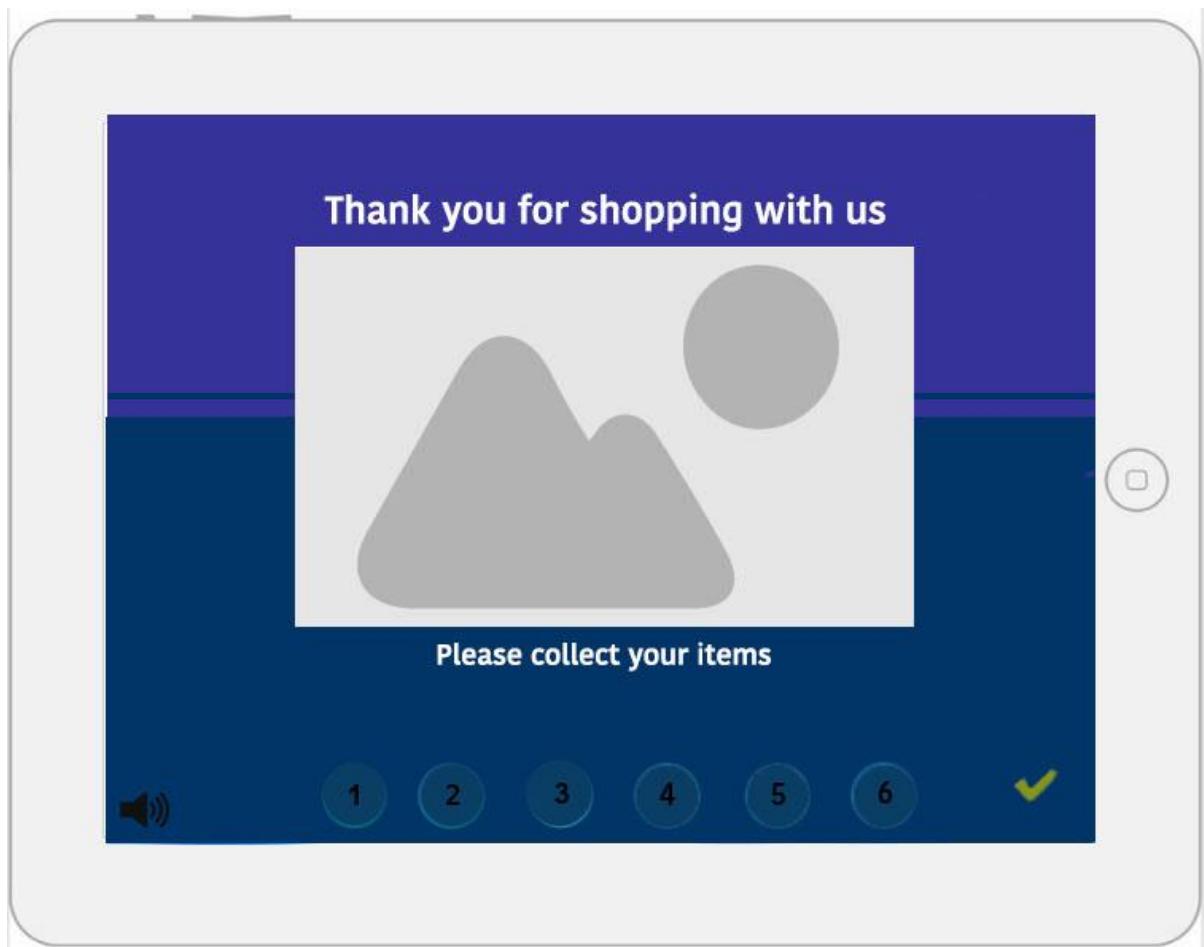


Figure 6.21 – Final screen

After the product has been dispensed, this screen will show up, the picture in the middle is a picture of the machine. No changes were made to this screen. The users were satisfied. The audio icon was added.

9 Appendix

9.1 Appendix 1 – Testing Scripts

Usability test consent form

Please read and sign this form.

In this usability test:

- You will be asked to perform certain tasks on an application.
- We will also conduct an interview with you regarding the tasks you performed.
- You will also be monitored with a stop watch to gather intel of your actions.
- An evaluation Post Test is required when finished.

Participation in this usability study is voluntary. All information will remain strictly confidential. The descriptions and findings may be used to help improve the Computerised Robotic dispensing application. However, at no time will your name or any other identification be used. You

can withdraw your consent to the experiment and stop participation at any time.

If you have any questions after today, please contact either Lachlan Holmes, John Santias, Crystal Wiltshire at customerservice@lifetec.org.au.

I have read and understood the information on this form and had all of my questions answered

Date: _____

Please print your name:

Please sign your name:

Thank you!

We appreciate your participation.

Test setup check list:

- The Robotic Computerised Dispensing system is functioning.
- App is working and controlling the dispensing system.
- Stop watch is ready.
- Pages are clean and blank.

User Pre-Test Questioner

PERSONAL DETAILS

1.1 NAME:

1.2 AGE:

1.3 SEX:

1.4 OCCUPATION:

1.5 FAVORITE OPERATING SYSTEM:

- Apple
- Android
- BlackBerry
- Windows
- Other: _____
- No favorite.

1.6 FAVORITE DEVICE:

- Apple iPhone
- Apple iPad
- Apple Macs
- Samsung Galaxy phones
- Samsung Tablets
- Other: _____
- No favorite.

1.7 DO YOU HAVE MEDICARE?

- Yes
- No

TECHNICAL MIND MODEL

1.1 HOW OFTEN DO YOU USE TECHNOLOGY?

- All the time
- Every day
- Few times a week
- Sometimes
- Never

1.2 WHICH CATEGORY(IES) DO YOU MOSTLY GET YOUR APPS FROM?

- Social media
- Games
- Books
- Business
- Food & Drink
- Catalogs
- Health & fitness
- Education
- Lifestyle
- Entertainment
- Kids
- Finance
- Magazines & Newspapers
- Medical
- Music
- Navigation
- News
- Photo & Video
- Productivity
- Reference
- Shopping
- Social Networking
- Sports
- Travel
- Utilities
- None

1.3 WITH THE GIVEN SMART TABLET, HOW DO YOU OPEN AN APP?

- Hold your finger on the app
- Tap on the app
- Say “open app” to the device
- Press home button
- Restart the device
- No idea

1.4 HOW DO YOU CLOSE THE APP?

- Hold your finger on the screen
- Tap on the screen
- Say “close app” to the device
- Press home button
- Restart the device

1.5 WITH THE GIVEN PICTURE, HOW WOULD YOU PROCEED TO THE NEXT PAGE?

- Tap the next button
- Tap the right side of the screen
- Swipe screen from right to left
- Tap the left side of the screen
- Swipe screen from left to right
- No idea

1.6 DO YOU HAVE A MYGOV ACCOUNT?

- Yes
- No
- Not sure

Moderators Script

EXPLANATION

1.1 This meeting will take about 30 minutes or less depending on how we get through this test. Thank you for your participation in this test. This will help us identify any obstacles, errors or anything else within the app so that we can further improve it. I will be timing you for the tasks you have to do on the app. The way you go through each task will be valuable information for us. We will be asking a number of questions, most of them will require you to use the app and answer questions. After a certain amount of time, in the use of the app, if you haven't been able to solve the task, I will give you a hint. If you still cannot solve it, I will show you so that the test can continue. Please don't hesitate or be scared to use the app, you can use it however you think it will work.

2 Welcome Screen

2.1 This is the welcome screen of the robotic dispensing machine. In a few sentences or less, please tell me, what do you think of the layout? Is there anything that should be changed?

2.2 Can you show me how to proceed to the next page?

- | | |
|--|-------|
| <input type="checkbox"/> Swipe screen from right to left | Time: |
| <input type="checkbox"/> Tap the screen | Time: |
| <input type="checkbox"/> Say "Next" to the smart tablet | Time: |
| <input type="checkbox"/> Tap on the arrow button | Time: |
| <input type="checkbox"/> No clue | Time: |

2.3 Was proceeding to the next page hard?

- Yes
- No
- Sort of

3 Entering personal details screen

3.1 Take a moment to look around this screen. When you're ready, please tell me what do you and do not like about this page.

3.2 How do you enter your surname in the top left-hand side of the screen?

- Say your surname to the smart tablet. Time:
- Tap on the box, a keyboard will come up and type your surname in. Time:
- Hold your finger on the box, keyboard will come up and you type in your surname. Time:
- Swipe your finger from the bottom to the top of the screen, keyboard will come up and you type in your surname Time:
- No idea Time:

3.3 Let's say you're having trouble using the app. How do you call for help?

- Call out for help Time:
- Do nothing Time:
- Tap on the blue question mark button located above the number 8 on the bottom right hand side of the screen. Time:
- No idea Time:

3.4 You've entered all your details. How do you proceed to the next page?

- Swipe screen from right to left Time:
- Tap the screen Time:
- Say "Next" to the smart tablet Time:
- Tap on the arrow button Time:
- No clue Time:

4 Scanning or Entering details of the script

4.1 Here is a script that has been given to you by a doctor. You will need to use this script to get your medication from the machine. In this method, you will have to scan the script's barcode, how do you do that?

- Tap 'scan barcode, use scanner to scan the barcode' Time:
- Tap 'enter script details, scan the script details and press next.' Time:
- Say the barcode details to the smart tablet Time:
- Type in the barcode Time:
- It doesn't work Time:
- No idea Time:

4.2 Good work! Now that you've added a script, you have another script given to you by the doctor. This time, you will have to enter it manually. How do you do that?

- Tap 'scan barcode', type in script details Time:
- Tap 'enter script details, enter the script details and press next.' Time:
- Scan script Time:
- Say the script details to the smart tablet. Time:
- It doesn't work Time:
- No idea Time:

4.3 The machine has listed the wrong medication. How do you go back to the previous page?

- Say "Go back" Time:
- Press on one of the page numbers below Time:
- Press the back button Time:
- No idea Time:

5 Payment method screen

5.1 Great job! The machine has listed down your needs. You now want to pay for the medications. With the given gift card, how do you use it?

- Tap 'gift card' and scan/swipe gift card. Time:
- Say "Gift card" to the smart tablet. Time:
- Press the home button and scan/swipe gift card. Time:
- Place the gift card on the screen. Time:

- Press next button Time:
- No idea Time:

5.2 With the given coupon, how do you use it?

- Tap ‘coupon’ and scan/swipe coupon. Time:
- Say “coupon” to the smart tablet. Time:
- Press the home button and scan/swipe coupon. Time:
- Place the coupon on the screen. Time:
- Press next button Time:
- No idea Time:

5.3 The coupon and gift card has been used. Now you only need to pay \$1. With the given cash, how do you use it?

- Tap ‘Cash’ and put coin into the machine. Time:
- Say “Cash” to the smart tablet. Time:
- Press the home button and put the coin into the machine. Time:
- Put the coin on the screen. Time:
- Press next button Time:
- No idea Time:

5.4 Good job! You’ve completed your purchase. However, we are going to go back to the payment screen where this time we would like you to pay with the given credit card. How do you use it?

