



IFB103

Design Logbook

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Thursday 5 - 7 PM

WEEK 2 WORKSHOP - 02/08/18

Design Crash Course - Fatal Five (Fatigue):

Understand the problem space and take observations:

- Currently no well-validated technologies that can reliably detect sleepiness for all drivers on the road
- Long straight roads can be particularly dangerous
- Contributes to 20-30% of deaths and accidents on the road
 - Significant increase during holiday periods
 - 13.5 times higher risk in rural areas in Queensland than in urban

How does sleepiness affect driving?

- Loss of attention
- Slower reaction time
- Impaired judgement

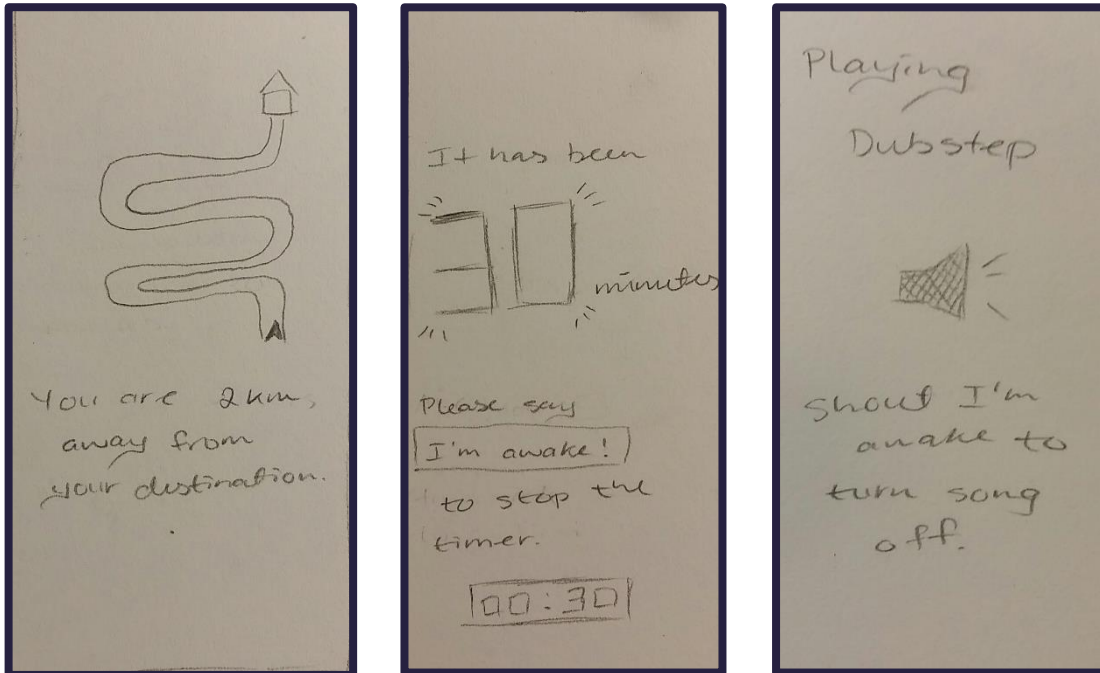
Facilitated Brainstorming - Speeding

- Software limit on speed
- Beeps when over speed limit
- HUD to clearly see speed
 - Frowny face HUD when over
- Fake sirens
- Turn the car off
- Immediately notify police
- Time trial app
- Automatic fines when above the speed limit
- App plays most hated song when over the speed limit
 - App turns music off when under
- Changing speed limit based on weather
- Send message to parents when speeding
- Peer to peer reporting when speeding
- Phone blows up when speeding
- Chopper when speeding
- Rewards for safe driving
- Facebook status update when speeding
- Electrocutation
- Sentient cars
- Autopilot
- Macabre news reports plays when speeding
- Demerit points automatically
- HAL9000 tells you you're speeding
- Starts draining fuel

Brainstorming - Fatigue

- Vibrating headrest
- Shows places to stop and rest
- Flashing
- Beeping
- Plays worst playlist
 - Energetic music
 - Dubstep drops
- Winds down the windows
- Airbags go off
- Water splashes into face
- Horn goes off uncontrollably
- Revs the engine
- Makes coffee
- Sprays unknown substances
- Gross smells start to emit through air freshener
- Auto swerves
- Auto pilot
- Electrocutates
- Periodically sends notifications to see if you're awake
 - Text-to-speak
- Auto calls contact list
- Plays PSA clips of car crashes

Low Fidelity prototype [Fatigue]



These 3 screens will continue to cycle until the user reaches their destination.

User Feedback

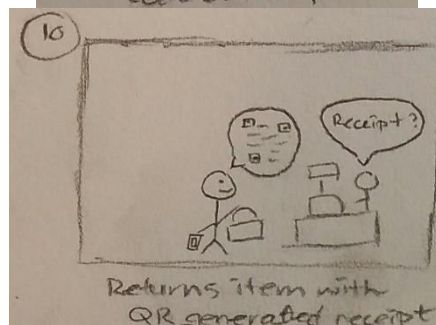
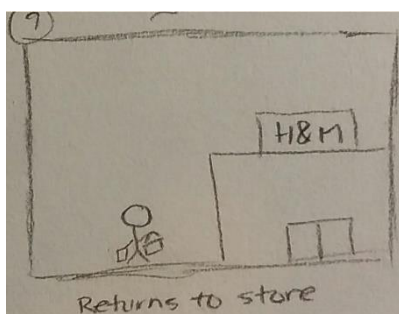
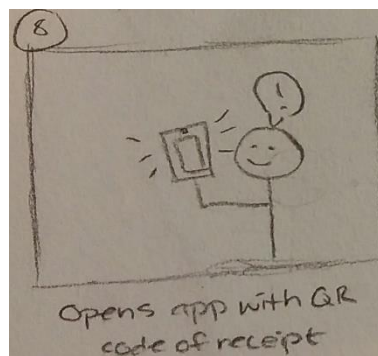
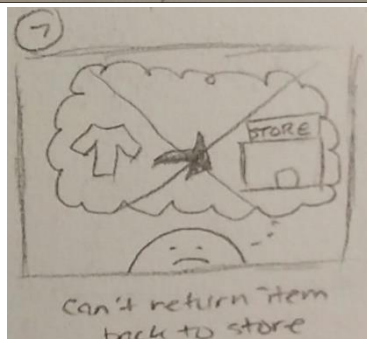
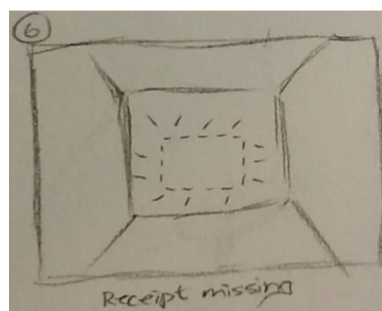
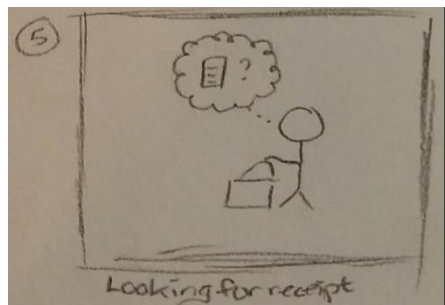
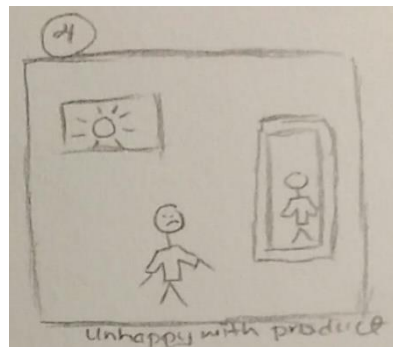
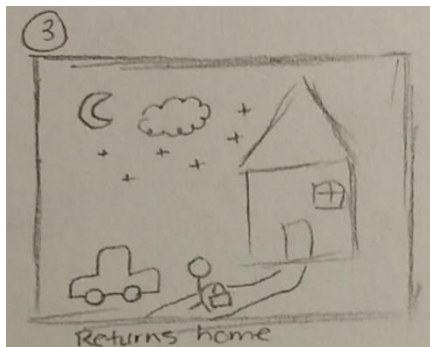
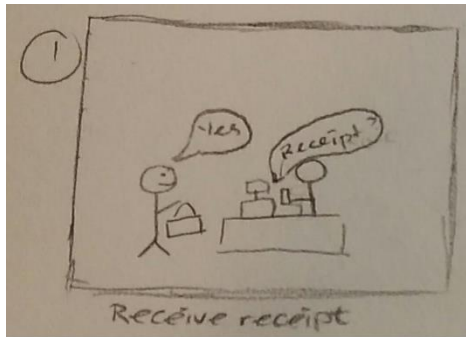
Their thoughts	My thoughts
How will the user be able to confirm they are awake if the music is too loud?	Song will fluctuate in volume periodically to allow a timeframe for the user to respond
Wouldn't users be distracted if they had to read the on-screen text?	Text-to-speak assistant will read out text out loud
How will user be able to confirm they are awake?	Voice activation; the app will be actively waiting for the user to respond
	Could add a feature to prompt the user to pull over and rest when it's safe to do so/after a certain period of time depending on how long the trip is expected to be
	May reduce the amount of time it takes to periodically notify the user depending on how long the trip is.
	Will need to account for the traffic - will need to alert the user when they are approaching one

