The University of Huddersfield

Designing Information Systems for People

Goaling App

Project Report by Sophie Thomas

1. Introduction

Throughout this project I focused on gathering research through different data gathering methods that form the User Requirements on the app. Using those User Requirement I designed the structure of the app using sitemaps and wireframes.

2. Data gathering

The app I am designing is called Goaling, which assists users in organising different life activities. These include:

- Going on holiday
- Organising social events
- Learning a new subject
- Managing money
- Preparing a meal or choosing a restaurant or ordering a takeaway

Heuristic Analysis

Heuristic analysis was first developed in 1990 by Jakob Nielsen. They are a board set of rules for UX that are used as guidelines for testing a user interface. Within this project I'll be using heuristic analysis to make sure the app I design meets the indented purpose.

Heuristic Analysis on competitor apps

1. Visibility of system status

My Study Life:

Good	Bad
Error messages when fields are not filled (in red – colour of danger)	It is unclear of what to do first (no tutorial or guidance)
Icons are relevant to the page in which it goes to	When a task is added there is no information saying it's added and the screen doesn't go to that page to show the user that it is there

Just Eat:

Good	Bad
Prompts are given so the user know what to do when they are using the app (enter postcode before seeing a list of restaurants)	Some icons may not be easily recognisable to some users
Basket auto updates to show how many items and total price	

Monefy:

Good	Bad

Good use of colour (red for -£ and green for +£) and icons	No indication of what to do first or how to use the app
	Icons may be confused with something else rather than what the app is referring to

Jet2Holidays:

Good	Bad
Prompts given so the user know where to go next when using the app	Some options don't tell the user they can't select something because another field is empty

Party Planner:

Good	Bad
Clearly states how many tasks are within a event	No easy to understand what to do on first glance
	Quite confusing as it makes you have checklists within checklists within checklists
	Doesn't show or indicate how much of the checklist you've completed

2. **Match between system and real world**

All of the apps utilises real world conventions to make the app useable to all abilities. They use icons that resemble real world objects as well as processes that are familiar to.

3. **User control and freedom**

My Study Life:

Good	Bad
Navigation menu on every page allowing the user to navigate to any page on the app at any time	For new users there is too much freedom in terms of there is no guidance on how to use the app

Just Eat:

Good	Bad
Users can browse through any restaurant in their own time	No way to go straight back to the home screen (have to keep pressing the back arrow)
Prompts for first time users (have to enter postcode before seeing restaurants)	Navigation menu isn't on every page (have to go back to the home page to view those pages)
Navigation menu to view more options (orders & sign in)	
Ability to refine	

Monefy:

Good	Bad

Can get to home page from every page	For new users there is too much freedom as there is not hints to how to use the app
Enter custom amounts	Can't add categories – can only use the ones on the app

Jet2Holidays:

Good	Bad
Navigation menu on every page which allows users get back to the home page and other pages quickly	No search facility when selecting a destination or resort
Ability to refine	

Party Planner:

Good	Bad
Users can create as many events and checklists within that event	No tutorial or hints on how to use the app for new users

4. Consistency and standards

All the apps use a consistent colour scheme, words that are familiar and recognisable icons.

5. Error prevention

Errors only appear if the user hasn't entered something or haven't performed an action and when this happens an error message appears explaining what the user needs to do rather than the app crashing.

6. Recognition rather than recall

All the apps I've looked into aren't complex in terms of how many pages they have. This means that the user can access all the pages through a small amount of steps.

For the Just Eat and Jet2Holidays app it could have been better for the users if they had a home button or breadcrumbs so they can go back to a certain step or restart the process.

7. Flexibility and ease of use

My Study Life:

Good	Bad
Saves what information the user has inputted	Doesn't suggest inputs that the user has entered previously

Just Eat:

Good	Bad
Saves users details (address/bank details) to make ordering again faster	
Stores previous orders and allows users to re-order	

Monefy:

Good	Bad
Saves what information the users has inputted	Doesn't suggest inputs that the user has entered previously

Jet2Holidays:

Good	Bad
Allows users to save holidays	No sign in which means if used on another device it won't be able to bring up the information entered on the primary device
Saves users preferred departure airport	

Party Planner:

Good	Bad
Saves what information the user has inputted	No sign in which means if used on another device it won't be able to bring up the information entered on the primary device

8. Aesthetic and minimalist design

My Study Life:

Due to the nature of this app, most of the information displayed is inputted by the user. The app doesn't clutter the information entered allowing them to easily view the tasks and exams they have.

Just Eat:

Good	Bad
The app sorts the restaurants so you see the most relevant first	
User can refine the list so it's tailored to what they want to eat	
Menu design is separated into categories (soups/curry dishes) making it easier for the user to find the dish they want	

Monefy:

Good	Bad
Utilises drop down lists to show extra details how much has been spend in each category	Cluttered look in terms of the placement of all the icons

Jet2Holidays:

Good	Bad
Put additional information onto other pages and under tabs	The list for destinations and resorts in very hard to read as the text is small making it seem cluttered

Party Planner:

As this app is built upon the user inputting their own data. The app keeps the user information in a block layout and checklists to keep it from being unreadable.

9. Help users recognise, diagnose, and recover from errors

On all apps when errors do occur they are shows in a user friendly message (not code). Some even use colours and icons to represent what is happening.

10. Help and documentation

My Study Life:

Good	Bad
Information is easy to read (privacy policy and terms of service follow the standard structure of those documents)	The information is under Settings which could be hard for users to find
Allows you to see ideas from other you use the app	The information isn't on the app which means that the users are redirected to their website
The user can get support by contacting them through a contact form	
Has plenty of articles of how to use each part of the app	

Just Eat:

Good	Bad
Help is separated into categories	Text isn't easily readable (the words are too close to the edge of the screen and the screen goes really far to the right for no reason)
All help information is viewable through the app	

Monefy:

No help or app documentation on the app or website.

Jet2Holidays:

Good	Bad
FAQ's page on their website	No help or documentation on the app
App shows contact information	No contact form (have to call)

Party Planner:

No help or app documentation on the app or website.

Competitor Analysis

To get a sense of what apps are already out there I'll be looking into the features they have and what is good and bad about the app so I know what features to have on my app and what to avoid.

My Study Life

Good	Bad
Allows both students and teacher to utilise the app	Have to sign up/in to be able to use the app
Makes you feel welcome with a welcome message and information about how to the use the app	App feels like any other Google app
Various features (calendar, tasks, exams and schedule)	A little confusing about where data should be entered as there are quite a lot of pages and tabs
Good interactions and animations	

Just Eat

Good	Bad
No sign in needed to browse the app	No way to compare (can't compare prices or rating on cuisines – have to do it manually)
Users can refine their search (delivery, list by, cuisines and custom search)	When prices are updated you see both prices (old and new)
App customises the home screen (shows what places you've recently viewed)	
Shows relevant information about the restaurant after search (star rating, number of reviews, delivery charge and minimum spend)	

Monefy

Good	Bad
No sign in needed to browse the app	Home screen is very confusing. Too many options and elements on the page
Welcome message and tutorial to make you feel welcome and so you know how to use the app	Very confusing the navigate – get lost in the pages
Good animations	
Good use of icons and colour (the placement of icons are round the total money in the middle which creates a pie chart to visually show your spending)	

Jet2holidays

Good	Bad
No sign in needed to browse the app	List of destinations is very cluttered – hard to read (no hierarchy and text is too small)
Easy start up wizard (select airport, occupancy, destination)	App doesn't notice your touch sometimes

Good use of images and colour	The colours the app uses don't go well together. Uses too many different colours (red, blue, orange, green)
Shows you relevant information after search (star rating and price)	Quite a lot of information on the page – can be quite confusing on first glance
Users can filter the search (budget, star rating, room type, suitability)	No option to share the holidays with friends or family
Holidays can be saved (makes it easier to go back and compare different holiday locations)	

Party Planner

Good	Bad
No sign in needed to browse the app	Long licence agreement to read before getting into the app
Easy to add events and checklists within an event	Have to create checklists within checklists (hard to find where you've put tasks)
	Interface design is very basic (one colour and looks like a standard Google app)
	No share options (can't tell people about the event through the app)

Competitor Comparison

Task	App 1	App 2	App 3	App 4	App 5
Sign in/up to use the app	Yes	No/Yes	No	No	No
Welcome Message	Yes	No	Yes	Yes	No
Refine Search	No	Yes	No	Yes	No
Relevant Info	Yes	Yes	Yes	Yes	Yes
Animations	Yes	No	Yes	No	No
Icons	Yes	Yes	Yes	No	Yes

Observation Tables

Observation 1

No tutorials for new users | HIGH CONCERN

When testing the competitor apps I found that most of them didn't have a tutorial of how to use the app or easily accessible help. This means that for some more complex apps some users may not understand how to use the app or what to do first.

Recommendations:

- Ensure that a tutorial is available for new users (allow it to be skipped for more experience users)
- Make help documents on how to use the app easily findable

Observation 2
Messages weren't effective or useful | HIGH CONCERN

I found that in some apps the messages given to users weren't useful. One example was that when a task was added it didn't tell the user that it had actually been added.

Recommendations:

- Make sure after the user inputs something into the app that clear and useful messages are given

Observation 3
Not able to access all pages | MEDIUM CONCERN

I found that in the more complex apps I tested it was a lot harder to access all the pages quickly. This was due to the navigation menu not being accessible on all pages and a home button not being on every page.

Recommendations:

- Ensure that there is a way for the user to access every page (through a navigation system or breadcrumbs)
- Allow the user to return to the first screen by providing a home link or button

Observation 4
Search facility wasn't available | MEDIUM CONCERN

Within some apps a search facility wasn't provided which could have saved users time in finding what they wanted from the app. An example was on the Jet2Holiday's app you couldn't search for a destination or resort, instead you had to scroll through a list.

Recommendations:

- Allow users to search through the app to give them more freedom and control while also speeding up the process for them

Observation 5
Help and documentation pages weren't there | MEDIUM CONCERN

After testing the competitor apps I found that the help and documentation pages were either not there, on an external website or unreadable. Not having these could make it hard for a user to find information about the app.

Recommendations:

- Ensure that help and documentation pages are on the app for users to find if they need them
- Make those pages readable

Observation 6
No sign in option | LOW CONCERN

I found some apps didn't have a sign in/up option. This means that the information that the user inputs into the app can only be stored on that device. By not giving users the ability to have an account means that they aren't able to use the app on multiple device because their data won't be saved.

Recommendations:

- Give the users the option to sign up

Observation 7
No suggested inputs on forms | LOW CONCERN

On some apps I tested I found that no suggested inputs came up when filling in a form. Having this function can save the user time.

Recommendations:

- Store user information to provide useful inputs.

User Research
To gather research about what management apps people use, what makes people download an app and what makes people uninstall an app I created an online survey which I shared on social media to collect responses.

Using the results I can make sure my app is downloaded for the right reasons and doesn't get uninstalled.

[Survey results can be found in Appendix 1.]

3. Key findings from data gathering

I've gathered a lot of data about what my app will do and how my competitor apps work. I've gathered these through doing a heuristic analysis, doing competitor analysis, observation tables and user research.

Through doing competitor analysis I can see that when I come to design my app I need to make sure it includes relevant information, the ability to refine search if there is a need for it and use icons for visual representation. I should also consider having a welcome message for new users and a sign up option if it improves the experience for the user.