- Tap ‘card’ and scan/swipe or tape card onto the eftpos machine. Time:
- Say “card” to the smart tablet. Time:
- Press the home button and scan/swipe or tape card onto the eftpos machine. Time:
- Put the card on the screen. Time:
- Press next button Time:
- No idea Time:

1.12 I think the application was very time consuming.

Strongly disagree

Strongly Agree

1

2

3

4

5

1.13 Overall, what do you think of the application? Was there anything that bothered you? Do we need to get rid of anything?

9.2 Appendix 2 – Test 1

Please read and sign this form.

In this usability test:

- You will be asked to perform certain tasks on an application.
- We will also conduct an interview with you regarding the tasks you performed.
- You will also be monitored with a stop watch to gather intel of your actions.
- Also an evaluation Post Test is required when finished.

Participation in this usability study is voluntary. All information will remain strictly confidential. The descriptions and findings may be used to help improve the Computerised Robotic dispensing application. However, at no time will your name or any other identification be used. You

can withdraw your consent to the experiment and stop participation at any time.

If you have any questions after today, please contact either Lachlan Holmes, John Santias, Crystal Wiltshire at customerservice@lifetec.org.au.

I have read and understood the information on this form and had all of my questions answered

Date: 18/10/2016

Please print your name:

Nash Jenkins

Please sign your name:

Nash Jenkins

Thank you!

We appreciate your participation.

User Pre-Test Questioner

PERSONAL DETAILS

1.1 NAME: *Nash Jenkins*

1.2 AGE: *47*

1.3 EDUCATION LEVEL: *Trademan*

1.4 FAVORITE OPERATING SYSTEM:

- Apple
- Android
- BlackBerry
- Windows
- Other: _____
- No favorite.

1.5 FAVORITE DEVICE:

- Apple iPhone
- Apple iPad
- Apple Macs
- Samsung Galaxy phones
- Samsung Tablets
- Other: _____
- No favorite.

1.6 DO YOU HAVE MEDICARE?

- Yes
- No

TECHNICAL MIND MODEL

1.1 HOW OFTEN DO YOU USE TECHNOLOGY?

- All the time
- Every day
- Few times a week
- Sometimes
- Never

1.2 WHICH CATEGORY(IES) DO YOU MOSTLY GET YOUR APPS FROM?

- Social media
- Games
- Books
- Business
- Food & Drink
- Catalogs
- Health & fitness
- Education
- Lifestyle
- Entertainment
- Kids
- Finance
- Magazines & Newspapers
- Medical
- Music
- Navigation

- News
- Photo & Video
- Productivity
- Reference
- Shopping
- Social Networking
- Sports
- Travel
- Utilities
- None

1.3 WITH THE GIVEN SMART TABLET, HOW DO YOU OPEN AN APP?

- Hold your finger on the app
- Tap on the app
- Say “open app” to the device
- Press home button
- Restart the device
- No idea

1.4 HOW DO YOU CLOSE THE APP?

- Hold your finger on the screen
- Tap on the screen
- Say “close app” to the device
- Press home button
- Restart the device

1.5 WITH THE GIVEN PICTURE, HOW WOULD YOU PROCEED TO THE NEXT PAGE?

- Tap the next button
- Tap the right side of the screen
- Swipe screen from right to left
- Tap the left side of the screen
- Swipe screen from left to right
- No idea

1.6 DO YOU HAVE A MYGOV ACCOUNT?

Yes

No

Moderators Script

EXPLANATION

1.1 This meeting will take about 30 minutes or less depending on how we get through this test. Thank you for your participation in this test. This will help us identify any obstacles, errors or anything else within the app so that we can further improve it. I will be timing you for the tasks you have to do on the app. The way you go through each task will be valuable information for us. We will be asking a number of questions, most of them will require you to use the app and answer questions. After a certain amount of time, in the use of the app, if you haven't been able to solve the task, I will give you a hint. If you still cannot solve it, I will show you so that the test can continue. Please don't hesitate or be scared to use the app, you can use it however you think it will work.

2 Welcome Screen

2.1 This is the welcome screen of the robotic dispensing machine. In a few sentences or less, please tell me, what do you think of the layout? Is there

anything that should be changed?

No, very simply with the next button being in the middle.

2.2 Can you show me how to proceed to the next page?

- | | |
|---|-------------|
| <input checked="" type="checkbox"/> Swipe screen from right to left | Time: 4secs |
| <input checked="" type="checkbox"/> Tap the screen | Time: 2secs |
| <input type="checkbox"/> Say "Next" to the smart tablet | Time: |
| <input type="checkbox"/> Tap on the play button | Time: |
| <input type="checkbox"/> No clue | Time: |

2.3 Was proceeding to the next page hard?

- Yes
 No

3 Entering personal details screen

3.1 Take a moment to look around this screen. When you're ready, please tell me what do you and do not like about this page.

Clean, well organised enabling myself to enter details fast.
The layout allowed me to not get lost and stay on track.

3.2 How do you enter your surname in the top left-hand side of the screen?

- | | |
|---|-------------|
| <input type="checkbox"/> Say your surname to the smart tablet. | Time: |
| <input checked="" type="checkbox"/> Tap on the box, a keyboard will come up and type your surname in. | Time: 2mins |
| <input type="checkbox"/> Hold your finger on the box, keyboard will come up and you | Time: |

type in your surname.

Swipe your finger from the bottom to the top of the screen, Time:

Keyboard will come up and you type in your surname

No idea Time:

3.3 Let's say you're having trouble using the app. How do you call for help?

Call out for help Time:

Do nothing Time:

Tap on the blue question mark button located above the number 8 on the bottom right hand side of the screen. Time: 10secs

No idea Time:

3.4 You've entered all your details. How do you proceed to the next page?

Swipe screen from right to left Time:

Tap the screen Time:

Say "Next" to the smart tablet Time:

Tap on the play button Time: 4secs

No clue Time:

4 Scanning or Entering details of the script

4.1 Here is a script that has been given to you by a doctor. You will need to use this script to get your medication from the machine. In this method, you will have to scan the script's barcode, how do you do that?

Tap 'scan script', use scanner to scan the barcode Time: 10secs

Tap 'enter manually', scan the script details and press next. Time: 2mins

Say the barcode details to the smart tablet Time:

Type in the barcode Time:

It doesn't work Time:

No idea Time:

4.2 Good work! Now that you've added a script, you have another script given to you by the doctor. This time, you will have to enter it manually. How do you do that?

Tap 'scan script', type in script details Time: 10secs

Tap 'enter manually', enter the script details and press next. Time:

- | | |
|--|-------|
| <input type="checkbox"/> Scan script | Time: |
| <input type="checkbox"/> Say the script details to the smart tablet. | Time: |
| <input type="checkbox"/> It doesn't work | Time: |
| <input type="checkbox"/> No idea | Time: |
- 4.3 The machine has listed the wrong medication. How do you go back to the previous page?
- | | |
|---|--------------------------|
| <input type="checkbox"/> Say "Go back" | Time: |
| <input type="checkbox"/> Press on one of the page numbers below | Time: |
| <input checked="" type="checkbox"/> Press the back button | Time: <i>2secs 5secs</i> |
| <input type="checkbox"/> No idea | Time: |

5 Payment method screen

5.1 Great job! The machine has listed down your needs. You now want to pay for the medications. With the given gift card, how do you use it?

- | | |
|---|---------------------|
| <input checked="" type="checkbox"/> Tap 'gift card' and scan/swipe gift card. | Time: <i>15secs</i> |
| <input type="checkbox"/> Say "Gift card" to the smart tablet. | Time: |
| <input type="checkbox"/> Press the home button and scan/swipe gift card. | Time: |
| <input type="checkbox"/> Place the gift card on the screen. | Time: |
| <input type="checkbox"/> Press next button | Time: |
| <input type="checkbox"/> No idea | Time: |

5.2 With the given coupon, how do you use it?

- | | |
|---|---------------------|
| <input checked="" type="checkbox"/> Tap 'coupon' and scan/swipe coupon. | Time: <i>10secs</i> |
| <input type="checkbox"/> Say "coupon" to the smart tablet. | Time: |
| <input type="checkbox"/> Press the home button and scan/swipe coupon. | Time: |
| <input type="checkbox"/> Place the coupon on the screen. | Time: |
| <input type="checkbox"/> Press next button | Time: |
| <input type="checkbox"/> No idea | Time: |

5.3 The coupon and gift card has been used. Now you only need to pay \$1. With the given cash, how do you use it?

- | | |
|---|--------------------|
| <input checked="" type="checkbox"/> Tap 'Cash' and put coin into the machine. | Time: <i>5secs</i> |
| <input type="checkbox"/> Say "Cash" to the smart tablet. | Time: |

- Press the home button and put the coin into the machine. Time:
- Put the coin on the screen. Time:
- Press next button Time:
- No idea Time:

5.4 Good job! You've completed your purchase. However, we are going to go back to the payment screen where this time we would like you to pay with the given credit card. How do you use it?

- Tap 'card' and scan/swipe or tape card onto the eftpos Time: 15secs machine.
- Say "card" to the smart tablet. Time:
- Press the home button and scan/swipe or tape card onto the eftpos machine. Time:
- Put the card on the screen. Time:
- Press next button Time:
- No idea Time:

Post-Test Questioner

User experience

1.1 I would like to see machine in my local pharmacy.

Strongly disagree	Strongly Agree			
1	2	3	4	5

1.2 The machine was useful

Strongly disagree	Strongly Agree			
1	2	3	4	5

1.3 I found the application easy to use

Strongly disagree	Strongly Agree			
1	2	3	4	5

1.4 The layout of the application was attractive.

Strongly disagree	Strongly Agree			
1	2	3	4	5

1.5 The back, next and help buttons were useful.

Strongly disagree	Strongly Agree			
1	2	3	4	5

1.12 I think the application was very time consuming.

Strongly disagree

Strongly Agree

1

(2)

3

4

5

1.13 Overall, what do you think of the application? Was there anything that bothered you? Do we need to get rid of anything?

Overall very nice and modern.

9.3 Appendix 2 – Test 2

Please read and sign this form.

In this usability test:

- You will be asked to perform certain tasks on an application.
- We will also conduct an interview with you regarding the tasks you performed.
- You will also be monitored with a stop watch to gather intel of your actions.
- An evaluation Post Test is required when finished.

Participation in this usability study is voluntary. All information will remain strictly confidential. The descriptions and findings may be used to help improve the Computerised Robotic dispensing application. However, at no time will your name or any other identification be used. You

can withdraw your consent to the experiment and stop participation at any time.

If you have any questions after today, please contact either Lachlan Holmes, John Santias, Crystal Wiltshire at customerservice@lifetec.org.au.

I have read and understood the information on this form and had all of my questions answered

Date: 18/10/2016

Please print your name:

Marge Davis

Please sign your name:

Marge Davis

Thank you!