30 Question Team Allocation Survey Results - 04/08/18

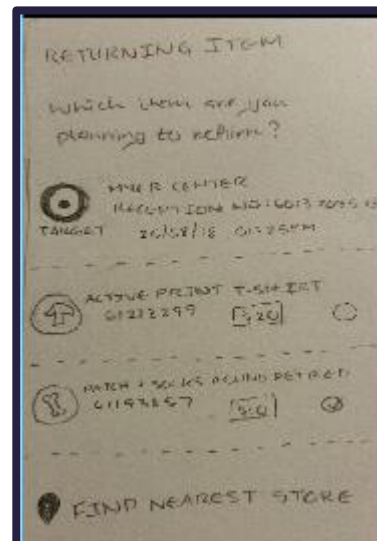
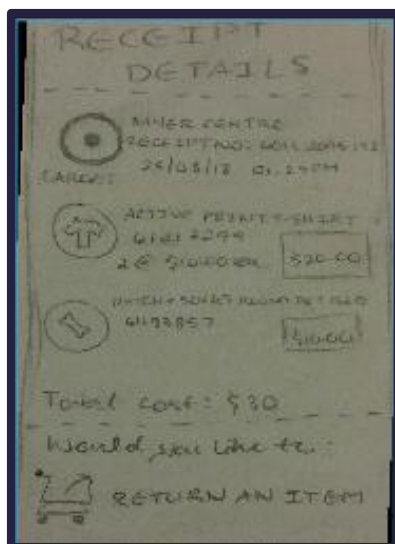
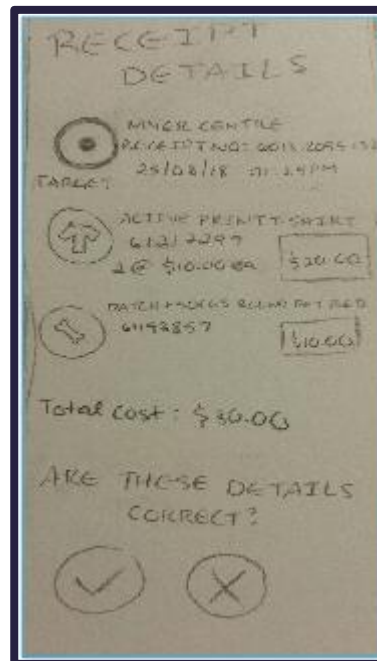
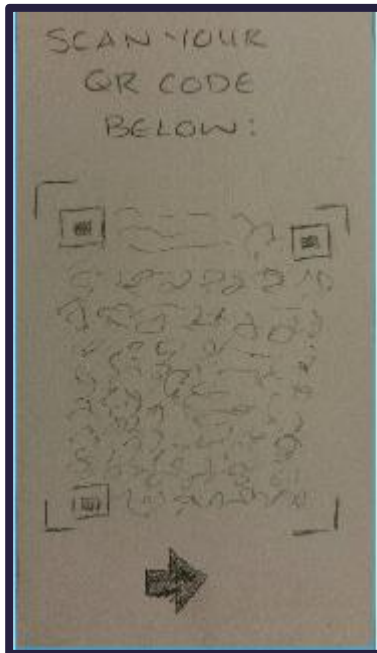
White = 3.4 Black = 2.4 Blue = 3 Red = 0.8 Yellow = 2.6 Green = 1.8

WEEK 3 WORKSHOP - 09/08/18

Storyboard [QR generated Receipts]



Low Fidelity Prototype - Pop App [Receipts]



Problem Spaces - 12/08/18

App to keep track of receipts/items that have return periods

- can be difficult to keep track of return periods of items if they're from different stores
- stores close at different times - hard to prioritise and plan when the optimal time is to return item
 - different branches of stores can have different business hours
- digital receipts - store employees need to ask customers to disclose email or phone number to send it to them
 - privacy concerns
 - clutters email box
- could utilise QR codes - only containing the data of the receipts which can be scanned with phone
- receipts can be lost easily - don't have it when it's needed
 - not recyclable

App to make process of choosing outfits easier

- a lot of time spent contemplating on an outfit to wear
 - often need to plan certain outfits the day before
- often find themselves with "nothing to wear" -> lots of considerations for picking an outfit
 - suitability and practicality for occasions and locations
 - appropriate for given weather or drastic weather changes
 - whether certain items/outfits have been worn differently
 - colour, fit, how they match in combination with other clothing items
 - characteristics of clothes help achieve different looks
 - vertical stripes help someone look taller
- confidence level for wearing certain clothing items can vary from day-to-day
 - effect how someone looks at themselves with clothing they normally enjoy wearing
 - sometimes visualise an outfit to wear and end up choosing a completely different outfit
 - trying on different clothing items help with decision-making
 - sometimes difficult to visualise when some clothes aren't fully visible - in laundry, hidden
- spending habits - buy clothes depending on
 - body type
 - season
 - colours
 - generally try to avoid buying the same thing

WEEK 4 WORKSHOP - 16/08/18

Multi-Criterial Decision Making [Excel Spreadsheet]