From doing heuristic analysis on my competitor apps I was able to form observations of what apps weren't doing well. When I come to design my app I will make sure that I consider having:

- Tutorials on how to use the app for new users
- Provide useful message when a user performs an action or inputs data
- Ensure the user is able to access every page as this allows them to get to where they need to be much faster and in less steps
- Allow user to search through the app where needed and provide refinement to allow them to tailor the search to them
- Make sure help and documentation pages are on the app and are easily readable
- Allow the user the ability to create an account as this will allow them to access their data on multiple devices
- Allow suggested inputs on form elements to make the process faster for the user

Through my survey I can see that when I come to design my app I need to make sure that it is easy to use, the functionality of what the users need to do are there, the interface looks appealing and that it provides a person with someone that no other app does.

Using this data I can now see what I can include on my design that will make someone use the app over my competitors. The things that I'll be consider when designing the app will form the trigger points that will make someone use this app over another.

4. User requirements and personas

Persona's
Chloe Gareside

Chloe Gareside

Gendar: Female
Age: 36
Occupation: Retail Manger (£22,000)
Location: Manchester, UK

Chloe is retail manger working in the Manchester area. She is a single parent with 2 children ages 6 and 11. At the moment she is finding it hard organise many different aspects of her life due to working all week. This struggle is mainly due with all the information she needs to so many different places that she can't keep up with.

Chloe's needs:

• Make her more organised with tasks such as events, money and preparing meals for her and her children through reminders
• She needs an app that is easy to use and navigate round as she isn't very tech-savvy
• She needs to be able to do a task through the app quickly due to her busy schedule (suggested inputs and the ability to remember her details that she has already entered on the app)

Dale Radford

Dale Radford

Gendar: Male

Age: 21

Occupation: Student

Location: Newcastle, UK

Dale is a student living in England. His only income is the loan he gets from student finance and any 'pocket money' from his parents. As a student he is finding it hard to find time to manage his money resulting him not sticking to budget, organising social events with his friends from both University and home and deciding on what food to buy and eat.

Dale's needs:

- The app needs to show him what money he has left spend that week and remind him when he is low on money (through alerts)
- He needs the ability to invite and share events with friends through a variety of mediums
- He needs the app to set and send out reminders for events and social activities he is attending
- He needs a variety of simple and cheap meals to choose from
- The app needs to give suggested inputs and remember his details to quicken the process

I chose these two personas to make sure my app caters for a variety of different people, whether they are used to using technology or not. Having two very different people means that the features on the app are suitable for a range of users with a variety of needs.

User Requirements

Claim/finding from research source	User requirements	Rationale
User Research: Functionality of the app	The app must provide the appropriate functionality for the end user to be able to perform the variety of tasks.	To keep both user Chloe and Dale using the app the functionality needs to be appropriate. For example, they both need to be able to organise themselves through using the app. Specifically, for Chloe she needs the app to be easy to navigate so she can use

		it with ease so it doesn't take up too much of her day. Dale needs a bit more functionality as he is a lot more tech-savvy. He will need features such as reminders, the ability to invite people and share events.
Observation 7 & Competitor Analysis: Suggested Inputs Some apps didn't have this feature resulting in the process taking longer than it could have taken.	Giving the user suggested inputs on forms should be implanted to quicken the process.	Users Chloe and Dale both need to use the app quickly due to their schedule.
Observation 1 & Competitor Analysis: Tutorials/Guidance for new users Some apps (especially the more complex apps) didn't provide any tutorials or guidance on what to do while using the app to first time users.	For first time users a simple tutorial of what the user should do next should appear with the ability to skip for those who are more tech-savvy.	For user Chloe this bit of guidance will help her in knowing how to effectivity use the app and quicken the process when she uses it after that first time. As Dale is more tech-savvy he has the option to view the tutorial or skip it.
Observation 6 & & Competitor Analysis: No sign up option Some apps didn't have a sign up option meaning that the app couldn't save their data across multiple devices.	The app should give the user the option to sign up and have an account so they are able to use the app with their data saved across different devices.	For both user Chloe and Dale this will help them keep using the app and using it to organise themselves as they can access it from any device they have not just the one they first downloaded the app on.