We appreciate your participation.

User Pre-Test Questioner

PERSONAL DETAILS

1.1 NAME: *Marge Davis*

1.2 AGE: *83*

1.3 EDUCATION LEVEL: *Pension*

1.4 FAVORITE OPERATING SYSTEM:

- Apple
- Android
- BlackBerry
- Windows
- Other: *Nokia*
- No favorite.

1.5 FAVORITE DEVICE:

- Apple iPhone
- Apple iPad
- Apple Macs
- Samsung Galaxy phones
- Samsung Tablets
- Other: *Nokia device*
- No favorite.

1.6 DO YOU HAVE MEDICARE?

- Yes
- No

TECHNICAL MIND MODEL

1.1 HOW OFTEN DO YOU USE TECHNOLOGY?

- All the time
- Every day
- Few times a week
- Sometimes
- Never

1.2 WHICH CATEGORY(IES) DO YOU MOSTLY GET YOUR APPS FROM?

- Social media
- Games
- Books
- Business
- Food & Drink
- Catalogs
- Health & fitness
- Education
- Lifestyle
- Entertainment
- Kids
- Finance
- Magazines & Newspapers
- Medical
- Music
- Navigation

- News
- Photo & Video
- Productivity
- Reference
- Shopping
- Social Networking
- Sports
- Travel
- Utilities
- None

1.3 WITH THE GIVEN SMART TABLET, HOW DO YOU OPEN AN APP?

- Hold your finger on the app
- Tap on the app
- Say "open app" to the device
- Press home button
- Restart the device
- No idea

1.4 HOW DO YOU CLOSE THE APP?

- Hold your finger on the screen
- Tap on the screen
- Say "close app" to the device
- Press home button
- Restart the device

1.5 WITH THE GIVEN PICTURE, HOW WOULD YOU PROCEED TO THE NEXT PAGE?

- Tap the next button
- Tap the right side of the screen
- Swipe screen from right to left
- Tap the left side of the screen
- Swipe screen from left to right
- No idea

1.6 DO YOU HAVE A MYGOV ACCOUNT?

Yes

No

Moderators Script

EXPLANATION

1.1 This meeting will take about 30 minutes or less depending on how we get through this test. Thank you for your participation in this test. This will help us identify any obstacles, errors or anything else within the app so that we can further improve it. I will be timing you for the tasks you have to do on the app. The way you go through each task will be valuable information for us. We will be asking a number of questions, most of them will require you to use the app and answer questions. After a certain amount of time, in the use of the app, if you haven't been able to solve the task, I will give you a hint. If you still cannot solve it, I will show you so that the test can continue. Please don't hesitate or be scared to use the app, you can use it however you think it will work.

2 Welcome Screen

2.1 This is the welcome screen of the robotic dispensing machine. In a few sentences or less, please tell me, what do you think of the layout? Is there

anything that should be changed?

Very advanced but simply enough for my age!

2.2 Can you show me how to proceed to the next page?

Swipe screen from right to left

Time: 5 Sec's

Tap the screen

Time:

Say "Next" to the smart tablet

Time:

Tap on the play button

Time: 15 Sec's

No clue

Time:

2.3 Was proceeding to the next page hard?

Yes

No

3 Entering personal details screen

3.1 Take a moment to look around this screen. When you're ready, please tell me what do you and do not like about this page.

Very overwhelming with my age, and computer abilities.

3.2 How do you enter your surname in the top left-hand side of the screen?

Say your surname to the smart tablet.

Time:

Tap on the box, a keyboard will come up and type your Time:
surname in.

Hold your finger on the box, keyboard will come up and you Time: 5 Sec's

type in your surname.

Swipe your finger from the bottom to the top of the screen, Time:

keyboard will come up and you type in your surname

No idea Time:

3.3 Let's say you're having trouble using the app. How do you call for help?

Call out for help Time: 10secs

Do nothing Time:

Tap on the blue question mark button located above the number 8 on the bottom right hand side of the screen. Time:

No idea Time:

3.4 You've entered all your details. How do you proceed to the next page?

Swipe screen from right to left Time:

Tap the screen Time:

Say "Next" to the smart tablet Time:

Tap on the play button Time: 15secs

No clue Time:

4 Scanning or Entering details of the script

4.1 Here is a script that has been given to you by a doctor. You will need to use this script to get your medication from the machine. In this method, you will have to scan the script's barcode, how do you do that?

Tap 'scan script', use scanner to scan the barcode Time:

Tap 'enter manually', scan the script details and press next. Time:

Say the barcode details to the smart tablet Time:

Type in the barcode Time: 20secs

It doesn't work Time:

No idea Time:

4.2 Good work! Now that you've added a script, you have another script given to you by the doctor. This time, you will have to enter it manually. How do you do that?

Tap 'scan script', type in script details Time:

Tap 'enter manually', enter the script details and press next. Time:

- | | |
|---|-------|
| <input type="checkbox"/> Scan script | Time: |
| <input checked="" type="checkbox"/> Say the script details to the smart tablet. | Time: |
| <input type="checkbox"/> It doesn't work | Time: |
| <input type="checkbox"/> No idea | Time: |
- 4.3 The machine has listed the wrong medication. How do you go back to the previous page?
- | | |
|--|----------------|
| <input type="checkbox"/> Say "Go back" | Time: |
| <input checked="" type="checkbox"/> Press on one of the page numbers below | Time: 10 Sec's |
| <input checked="" type="checkbox"/> Press the back button | Time: 10 sec's |
| <input type="checkbox"/> No idea | Time: |

5 Payment method screen

5.1 Great job! The machine has listed down your needs. You now want to pay for the medications. With the given gift card, how do you use it?

- | | |
|--|-------|
| <input type="checkbox"/> Tap 'gift card' and scan/swipe gift card. | Time: |
| <input type="checkbox"/> Say "Gift card" to the smart tablet. | Time: |
| <input type="checkbox"/> Press the home button and scan/swipe gift card. | Time: |
| <input type="checkbox"/> Place the gift card on the screen. | Time: |
| <input type="checkbox"/> Press next button | Time: |
| <input type="checkbox"/> No idea | Time: |

5.2 With the given coupon, how do you use it?

- | | |
|---|----------------|
| <input checked="" type="checkbox"/> Tap 'coupon' and scan/swipe coupon. | Time: 10 sec's |
| <input type="checkbox"/> Say "coupon" to the smart tablet. | Time: |
| <input type="checkbox"/> Press the home button and scan/swipe coupon. | Time: |
| <input type="checkbox"/> Place the coupon on the screen. | Time: |
| <input checked="" type="checkbox"/> Press next button | Time: |
| <input type="checkbox"/> No idea | Time: |

5.3 The coupon and gift card has been used. Now you only need to pay \$1. With the given cash, how do you use it?

- | | |
|---|----------------|
| <input checked="" type="checkbox"/> Tap 'Cash' and put coin into the machine. | Time: 15 sec's |
| <input type="checkbox"/> Say "Cash" to the smart tablet. | Time: |

- Press the home button and put the coin into the machine. Time:
- Put the coin on the screen. Time:
- Press next button Time:
- No idea Time:

5.4 Good job! You've completed your purchase. However, we are going to go back to the payment screen where this time we would like you to pay with the given credit card. How do you use it?

- Tap 'card' and scan/swipe or tape card onto the eftpos Time: 10 secs
machine.
- Say "card" to the smart tablet. Time:
- Press the home button and scan/swipe or tape card Time:
onto the eftpos machine.
- Put the card on the screen. Time:
- Press next button Time:
- No idea Time:

Post-Test Questioner

User experience

1.1 I would like to see machine in my local pharmacy.



1.2 The machine was useful



1.3 I found the application easy to use



1.4 The layout of the application was attractive.



1.5 The back, next and help buttons were useful.



1.6 I felt confident using the application.

Strongly disagree

1

2

3

4

5

Strongly Agree

1.7 The application ran smoothly. No errors.

Strongly disagree

1

2

3

4

5

Strongly Agree

1.8 Typing in information was easy

Strongly disagree

1

2

3

4

5

Strongly Agree

1.9 I got used to the app after a few minutes.

Strongly disagree

1

2

3

4

5

Strongly Agree

1.10 Instructions shown on the app were clear.

Strongly disagree

1

2

3

4

5

Strongly Agree

1.11 I think there were too many text boxes.

Strongly disagree

1

2

3

4

5

Strongly Agree

1.12 I think the application was very time consuming.

Strongly disagree

Strongly Agree

1

2

3

4

5

1.13 Overall, what do you think of the application? Was there anything that bothered you? Do we need to get rid or anything?

I can see it being useful however
not use for technology and can be
very confusing.

9.4 Appendix 2 – Test 3

Please read and sign this form.

In this usability test:

- You will be asked to perform certain tasks on an application.
- We will also conduct an interview with you regarding the tasks you performed.
- You will also be monitored with a stop watch to gather intel of your actions.
- An evaluation Post Test is required when finished.

Participation in this usability study is voluntary. All information will remain strictly confidential. The descriptions and findings may be used to help improve the Computerised Robotic dispensing application. However, at no time will your name or any other identification be used. You

can withdraw your consent to the experiment and stop participation at any time.

If you have any questions after today, please contact either Lachlan Holmes, John Santias, Crystal Wiltshire at customerservice@lifetec.org.au.

I have read and understood the information on this form and had all of my questions answered

Date: 18/10/2016

Please print your name:

Rex Whiticker

Please sign your name:

Rex Whiticker

Thank you!

We appreciate your participation.

User Pre-Test Questioner

PERSONAL DETAILS

1.1 NAME: *Rex Whiticker*

1.2 AGE: *23* Gender: Male

1.3 EDUCATION LEVEL: *Student*
Occupation:

1.4 FAVORITE OPERATING SYSTEM:

- Apple
- Android
- BlackBerry
- Windows
- Other: _____
- No favorite.

1.5 FAVORITE DEVICE:

- Apple iPhone
- Apple iPad
- Apple Macs
- Samsung Galaxy phones
- Samsung Tablets
- Other: _____
- No favorite.

