**Recipe and cookbook background research**

A recipe book is not just a book that contains sets of instructions for preparing a dishes. Recipe books can tell us the stories of the author(s), their knowledge and discoveries as well as the historical context that can be derived from these recipes. Several pieces of work have focussed on examining how recipes tell the stories of people and communities.

In the paper Cookbooks As A Social And Historical document – A Scottish Case Study it focusses on Scottish cookbooks published between 1890 and 1990 and how these recipes act as historical markers of major events and record technological advances in society. The results from the paper validated the claim that cookbooks are a social historic and cultural document stating that “although cookbooks might not record events in the society as historical facts nevertheless their contents are often a response to historical events.”

Intensifying Taste, Intensifying Identity : Collectively Through Cookbooks this paper was a study into whether community cookbooks implicitly rebuke a social order that devalues women’s work. In the paper some interesting points were made about the benefits of community cookbooks when the author observed the Lutheran church women developing their cookbook then took on a corporate process that gave a voice to the community through building the cookbook by organizing it, discussing experiences and producing and selling them. The cookbook developed by the Lutheran church women is not just a way to raise money for the church but it was also a way recognise each of ladies knowledge and experience of cooking and to share it with others that were interested.

Recipes For Reading is a collection of essays that demonstrate the different stories available in cookbooks and in particular community cookbooks. Several scholars contributed towards the book and with reference to recipes the book states that “the work of scholars in the arts, history, literature and woman’s study we have increasingly come to see them as readable with great benefit to our knowledge of women’s experiences and discourses.” The author explains from examining cookbooks that the “cookbooks tell stories – autobiographical in some cases, historical sometimes and perhaps factious or idealized in other instances.” And that within community cookbooks “women present their values wittingly or unwittingly”. Recipes for reading is evidence that cookbooks tell the stories of people and communities and is proof that this should be maintained into the 21st century in a modern format.

Eat My Words : Reading Woman’s Lives Through The Cookbooks They Wrote that focuses on cookbooks and the stories they tell with particular focus on 17th and 18th century cookbooks. Within Eat My Words I found a quotation that showed the benefits of community cookbooks which is “modifications and modernizations of old recipes and the invention of new dishes in a woman’s cookbook represent the combined effort of many people. Contributions may come from past generations and from individuals living side by side in small communities, connected to larger social circles, sometimes from one or more cultures and they come from an array of print media. And while we tend to think of cooking as a delight to our senses, the relationships formed through these culinary compositions are social, cultural and economic.”

The Meaning Of Cooking And Recipe Work For Older Thai and New Zealand women is a study that took place in 2000 and its findings were drawn from a collaborative and interpretive study. Focus groups were used to gather narrative data and in this context the researchers observed women engaging in and gaining pleasure talking about recipes. Within the paper there is focus on recipe work and in particular discussion of people sending in recipes and they noticed “accompanying the recipes, the woman submitted stories that provided temporal, generational and cultural makers. The stories told of treasured recipes devotedly prepared and passed down from one generation to the next.” In the paper they found the recipes and stories that went with them “suggests the potency and ubiquity of women’s recipe work”.

In the paper discussed above they also mention Meyers (2001) study of 412 women shows how recipes have become part of ensuring continuality of traditions across two or three generations of American and Canadian women.

**Look into this study and references from papers discussed above – still to be done**

<http://onlinelibrary.wiley.com/doi/10.1046/j.1471-5740.2001.00002.x/abstract?deniedAccessCustomisedMessage=&userIsAuthenticated=false>

<http://www.tandfonline.com/doi/abs/10.1080/14427591.2002.9686499#.VDrqMPldV8F>

<http://books.google.co.uk/books?hl=en&lr=&id=vjK2olmZMCMC&oi=fnd&pg=PR9&dq=cookbooks&ots=wEb7jocaOE&sig=T8UJaZ5JpYo2XozGs4geHh9IeiE#v=onepage&q=cookbooks&f=false>

<http://books.google.co.uk/books?hl=en&lr=&id=JF0RQ3MVudcC&oi=fnd&pg=PR9&dq=cookbooks&ots=XXRCMwKQMw&sig=0cMAeLKLP0z1L_MK-eBXG_8bLNw#v=onepage&q=cookbooks&f=false>

<http://www.jstor.org/discover/10.1086/662697?uid=3738032&uid=2&uid=4&sid=21104900879693>

**Available applications and recipe websites research**

Recipe work has made it into the 21st century with websites like bbcgoodfood and pinterest being different ways to represent and share recipes on the web as well as several modern computer and phone applications to help manage your recipe box and share your recipes with others. Below I will explore the modern day applications and websites for recipe management.