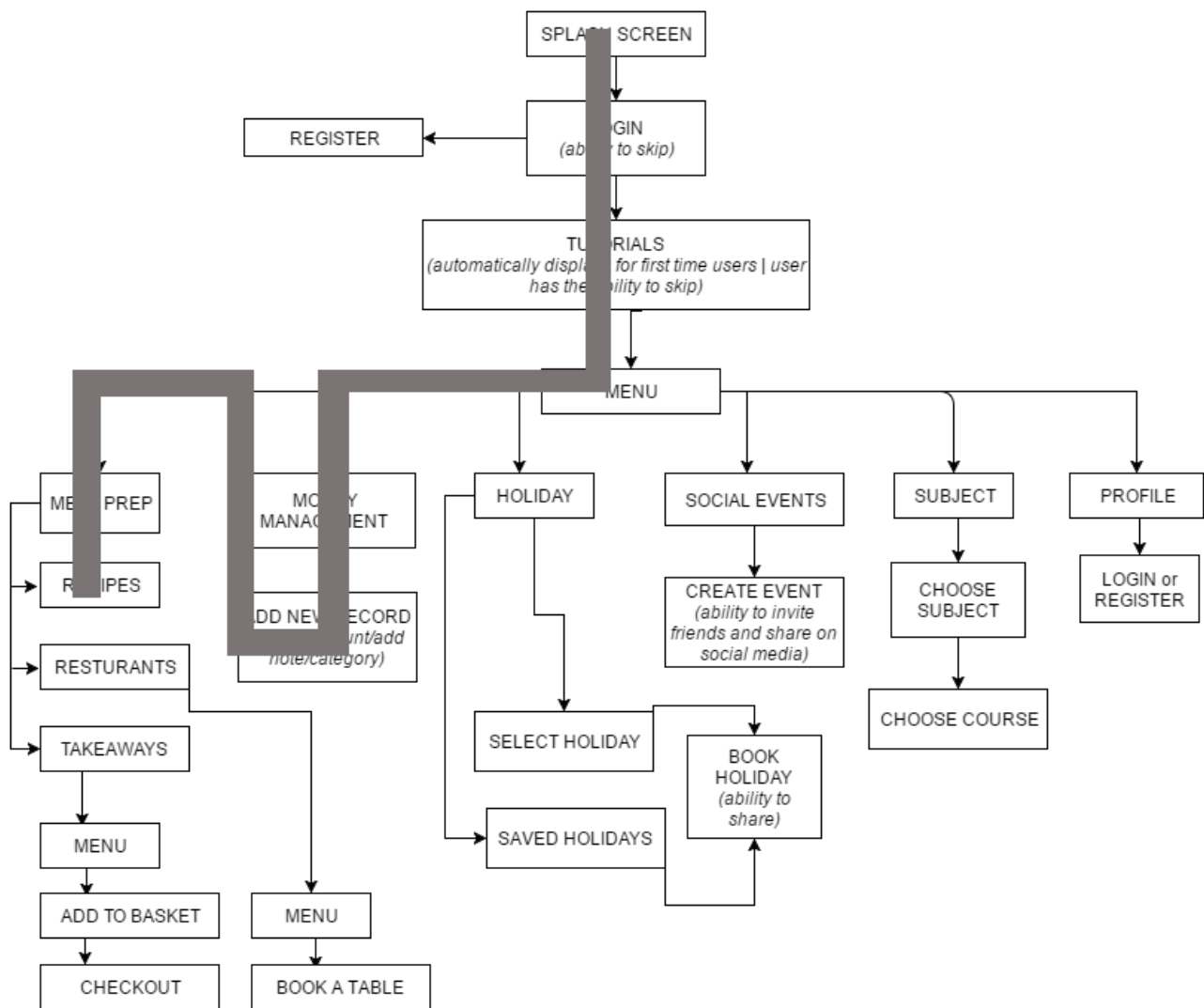# 5. Site Map and task flow

Sitemap

After going through different ideas of what pages could be on the app I have created a sitemap to show what pages will be on the app. [See Appendix 2 for older versions]. I decided on this sitemap compared to the others because they are prompted to sign in which is one of my user requirements as well as tutorials for guidance on how to use the app. Both of these can be skipped giving the user more control and freedom.
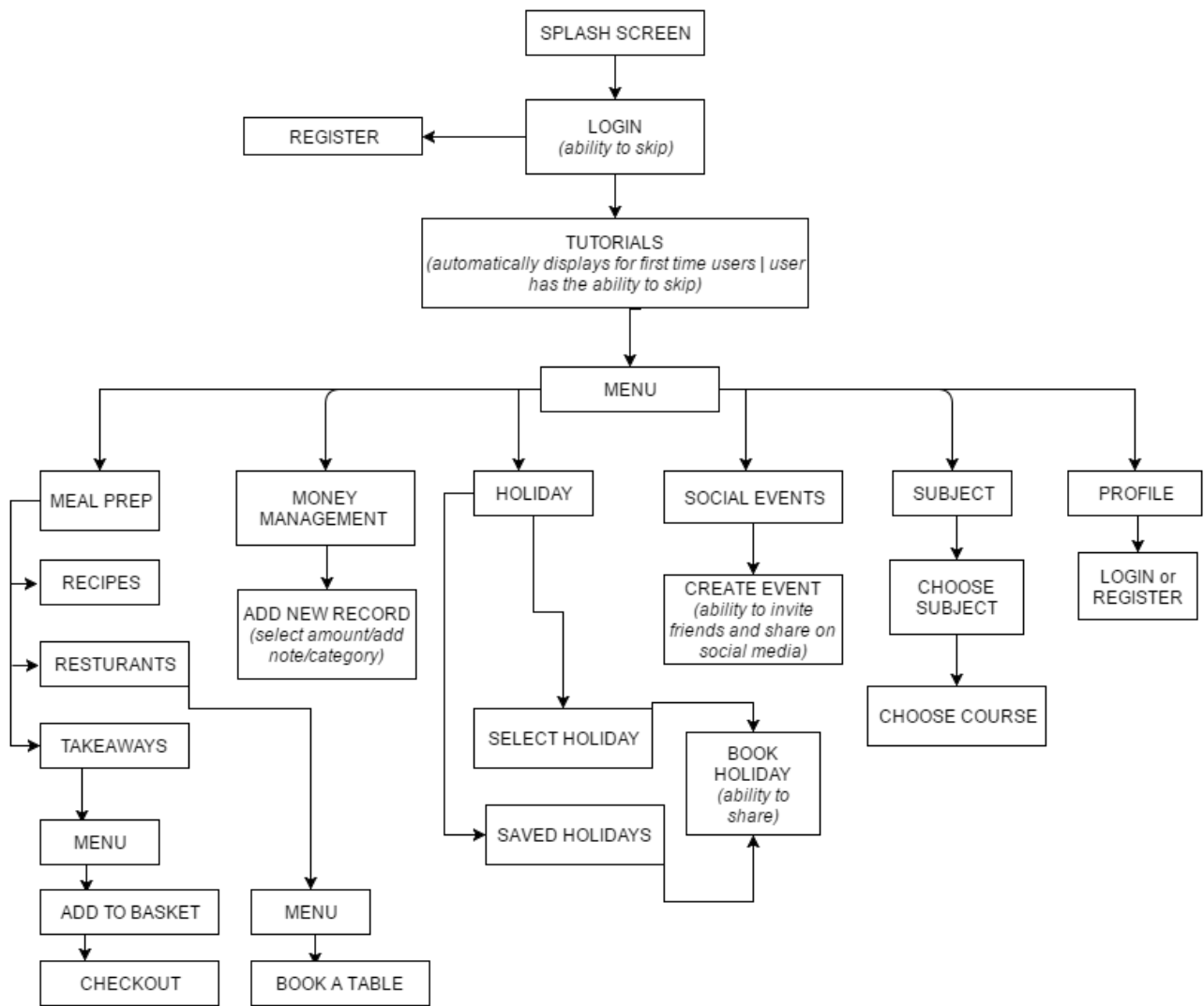
I have highlighted the pages from my sitemap that I'll be wireframing. I am going to wireframe these pages because they are the main pages that are required for the app to be functional.

```
                              SPLASH SCREEN

                                     │
                                     ▼
            REGISTER  ◄──────── LOGIN
                                (ability to skip)

                                     │
                                     ▼
                               TUTORIALS
                    (automatically displays for first time users | user
                                has the ability to skip)

                                     │
                                     ▼
                                  MENU
```
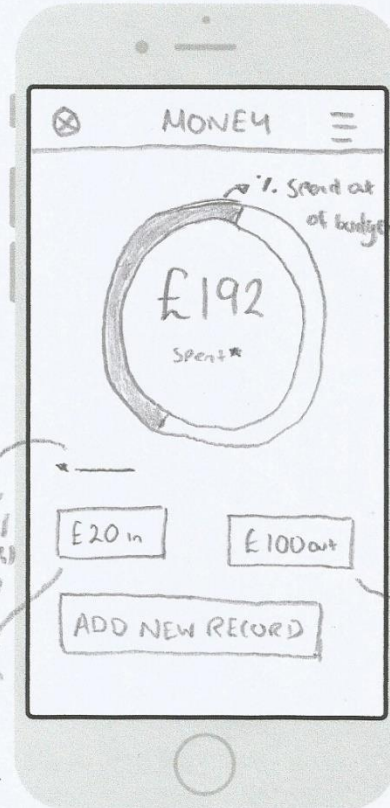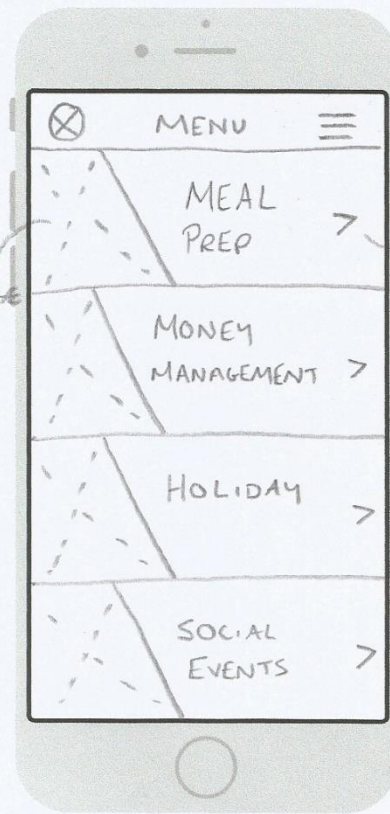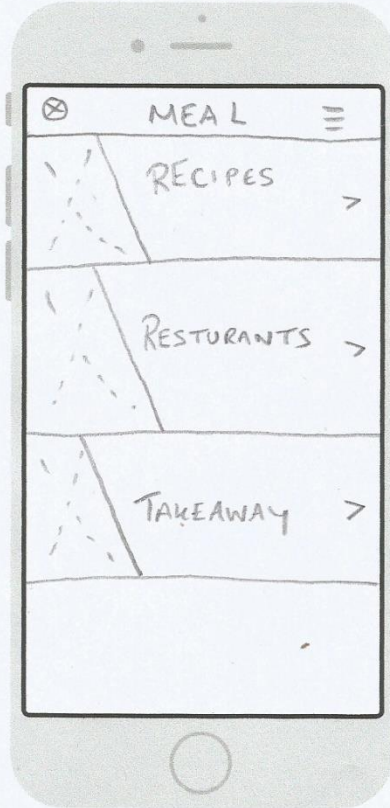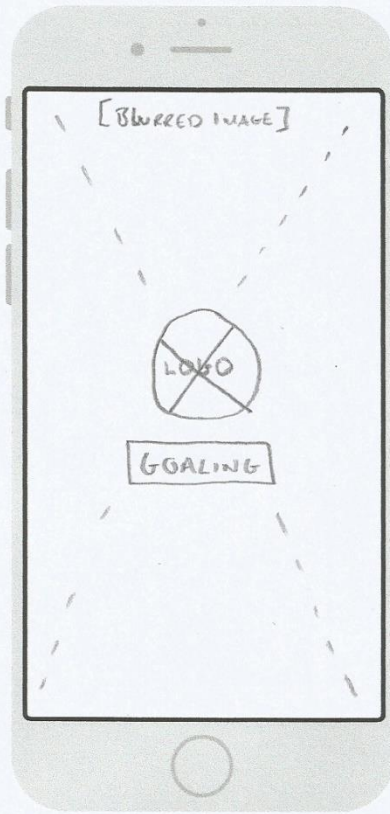
```
MEAL PREP      MONEY         HOLIDAY     SOCIAL EVENTS    SUBJECT      PROFILE
              MANAGEMENT

RECIPES                                 CREATE EVENT      CHOOSE       LOGIN or
                                        (ability to invite SUBJECT     REGISTER
                                        friends and share on
RESTURANTS    ADD NEW RECORD            social media)
              (select amount/add                          CHOOSE
              note/category)                              COURSE
TAKEAWAYS

                            SELECT HOLIDAY    BOOK
                                              HOLIDAY
                                              (ability to
MENU                                          share)
                            SAVED HOLIDAYS

ADD TO BASKET  MENU

CHECKOUT       BOOK A TABLE
```

Task Flows

On this task flow, which is based on Chloe, she is adding a new record to her money management side of the app and looking for new recipes for what she can cook for her children.

6 Wireframes

To develop my wireframes I used my sitemap to understand how the pages all relate as I want end users Chloe and Dale to be able to quickly perform tasks on all aspects of the app.

I sketched out many different designs [see Appendix 3 for paper versions] before developing those ideas into my final wireframe set.

[BLURRED IMAGE]

⊗ LOGO

GOALING

⊗ MENU ☰

MEAL PREP >

MONEY MANAGEMENT >

HOLIDAY >

SOCIAL EVENTS >

LOGO / PAGE TITLE / MENU ICON

for Apple iPhone 7

IMAGE

ARROW

⊗ MEAL ☰

RECIPES >

RESTURANTS >

TAKEAWAY >

⊗ MONEY ☰

% Spent out of budget

£192

Spent★

£20 in

£100 out

ADD NEW RECORD

Extra social money day

a Green

Red

Rapid Prototype Design Template (Illustrator / A3 / Scale 1:1)

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CIT 2351 Visual Design
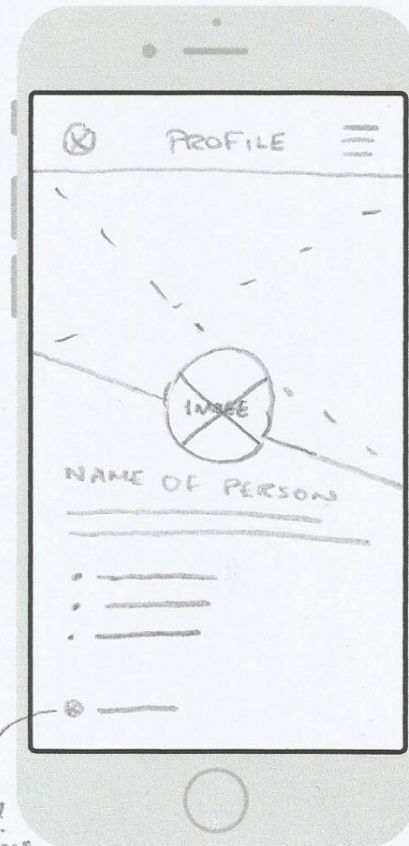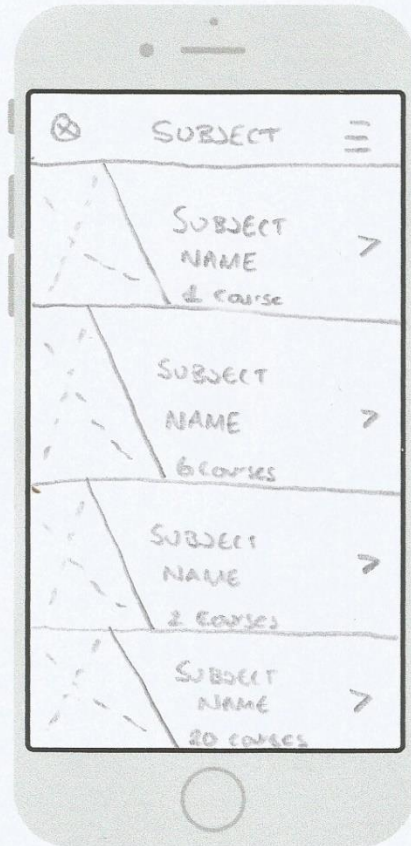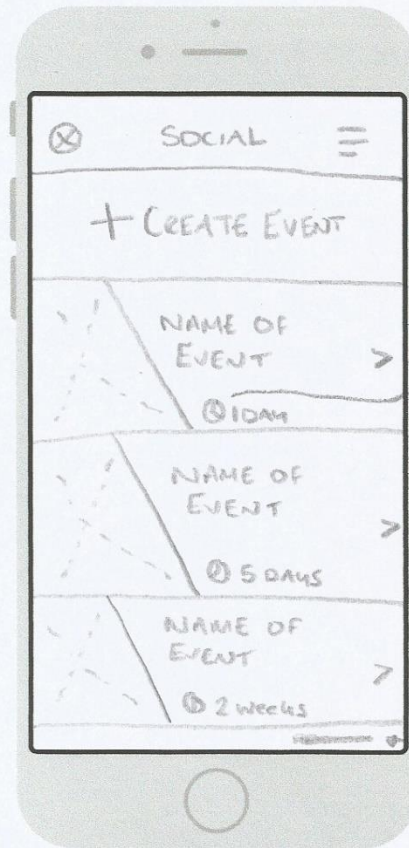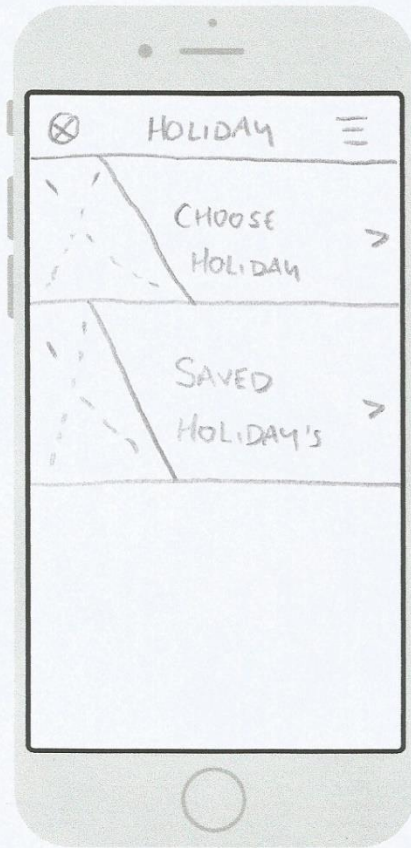
HOLIDAY

CHOOSE HOLIDAY >

SAVED HOLIDAY'S >

SOCIAL

+ CREATE EVENT

NAME OF EVENT >
⏱ 1 DAY — Clock Icon

NAME OF EVENT >
⏱ 5 DAYS

NAME OF EVENT >
⏱ 2 weeks — Previous events

SUBJECT

SUBJECT NAME >
1 course

SUBJECT NAME >
6 courses

SUBJECT NAME >
2 courses

SUBJECT NAME >
20 courses

PROFILE

IMAGE

NAME OF PERSON

Edit / Settings

Rapid Prototype Design Template (Illustrator / A3 / Scale 1:1)
© Copyright Graham Watts 2016

for Apple iPhone 7

CIT2351 Visual Design

②

The above images are my final wireframe set. I decided on this layout because it the content a good clear structure. This block style layout also allows room for growth if new tasks need to be added. The main thing I kept in mind was user requirement 1 as both users needed to go through tasks quickly. With my design I made sure that you can get to each page in a minimal amount of steps and kept the design simple so that all abilities could easily use the app.