1.6 DO YOU HAVE MEDICARE?

- Yes
- No

TECHNICAL MIND MODEL

1.1 HOW OFTEN DO YOU USE TECHNOLOGY?

- All the time
- Every day
- Few times a week
- Sometimes
- Never

1.2 WHICH CATEGORY(IES) DO YOU MOSTLY GET YOUR APPS FROM?

- Social media
- Games
- Books
- Business
- Food & Drink
- Catalogs
- Health & fitness
- Education
- Lifestyle
- Entertainment
- Kids
- Finance
- Magazines & Newspapers
- Medical
- Music
- Navigation

- News
- Photo & Video
- Productivity
- Reference
- Shopping
- Social Networking
- Sports
- Travel
- Utilities
- None

1.3 WITH THE GIVEN SMART TABLET, HOW DO YOU OPEN AN APP?

- Hold your finger on the app
- Tap on the app
- Say "open app" to the device
- Press home button
- Restart the device
- No idea

1.4 HOW DO YOU CLOSE THE APP?

- Hold your finger on the screen
- Tap on the screen
- Say "close app" to the device
- Press home button
- Restart the device

1.5 WITH THE GIVEN PICTURE, HOW WOULD YOU PROCEED TO THE NEXT PAGE?

- Tap the next button
- Tap the right side of the screen
- Swipe screen from right to left
- Tap the left side of the screen
- Swipe screen from left to right
- No idea

1.6 DO YOU HAVE A MYGOV ACCOUNT?

Yes

No

Moderators Script

EXPLANATION

1.1 This meeting will take about 30 minutes or less depending on how we get through this test. Thank you for your participation in this test. This will help us identify any obstacles, errors or anything else within the app so that we can further improve it. I will be timing you for the tasks you have to do on the app. The way you go through each task will be valuable information for us. We will be asking a number of questions, most of them will require you to use the app and answer questions. After a certain amount of time, in the use of the app, if you haven't been able to solve the task, I will give you a hint. If you still cannot solve it, I will show you so that the test can continue. Please don't hesitate or be scared to use the app, you can use it however you think it will work.

2 Welcome Screen

2.1 This is the welcome screen of the robotic dispensing machine. In a few sentences or less, please tell me, what do you think of the layout? Is there

anything that should be changed?

2.2 Can you show me how to proceed to the next page?

- | | |
|--|-------------|
| <input type="checkbox"/> Swipe screen from right to left | Time: |
| <input checked="" type="checkbox"/> Tap the screen | Time: 4secs |
| <input type="checkbox"/> Say "Next" to the smart tablet | Time: |
| <input type="checkbox"/> Tap on the play button | Time: |
| <input type="checkbox"/> No clue | Time: |

2.3 Was proceeding to the next page hard?

- Yes
 No

3 Entering personal details screen

3.1 Take a moment to look around this screen. When you're ready, please tell me what do you and do not like about this page.

*Should be spread out onto two screens
larger test.*

3.2 How do you enter your surname in the top left-hand side of the screen?

- | | |
|---|-------------|
| <input type="checkbox"/> Say your surname to the smart tablet. | Time: |
| <input checked="" type="checkbox"/> Tap on the box, a keyboard will come up and type your surname in. | Time: 5secs |
| <input type="checkbox"/> Hold your finger on the box, keyboard will come up and you | Time: |

type in your surname.

Swipe your finger from the bottom to the top of the screen, Time:

keyboard will come up and you type in your surname

No idea Time:

3.3 Let's say you're having trouble using the app. How do you call for help?

Call out for help Time: 3secs

Do nothing Time:

Tap on the blue question mark button located above the number 8 on the bottom right hand side of the screen. Time: 7secs

No idea Time:

3.4 You've entered all your details. How do you proceed to the next page?

Swipe screen from right to left Time:

Tap the screen Time: 2secs

Say "Next" to the smart tablet Time:

Tap on the play button Time: 2secs

No clue Time:

4 Scanning or Entering details of the script

4.1 Here is a script that has been given to you by a doctor. You will need to use this script to get your medication from the machine. In this method, you will have to scan the script's barcode, how do you do that?

Tap 'scan script', use scanner to scan the barcode Time:

Tap 'enter manually', scan the script details and press next. Time: 20secs

Say the barcode details to the smart tablet Time:

Type in the barcode Time:

It doesn't work Time:

No idea Time:

4.2 Good work! Now that you've added a script, you have another script given to you by the doctor. This time, you will have to enter it manually. How do you do that?

Tap 'scan script', type in script details Time: 10secs

Tap 'enter manually', enter the script details and press next. Time:

- | | |
|--|--------------|
| <input checked="" type="checkbox"/> Scan script | Time: 15secs |
| <input type="checkbox"/> Say the script details to the smart tablet. | Time: |
| <input type="checkbox"/> It doesn't work | Time: |
| <input type="checkbox"/> No idea | Time: |

4.3 The machine has listed the wrong medication. How do you go back to the previous page?

- | | |
|--|--------------|
| <input type="checkbox"/> Say "Go back" | Time: |
| <input checked="" type="checkbox"/> Press on one of the page numbers below | Time: 6 secs |
| <input type="checkbox"/> Press the back button | Time: |
| <input type="checkbox"/> No idea | Time: |

5 Payment method screen

5.1 Great job! The machine has listed down your needs. You now want to pay for the medications. With the given gift card, how do you use it?

- | | |
|---|--------------|
| <input checked="" type="checkbox"/> Tap 'gift card' and scan/swipe gift card. | Time: 11secs |
| <input type="checkbox"/> Say "Gift card" to the smart tablet. | Time: |
| <input type="checkbox"/> Press the home button and scan/swipe gift card. | Time: |
| <input type="checkbox"/> Place the gift card on the screen. | Time: |
| <input type="checkbox"/> Press next button | Time: |
| <input type="checkbox"/> No idea | Time: |

5.2 With the given coupon, how do you use it?

- | | |
|---|-------------|
| <input checked="" type="checkbox"/> Tap 'coupon' and scan/swipe coupon. | Time: 7secs |
| <input type="checkbox"/> Say "coupon" to the smart tablet. | Time: |
| <input type="checkbox"/> Press the home button and scan/swipe coupon. | Time: |
| <input type="checkbox"/> Place the coupon on the screen. | Time: |
| <input type="checkbox"/> Press next button | Time: |
| <input type="checkbox"/> No idea | Time: |

5.3 The coupon and gift card has been used. Now you only need to pay \$1. With the given cash, how do you use it?

- | | |
|---|----------------|
| <input checked="" type="checkbox"/> Tap 'Cash' and put coin into the machine. | Time: 15 Sec's |
| <input type="checkbox"/> Say "Cash" to the smart tablet. | Time: |

- Press the home button and put the coin into the machine. Time:
- Put the coin on the screen. Time:
- Press next button Time:
- No idea Time:

5.4 Good job! You've completed your purchase. However, we are going to go back to the payment screen where this time we would like you to pay with the given credit card. How do you use it?

- Tap 'card' and scan/swipe or tape card onto the eftpos machine. Time: *22 secs*
- Say "card" to the smart tablet. Time:
- Press the home button and scan/swipe or tape card onto the eftpos machine. Time:
- Put the card on the screen. Time:
- Press next button Time:
- No idea Time:

Post-Test Questioner

User experience

1.1 I would like to see machine in my local pharmacy.

Strongly disagree

Strongly Agree

1

2

3

4

5



1.2 The machine was useful

Strongly disagree

Strongly Agree

1

2

3

4

5



1.3 I found the application easy to use

Strongly disagree

Strongly Agree

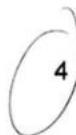
1

2

3

4

5



1.4 The layout of the application was attractive.

Strongly disagree

Strongly Agree

1

2

3

4

5



1.5 The back, next and help buttons were useful.

Strongly disagree

Strongly Agree

1

2

3

4



1.6 I felt confident using the application.

Strongly disagree

1

2

3

Strongly Agree

4

5

1.7 The application ran smoothly. No errors.

Strongly disagree

1

2

3

Strongly Agree

4

5

1.8 Typing in information was easy

Strongly disagree

1

2

3

Strongly Agree

4

5

1.9 I got used to the app after a few minutes.

Strongly disagree

1

2

3

Strongly Agree

4

5

1.10 Instructions shown on the app were clear.

Strongly disagree

1

2

3

Strongly Agree

4

5

1.11 I think there were too many text boxes.

Strongly disagree

1

2

3

Strongly Agree

4

5

1.12 I think the application was very time consuming.

Strongly disagree

Strongly Agree

1

2

3

4

5

1.13 Overall, what do you think of the application? Was there anything that bothered you? Do we need to get rid of anything?

Fantastic, fast efficient stop me waiting
for the pharmacist and wasting time.

9.5 Appendix 5 – Test 4

Please read and sign this form.

In this usability test:

- You will be asked to perform certain tasks on an application.
- We will also conduct an interview with you regarding the tasks you performed.
- You will also be monitored with a stop watch to gather intel of your actions.
- An evaluation Post Test is required when finished.

Participation in this usability study is voluntary. All information will remain strictly confidential. The descriptions and findings may be used to help improve the Computerised Robotic dispensing application. However, at no time will your name or any other identification be used. You

can withdraw your consent to the experiment and stop participation at any time.

If you have any questions after today, please contact either Lachlan Holmes, John Santias, Crystal Wiltshire at customerservice@lifetec.org.au.

I have read and understood the information on this form and had all of my questions answered

Date: 18/10/2016

Please print your name:

Tracey Holmes

Please sign your name:

Tracey Holmes

Thank you!

We appreciate your participation.

User Pre-Test Questioner

PERSONAL DETAILS

1.1 NAME: *Tracy Holmes*

1.2 AGE: *54*

1.3 EDUCATION LEVEL: *Lawyer*

1.4 FAVORITE OPERATING SYSTEM:

- Apple
- Android
- BlackBerry
- Windows
- Other: _____
- No favorite.

1.5 FAVORITE DEVICE:

- Apple iPhone
- Apple iPad
- Apple Macs
- Samsung Galaxy phones
- Samsung Tablets
- Other: _____
- No favorite.

1.6 DO YOU HAVE MEDICARE?

- Yes
- No

TECHNICAL MIND MODEL

1.1 HOW OFTEN DO YOU USE TECHNOLOGY?

- All the time
- Every day
- Few times a week
- Sometimes
- Never

1.2 WHICH CATEGORY(IES) DO YOU MOSTLY GET YOUR APPS FROM?

- Social media
- Games
- Books
- Business
- Food & Drink
- Catalogs
- Health & fitness
- Education
- Lifestyle
- Entertainment
- Kids
- Finance
- Magazines & Newspapers
- Medical
- Music
- Navigation

- News
- Photo & Video
- Productivity
- Reference
- Shopping
- Social Networking
- Sports
- Travel
- Utilities
- None

1.3 WITH THE GIVEN SMART TABLET, HOW DO YOU OPEN AN APP?

- Hold your finger on the app
- Tap on the app
- Say "open app" to the device
- Press home button
- Restart the device
- No idea

1.4 HOW DO YOU CLOSE THE APP?

- Hold your finger on the screen
- Tap on the screen
- Say "close app" to the device
- Press home button
- Restart the device

1.5 WITH THE GIVEN PICTURE, HOW WOULD YOU PROCEED TO THE NEXT PAGE?

- Tap the next button
- Tap the right side of the screen
- Swipe screen from right to left
- Tap the left side of the screen
- Swipe screen from left to right
- No idea

1.6 DO YOU HAVE A MYGOV ACCOUNT?

Yes

No

Moderators Script

EXPLANATION

1.1 This meeting will take about 30 minutes or less depending on how we get through this test. Thank you for your participation in this test. This will help us identify any obstacles, errors or anything else within the app so that we can further improve it. I will be timing you for the tasks you have to do on the app. The way you go through each task will be valuable information for us. We will be asking a number of questions, most of them will require you to use the app and answer questions. After a certain amount of time, in the use of the app, if you haven't been able to solve the task, I will give you a hint. If you still cannot solve it, I will show you so that the test can continue. Please don't hesitate or be scared to use the app, you can use it however you think it will work.