All The Cooks is a social cooking application where you can browse all the recipes in the application by categories as well as add recipes, create shopping list and have a profile. The application is social you can view others recipes where you can read the recipe, the story behind it, write reviews, add photos or ask questions for recipe. The application has neat features like adding recipes to shopping list, conversion features and nutrition facts. The application is image – oriented on the main page. All the cooks is available for android, iphone and windows.

Yummly is an application that enables you to discover new recipes. It has a really nice interface, easy ability to share as well as add recipes to a shopping list. Within the application you are able to find new recipes and save but not able to add your own. The application is a recipe inspiration which takes recipes from many different websites. Has a neat feature to find recipes by taste ( savoury, salt etc ), by ingredients, dietary requirements and many more filters which makes it easier to discover new recipes. Yummly is an ios application.

My Recipe Book an application where you can add a recipe manually or import recipes from the web. You can edit any of the recipes in your application, make recipes kitchen friendly with zoom or font adjusting and use the range of kitchen tools in the application like timers or conversion tools. The application also has a grocery list feature but lacks a social aspect. Simply a tool to manage recipes. My recipe book is an ios application.

Personal Cookbook is a recipe book manager to import or manually insert recipes. Enables you to group recipes, make changes to recipe and do basic share functionality. This is a very basic application to back up your recipes with little search features. Personal cookbook is an ios application.

What’s 4 dinner is a recipe manager which does enable you to import recipes but is unsophisticated. What’s 4 dinner has a basic recipe manager.

Basil is another application with a nice interface with the ability to organize recipes and import recipes.

Pepperplate is a basic recipe manager with no import feature or social aspect. It does enable you to manage menus and set timers. Pepperplate is available for windows, android and ios.

BigOven import from websites, take an image of recipe and convert to recipe or manual typing as well as browse other recipes such as nearby or popular recipes. Strong application but for some features involves purchasing. Ability to plan menus, create grocery lists and strong sharing features.

Paprika is an application which enables recipe management with imports. Although imports are unsophisticated from unsupported websites. Features grocery list and menu planner management.

Evernote allows you to explore and clip recipes from websites.

The applications often appear to enable recipe management or social aspects but none of the applications seem to make it work well for both. The applications do not enable multiple contributors which was one of the core aspects of recipes, the ability to pass on recipes, accept alterations, gain new recipes which all make up a good recipe book. Recipes For Life aims to enable this collaboration between friends, families or strangers with a similar interest to create a recipe book for life.

**More research to be done on Android applications, recipe blogs and websites.**

**Design decisions**

**Device choice**

The Recipes For Life application will be an app which can be used on both a phone and tablet predominantly a tablet because these devices are easier to read and use in a kitchen environment. The options I had for the operating systems I could develop for were android, ios or a hybrid using both native and html/css/javascript.

Advantages/disadvantages from personal experience/knowledge of OS’s:

**Android**

|  |  |
| --- | --- |
| **Advantages** | **Disadvantages** |
| Experience with Android development and java | Only covers one operating system |
| Not as many recipe applications available on android – more market share for the application |  |
| Large amount of resources available for help |  |

**IOS**

|  |  |
| --- | --- |
| **Advantages** | **Disadvantages** |
| Large amount of resources available for help | No experience with ios or objective c development |
| Popular operating system | Need to own a mac to develop, so would only be able to work from the labs |
|  | Only covers one operating system |

**Hybrid / Web app’s**

|  |  |
| --- | --- |
| **Advantages** | **Disadvantages** |
| Works on both operating systems | Little help available, relatively new |
| Have experience of html/css and minor javascript experience | Can be complex to set up and fidgety |