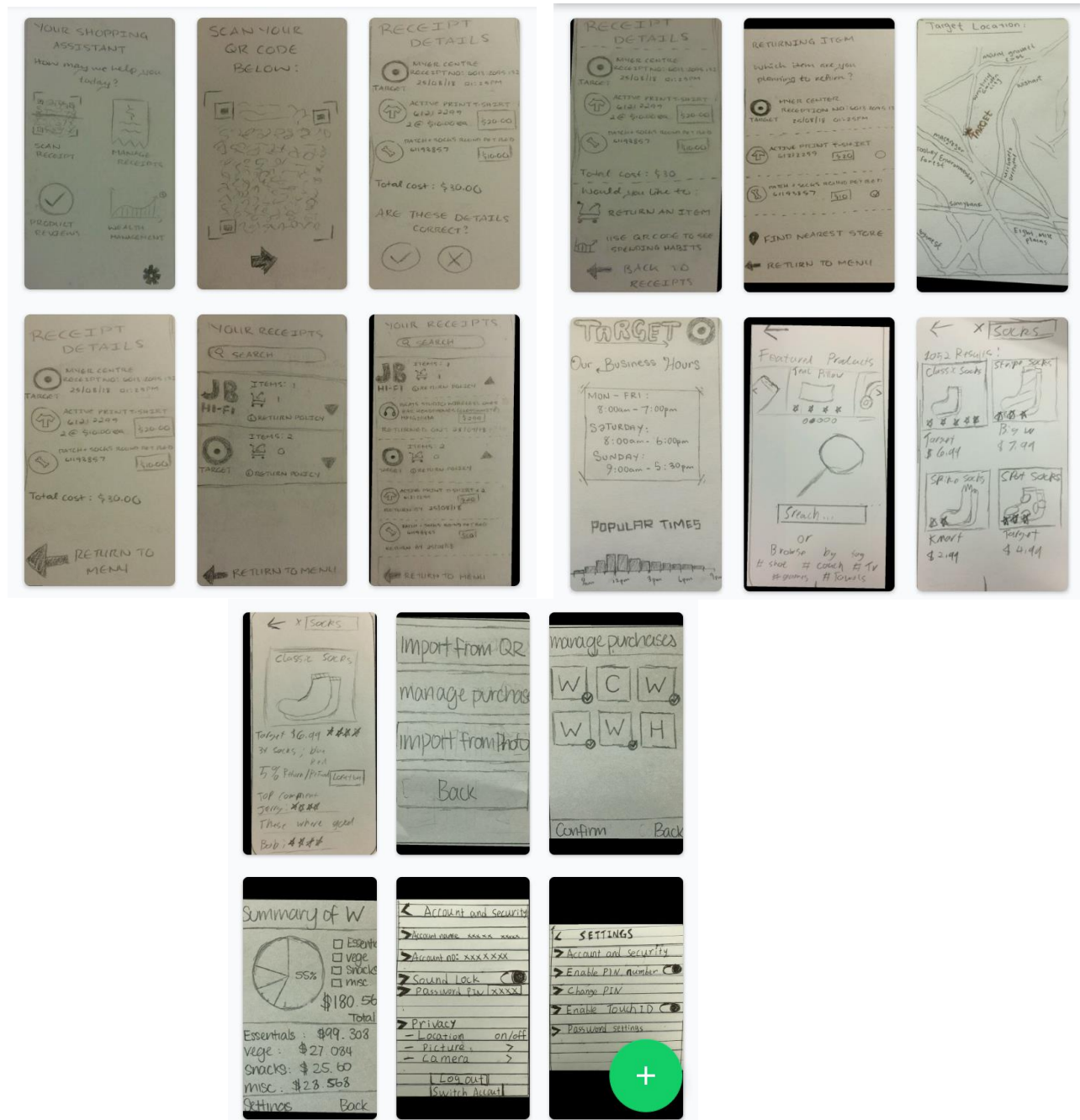
	Receipt Storage	Mapping Stores	Product Reviews	Wealth Manageme	Environmental	Security	Business Details	total	weighted total
Google Maps	0	5	3	0	2	2	5	17	47
Receipt Bank	4	0	0	2	1	3	0	10	45
Woolworths	0	3	3	3	1	2	2	14	44
Commonwealth Bank	0	0	0	5	3	5	2	15	59
ShopEase	5	2	2	4	5	5	3	26	102
weighting	5	2	3	4	5	4	2	25	

Brainstorming Features [Group]

- TRS claims - tourists
 - streamline process
- QR codes to replace traditional and digital receipts
 - don't have to provide personal details to retrieve
 - just need to present QR code - contains necessary information item about the item i.e. where it was bought, how much it costed, when it was purchased
 - don't have to worry about losing or fading receipt details - stored in app
 - traditional receipts aren't biodegradable
- Stop wasteful shopping/help improve shopping experience
 - have info about shop closing hours, peak hours to optimise travel time
 - map to closest store
 - details about returns and exchange terms/conditions for different stores
 - highlights return periods for stores
 - be able to plan and prioritise items to returns
 - product reviews
 - price comparisons
 - feature cheaper products
 - want to be able to see prices of products for many different stores at once
 - user satisfaction with product
 - digital catalogue
- Give perspective of shopping habits
 - how much they've spent in certain areas - entertainment, food
 - crowd sourced data - average spending habits/trends

Low Fidelity Prototype Screens [Group] - 21/08/18

Link to low fidelity: <https://marvelapp.com/9cffag7>



Low Fidelity Feedback - 22/08/18

Lack of Structure - Interview #1:

- no back button for scanning receipts page
- can't go back to menu from settings
- no option to go back to menu after selecting map locations and business hour screens
- returning items - lots of focus on user perspective, not enough thought put into cashier's perspective
 - traditionally have a barcode to register a returned item back into their system

Suggestions:

- user scans QR code at checkout, copy of QR code is stored in app to be regenerated when returning an item
 - cashier will be able to scan it, and creates a new code where the returning item is marked

Lack of Clarity - Interview #2:

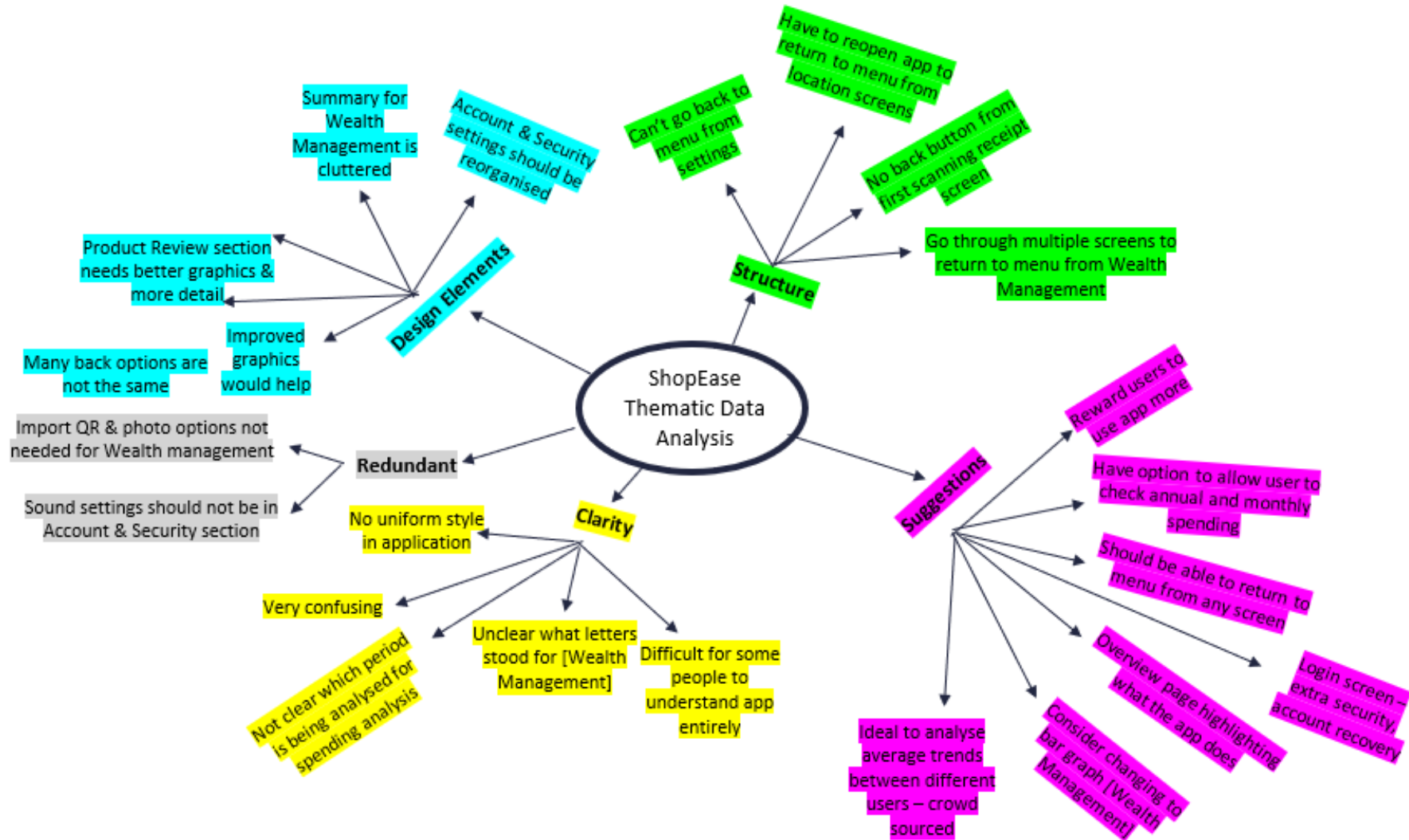
- labels of 'Wealth Management' and 'Product Reviews' don't portray their intended purpose
- was unclear what letters stood for at first in Wealth Management screen
- not clear which period was used for the analysis of user's spending