7 Key Design Changes

- Each page can be accessed with a minimal amount of steps – User Requirement 1
- Tutorials appear straight away for first time users (user has the ability to skip) – User Requirement 3
- Sign in/up option when users first opens the app and can sign up/in via the menu (user has the ability to skip but some features won't be available to those who don't have an account) – User Requirement 4
- The app design is simple but provides the functionality needed for the app to be used by both Chloe and Dale – User Requirement 1

1. User Testing

Throughout this project I completed two sets of user testing on my Goaling app. This involved designing paper prototypes that were user-friendly and getting people whom are in my target audience to test the functionality and design of the app. The approach to user testing I took was sending out surveys, conducting interviews and observing someone performing tasks on my app.

From doing user testing it revealed that the overall design and functionality of my app was suitable for my target audience and the main design changes that needed to be made were adding a secondary navigation, adding a home page with notifications and offers and making the logout button more visible.

2. Paper Prototyping

- Prototype 1

The screens below is the first prototype of my app which is based off the sitemap and task flows I previously created. The app goes through the five tasks (preparing meals, creating an event, booking a holiday, learning a subject, managing money) that the user must be able to do as well as other functionalities I added which I found were important in my user research.

Screen 1 — NAME: MEUN

NAME: MEUN ≡

STARTERS
- ———— £10
- ———— £5.99
- ———— £2.89

MANS
- ———— £14.99
- ———— £8.99
- ———— £12.99
- ———— £6.45

☑ 1 item | CHECKOUT

Screen 2 — MONEY

MONEY ≡

% Spend out of budget

£192
Spent ★

£20 in   £100 out

ADD NEW RECORD

Screen 3 — NEW RECORD

NEW RECORD ≡

IN   OUT

Record Name

£

ADD RECORD

Screen 4 — HOLIDAY

HOLIDAY ≡

CHOOSE HOLIDAY >

SAVED HOLIDAY'S >

Screen 5 — SELECT HOLIDAY

SELECT HOLIDAY ≡

DESTINATION from £169 >
DESTINATION from £269 >
DESTINATION from £271 >
DESTINATION from £399 >
DESTINATION from £569 >
DESTINATION from £680 >

Screen 6 — DESTINATION

DESTINATION ≡

DESTINATION NAME
from £169

Arr 03/03/17   Dept 03/12/17

Add People

☑ Airport

total £229   BOOK NOW

Screen 7 — SOCIAL

SOCIAL ≡

+ CREATE EVENT

NAME OF EVENT >
⊙ 10AM

NAME OF EVENT >
⊙ 5 DAYS

NAME OF EVENT >
⊙ 2 WEEKS

Screen 8 — CREATE EVENT

CREATE EVENT ≡

EVENT NAME

EVENT DESC

03/03/14 to 03/03/17
LOCATION
EVENT IMAGE [choose]

CRETE

Screen 9 — EVENT NAME

EVENT NAME ≡

EVENT NAME
————————

⊙ ——— ◦ ———

< SHARE

Screen 10 — SUBJECT

SUBJECT ≡

SUBJECT NAME >
1 course

SUBJECT NAME >
6 courses

SUBJECT NAME >
2 courses

SUBJECT NAME >
20 courses

Screen 11 — COURES

COURES ≡

COURE NAME >
⊙ ———

COURSE NAME >
⊙ ———

COURSE NAME >
⊙ ———

Screen 12 — COURSE TITLE

COURSE TITLE ≡

COURSE NAME
⊙ ———

Lesson 1

▷

- Prototype 2

The screens below is the second iteration of my app which is based off the feedback given through the surveys and interviews. The main changes I made were adding a sub-navigation, adding a home page which included notifications and offers, re-designed the restaurant/takeaway menu pages and the profile page, added a colour system for the restaurant and takeaway page and added a logout button.
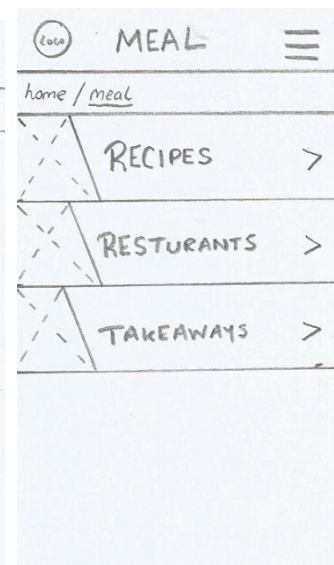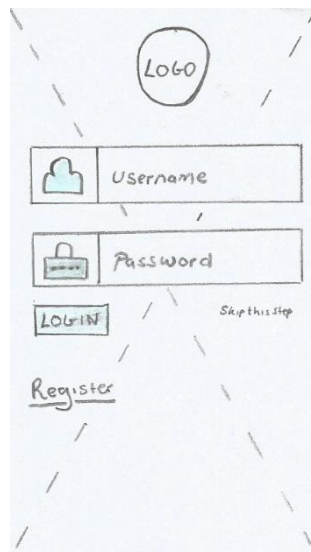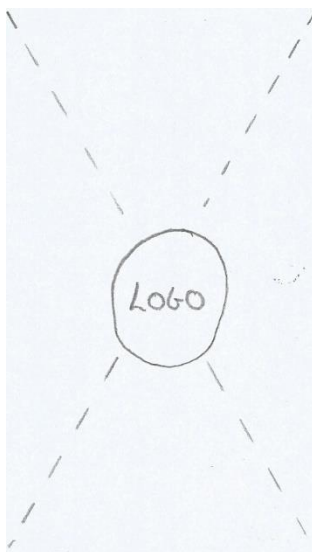
RECIPES
home / meal / recipes

- RECIPE NAME — 1hr 30mins >
- RECIPE NAME — 40mins >
- RECIPE NAME — 2hrs 10mins >
- RECIPE NAME — 30mins >
- RECIPE NAME — 30mins >

RECIPE NAME
home / meal / recipes / recipe name

RECIPE NAME
1hr 30mins

RESTURANTS
home / meal / resturants

- NAME — Open >
- NAME — Open >
- NAME — Open >
- NAME — Open >
- NAME — Closed >

MENU
home / meal / resturants / menu

STARTERS
- NAME — £1.99
- NAME — £2.59

MAINS
- NAME — £8.99
- NAME — £12.98

BOOK A TABLE

TAKEAWAY'S
home / meal / takeaways

- NAME — Open >
- NAME — Open >
- NAME — Open >
- NAME — Opening Soon >
- NAME — Closed >

MENU
home / meal / takeaways / menu

STARTERS
- NAME £2.69 +
- NAME £3.99 +

MAINS
- NAME £12.99 +
- NAME £13.59 +

🛒 1 item | CHECKOUT

MONEY
home / money

£192
Spend *

*this week ▾

IN: £20   OUT: £100

ADD NEW RECORD

NEW RECORD
home / money / new record

MONEY IN OR OUT
IN   OUT

RECORD NAME
name

ADD

HOLIDAY
home / holiday

- CHOOSE HOLIDAY >
- SAVED HOLIDAY'S >

CHOOSE HOLIDAY
home / holiday / choose holiday

- DESTINATION — from £169 >
- DESTINATION — from £172 >
- DESTINATION — from £206 >
- DESTINATION — from £259 >
- DESTINATION — from £399 >

BOOK HOLIDAY
home / holiday / choose holiday / Book

DESTINATION NAME
from £169

DATE
03/03/17 ▾ to 12/03/17 ▾

PEOPLE
1 adult

total = £229 | BOOK NOW

EVENTS
home / events

CREATE EVENT

- EVENT NAME — 1 day >
- EVENT NAME — 3 days >
- EVENT NAME — 3 days >
- EVENT NAME — 5 days >

VIEW PREVIOUS EVENTS

3. User Testing Plan

- ### The approach

When going through my testing process I'll be gathering both qualitative and quantitative data as this will allow me to easily measure whether the app works and is suitable as well as gaining a sense of where the user is having problems and what their suggestions for improvements are.

Having the two is important as quantitative data provides numbers while qualitative gives descriptive feedback that can fill the gaps of that quantitative data. This will allow me to see pattern trends. This type of data will be gathered through closed and open questions.

- Planning the tests

I'll be sending out surveys, conducting interviews and doing an app walkthrough with someone to gather feedback on my app. By doing all of these it will allow me to gather a variety of data. The surveys will provide more numeric data while the interviews will allow me to ask questions to see why they said a certain answer and the walkthrough will allow me to observe how long someone takes to complete a task and what problems they come across when using the app. All of this will provide me with a good understanding of whether my app is suitable for the target audience and what can be done to improvement the app to make performing those tasks easier and more quickly.

The style of questions I'll be using are a mixture of open-ended questions, yes or no questions and questions that use a likert scale. In the second test I'll be asking more closed questions relating to specific task flows. On the likert scale I am going to give them a scale of 1 to 4 to avoid users to select natural option throughout, it forces them to either agree or disagree with the statement.

Having a mixture of questions gives the user more of an opportunity to give their input of the app. By having closed questions I'll be able to easily analyse the answers to whether the app is suitable for that person. Using both style of questions will give me both quantitative and qualitative data.

- User selection

To gather the best feedback of my app I am going to send it out to people within the age range of my persona's as these are the people the app is designed for. I will be selecting different users for each test based on technical ability to find out what problems a variety of people are having when using the app.

- Analyse the results

To analyse the results of the user tests I'll be looking through the data to see what patterns occur and find out what specific problems users have.

4. Key findings from data gathering

- Pilot Test

Before sending out my first test I completed a small pilot test with Emily and Nick. I used this test to check if the questions that I was planning on asking users where the type of questions that were going to get the answers needed to know whether the app is suitable for the target audience.

From this test I found that the questions were to open-ended which didn't give me answers that I could measure and that I needed to add more questions about the different tasks flows so I could analysis whether the process of a user performing was easy and quick.

- Introduction to Study 1 and Study 2

The data that I gathered from both tests were results from likert scales, numeric data from closed questions and comments about the app from the users. The variety of data gathered allowed me to see where the app

could be improved and allowed the user to suggest their improvements for the app to make it more suitable for them.