Figures:

IDC.com states the worldwide smartphone os market share is for Q2 2014 is:

Android – 84.7%

Ios – 11.7%

Windows – 2.5%

Blackberry – 0.5%

Others – 0.7%

IDC.com for Q2 2014 states the vendor market share is:

Samsung - 24.4%

Apple – 11.7%

Others - - 63.9 %

IDC.com for 2012 tablet os market share:

Android – 42.7%

Ios – 53.8%

Other – 3.5%

Apple and google both claim to have more than 800000 applications available on the app store.

From research:

**Native apps**

|  |  |
| --- | --- |
| **Advantages** | **Disadvantages** |
| Make use of hardware and software features | Time consuming to build especially if building for all platforms |
| Can be used offline |  |
| Standardized marketplace |  |
| Often easier to build nicer user experience/interface |  |
| Tend to be better for speed |  |

**Hybrid/Web apps**

|  |  |
| --- | --- |
| **Advantages** | **Disadvantages** |
| Save time as they can port to multiple platforms | Do not have a centralized market place |
| Strong discoverability features | Often work arounds are needed when porting to different apps |
| In hybrid you can merge web and native features | Lack of support available as it’s a relatively new concept |
| Consistency between apps |  |

<http://www.nngroup.com/articles/mobile-native-apps/>

<http://www.seguetech.com/blog/2013/04/09/native-vs-html-applications-best-approach>

<http://www.digitaleyemedia.com/blog/mobile-app-vs.-html5>

<http://techland.time.com/2013/04/16/ios-vs-android/>

<http://www.idc.com/prodserv/smartphone-os-market-share.jsp>

**Development environment choice:**

Two integrated development environments (IDE) for Android. The default is eclipse and there is a new alternative which is Android studio which is the intellj editor which is set to replace eclipse at some point in the future. Android studio is in its beta stage at the moment. I have experience with the eclipse development environment and would prefer to use it as it is stable and less likely to run into as many bugs or glitches as you might with Android studio in its beta stages.

From experience the emulators that come with eclipse can be slow to load and take a while to load changes in the code. So the emulator I will be using is Genymotion. Genymotion is the fastest android emulator and is trusted by 1 500 000 developers. In the past I have used Genymotion and noticed a significant difference in speed compared with the emulators built into eclipse.

For device testing I will be using a Samsung Galaxy Tab 4 which will be good to test on as Samsung has the highest market share for selling android devices and I imagine the application I will be building will be more likely to be used on tablets over smart phones.

For unit testing I will be using Junit as the android test suites are based on Junit.

To store my files for the project I will be using Github. Github enables you to access files anywhere with wifi, store old versions, store any types of file whether its code or a word document and has a GUI feature meaning I do not have to manage commits with the console. I already have experience with Github and an account which allows me to keep some repositories private which is good for maintaining my project. Over 6 million people use Github which means there is a lot of support available if I struggle with any of the Github features.

<http://www.genymotion.com/>

<http://developer.android.com/tools/testing/testing_android.html>

<https://github.com/about>

**Software development process (lifecycle) choice**

The software development process I feel would be best for the project is the iterative approach. The iterative approach is appropriate as I can gain the initial functional and non-functional requirements for the project. I can then create an iteration where I select 2 or 3 of the highest priority requirements develop them in a time frame of 2-3 weeks then test and evaluate the application with users which will maintain a user-centred design which is well tested and evaluated. An iterative approach enables me to create a product with users in mind and get evaluation throughout development process. An iterative approach also enables me to be flexible with changing requirements and the process of picking the highest priority requirements to be done first means I will be getting the core aspects of the application done first.