Suggestions:

- more secure login options
- maybe an option to have people take pictures of the QR code to scan multiple ones for later
- more useful to use brand logos to differentiate between stores
- ideal to showcase an average trend between different users

WEEK 5 WORKSHOP - 23/08/18

Thematic Data Analysis



Personas

Cautious Charlie



"Oh boy. \$12 for a meal? What."

Cautious Charlie is someone who hates to spend unnecessarily. He much prefers to spend money on what he needs, rather than on what he wants. He holds onto receipts as he may want to return something he's unsatisfied with. As a tech-savvy university student, he prefers everything to be digitalized for him for convenience.

Name Charlie
Occupation University Student
Income \$550/fortnight

Motivations

- Spend as little as possible for the best value
- Saving for a special occasion
- Bargain hunter

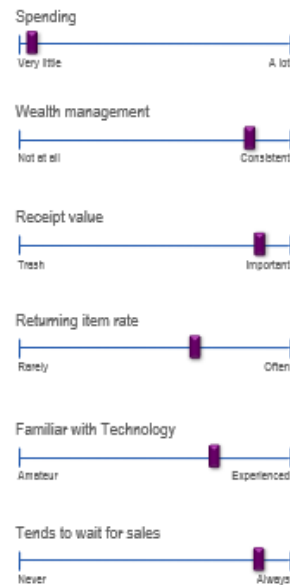
Goals

- Track my spending habits
- Determine how much I'm saving
- Monitor what I need and what I don't

Pain points

- Spending money on something when they don't need to
- Not being able to keep track of how much they're spending on average

Behaviours



ThoughtWorks®

Extravagant Emily



"I want to manage my spending, but have no idea how."

Extravagant Emily is an environmentally aware businesswoman with not a lot of time on her hands due to her late working hours. As she is an impulsive spender, she needs help identifying her problem areas to become more resourceful with her spending.

Name Emily
Occupation Businesswoman
Income \$1000+/week

Motivations

- Be in control of weekly spending
- Cut down on unnecessary purchases

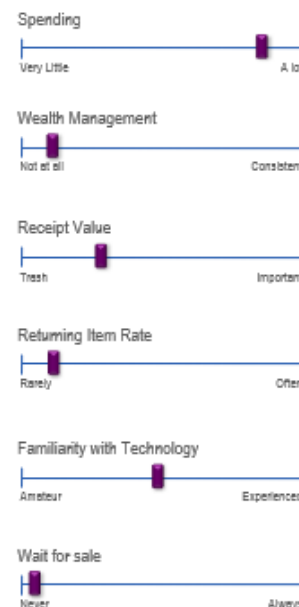
Goals

- Be more organised
- Maximise savings
- Learn money management quick and easy

Pain points

- I have no idea where or how I'm spending my all of my weekly salary
- I lack the time and energy to keep track of all my purchases physically

Behaviours



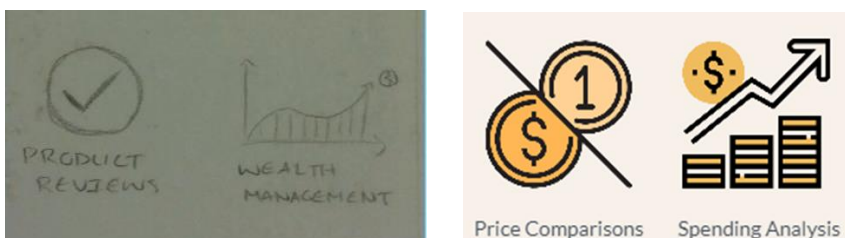
ThoughtWorks®

Medium Fidelity Prototype - 26/08/18 to 29/08/18



Main screen

- changed labels of 'product reviews' and 'wealth management' [did not reflect intended functionality]



- added additional screen to highlight app features to user [App Overview]

Setting -

Authentication settings & App Permissions

- redesigned and simplified
- split into authentication settings
- split into app permissions

Scanning Receipts -

Scan Receipts -> Your Receipt

- added 'back to menu' button
- removed additional screen from prototype showing only receipt details
 - Already see receipt details when confirming they're correct and should be able to return to menu afterwards.

Receipt details [Managing Receipts]

Receipt Overview -> Receipt Details

Receipt Details -> Regenerate QR Code -> Scan New Receipt -> Your New Receipt

Receipt Details -> Branch Locations -> Store Hours

- removed option to use QR code to see spending habits.
- split 'returning item' process into 2 separate buttons - regenerate QR code and business hours
 - regenerate QR code - removed option to select which item to return; process handled by the cashier; user only has to scan a new QR code.
 - added branch name to business hours screen as many branches of stores can have different business hours and optimal times to visit them

Price Comparisons

- simplified screens down to 1 screen.
- need to add screen to show reviews of products.