2 Welcome Screen

2.1 This is the welcome screen of the robotic dispensing machine. In a few sentences or less, please tell me, what do you think of the layout? Is there

anything that should be changed?

*Very easy to locate
next button being indicated centrally.*

2.2 Can you show me how to proceed to the next page?

- | | |
|--|-------------|
| <input type="checkbox"/> Swipe screen from right to left | Time: |
| <input checked="" type="checkbox"/> Tap the screen | Time: 5secs |
| <input type="checkbox"/> Say "Next" to the smart tablet | Time: |
| <input type="checkbox"/> Tap on the play button | Time: |
| <input type="checkbox"/> No clue | Time: |

2.3 Was proceeding to the next page hard?

- Yes
 No

3 Entering personal details screen

3.1 Take a moment to look around this screen. When you're ready, please tell me what do you and do not like about this page.

*I like how efficient and precise
this is with removing any errors in the
spelling.*

3.2 How do you enter your surname in the top left-hand side of the screen?

- | | |
|---|-------------|
| <input type="checkbox"/> Say your surname to the smart tablet. | Time: |
| <input checked="" type="checkbox"/> Tap on the box, a keyboard will come up and type your surname in. | Time: 5secs |
| <input type="checkbox"/> Hold your finger on the box, keyboard will come up and you | Time: |

type in your surname.

Swipe your finger from the bottom to the top of the screen, Time:

keyboard will come up and you type in your surname

No idea Time:

3.3 Let's say you're having trouble using the app. How do you call for help?

Call out for help Time:

Do nothing Time:

Tap on the blue question mark button located above the number 8 on the bottom right hand side of the screen. Time: 10secs

No idea Time:

3.4 You've entered all your details. How do you proceed to the next page?

Swipe screen from right to left Time:

Tap the screen Time: 2secs

Say "Next" to the smart tablet Time:

Tap on the play button Time:

No clue Time:

4 Scanning or Entering details of the script

4.1 Here is a script that has been given to you by a doctor. You will need to use this script to get your medication from the machine. In this method, you will have to scan the script's barcode, how do you do that?

Tap 'scan script', use scanner to scan the barcode Time:

Tap 'enter manually', scan the script details and press next. Time: 30 secs

Say the barcode details to the smart tablet Time:

Type in the barcode Time:

It doesn't work Time:

No idea Time:

4.2 Good work! Now that you've added a script, you have another script given to you by the doctor. This time, you will have to enter it manually. How do you do that?

Tap 'scan script', type in script details Time: 15 secs

Tap 'enter manually', enter the script details and press next. Time:

- | | |
|--|-------|
| <input type="checkbox"/> Scan script | Time: |
| <input type="checkbox"/> Say the script details to the smart tablet. | Time: |
| <input type="checkbox"/> It doesn't work | Time: |
| <input type="checkbox"/> No idea | Time: |

4.3 The machine has listed the wrong medication. How do you go back to the previous page?

- | | |
|--|--------------|
| <input type="checkbox"/> Say "Go back" | Time: |
| <input checked="" type="checkbox"/> Press on one of the page numbers below | Time: 5sec's |
| <input type="checkbox"/> Press the back button | Time: |
| <input type="checkbox"/> No idea | Time: |

5 Payment method screen

5.1 Great job! The machine has listed down your needs. You now want to pay for the medications. With the given gift card, how do you use it?

- | | |
|---|---------------|
| <input checked="" type="checkbox"/> Tap 'gift card' and scan/swipe gift card. | Time: 12sec's |
| <input type="checkbox"/> Say "Gift card" to the smart tablet. | Time: |
| <input type="checkbox"/> Press the home button and scan/swipe gift card. | Time: |
| <input type="checkbox"/> Place the gift card on the screen. | Time: |
| <input type="checkbox"/> Press next button | Time: |
| <input type="checkbox"/> No idea | Time: |

5.2 With the given coupon, how do you use it?

- | | |
|---|----------------|
| <input checked="" type="checkbox"/> Tap 'coupon' and scan/swipe coupon. | Time: 16 sec's |
| <input type="checkbox"/> Say "coupon" to the smart tablet. | Time: |
| <input type="checkbox"/> Press the home button and scan/swipe coupon. | Time: |
| <input type="checkbox"/> Place the coupon on the screen. | Time: |
| <input type="checkbox"/> Press next button | Time: |
| <input type="checkbox"/> No idea | Time: |

5.3 The coupon and gift card has been used. Now you only need to pay \$1. With the given cash, how do you use it?

- | | |
|---|----------------|
| <input checked="" type="checkbox"/> Tap 'Cash' and put coin into the machine. | Time: 30 sec's |
| <input type="checkbox"/> Say "Cash" to the smart tablet. | Time: |

- Press the home button and put the coin into the machine. Time:
- Put the coin on the screen. Time:
- Press next button Time:
- No idea Time:

5.4 Good job! You've completed your purchase. However, we are going to go back to the payment screen where this time we would like you to pay with the given credit card. How do you use it?

- Tap 'card' and scan/swipe or tape card onto the eftpos machine. Time: 7 sec's
- Say "card" to the smart tablet. Time:
- Press the home button and scan/swipe or tape card onto the eftpos machine. Time:
- Put the card on the screen. Time:
- Press next button Time:
- No idea Time:

Post-Test Questioner

User experience

1.1 I would like to see machine in my local pharmacy.

Strongly disagree	Strongly Agree			
1	2	3	4	5

1.2 The machine was useful

Strongly disagree	Strongly Agree			
1	2	3	4	5

1.3 I found the application easy to use

Strongly disagree	Strongly Agree			
1	2	3	4	5

1.4 The layout of the application was attractive.

Strongly disagree	Strongly Agree			
1	2	3	4	5

1.5 The back, next and help buttons were useful.

Strongly disagree	Strongly Agree			
1	2	3	4	5

1.6 I felt confident using the application.

Strongly disagree	Strongly Agree			
1	2	3	4	5

1.7 The application ran smoothly. No errors.

Strongly disagree	Strongly Agree			
1	2	3	4	5

1.8 Typing in information was easy

Strongly disagree	Strongly Agree			
1	2	3	4	5

1.9 I got used to the app after a few minutes.

Strongly disagree	Strongly Agree			
1	2	3	4	5

1.10 Instructions shown on the app were clear.

Strongly disagree	Strongly Agree			
1	2	3	4	5

1.11 I think there were too many text boxes.

Strongly disagree	Strongly Agree			
1	2	3	4	5

1.12 I think the application was very time consuming.

Strongly disagree

Strongly Agree

1

2

3

4

5

1.13 Overall, what do you think of the application? Was there anything that bothered you? Do we need to get rid of anything?

9.6 Appendix 6 – Test 5

Please read and sign this form.

In this usability test:

- You will be asked to perform certain tasks on an application.
- We will also conduct an interview with you regarding the tasks you performed.
- You will also be monitored with a stop watch to gather intel of your actions.
- Also an evaluation Post Test is required when finished.

Participation in this usability study is voluntary. All information will remain strictly confidential. The descriptions and findings may be used to help improve the Computerised Robotic dispensing application. However, at no time will your name or any other identification be used. You

can withdraw your consent to the experiment and stop participation at any time.

If you have any questions after today, please contact either Lachlan Holmes, John Santias, Crystal Wiltshire at customerservice@lifetec.org.au.

I have read and understood the information on this form and had all of my questions answered

Date: 18/10/2016

Please print your name:

Nancy Bailey

Please sign your name:

Nancy Bailey

Thank you!

We appreciate your participation.

User Pre-Test Questioner

PERSONAL DETAILS

1.8 NAME: Nancy Bailey

1.9 AGE: 72

1.10 EDUCATION LEVEL: RETIRED

1.11 FAVORITE OPERATING SYSTEM:

- Apple
- Android
- BlackBerry
- Windows
- Other: _____
- No favorite.

1.12 FAVORITE DEVICE:

- Apple iPhone
- Apple iPad
- Apple Macs
- Samsung Galaxy phones
- Samsung Tablets
- Other: _____
- No favorite.

1.13 DO YOU HAVE MEDICARE?

- Yes
- No

2 TECHNICAL MIND MODEL

2.1 HOW OFTEN DO YOU USE TECHNOLOGY?

- All the time
- Every day
- Few times a week
- Sometimes
- Never

2.2 WHICH CATEGORY(IES) DO YOU MOSTLY GET YOUR APPS FROM?

- Social media
- Games
- Books
- Business
- Food & Drink
- Catalogs
- Health & fitness
- Education
- Lifestyle
- Entertainment
- Kids
- Finance
- Magazines & Newspapers
- Medical
- Music
- Navigation
- News
- Photo & Video
- Productivity
- Reference
- Shopping
- Social Networking
- Sports
- Travel
- Utilities
- None

2.3 WITH THE GIVEN SMART TABLET, HOW DO YOU OPEN AN APP?

- Hold your finger on the app
- Tap on the app
- Say “open app” to the device
- Press home button

- Restart the device
- No idea

2.4 HOW DO YOU CLOSE THE APP?

- Hold your finger on the screen
- Tap on the screen
- Say “close app” to the device
- Press home button
- Restart the device

2.5 WITH THE GIVEN PICTURE, HOW WOULD YOU PROCEED TO THE NEXT PAGE?

- Tap the next button
- Tap the right side of the screen
- Swipe screen from right to left
- Tap the left side of the screen
- Swipe screen from left to right
- No idea

2.6 DO YOU HAVE A MYGOV ACCOUNT?

- Yes
- No
- Not sure

Moderators Script

1 EXPLANATION

1.1 This meeting will take about 30 minutes or less depending on how we get through this test. Thank you for your participation in this test. This will help us identify any obstacles, errors or anything else within the app so that we can further improve it. I will be timing you for the tasks you have to do on the app. Please don't hesitate or rush the tasks, just relax because it's nothing serious. The way you go through each task will be valuable information for us. We will be asking a number of questions, most will require you to use the app and some short answer questions. After a certain amount of time, in the use of the app, if you haven't been able to solve the task, I will give you a hint. If you still cannot solve it, I will show you so that the test can continue. Please don't hesitate or be scared to use the app, you can use it however you think it will work.

2 Welcome Screen

2.1 This is the welcome screen of the robotic dispensing machine. In a few sentences or less, please tell me, what do you think of the layout? Is there anything that should be changed?

Very nice layout, loved the colours. Looks like I'm going to play a video. I'm not sure what the question mark is on the bottom right of the screen. Overall it's well presented. It's attractive and I like it.