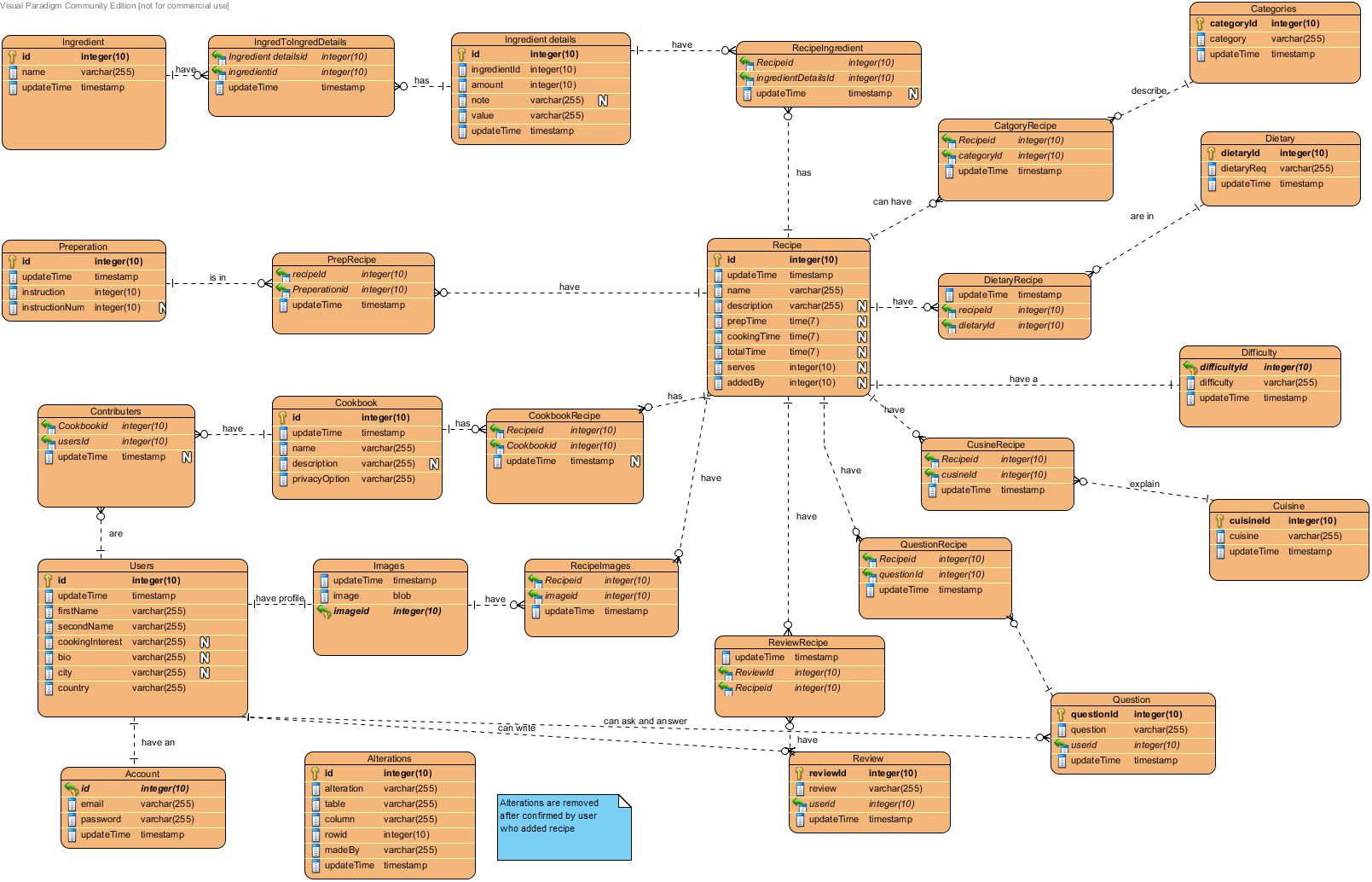
Waterfall was not an appropriate choice as it is not flexible for changing requirements or have much room for user centred design as you evaluate only at the end of development. Agile was an appropriate choice but was too client focussed, iterative has the same principles but is not as client focussed such as sprint reviews or team retrospectives when I am on my own and not working with client I do not need a process so team and client focused so iterative seemed the best option for the project.