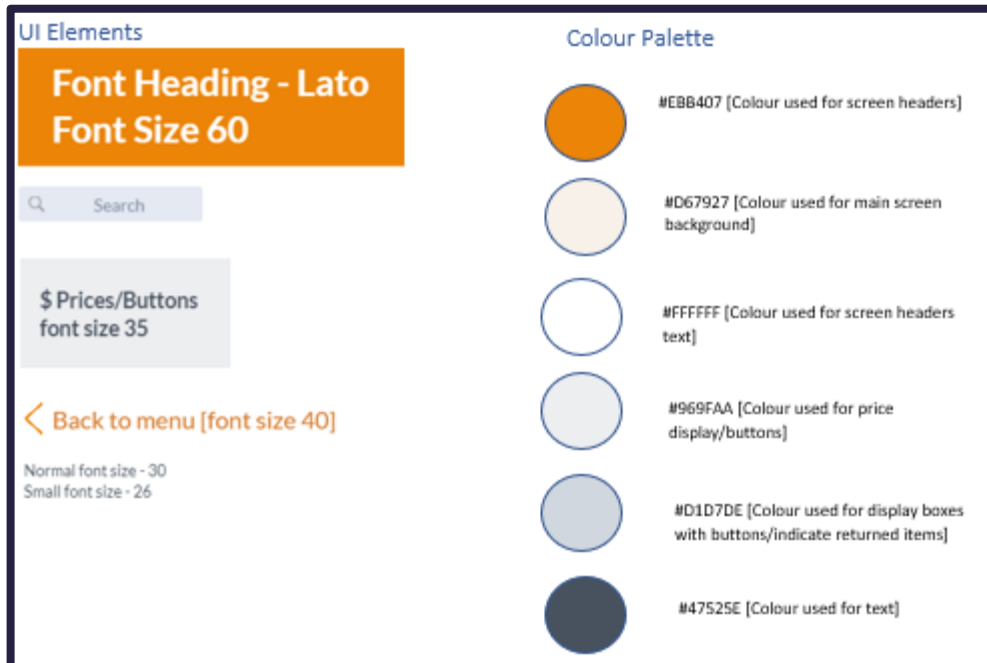
Spending Analysis -

Monthly Analysis, Annual Analysis, Compare Trends, Brand Analysis

Brand Analysis [with logos] -> Branch Analysis [Graph]

- import QR and photo options for receipts were redundant
- made 4 buttons - brand analysis, monthly analysis, annual analysis, compare trends
- not clear which period user's spending was used for analysis
- added option to compare trends of how much user spends on average to what others spend [crowd sourced]
- reconceptualised prototype functionality of feature into 'brand analysis' button

UI Styling Sheet - 29/08/18



Medium Fidelity Feedback - 29/08/18

Interview #1:

- Much more cohesive style
- Easier to understand purpose of each screen
- While all screens return to menu, have to go through multiple screens again to test other features [Returning Items]
 - Should have back button to previous screens as well
- Could have an option to compile items the user wants to consider buying into a 'shopping list'
 - Would be able to organise which items user wants to buy from a particular store

Interview #2:

- Liked the different icons used
- Good use of white space between everything
- Much more structured and makes more sense
- Should be able to switch between annual and monthly analysis screens instantaneously
- Should be able to return to previous screens. Have to go back to menu to go back to the screen I was just in

WEEK 6 WORKSHOP - 30/08/18

Presentation Slides - 01/09/18

General Feedback

- Lack of structure and cohesiveness - very confusing
- Needs a more uniform style and improved graphics
- Many screens didn't have the option to return back to the menu screen

Lack of Structure & Cohesiveness

Redesign

Lack of Clarity

App Overview

Scan Receipt's QR Code
This feature will be used at the point of sale. When you pay for your items, you will be able to scan a QR code containing your receipt information. After scanning, you will be able to confirm if these details are correct.

Manage Receipts
You will be able to see an overview of the receipts you have scanned. When you view your receipt details, you will have the option to regenerate an QR code in order to reprint your items, search for the nearest branches and view the optimal business hours.

Spending Analysis
This feature will present a summary of your monthly, annual and bi-annual spending habits based on the scanned receipts. You will also be able to compare your spending habits with other users based on crowd-sourced data.

[Back to menu](#)

Lack of Clarity

Money based

Spending Analysis

Analysis-based

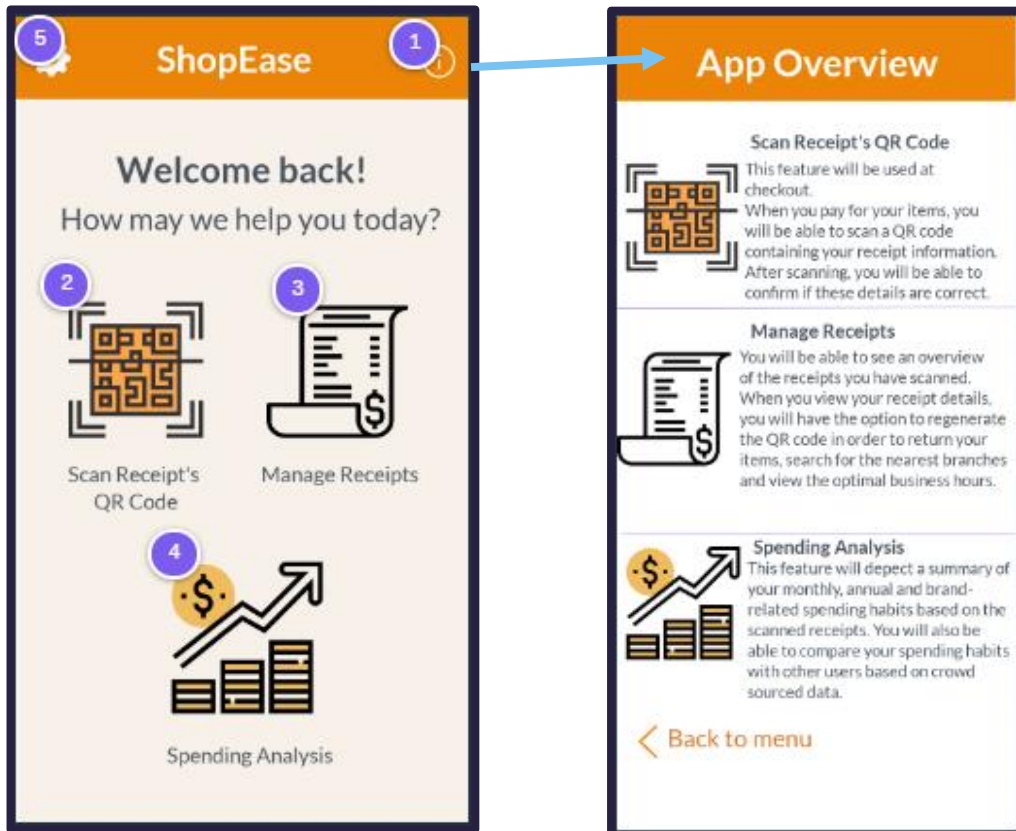
These slides were designed to help illustrate the changes we made from the low fidelity feedback we received to improve our medium fidelity prototype. We mainly considered how to clarify our app features to our users, make our app more visually appealing and consistent and how the user would navigate between screens to avoid the frustration they experienced with our low fidelity prototype.

High Level Fidelity - 03/09/18 to 06/09/18

Link to high fidelity prototype: <https://marvelapp.com/348f4dh/screen/47061900>

As we were not able to fully annotate the medium fidelity before applying changes for the high fidelity prototype, annotations, description of each screen and how they link together will be provided.