From these tests, which consisted of both survey's (see Appendix 4 and 6), interviewing different people (see Appendix 5 and 7) with a range of technical skills and observing someone do a walkthrough of the app (see Appendix 8), I found that generally the users found the functionality of the app suitable for them and that the design was good in terms of the structure of elements. I did get some constructive feedback which suggested improvements for the app from both tests.

- **Study 1**

From the survey I send out (see Appendix 4), users said that I should:

1. Add a home/hub page instead of the menu being the first page the user goes to after logging in
2. Show special offer/alerts (for example, show if my flight is delayed if I've booked a holiday)

While conducting an interview with Zahraa (see Appendix 5a) she said that "sometimes there are a lot of clicking to get to certain places so if you have a menu that can navigate directly to a page and possibly have sub links might make it easier". This suggests that I need to add either a back button or a breadcrumb navigation system to the pages that make navigating the app easier and faster for the user. It would also help in the user knowing what page they are on.

I made changes to my app based of the feedback I was given. The changes were:

1. Sub-navigation in the form of breadcrumbs were added to every page
2. Designed a home/hub page that includes alerts and offers
3. Made all the pages consistent by having the same size boxes for similar elements
4. Edited the profile page to make it consistent with the design of other pages on the app
5. Edited the design of the restaurant and takeaway menu pages to make reading the items easier
6. Added a colour system for when a restaurant or takeaway is open, opening soon or closed
7. Added a logout button to the profile page so other people can use the app on that device

- **Study 2**

From the survey I send out (see Appendix 6), users said that I should:

1. Make the logout button more visible
2. Reduce down the amount of menus on the app
3. Add an about page

While conducting an interview with Alice (see Appendix 7b) she said that "maybe reduce the menus down". This suggests that I need to re-think the way people get to the sub-pages of the app. Although after conducting an app walkthrough with Lauren (see Appendix 8) the timing it took to complete tasks showed that having an app that is based around menus wasn't a hindrance in completing different tasks on the app.

After observing the app walkthrough with Lauren (see Appendix 8) and conducting an interview with Jayne (see Appendix 7a) it is clear that where the logout button is currently located isn't the best place as Jayne said "Couldn't locate the logout button at all. Maybe make it more visible by adding it to the menu" and Lauren said "Logout button was very hard to find as it was hidden on a page".

5. Reflections

Through doing this module I've learnt a lot about the process of UX and its role in designing interactive systems for people from data gathering to creating persona's to designing paper prototypes and user testing. The main aspects of the UX process I've learnt is:

1. What heuristic analysis is and how to use it when data gathering
2. Creating observation tables based off data gathered through heuristic and competitor analysis
3. Creating a user requirements tables based of the data I gathered
4. Creating task flows based around my persona's
5. Wireframing for people in terms of people need to understand them
6. How to conduct user testing and the importance of getting people who could use the to provide feedback about the apps design and functionality

I believe that by going through this process thoroughly I've been able to design a complex app that can be used by a variety of people no matter of their technical skill level.

- **I now know what heuristic analysis is and its role it has in the UX process**

Heuristic analysis is a set of guidelines used to help with testing a user interface. From doing this module I now know what those guidelines are and that having them is important in determining whether an interface meets that guidelines.

- **I now know how to use my research, in this case data gathering, to help in the process of designing an interface for people**

This module has taught me the different stages of data gathering and how to use my key finding in decision making.

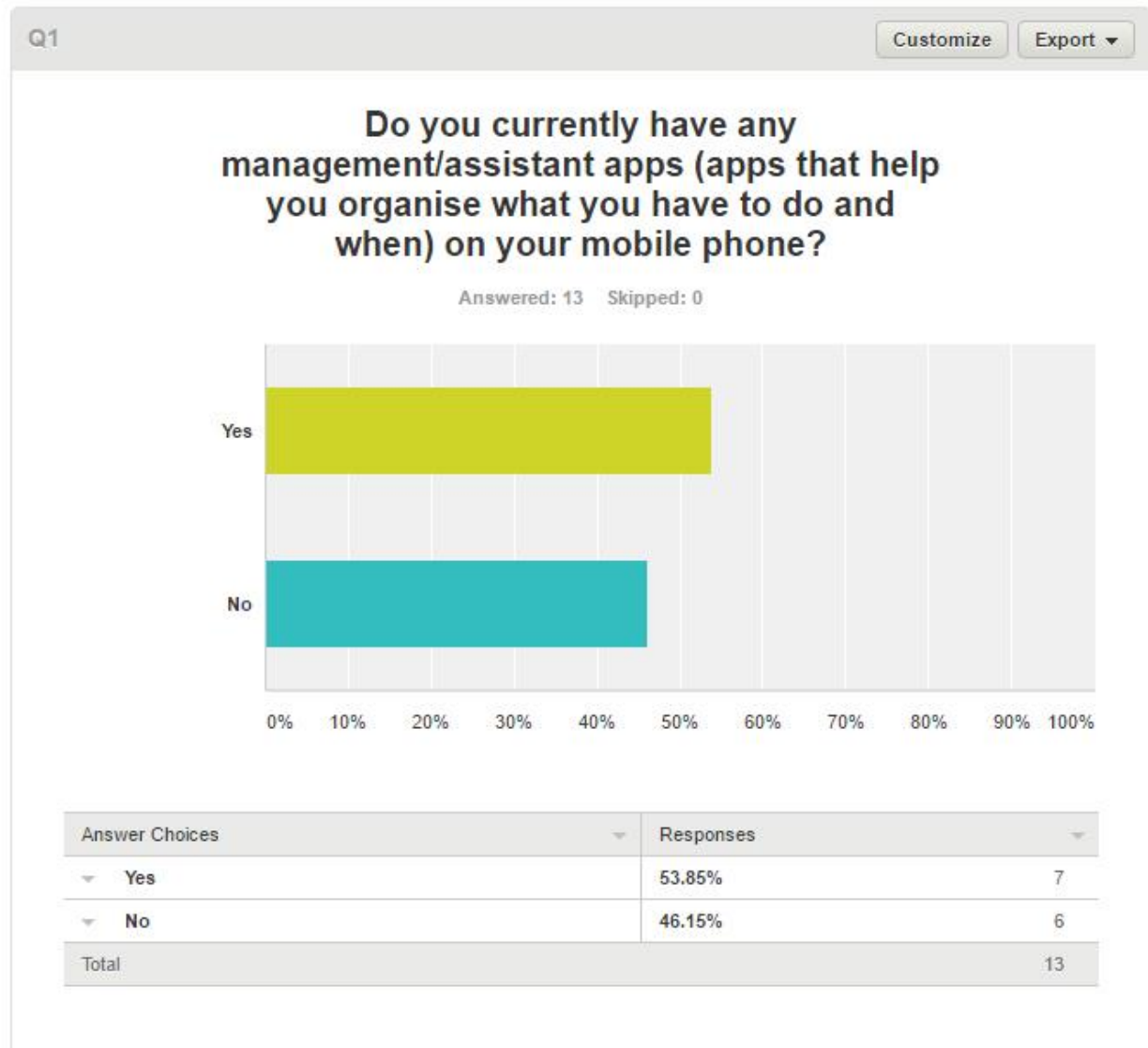- **I now know the importance of creating persona's**

From doing this module I've learnt the importance of creating persona's that are based off your target audience. Having them gives you a real person with need's to design the app for.

- **I now know how to produce wireframes that are user-friendly**

Throughout this module I've learnt how to produce wireframes that a user can understand. I've found that producing wireframes that are user-friendly are very important when it comes to user testing as they've got to understand what the elements on the page are to understand how the app works.

- **I can now do thorough user testing**

I've learnt how to perform thorough user testing from doing this module. I now know the different types of tests that you can do and the different styles of questions that can be asked.

8 Appendices

Appendix 1

User research gather through an online survey containing 7 questions answered by 13 people of a variety of ages and occupation.

Q2

If your answer to Q1 was yes, what are those apps called?

Answered: 8   Skipped: 5

| ● Responses (8) | ☁ Text Analysis | ◗ My Categories |

Categorize as... ▾   Filter by Category ▾   Search responses   🔍 ❓

Showing 8 responses

Wunderlist
10/12/2016 7:00 AM   View respondent's answers

My fitness pal
10/11/2016 4:54 PM   View respondent's answers

Notes and calendar
10/11/2016 3:22 PM   View respondent's answers

University of Huddersfield
10/11/2016 12:31 PM   View respondent's answers

Calendar
10/11/2016 12:22 PM   View respondent's answers

iOS Calendar iOS Notes iOS Reminders
10/11/2016 12:16 PM   View respondent's answers

N/a
10/11/2016 12:13 PM   View respondent's answers

Countdown Calendar
10/11/2016 12:13 PM   View respondent's answers

If your answer to Q1 was yes, why do you use those types of apps?

Answered: 8   Skipped: 5

| ● Responses (8) | 🗨 Text Analysis | 🏷 My Categories |

| Categorize as... ▾ | Filter by Category ▾ | | Search responses | 🔍 | ❓ |

Showing 8 responses

Terrible memory.
10/12/2016 7:00 AM   View respondent's answers

Organise my meals
10/11/2016 4:54 PM   View respondent's answers

Keep me organised
10/11/2016 3:22 PM   View respondent's answers

To check my timetable
10/11/2016 12:31 PM   View respondent's answers

To organise myself
10/11/2016 12:22 PM   View respondent's answers

They're simple to use.
10/11/2016 12:16 PM   View respondent's answers

N/a
10/11/2016 12:13 PM   View respondent's answers

So I remember what it is I have to do
10/11/2016 12:13 PM   View respondent's answers

Q4

Export ▾

If your answer to Q1 was no, why don't you?

Answered: 7   Skipped: 6

● **Responses** (7)   ☁ **Text Analysis**   ❧ **My Categories**

Categorize as... ▾ | Filter by Category ▾ | Search responses 🔍 | ❓

Showing 7 responses

I like to use a diary instead so I can access it whenever in case my phone ever loses charge
10/12/2016 5:24 PM   View respondent's answers

I have a windows phone and do not know of any, but I don't use apps normally.
10/12/2016 1:11 AM   View respondent's answers

Not something I've needed before so don't feel I need one now
10/11/2016 10:06 PM   View respondent's answers

I like to write things down, also not sure what would be the best app for my needs.
10/11/2016 3:54 PM   View respondent's answers

N/A
10/11/2016 12:22 PM   View respondent's answers

I prefer paper organizers such as a filofax
10/11/2016 12:15 PM   View respondent's answers

I prefer the use of a diary in order to manage my time.
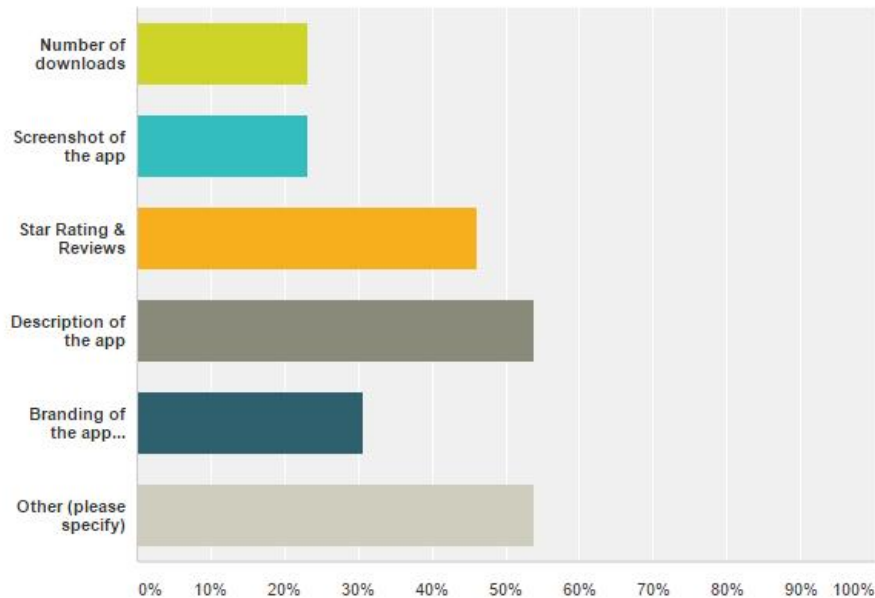10/11/2016 12:13 PM   View respondent's answers

What makes you download an app?