2.2 Can you show me how to proceed to the next page?

- | | |
|--|----------|
| <input type="checkbox"/> Swipe screen from right to left | Time: |
| <input type="checkbox"/> Tap the screen | Time: |
| <input type="checkbox"/> Say "Next" to the smart tablet | Time: |
| <input checked="" type="checkbox"/> Tap on the arrow | Time: 4s |
| <input type="checkbox"/> No clue | Time: |

2.3 Was proceeding to the next page hard?

- | |
|---|
| <input type="checkbox"/> Yes |
| <input type="checkbox"/> No |
| <input checked="" type="checkbox"/> Sort of |

3 Entering personal details screen

3.2 Take a moment to look around this screen. When you're ready, please tell me what do you and do not like about this page.

There are too many things in one page. Everything in this page look small. It looks like you have to be very detail and accurate with what you're telling the machine. The arrow and question buttons look out of place, it's not aligned.

3.3 How do you enter your surname in the top left-hand side of the screen?

- Say your surname to the smart tablet. Time:
- Tap on the box, a keyboard will come up and type your surname in. Time:
- Hold your finger on the box, keyboard will come up and you type in your surname. Time:
- Swipe your finger from the bottom to the top of the screen, keyboard will come up and you type in your surname Time: 6s
- No idea Time:

3.4 Let's say you're having trouble using the app. How do you call for help?

- Call out for help Time: 4s
- Do nothing Time:
- Tap on the blue question mark button located above the number 8 on the bottom right hand side of the screen. Time:
- No idea Time:

3.5 You've entered all your details. How do you proceed to the next page?

- Swipe screen from right to left Time: 3s
- Tap the screen Time:
- Say "Next" to the smart tablet Time:
- Tap on the play button Time:
- No clue Time:

4 Scanning or Entering details of the script

4.1 Here is a script that has been given to you by a doctor. You will need to use this script to get your medication from the machine. In this method, you will have to scan the script's barcode, how do you do that?

- Tap 'scan barcode', use scanner to scan the barcode Time: 20s
- Tap 'enter manually', scan the script details and press next. Time:
- Say the barcode details to the smart tablet Time:
- Type in the barcode Time:
- It doesn't work Time:
- No idea Time:

4.2 Good work! Now that you've added a script, you have another script given to you by the doctor. This time, you will have to enter it manually. How do you do that?

- Tap 'scan script', type in script details Time:
- Tap 'enter script details', enter the script details and press next. Time: 15s
- Scan script Time:
- Say the script details to the smart tablet. Time:
- It doesn't work Time:
- No idea Time:

4.3 The machine has listed the wrong medication. How do you go back to the previous page?

- Say "Go back" Time:
- Press on one of the page numbers below Time:
- Press the back button Time: 5s
- No idea Time:

5 Payment method screen

5.2 Great job! The machine has listed down your needs. You now want to pay for the medications. With the given gift card, how do you use it?

- Tap 'gift card' and scan/swipe gift card. Time: 2s
- Say "Gift card" to the smart tablet. Time:
- Press the home button and scan/swipe gift card. Time:
- Place the gift card on the screen. Time:
- Press next button Time:
- No idea Time:

5.3 The gift card has now been used but it hasn't completely paid your whole

shopping cart. How do you go back to the previous screen?

- Say "Go back" Time:
- Press on one of the page numbers below Time:
- Press the back button Time: 2s
- No idea Time:

5.4 With the given coupon, how do you use it?

- Tap 'coupon' and scan/swipe coupon. Time: 2s
- Say "coupon" to the smart tablet. Time:
- Press the home button and scan/swipe coupon. Time:
- Place the coupon on the screen. Time:
- Press next button Time:
- No idea Time:

5.5 The coupon and gift card has been used. Now you only need to pay \$1. With the given cash, how do you use it?

- Tap 'Cash' and put coin into the machine. Time: 2s
- Say "Cash" to the smart tablet. Time:
- Press the home button and put the coin into the machine. Time:
- Put the coin on the screen. Time:
- Press next button Time:
- No idea Time:

5.6 Good job! You've completed your purchase. However, we are going to go back to the payment screen where this time we would like you to pay with the given credit card. How do you use it?

- Tap 'card' and scan/swipe or tape card onto the eftpos machine. Time: 2s
- Say "card" to the smart tablet. Time:
- Press the home button and scan/swipe or tape card onto the eftpos machine. Time:
- Put the card on the screen. Time:
- Press next button Time:
- No idea Time:

Post-Test Questioner

1 2 3 4 5

7. The application ran smoothly. No errors.

1 2 3 4 **5**

8. Typing in information was easy

1 2 3 4 5

9. I got used to the app after a few minutes.

1 2 3 4 5

10. Instructions shown on the app were clear.

1 2 3 4 5

11.I think there were too many text boxes.

1 2 3 4 5

12.I think the application was very time consuming.

1

2

3

4

5

13. Overall, what do you think of the application? Was there anything that bothered you? Do we need to get rid or anything?

Overall, the application is great! I really had no idea how to use technology but after going through a few pages I got used to it. I learned how to use it. The design was attractive, but the page where we had to enter our details there were too many text boxes in there. By splitting the page into 2 pages, it would be better. I would use this when it is available. I reckon it would make the process in the pharmacy faster and the correct medications are given to the patients.

9.7 Appendix 7 – Test 6

Please read and sign this form.

In this usability test:

- You will be asked to perform certain tasks on an application.
- We will also conduct an interview with you regarding the tasks you performed.
- You will also be monitored with a stop watch to gather intel of your actions.
- Also an evaluation Post Test is required when finished.

Participation in this usability study is voluntary. All information will remain strictly confidential. The descriptions and findings may be used to help improve the Computerised Robotic dispensing application. However, at no time will your name or any other identification be used. You

can withdraw your consent to the experiment and stop participation at any time.

If you have any questions after today, please contact either Lachlan Holmes, John Santias, Crystal Wiltshire at customerservice@lifetec.org.au.

I have read and understood the information on this form and had all of my questions answered

Date: _____ 18/10/2016 _____

Please print your name:

Harold Scretcher

Please sign your name:

Harold Scretcher

Thank you!

We appreciate your participation.

PERSONAL DETAILS

1.1 NAME: Harold Scretcher

1.2 AGE: 35

1.3 OCCUPATION: Engineer

1.4 FAVORITE OPERATING SYSTEM:

- Apple
- Android
- BlackBerry
- Windows
- Other: _____
- No favorite.

1.5 FAVORITE DEVICE:

- Apple iPhone
- Apple iPad
- Apple Macs
- Samsung Galaxy phones
- Samsung Tablets
- Other: _____
- No favorite.

1.6 DO YOU HAVE MEDICARE?

- Yes
- No

2 TECHNICAL MIND MODEL

2.1 HOW OFTEN DO YOU USE TECHNOLOGY?

- All the time
- Every day
- Few times a week
- Sometimes
- Never

2.2 WHICH CATEGORY(IES) DO YOU MOSTLY GET YOUR APPS FROM?

- Social media
- Games
- Books
- Business
- Food & Drink
- Catalogs
- Health & fitness
- Education
- Lifestyle
- Entertainment
- Kids
- Finance
- Magazines & Newspapers
- Medical
- Music
- Navigation
- News
- Photo & Video
- Productivity
- Reference
- Shopping
- Social Networking
- Sports
- Travel
- Utilities
- None

2.3 WITH THE GIVEN SMART TABLET, HOW DO YOU OPEN AN APP?

- Hold your finger on the app

- Tap on the app
- Say “open app” to the device
- Press home button
- Restart the device
- No idea

2.4 HOW DO YOU CLOSE THE APP?

- Hold your finger on the screen
- Tap on the screen
- Say “close app” to the device
- Press home button
- Restart the device

2.5 WITH THE GIVEN PICTURE, HOW WOULD YOU PROCEED TO THE NEXT PAGE?

- Tap the next button
- Tap the right side of the screen
- Swipe screen from right to left
- Tap the left side of the screen
- Swipe screen from left to right
- No idea

2.6 DO YOU HAVE A MYGOV ACCOUNT?

- Yes
- No
- Not sure

Moderators Script

1 EXPLANATION

1.1 This meeting will take about 30 minutes or less depending on how we get through this test. Thank you for your participation in this test. This will help us identify any obstacles, errors or anything else within the app so that we can further improve it. I will be timing you for the tasks you have to do on the app. The way you go through each task will be valuable information for us. We will be asking a number of questions, most of them will require you to use the app and answer questions. After a certain amount of time, in the use of the app, if you haven't been able to solve the task, I will give you a hint. If you still cannot solve it, I will show you so that the test can continue. Please don't hesitate or be scared to use the app, you can use it however you think it will work.

2 Welcome Screen

2.1 This is the welcome screen of the robotic dispensing machine. In a few sentences or less, please tell me, what do you think of the layout? Is there anything that should be changed?

Design looks pretty similar to other designs he's seen before. The colours used are nice and attractive. Title looks too big, should be at the top. Don't know what the question mark button does. Haven't really seen one before in an app.

2.2 Can you show me how to proceed to the next page?

- | | |
|---|----------|
| <input type="checkbox"/> Swipe screen from right to left | Time: |
| <input type="checkbox"/> Tap the screen | Time: |
| <input type="checkbox"/> Say "Next" to the smart tablet | Time: |
| <input checked="" type="checkbox"/> Tap on the arrow button | Time: 2s |
| <input type="checkbox"/> No clue | Time: |

2.3 Was proceeding to the next page hard?

- Yes
- No
- Sort of

3 Entering personal details screen

3.1 Take a moment to look around this screen. When you're ready, please tell me what do you and do not like about this page.

Too many things in one page. Looks very compact. Should change the layout or even ask for fewer details.

3.2 How do you enter your surname in the top left-hand side of the screen?

- Say your surname to the smart tablet. Time:
- Tap on the box, a keyboard will come up and type your surname in. Time: 3s
- Hold your finger on the box, keyboard will come up and you type in your surname. Time:
- Swipe your finger from the bottom to the top of the screen, keyboard will come up and you type in your surname Time:
- No idea Time:

3.3 Let's say you're having trouble using the app. How do you call for help?

- Call out for help Time:
- Do nothing Time:
- Tap on the blue question mark button located above the number 8 on the bottom right hand side of the screen. Time:
- No idea Time: 3s

3.4 You've entered all your details. How do you proceed to the next page?

- Swipe screen from right to left Time:
- Tap the screen Time:
- Say "Next" to the smart tablet Time:
- Tap on the arrow button Time: 3s
- No clue Time:

4 Scanning or Entering details of the script

4.1 Here is a script that has been given to you by a doctor. You will need to use this script to get your medication from the machine. In this method, you will have to scan the script's barcode, how do you do that?

- Tap 'scan barcode', use scanner to scan the barcode Time: 17s
- Tap 'enter script details', scan the script details and press next. Time:
- Say the barcode details to the smart tablet Time:
- Type in the barcode Time:
- It doesn't work Time:
- No idea Time:

4.2 Good work! Now that you've added a script, you have another script given by the doctor. This time, you will have to enter it manually. How do you do that?