Main Menu & App Overview:

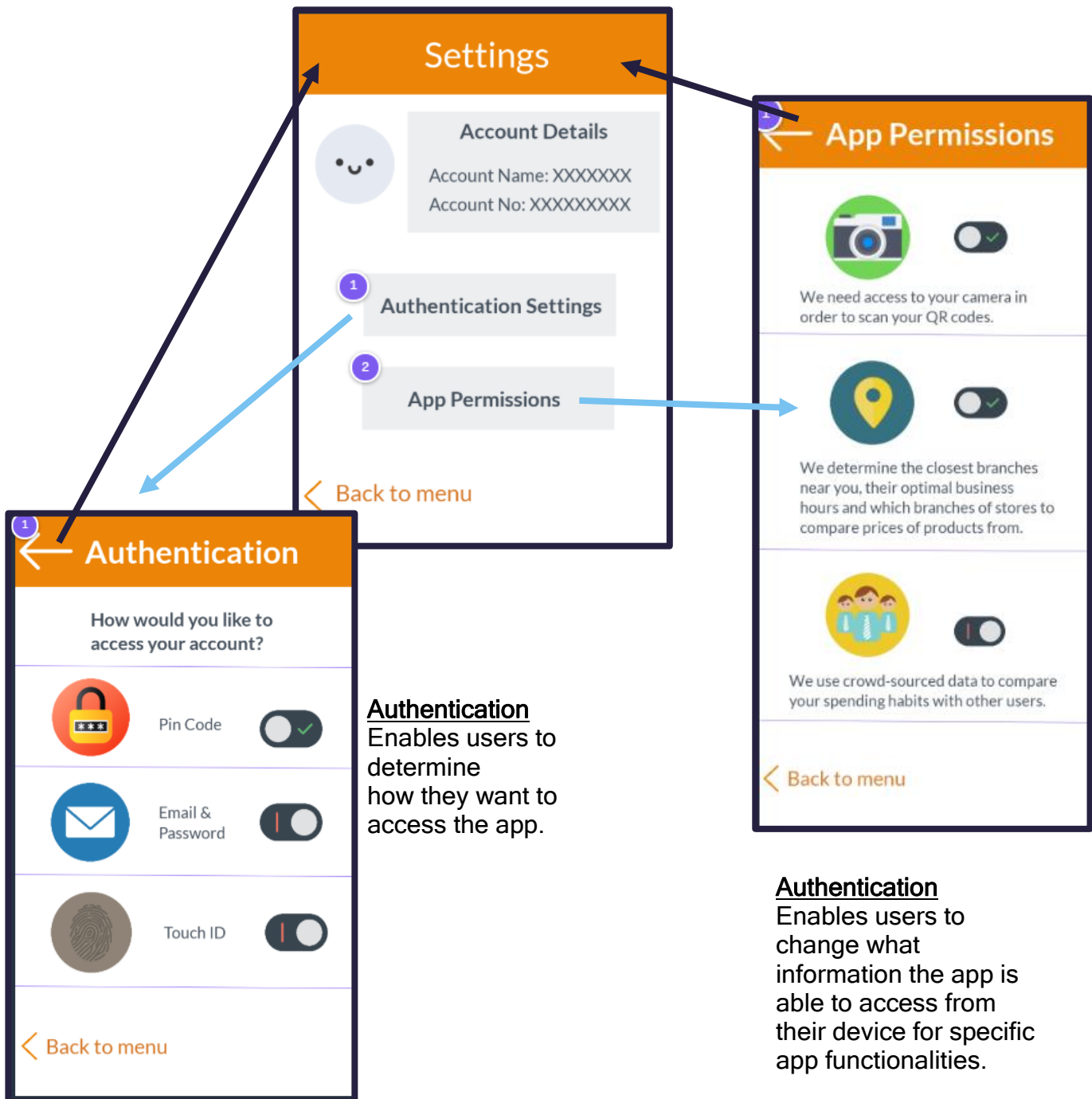


- 1 - App overview page.
- 2 - Adding receipts with QR codes.
- 3 - Access receipt information saved to the app.
- 4 - Overview of user's spending.
- 5 - Settings.

App overview of features to give the user an idea of how each feature is intended to behave.

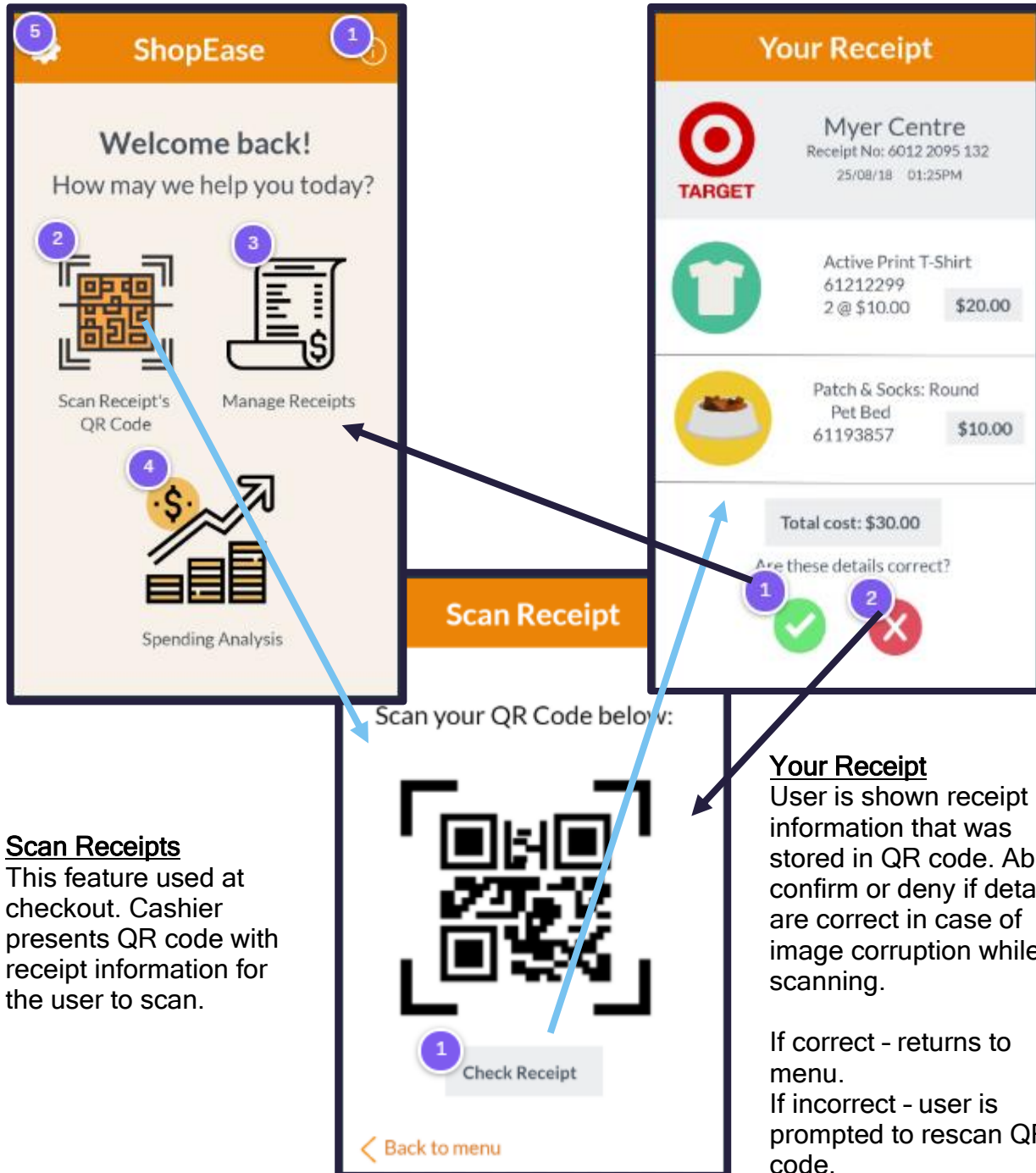
Since our last iteration, we have decided to remove our 'Price Comparisons' feature as it was not an essential feature for the app - was more like a bonus feature.

Because of this decision, we have removed 'Price Comparison' description from the App Overview screen, logo from the menu screen and other related screens.