Answered: 13   Skipped: 0

Answer Choices	Responses	
▼ Number of downloads	23.08%	3
▼ Screenshot of the app	23.08%	3
▼ Star Rating & Reviews	46.15%	6
▼ Description of the app	53.85%	7
▼ Branding of the app (logo/colour scheme)	30.77%	4
▼ Other (please specify) Responses	53.85%	7

● Responses (7) | 🔊 Text Analysis | 🏷 My Categories

Categorize as... ▼ | Filter by Category ▼ | Search responses | 🔍 | ❓

Showing 7 responses

Whether it is of use to me.
10/11/2016 10:06 PM   View respondent's answers

Friend recommendations
10/11/2016 4:54 PM   View respondent's answers

If someone else has it and says its good
10/11/2016 3:54 PM   View respondent's answers

Recommendation/word of mouth
10/11/2016 12:31 PM   View respondent's answers

N/A
10/11/2016 12:22 PM   View respondent's answers

Simplicity
10/11/2016 12:16 PM   View respondent's answers

Advertisements
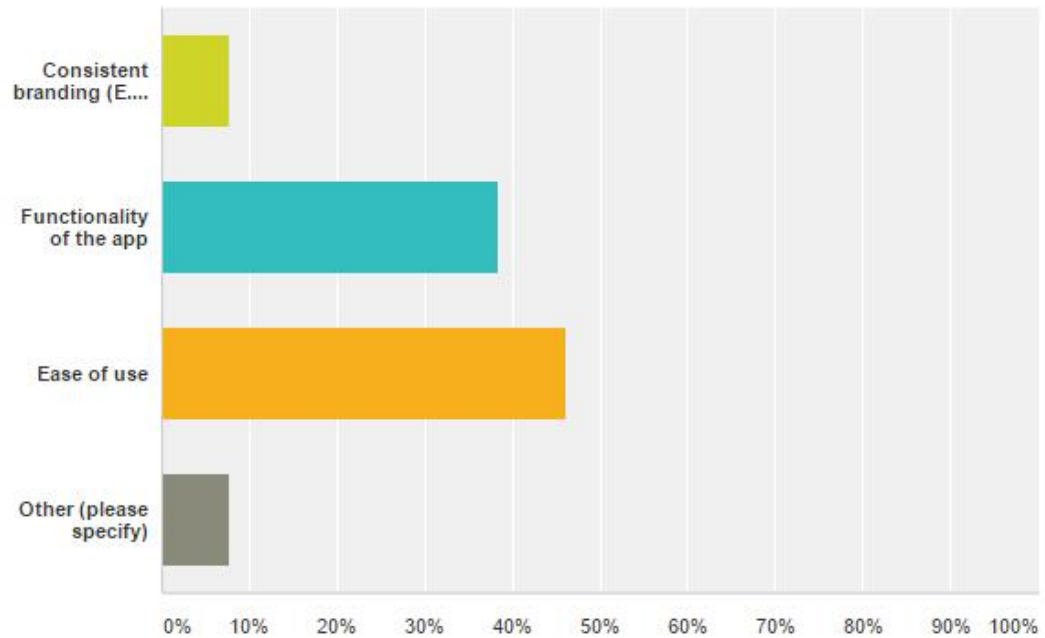10/11/2016 12:13 PM   View respondent's answers

Total Respondents: 13

When downloading an app, what is the main thing you look for?

Answered: 13   Skipped: 0

Answer Choices		Responses	
▾ Consistent branding (E.g. colour scheme)		7.69%	1
▾ Functionality of the app		38.46%	5
▾ Ease of use		46.15%	6
▾ Other (please specify)	Responses	7.69%	1

Customize   Export ▾

What makes you uninstall an app?

Answered: 13   Skipped: 0
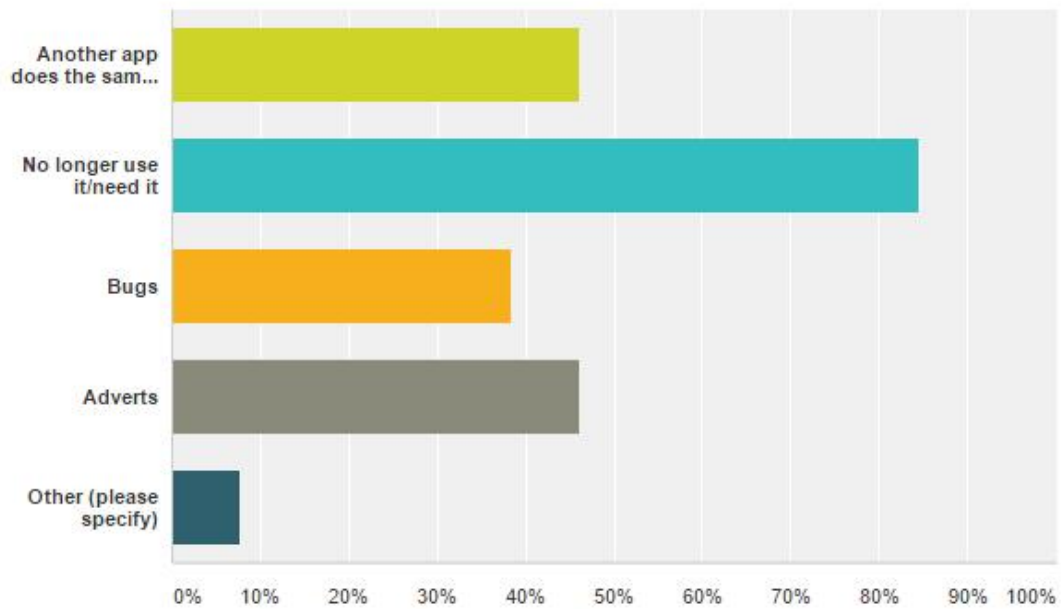
Answer Choices		Responses	
▾ Another app does the same thing better or provides more functionality		46.15%	6
▾ No longer use it/need it		84.62%	11
▾ Bugs		38.46%	5
▾ Adverts		46.15%	6
▾ Other (please specify)	Responses	7.69%	1