- Tap 'scan barcode', type in script details Time:
- Tap 'enter script details', enter the script details and press next. Time: 13s
- Scan script Time:
- Say the script details to the smart tablet. Time:
- It doesn't work Time:
- No idea Time:

4.3 The machine has listed the wrong medication. How do you go back to the previous page?

- Say "Go back" Time:
- Press on one of the page numbers below Time: 9s
- Press the back button Time:
- No idea Time:

5 Payment method screen

5.1 Great job! The machine has listed down your needs. You now want to pay for the medications. With the given gift card, how do you use it?

- Tap 'gift card' and scan/swipe gift card. Time: 2s
- Say "Gift card" to the smart tablet. Time:
- Press the home button and scan/swipe gift card. Time:

- Place the gift card on the screen. Time:
- Press next button Time:
- No idea Time:

5.2 With the given coupon, how do you use it?

- Tap ‘coupon’ and scan/swipe coupon. Time: 2s
- Say “coupon” to the smart tablet. Time:
- Press the home button and scan/swipe coupon. Time:
- Place the coupon on the screen. Time:
- Press next button Time:
- No idea Time:

5.3 The coupon and gift card has been used. Now you only need to pay \$1. With the given cash, how do you use it?

- Tap ‘Cash’ and put coin into the machine. Time: 2s
- Say “Cash” to the smart tablet. Time:
- Press the home button and put the coin into the machine. Time:
- Put the coin on the screen. Time:
- Press next button Time:
- No idea Time:

5.4 Good job! You’ve completed your purchase. However, we are going to go back to the payment screen where this time we would like you to pay with the given credit card. How do you use it?

- Tap ‘card’ and scan/swipe or tape card onto the eftpos machine. Time: 2s
- Say “card” to the smart tablet. Time:
- Press the home button and scan/swipe or tape card onto the eftpos machine. Time:
- Put the card on the screen. Time:
- Press next button Time:
- No idea Time:

12 I think the application was very time consuming.

Strongly disagree

Strongly Agree

1

2

3

4

5

13 Overall, what do you think of the application? Was there anything that bothered you? Do we need to get rid or anything?

The colours used are nice and attractive. Title looks too big, should be at the top.

Did not know what the question mark button was for. Haven't really seen one before in an app. Nicely presented. Just split the personal details screen into two pages.

9.8 Appendix 8 – Test 7

Please read and sign this form.

In this usability test:

- You will be asked to perform certain tasks on an application.
- We will also conduct an interview with you regarding the tasks you performed.
- You will also be monitored with a stop watch to gather intel of your actions.
- Also an evaluation Post Test is required when finished.

Participation in this usability study is voluntary. All information will remain strictly confidential. The descriptions and findings may be used to help improve the Computerised Robotic dispensing application. However, at no time will your name or any other identification be used. You

can withdraw your consent to the experiment and stop participation at any time.

If you have any questions after today, please contact either Lachlan Holmes, John Santias, Crystal Wiltshire at customerservice@lifetec.org.au.

I have read and understood the information on this form and had all of my questions answered

Date: _____ 18/10/2016 _____

Please print your name:

Tyler Mok

Please sign your name:

Tyler Mok

Thank you!

We appreciate your participation.

User Pre-Test Questioner

PERSONAL DETAILS

1. NAME: Tyler Mok
2. AGE: 18
3. OCCUPATION: Retail Employee
4. FAVORITE OPERATING SYSTEM:
 Apple
 Android
 BlackBerry
 Windows
 Other: _____
 No favorite.
5. FAVORITE DEVICE:
 Apple iPhone
 Apple iPad
 Apple Macs
 Samsung Galaxy phones
 Samsung Tablets
 Other: _____
 No favorite.
6. DO YOU HAVE MEDICARE?
 Yes
 No

TECHNICAL MIND MODEL

2.1 HOW OFTEN DO YOU USE TECHNOLOGY?

- All the time
- Every day
- Few times a week
- Sometimes
- Never

2.2 WHICH CATEGORY(IES) DO YOU MOSTLY GET YOUR APPS FROM?

- Social media
- Games
- Books
- Business
- Food & Drink
- Catalogs
- Health & fitness
- Education
- Lifestyle
- Entertainment
- Kids
- Finance
- Magazines & Newspapers
- Medical
- Music
- Navigation
- News
- Photo & Video
- Productivity
- Reference
- Shopping
- Social Networking
- Sports
- Travel
- Utilities
- None

2.3 WITH THE GIVEN SMART TABLET, HOW DO YOU OPEN AN APP?

- Hold your finger on the app

- Tap on the app
- Say “open app” to the device
- Press home button
- Restart the device
- No idea

2.4 HOW DO YOU CLOSE THE APP?

- Hold your finger on the screen
- Tap on the screen
- Say “close app” to the device
- Press home button
- Restart the device

2.5 WITH THE GIVEN PICTURE, HOW WOULD YOU PROCEED TO THE NEXT PAGE?

- Tap the next button
- Tap the right side of the screen
- Swipe screen from right to left
- Tap the left side of the screen
- Swipe screen from left to right
- No idea

2.6 DO YOU HAVE A MYGOV ACCOUNT?

- Yes
- No
- Not sure

Moderators Script

1 EXPLANATION

1.1 This meeting will take about 30 minutes or less depending on how we get through this test. Thank you for your participation in this test. This will help us identify any obstacles, errors or anything else within the app so that we can further improve it. I will be timing you for the tasks you have to do on the app. The way you go through each task will be valuable information for us. We will be asking a number of questions, most of them will require you to use the app and answer questions. After a certain amount of time, in the use of the app, if you haven't been able to solve the task, I will give you a hint. If you still cannot solve it, I will show you so that the test can continue. Please don't hesitate or be scared to use the app, you can use it however you think it will work.

2 Welcome Screen

2.1 This is the welcome screen of the robotic dispensing machine. In a few sentences or less, please tell me, what do you think of the layout? Is there anything that should be changed?

Not sure what the question mark was for. Reckon the help button shouldn't be on the first page. The whole layout looks weird but I could take some time to get used to it. The background image is too big. Used up too much space.

2.2 Can you show me how to proceed to the next page?

- | | |
|---|----------|
| <input type="checkbox"/> Swipe screen from right to left | Time: |
| <input type="checkbox"/> Tap the screen | Time: |
| <input type="checkbox"/> Say "Next" to the smart tablet | Time: |
| <input checked="" type="checkbox"/> Tap on the arrow button | Time: 1s |
| <input type="checkbox"/> No clue | Time: |

2.3 Was proceeding to the next page hard?

- Yes
- No
- Sort of

3 Entering personal details screen

3.1 Take a moment to look around this screen. When you're ready, please tell me what do you and do not like about this page.

Its well presented. Don't have any problems with it. Would rather not have the question mark next to the arrow. People could accidentally click it.

3.2 How do you enter your surname in the top left-hand side of the screen?

- Say your surname to the smart tablet. Time:
- Tap on the box, a keyboard will come up and type your surname in. Time: 5s
- Hold your finger on the box, keyboard will come up and you type in your surname. Time:
- Swipe your finger from the bottom to the top of the screen, keyboard will come up and you type in your surname Time:
- No idea Time:

3.3 Let's say you're having trouble using the app. How do you call for help?

- Call out for help Time:
- Do nothing Time:
- Tap on the blue question mark button located above the number 8 on the bottom right hand side of the screen. Time: 2s
- No idea Time:

3.4 You've entered all your details. How do you proceed to the next page?

- Swipe screen from right to left Time:
- Tap the screen Time:
- Say "Next" to the smart tablet Time:
- Tap on the arrow button Time: 2s
- No clue Time:

4 Scanning or Entering details of the script

4.1 Here is a script that has been given to you by a doctor. You will need to use this script to get your medication from the machine. In this method, you will have to scan the script's barcode, how do you do that?

- | | |
|---|-----------|
| <input checked="" type="checkbox"/> Tap 'scan barcode', use scanner to scan the barcode | Time: 20s |
| <input type="checkbox"/> Tap 'enter script details, scan the script details and press next. | Time: |
| <input type="checkbox"/> Say the barcode details to the smart tablet | Time: |
| <input type="checkbox"/> Type in the barcode | Time: |
| <input type="checkbox"/> It doesn't work | Time: |
| <input type="checkbox"/> No idea | Time: |

4.2 Good work! Now that you've added a script, you have another script given by the doctor. This time, you will have to enter it manually. How do you do that?

- | | |
|---|-----------|
| <input type="checkbox"/> Tap 'scan barcode', type in script details | Time: |
| <input checked="" type="checkbox"/> Tap 'enter script details, enter the script details and press next. | Time: 18s |
| <input type="checkbox"/> Scan script | Time: |
| <input type="checkbox"/> Say the script details to the smart tablet. | Time: |
| <input type="checkbox"/> It doesn't work | Time: |
| <input type="checkbox"/> No idea | Time: |

4.3 The machine has listed the wrong medication. How do you go back to the previous page?

- | | |
|---|-----------|
| <input type="checkbox"/> Say "Go back" | Time: |
| <input type="checkbox"/> Press on one of the page numbers below | Time: |
| <input type="checkbox"/> Press the back button | Time: |
| <input checked="" type="checkbox"/> No idea | Time: 30s |

5 Payment method screen

5.1 Great job! The machine has listed down your needs. You now want to pay for the medications. With the given gift card, how do you use it?

- | | |
|---|----------|
| <input checked="" type="checkbox"/> Tap 'gift card' and scan/swipe gift card. | Time: 5s |
| <input type="checkbox"/> Say "Gift card" to the smart tablet. | Time: |
| <input type="checkbox"/> Press the home button and scan/swipe gift card. | Time: |
| <input type="checkbox"/> Place the gift card on the screen. | Time: |
| <input type="checkbox"/> Press next button | Time: |
| <input type="checkbox"/> No idea | Time: |

5.2 With the given coupon, how do you use it?

- | | |
|---|----------|
| <input checked="" type="checkbox"/> Tap 'coupon' and scan/swipe coupon. | Time: 4s |
| <input type="checkbox"/> Say "coupon" to the smart tablet. | Time: |
| <input type="checkbox"/> Press the home button and scan/swipe coupon. | Time: |
| <input type="checkbox"/> Place the coupon on the screen. | Time: |
| <input type="checkbox"/> Press next button | Time: |
| <input type="checkbox"/> No idea | Time: |

5.3 The coupon and gift card has been used. Now you only need to pay \$1.

With the given cash, how do you use it?

- | | |
|---|----------|
| <input checked="" type="checkbox"/> Tap 'Cash' and put coin into the machine. | Time: 2s |
| <input type="checkbox"/> Say "Cash" to the smart tablet. | Time: |
| <input type="checkbox"/> Press the home button and put the coin into the machine. | Time: |
| <input type="checkbox"/> Put the coin on the screen. | Time: |
| <input type="checkbox"/> Press next button | Time: |
| <input type="checkbox"/> No idea | Time: |

5.4 Good job! You've completed your purchase. However, we are going to go back to the payment screen where this time we would like you to pay with the given credit card. How do you use it?