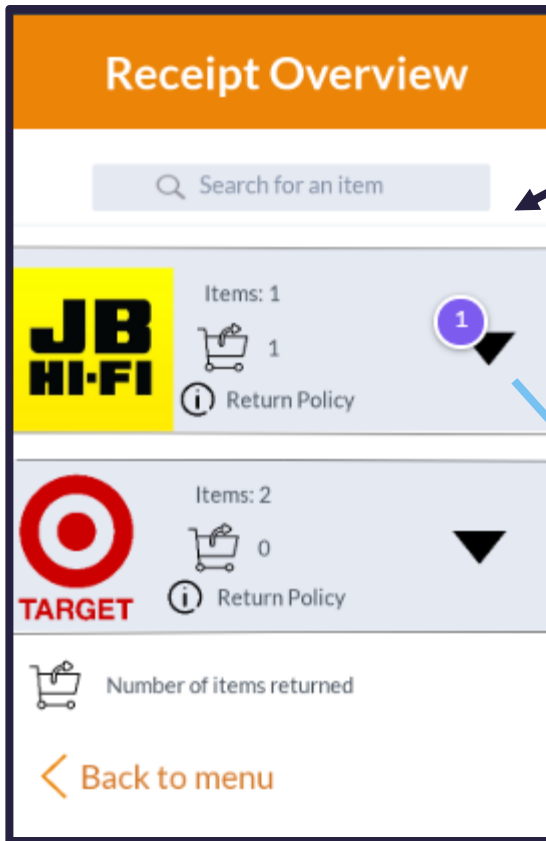


Both of the arrows of the Authentication & App Permissions screens return back to the 'Settings' screen. We did this in-case so that users would be able to return to the parent screen (Settings) from the child screens (App Permissions & Authentication Settings). Otherwise, if one of our users were in the one of the child screens, they would need to return back to the menu and setting screens just to access the other child screen. This was also done to avoid users from experiencing similar frustrations with our low-fidelity prototype where they had to reopen the app to access our other features.

Scan QR Codes

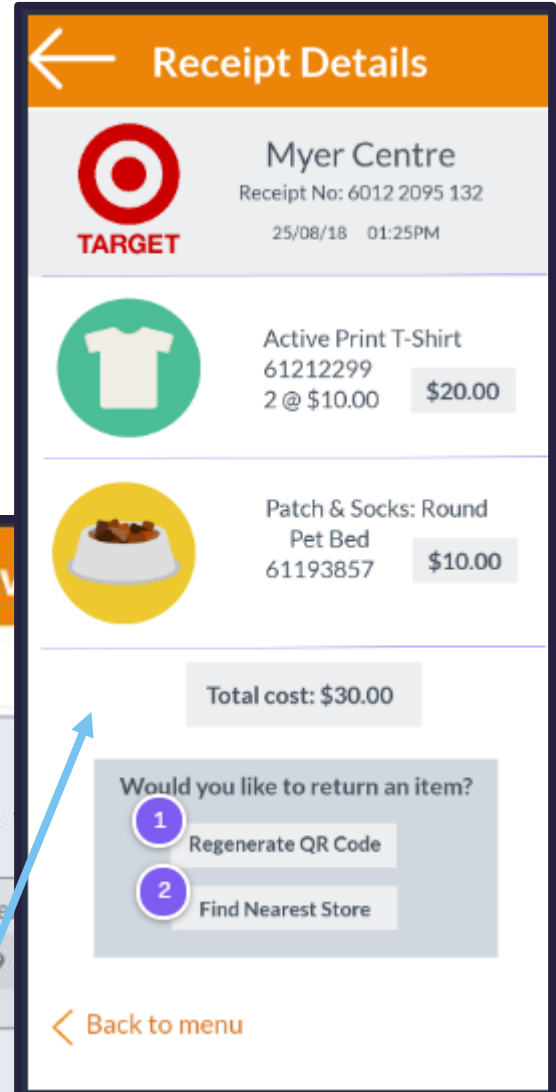
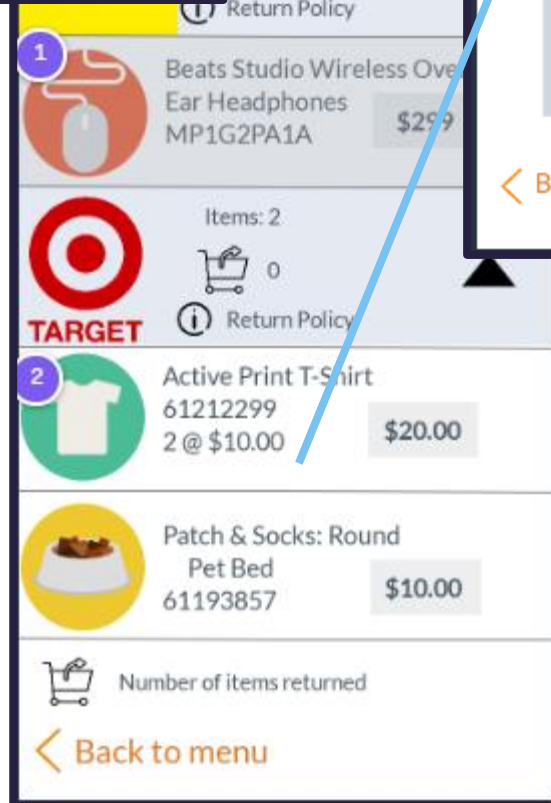


Receipt Overview



Receipt Overview:

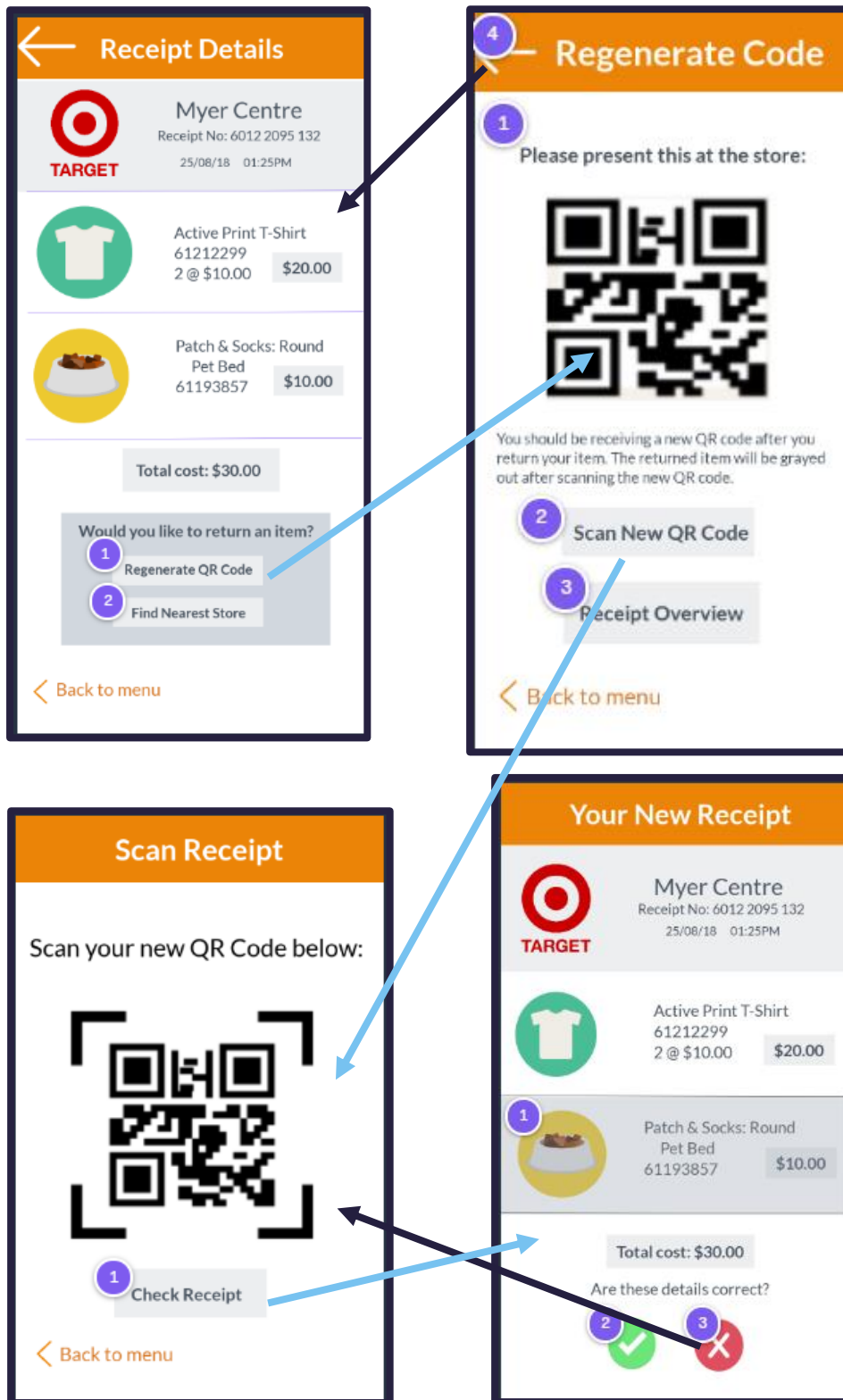
Allows user to access receipt items stored in app. Greyed out items and shopping cart icon illustrate returned items.