● Responses (1)   🗨 Text Analysis   🏷 My Categories

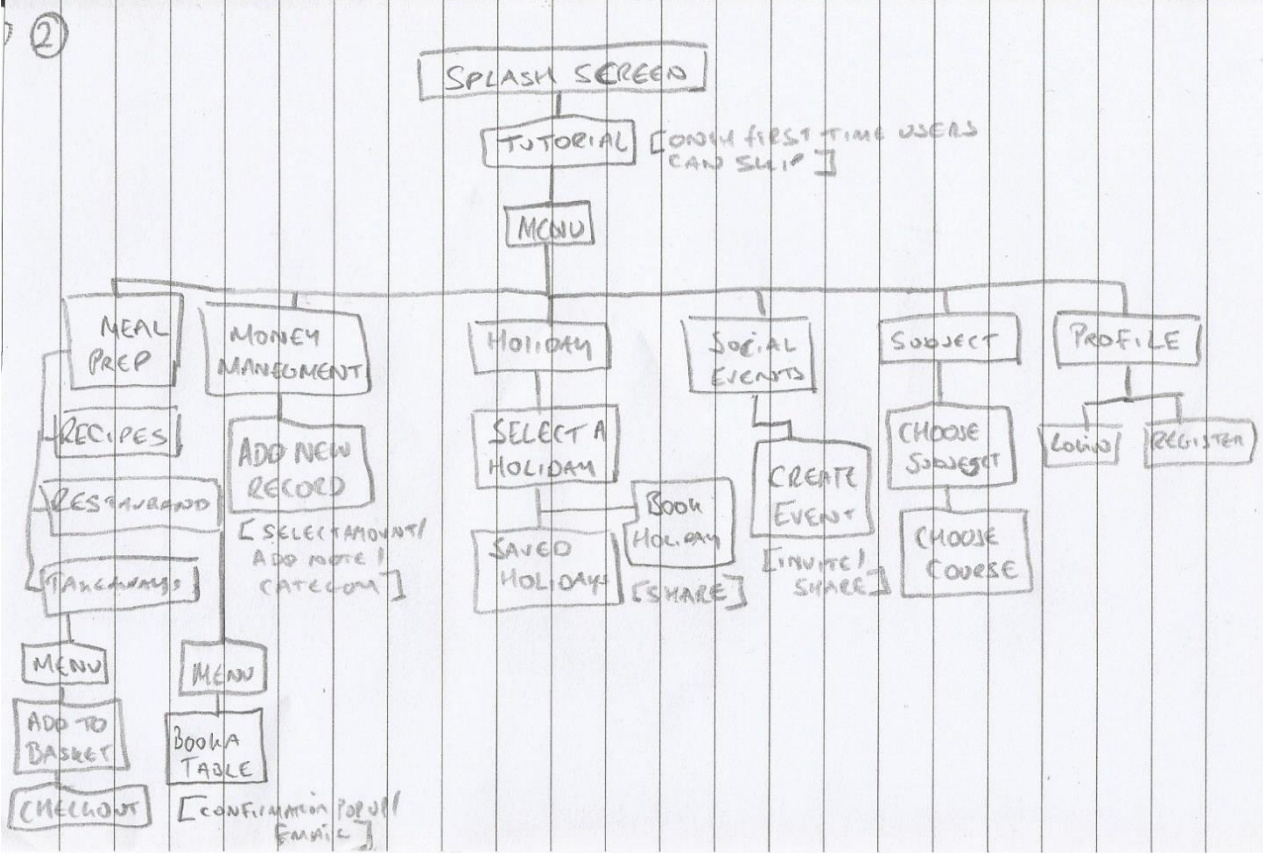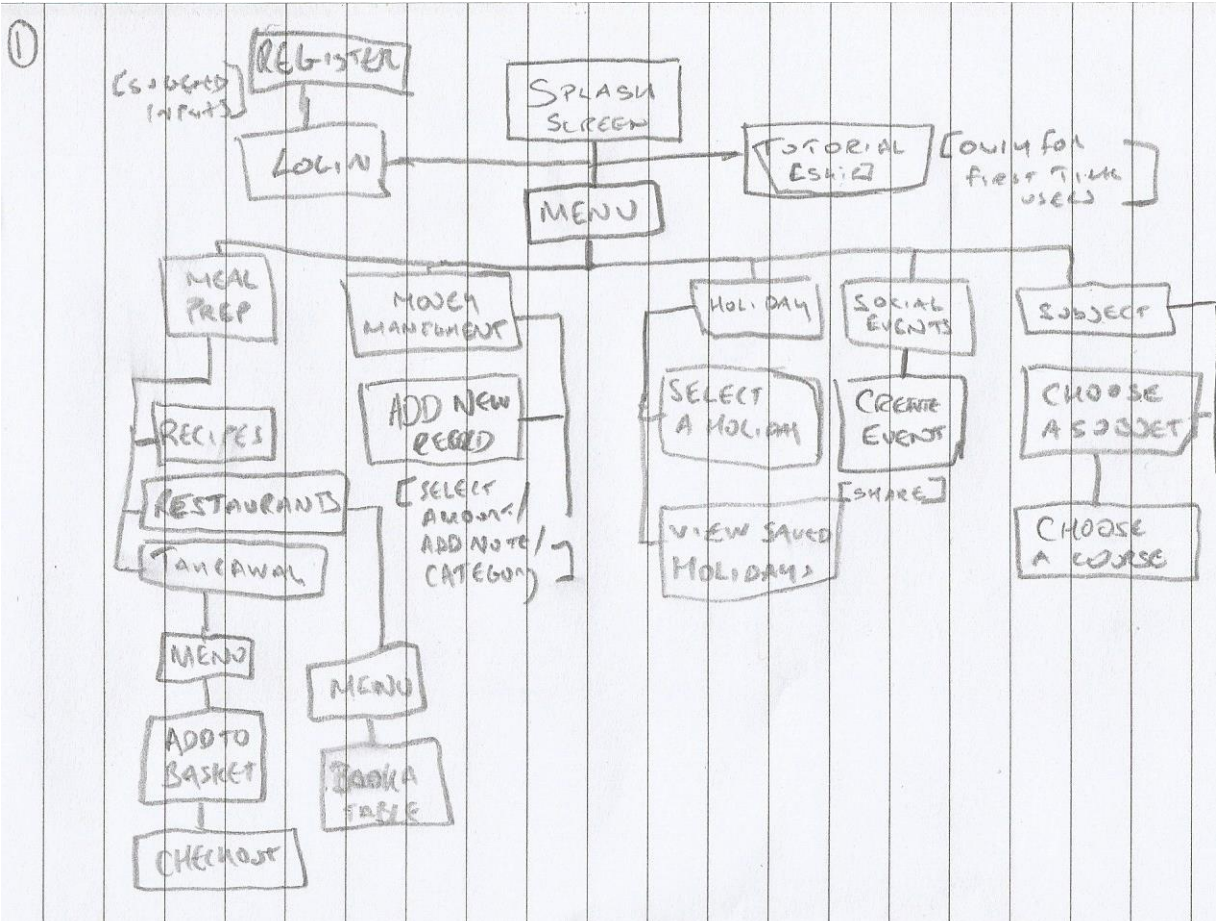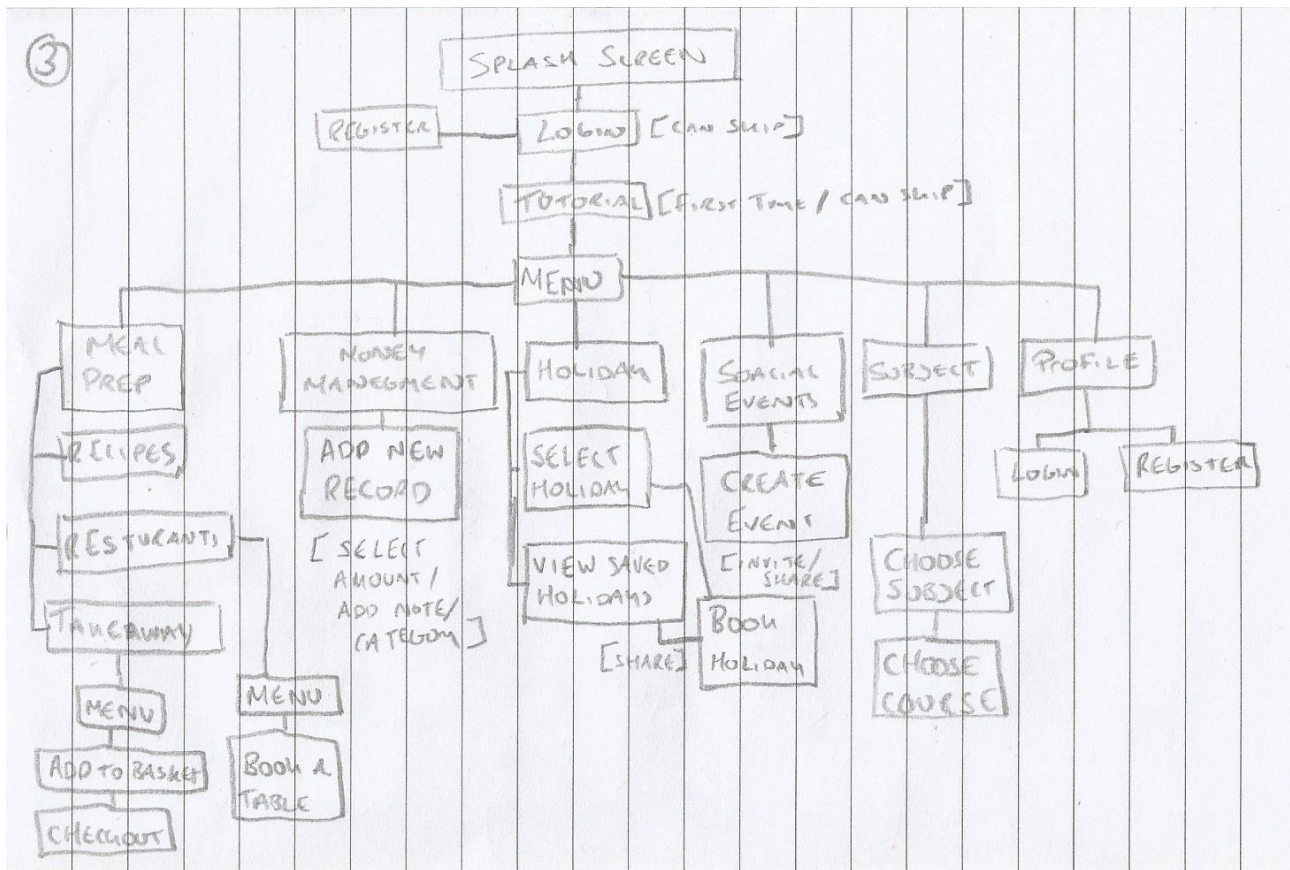Categorize as... ▾   Filter by Category ▾   Search responses   🔍 ❓

Showing 1 response
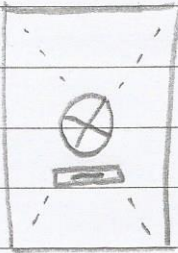
N/A

Appendix 2

Paper / draft versions of my sitemap.

①

SPLASH SCREEN → MENU

REGISTER

[SUGGESTED INPUTS]

LOGIN → TUTORIAL [SKIP] — [ONLY FOR FIRST TIME USERS]

MENU branches:

MEAL PREP
- RECIPES
- RESTAURANT
- TAKEAWAY
  - MENU
    - ADD TO BASKET
      - CHECKOUT

MONEY MANAGEMENT
- ADD NEW RECORD
- [SELECT AMOUNT / ADD NOTE / CATEGORY]
  - MENU
    - BOOK A TABLE

HOLIDAY
- SELECT A HOLIDAY
- VIEW SAVED HOLIDAYS

SOCIAL EVENTS
- CREATE EVENT
- [SHARE]

SUBJECT
- CHOOSE A SUBJECT
- CHOOSE A COURSE

---

②

SPLASH SCREEN
→ TUTORIAL [ONLY FIRST TIME USERS CAN SKIP]
→ MENU

MENU branches:

MEAL PREP
- RECIPES
- RESTAURANT
- TAKEAWAYS
  - MENU
    - ADD TO BASKET
      - CHECKOUT

MONEY MANAGEMENT
- ADD NEW RECORD
- [SELECT AMOUNT / ADD NOTE / CATEGORY]
  - MENU
    - BOOK A TABLE
      - [CONFIRMATION POPUP / EMAIL]

HOLIDAY
- SELECT A HOLIDAY
- SAVED HOLIDAY
- BOOK HOLIDAY
- [SHARE]

SOCIAL EVENTS
- CREATE EVENT
- [INVITE / SHARE]

SUBJECT
- CHOOSE SUBJECT
- CHOOSE COURSE
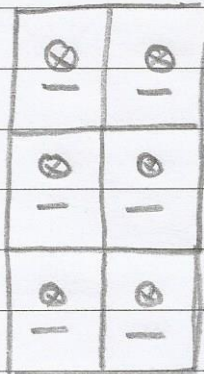
PROFILE
- LOGIN
- REGISTER

Appendix 3

Paper / draft versions of my wireframes.
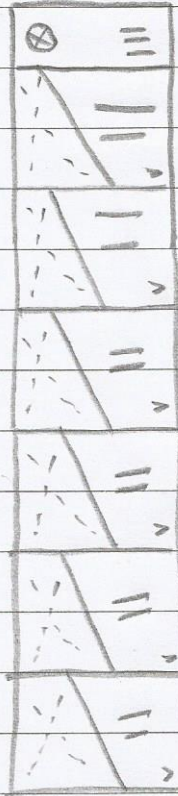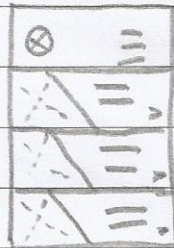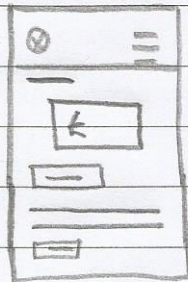
①