- | | |
|---|----------|
| <input checked="" type="checkbox"/> Tap 'card' and scan/swipe or tape card onto the eftpos machine. | Time: 2s |
| <input type="checkbox"/> Say "card" to the smart tablet. | Time: |
| <input type="checkbox"/> Press the home button and scan/swipe or tape card onto the eftpos machine. | Time: |
| <input type="checkbox"/> Put the card on the screen. | Time: |
| <input type="checkbox"/> Press next button | Time: |
| <input type="checkbox"/> No idea | Time: |

12 I think the application was very time consuming.

Strongly disagree

Strongly Agree

1

2

3

4

5

13 Overall, what do you think of the application? Was there anything that bothered you? Do we need to get rid or anything?

The layout should be changed. The whole app reminded me of using an ATM. I reckon the layout should be more classy/better. Maybe should look more like the self service ticket machine you see at the cinemas. Adding audio to the app would be great as it would help the person a lot, kind of eliminates the reading. It would be helpful.

9.9 Appendix 9 – Test 8

Please read and sign this form.

In this usability test:

- You will be asked to perform certain tasks on an application.
- We will also conduct an interview with you regarding the tasks you performed.
- You will also be monitored with a stop watch to gather intel of your actions.
- Also an evaluation Post Test is required when finished.

Participation in this usability study is voluntary. All information will remain strictly confidential. The descriptions and findings may be used to help improve the Computerised Robotic dispensing application. However, at no time will your name or any other identification be used. You

can withdraw your consent to the experiment and stop participation at any time.

If you have any questions after today, please contact either Lachlan Holmes, John Santias, Crystal Wiltshire at customerservice@lifetec.org.au.

I have read and understood the information on this form and had all of my questions answered

Date: 18/10/2016

Please print your name:

Markus Daniswara

Please sign your name:

Markus Daniswara

Thank you!

We appreciate your participation.

User Pre-Test Questioner

PERSONAL DETAILS

1.1 NAME: Markus Daniswara

1.2 AGE: 18

1.3 OCCUPATION: STUDENT

1.4 FAVORITE OPERATING SYSTEM:

- Apple
- Android
- BlackBerry
- Windows
- Other: _____
- No favorite.

1.5 FAVORITE DEVICE:

- Apple iPhone
- Apple iPad
- Apple Macs
- Samsung Galaxy phones
- Samsung Tablets
- Other: _____
- No favorite.

1.6 DO YOU HAVE MEDICARE?

- Yes
- No

TECHNICAL MIND MODEL

1.7 HOW OFTEN DO YOU USE TECHNOLOGY?

- All the time
- Every day

- Few times a week
- Sometimes
- Never

1.8 WHICH CATEGORY(IES) DO YOU MOSTLY GET YOUR APPS FROM?

- Social media
- Games
- Books
- Business
- Food & Drink
- Catalogs
- Health & fitness
- Education
- Lifestyle
- Entertainment
- Kids
- Finance
- Magazines & Newspapers
- Medical
- Music
- Navigation
- News
- Photo & Video
- Productivity
- Reference
- Shopping
- Social Networking
- Sports
- Travel
- Utilities
- None

1.9 WITH THE GIVEN SMART TABLET, HOW DO YOU OPEN AN APP?

- Hold your finger on the app
- Tap on the app
- Say “open app” to the device
- Press home button
- Restart the device
- No idea

1.10 HOW DO YOU CLOSE THE APP?

- Hold your finger on the screen
- Tap on the screen
- Say “close app” to the device
- Press home button
- Restart the device

1.11 WITH THE GIVEN PICTURE, HOW WOULD YOU PROCEED TO THE NEXT PAGE?

- Tap the next button
- Tap the right side of the screen
- Swipe screen from right to left
- Tap the left side of the screen
- Swipe screen from left to right
- No idea

1.12 DO YOU HAVE A MYGOV ACCOUNT?

- Yes
- No
- Not sure

Moderators Script

EXPLANATION

1.1 This meeting will take about 30 minutes or less depending on how we get through this test. Thank you for your participation in this test. This will help us identify any obstacles, errors or anything else within the app so that we can further improve it. I will be timing you for the tasks you have to do on the app. The way you go through each task will be valuable information for us. We will be asking a number of questions, most of them will require you to use the app and answer questions. After a certain amount of time, in the use of the app, if you haven't been able to solve the task, I will give you a hint. If you still cannot solve it, I will show you so that the test can continue. Please don't hesitate or be scared to use the app, you can use it however you think it will work.

2 Welcome Screen

- 2.1 This is the welcome screen of the robotic dispensing machine. In a few sentences or less, please tell me, what do you think of the layout? Is there anything that should be changed?
- The help button was a bit confusing at first. Didn't know what the help button was.
By labelling the help button, it would help the user straight away know its purpose. Maybe lift the Title to the top of the page instead of having it almost in the middle. The text right underneath the arrow is too close to the arrow button.

- 2.2 Can you show me how to proceed to the next page?

- | | |
|---|----------|
| <input type="checkbox"/> Swipe screen from right to left | Time: |
| <input type="checkbox"/> Tap the screen | Time: |
| <input type="checkbox"/> Say "Next" to the smart tablet | Time: |
| <input checked="" type="checkbox"/> Tap on the arrow button | Time: 3s |
| <input type="checkbox"/> No clue | Time: |

- 2.3 Was proceeding to the next page hard?

- | |
|--|
| <input type="checkbox"/> Yes |
| <input checked="" type="checkbox"/> No |
| <input type="checkbox"/> Sort of |

3 Entering personal details screen

- 3.1 Take a moment to look around this screen. When you're ready, please tell me what do you like and dislike about this page.

I don't like how the app asks for my name and then address. The ordering of inputs should be different to make the user not feel uncomfortable giving their details. As this is presented in an iPad, I reckon the list, where the user has to tick the allergies, should be on the next page because it would be too small and hard for the user to tick the boxes.

- 3.2 How do you enter your surname in the top left-hand side of the screen?

- | | |
|---|----------|
| <input type="checkbox"/> Say your surname to the smart tablet. | Time: |
| <input checked="" type="checkbox"/> Tap on the box, a keyboard will come up and type your surname in. | Time: 2s |

- Hold your finger on the box, keyboard will come up and you type in your surname. Time:
- Swipe your finger from the bottom to the top of the screen, keyboard will come up and you type in your surname Time:
- No idea Time:

3.3 Let's say you're having trouble using the app. How do you call for help?

- Call out for help Time:
- Do nothing Time:
- Tap on the blue question mark button located above the number 8 on the bottom right hand side of the screen. Time: 2s
- No idea Time:

3.4 You've entered all your details. How do you proceed to the next page?

- Swipe screen from right to left Time:
- Tap the screen Time:
- Say "Next" to the smart tablet Time: 1s
- Tap on the arrow button Time:
- No clue Time:

4 Scanning or Entering details of the script

4.1 Here is a script that has been given to you by a doctor. You will need to use this script to get your medication from the machine. In this method, you will have to scan the script's barcode, how do you do that?

- Tap 'scan barcode', use scanner to scan the barcode Time: 2s
- Tap 'enter script details', scan the script barcode and press next. Time:
- Say the barcode details to the smart tablet Time:
- Type in the barcode Time:
- It doesn't work Time:
- No idea Time:

4.2 Good work! Now that you've added a script, you have another script given to you by the doctor. This time, you will have to enter it manually. How do you do that?

- Tap 'scan barcode, type in script details' Time:
- Tap 'enter script details', enter the script details and Time: 9s

press next.

- | | |
|--|-------|
| <input type="checkbox"/> Scan script | Time: |
| <input type="checkbox"/> Say the script details to the smart tablet. | Time: |
| <input type="checkbox"/> It doesn't work | Time: |
| <input type="checkbox"/> No idea | Time: |

4.3 The machine has listed the wrong medication. How do you go back to the previous page?

- | | |
|---|----------|
| <input type="checkbox"/> Say "Go back" | Time: |
| <input type="checkbox"/> Press on one of the page numbers below | Time: |
| <input checked="" type="checkbox"/> Press the back button | Time: 3s |
| <input type="checkbox"/> No idea | Time: |

5 Payment method screen

5.1 Great job! The machine has listed down your needs. You now want to pay for the medications. With the given gift card, how do you use it?

- | | |
|---|----------|
| <input checked="" type="checkbox"/> Tap 'gift card' and scan/swipe gift card. | Time: 1s |
| <input type="checkbox"/> Say "Gift card" to the smart tablet. | Time: |
| <input type="checkbox"/> Press the home button and scan/swipe gift card. | Time: |
| <input type="checkbox"/> Place the gift card on the screen. | Time: |
| <input type="checkbox"/> Press next button | Time: |
| <input type="checkbox"/> No idea | Time: |

5.2 With the given coupon, how do you use it?

- | | |
|---|----------|
| <input checked="" type="checkbox"/> Tap 'coupon' and scan/swipe coupon. | Time: 1s |
| <input type="checkbox"/> Say "coupon" to the smart tablet. | Time: |
| <input type="checkbox"/> Press the home button and scan/swipe coupon. | Time: |
| <input type="checkbox"/> Place the coupon on the screen. | Time: |
| <input type="checkbox"/> Press next button | Time: |
| <input type="checkbox"/> No idea | Time: |

5.3 The coupon and gift card has been used. Now you only need to pay \$1. With the given cash, how do you use it?

- | | |
|---|----------|
| <input checked="" type="checkbox"/> Tap 'Cash' and put coin into the machine. | Time: 1s |
| <input type="checkbox"/> Say "Cash" to the smart tablet. | Time: |
| <input type="checkbox"/> Press the home button and put the coin into the machine. | Time: |
| <input type="checkbox"/> Put the coin on the screen. | Time: |
| <input type="checkbox"/> Press next button | Time: |
| <input type="checkbox"/> No idea | Time: |

5.4 Good job! You've completed your purchase. However, we are going to go back to the payment screen where this time we would like you to pay with the given credit card. How do you use it?

- | | |
|---|----------|
| <input checked="" type="checkbox"/> Tap 'card' and scan/swipe or tape card onto the eftpos machine. | Time: 1s |
| <input type="checkbox"/> Say "card" to the smart tablet. | Time: |
| <input type="checkbox"/> Press the home button and scan/swipe or tape card onto the eftpos machine. | Time: |
| <input type="checkbox"/> Put the card on the screen. | Time: |
| <input type="checkbox"/> Press next button | Time: |
| <input type="checkbox"/> No idea | Time: |

Post-Test Questioner

User experience

13 Overall, what do you think of the application? Was there anything that bothered you? Do we need to get rid or add anything?

As said earlier, help button should be labelled but just on the first page. The help button was a bit confusing at first. By labelling the help button, it would help the user straight away know its purpose. Lift the Title to the top of the page instead of having it almost in the middle. The text right underneath the arrow is too close to the arrow button.

I don't like how the app asked from my name and then address. The ordering of inputs should be different to make the user not feel uncomfortable giving their details. As this is presented in an iPad, the list, where the user has to tick their allergies, should be on the next page because it would be too small and hard for the user to tick the boxes.