Receipt Details

Copy of receipt details. Users are able to regenerate QR code to return an item and determine the closest store and their business hours to return an item.

Returning an Item



Regenerate QR Code

User will be able to regenerate QR code of receipt to present to cashier with their returned item. The cashier will be able to register the item back into their system and edit the QR code to tag the returned item.

Scan Receipt

The cashier will present the user with a new copy of the QR code to scan.

Your New Receipt

Users will be able to see new receipt details where returned item is greyed out.

Business Hours & Branch Locations



Branch Locations

Users able to determine closest branch location.

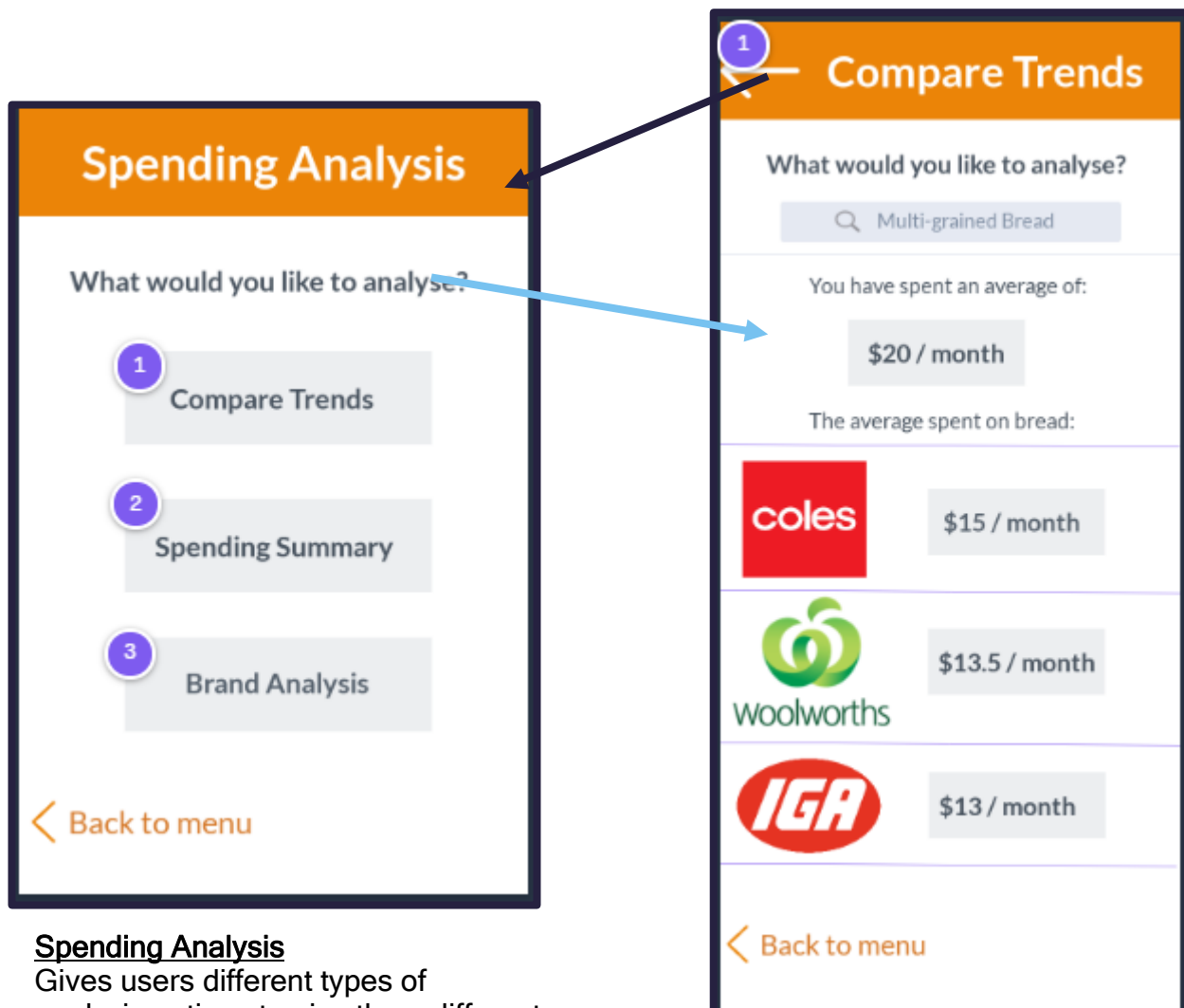
Store Hours

Users able to determine business opening/closing hours as well as the optimal times to visit that particular store.

Both Branch Locations & Store Hours screen are able to return back to either Receipt Details or Receipt Overview pages.

This is to allow the user to return back to the relevant receipt page to quickly regenerate QR code or to view another receipt.

Spending Analysis - Compare Trends



Spending Analysis

Gives users different types of analysis options to give them different perspectives on how much they're spending.

Compare Trends

Allows users to compare how much they spend on average for particular products/brand of products and compare against what other users have spent on average for different stores. This is gathered through crowd sourced data.

If we were able to develop another iteration for this particular feature, we would want to be more specific with the information presented in our Comparing Trends screen. This is so our 'Cautious Charlie' user-base will have a clear idea of what particular products are being purchased from our crowd sourced data and how much they're saving compared to their own purchases.

Spending Summary



Spending Summary

Give the user an overview of what they're spending on average in a monthly or annual basis.

Since our last iteration, we combined Annual & Monthly analysis under one feature (Spending Summary). This was done as users should be able to switch between the two options for convenience. If we were to also consider developing another iteration of this feature, we would want to be able to list out what the user has been spending on specifically for each category. This will allow our 'Extravagant Emily' users to be more financially aware of what they're spending the most of in each section to help them become more resourceful with their spending.

Brand Analysis



Brand Analysis
Enables users to see how much they spend on average for a specific brand of store.

As mentioned before in previous sections, back arrows have been included in many of our child screens to return back to the 'Spending Analysis' screen for easier access to the other child screens of 'Spending Analysis'.