SPLASH

MENU

MENU
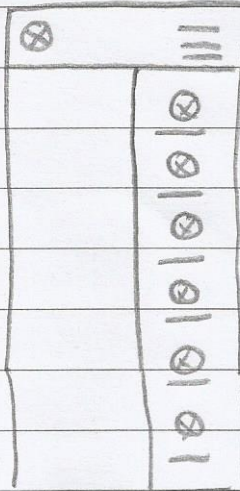
MENU

MEAL
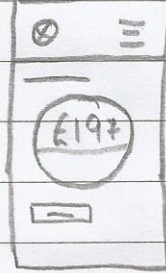
MONEY

SLIDES OUT

MEAL

MONEY

MONEY

£197

£9

MONEY
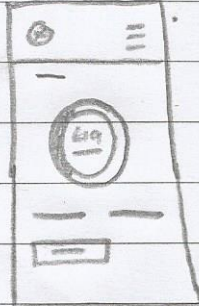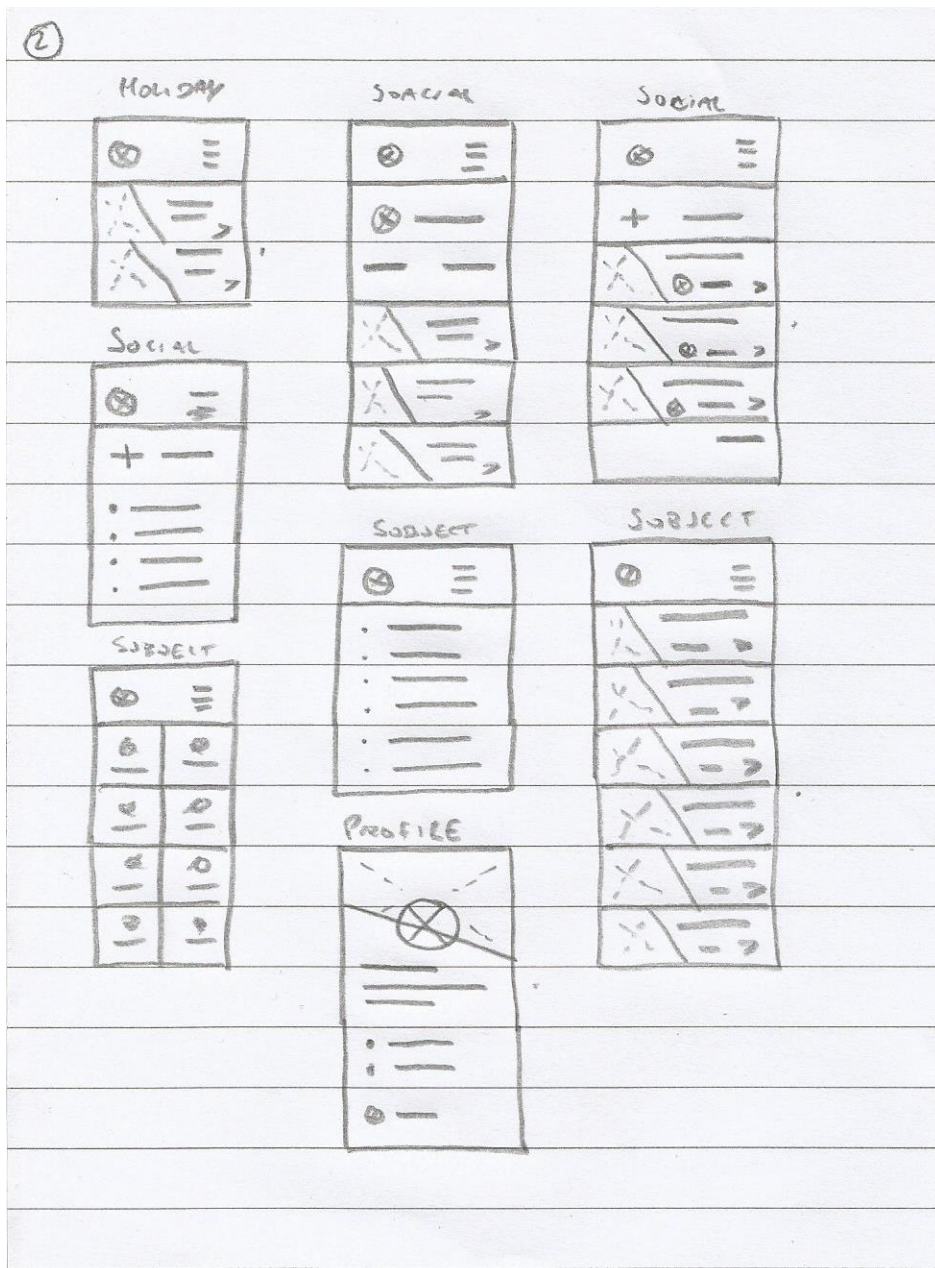
- **Appendix 4** – Test 1: Survey Results

	Question	Response
1	On a scale of 1 to 4, did you find the login page clear and well structured?	Strongly agree (4) Strongly agree (4)
1a	If you disagree, why wasn't the page clear and well structured?	
2	Were you able to find and access the menu on every page of the app?	Yes Yes
2a	If no, what pages couldn't you find and access the menu?	
3	Was it clear what page you were on when you were navigating through the app?	Yes Yes

4	On a scale of 1 to 4, did you find performing the different tasks on the app easy and quick?	Agree (3) Agree (3)
4a	If you disagree, which task(s) couldn't you perform easily and quickly?	
5	On a scale of 1 to 4, did you find the functionality of the app appropriate?	Agree (3) Agree (3)
5a	If you disagree, what functionality wasn't appropriate?	"Could maybe do with some sort of home page/hub so that the menu isn't the home page"
6	If you could add a feature to the app what would you add?	"Back button on pages where appropriate" "Special offers or alerts of when a flight is delayed if I have an upcoming holiday"

- **Appendix 5** – Test 1

A: Interview with Zahraa - Results

	Question	Response
1	On a scale of 1 to 4, did you find the login page clear and well structured?	Strongly agree (4)
1a	If you disagree, why wasn't the page clear and well structured?	
2	Were you able to find and access the menu on every page of the app?	Yes
2a	If no, what pages couldn't you find and access the menu?	
3	Was it clear what page you were on when you were navigating through the app?	Yes
4	On a scale of 1 to 4, did you find performing the different tasks on the app easy and quick?	Agree (3)
4a	If you disagree, which task(s) couldn't you perform easily and quickly?	"Sometimes there are a lot of clicking to get to certain places so if you have a menu that can navigate directly to a page and possibly have sub links might make it easier"
5	On a scale of 1 to 4, did you find the functionality of the app appropriate?	Strongly agree (4)
5a	If you disagree, what functionality wasn't appropriate?	
6	If you could add a feature to the app what would you add?	

B: Interview with Abbie - Results

	Question	Response
1	On a scale of 1 to 4, did you find the login page clear and well structured?	Agree (3)

1a	If you disagree, why wasn't the page clear and well structured?	
2	Were you able to find and access the menu on every page of the app?	Yes
2a	If no, what pages couldn't you find and access the menu?	
3	Was it clear what page you were on when you were navigating through the app?	Yes
4	On a scale of 1 to 4, did you find performing the different tasks on the app easy and quick?	Agree (3)
4a	If you disagree, which task(s) couldn't you perform easily and quickly?	
5	On a scale of 1 to 4, did you find the functionality of the app appropriate?	Strongly agree (4)
5a	If you disagree, what functionality wasn't appropriate?	
6	If you could add a feature to the app what would you add?	"Can't think of anything else to add"

C: Interview with Hannah - Results

	Question	Response
1	On a scale of 1 to 4, did you find the login page clear and well structured?	Strongly agree (4)
1a	If you disagree, why wasn't the page clear and well structured?	
2	Were you able to find and access the menu on every page of the app?	Yes
2a	If no, what pages couldn't you find and access the menu?	
3	Was it clear what page you were on when you were navigating through the app?	Yes
4	On a scale of 1 to 4, did you find performing the different tasks on the app easy and quick?	Strongly agree (4)
4a	If you disagree, which task(s) couldn't you perform easily and quickly?	
5	On a scale of 1 to 4, did you find the functionality of the app appropriate?	Strongly agree (4)
5a	If you disagree, what functionality wasn't appropriate?	
6	If you could add a feature to the app what would you add?	"Nothing it's great"

- **Appendix 6** – Test 2: Survey Results

	Question	Response
1	Were you able to navigate and perform task(s) on the app easily and quickly?	Yes Yes

2	On a scale of 1 to 4, did you find the app clear and well structured?	Strongly agree (4) Strongly agree (4)
2a	If you disagree, what pages weren't?	"I agree the app was clear and navigation intuitive."
3	On a scale of 1 to 4, do you find the notifications and offers on the home page a useful feature?	Very useful (4) Very useful (4)
3a	If you find the feature not useful, please state why and what would be more useful to you?	
4	Did you find having a secondary navigation (list of links under the title of the page) useful when navigating through the app?	Yes Yes
4a	If no, why wasn't it useful to you?	
5	TASK: Login then logout of the app. When performing this task did you come across any problems?	No Yes
5a	If you did, what were those problems?	"couldn't find out to log out the 'X' didn't seem to work - just took me to the home page"
6	Would you make any improvements to the app (in terms of both design and functionality)? If yes please explain what improvements you'd make.	"maybe should have an 'about' page to explain aims of app" "I can't think of anything"

- **Appendix 7** – Test 2

A: Interview with Jayne - Results

	Question	Response
1	Were you able to navigate and perform task(s) on the app easily and quickly?	Yes
2	On a scale of 1 to 4, did you find the app clear and well structured?	Agree (3)
2a	If you disagree, what pages weren't?	
3	On a scale of 1 to 4, do you find the notifications and offers on the home page a useful feature?	Somewhat useful (3)
3a	If you find the feature not useful, please state why and what would be more useful to you?	"I may not need to use the offers"
4	Did you find having a secondary navigation (list of links under the title of the page) useful when navigating through the app?	Yes
4a	If no, why wasn't it useful to you?	
5	TASK: Book a holiday on the app. When performing this task did you come across any problems?	Yes
5a	If you did, what were those problems?	"Couldn't locate the logout button at all. Maybe make it more visible by adding it to the menu"
6	Would you make any improvements to the app (in terms of both design and	"no"

	functionality)? If yes please explain what improvements you'd make.	

B: Interview with Alice - Results

	Question	Response
1	Were you able to navigate and perform task(s) on the app easily and quickly?	Yes
2	On a scale of 1 to 4, did you find the app clear and well structured?	Agree (3)
2a	If you disagree, what pages weren't?	
3	On a scale of 1 to 4, do you find the notifications and offers on the home page a useful feature?	Very useful (4)
3a	If you find the feature not useful, please state why and what would be more useful to you?	
4	Did you find having a secondary navigation (list of links under the title of the page) useful when navigating through the app?	Yes
4a	If no, why wasn't it useful to you?	
5	TASK: Book a table at a restaurant on the app. When performing this task did you come across any problems?	No
5a	If you did, what were those problems?	
6	Would you make any improvements to the app (in terms of both design and functionality)? If yes please explain what improvements you'd make.	"It was easy to navigate, maybe reduce the menus down"

C: Interview with Leanne - Results

	Question	Response
1	Were you able to navigate and perform task(s) on the app easily and quickly?	Yes
2	On a scale of 1 to 4, did you find the app clear and well structured?	Strongly agree (4)
2a	If you disagree, what pages weren't?	
3	On a scale of 1 to 4, do you find the notifications and offers on the home page a useful feature?	Very useful (4)
3a	If you find the feature not useful, please state why and what would be more useful to you?	
4	Did you find having a secondary navigation (list of links under the title of the page) useful when navigating through the app?	Yes
4a	If no, why wasn't it useful to you?	
5	TASK: Create an event on the app. When performing this task did you come across any problems?	No
5a	If you did, what were those problems?	

6	Would you make any improvements to the app (in terms of both design and functionality)? If yes please explain what improvements you'd make.	"Nothing the app was excellent"

- **Appendix 8** – Test 2 (App walkthrough with Lauren Results)

YouTube Video of App Walkthrough: https://www.youtube.com/watch?v=nwFLt95jsGo&t=1s

Task 1 – Login then logout of the app

Time taken to complete the task: 33 seconds

Comments: "Logout button was very hard to find as it was hidden on a page"

Task 2 – Create an event

Time taken to complete the task: 16 seconds

Comments: "Wasn't sure where the add button was as I didn't realise you could scroll the page"

Task 3 – Book a table at a restaurant

Time taken to complete the task: 10 seconds

Task 4 – Choose a course to start learning

Time taken to complete the task: 48 seconds

Task 5 – Book a holiday

Time taken to complete the task: 10 seconds

Task 6 – Record you spending of today

Time taken to complete the task: 5 seconds

Question 1: Was having a secondary navigation (links under the title of the page) helpful in navigating the app?

Response: "Yes, I used it a lot to get back to the home page"

Question 2: Do you find having notifications and offers on the home page useful?

Response: "Yes"

References

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