**Database choice**

Android comes with a SQLite database which enables you to query a database on the phone without having to connect to the internet enabling you to work offline. When you have a connection you connect to the SQL server side database and update each of the tables in the database often through xml or json. This seems like the natural option as SQLite comes with android and has support for it. Although there is also an option that couchDB has to use nosql databases on android devices. Looking at my data and columns initially I felt a nosql database option would be best as it would enable me to have multiple pieces of data per column, I wouldn’t have to have linking tables or complex joins so it would be the best option. But then looking at the tables I would have more closely I realised that some of the queries I hoped to do would not work in couchDB and the data would need to be normalized which led me back to my original choice of using SQL.

Reasoning against using couchdb is that not all the data could be stored in the one document but in couchdb you cannot view two documents this would make it difficult to show certain pieces of data hence the data in the end seemed better suited to SQL style. This was frustrating because both had sql and couchdb had aspects that would suit my data but in the end sql seemed the best choice. Couchdb is relatively new so also lack of support and information concerned me when taking on such an important project in such a short time period. If there was more support on couchdb with android and setting up couchdb databases I may have considered it more but in comparison to sql which has a large amount of support covering a range of issues I felt sql was more appropriate for a project.

It was a hard decision where I went between the two database options a lot but in the end decided on SQL.



**Design patterns**

My application will be heavily database focused so it will use the Model-View-Controller design pattern as this pattern enables me to keep the business logic and view separated. The benefits of this pattern is it limits code duplication and enforces code re-use making your code more flexible and easy to test code functionality independently.

http://blog.codinghorror.com/understanding-model-view-controller/

**Project management tool choice**

Trello will be used to manage my project requirements as it is a good way to visualise requirements and move it around the board to see the progress of the requirement. Also a good way to visualise to supervisor where I am with my project.

Supervisor Minutes will be used to track my meetings with supervisor showing what was said and what was agreed to be done for the next week which is a good way to show where I am at with the project.

Github will be used to manage versions of the project it will be a way to be seen what is done and look back on old versions. Can look at the graphs in Github to analyse if good progress is being made.

Backlog for iterations will be used to split up requirements being done for an iteration into smaller tasks so it is easy for me to see the progress being made in the iteration and tasks that still need to be done.

Project plan details each week till submission showing an overview of what I am to have had done by this point.

Logbooks will be used to manage ideas and sketches. They will be the area where I store my thoughts and a way to see my progress throughout the project.

Risk plan and gantt chart ?

**Ethics design**

**Design sketches**

**Target market research – persona’s, storyboards, generalisations, facts**

Facts about the market:

Allrecipes.com in 2013 found social referrals came from tablet devices up 787% from 2012 to 2013 as well as an increase in pageviews from tablets (+260% in 2012 and +43% in 2013).

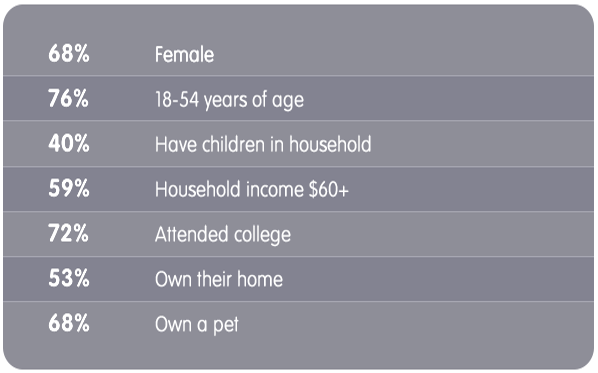
Allrecipes.com in 2012 found that one third of online cooks used smart phones to look up recipes and 29% of them snapping a photo of the final dish. They also discovered social media was a big motivation for sharing recipes with top motivations being attractive photos (79%), cook plans to make the recipe (78%), recipe has positive peer ratings/reviews (75%). When asked to choose only one cooking resource to use for the rest of their lives, half of home cooks selected cooking websites (44%), followed by cookbooks (19%), and parents (9%). Use of cooking websites has surged 207% in 15 years. The widespread availability of free cooking resources on computers and mobile devices has increased cooks’ appetites for using recipes. According to a 2012 survey, 16% of home cooks are now using recipes all the timewhen cooking, up from just 9% (80% growth) 13 years ago.

Realising the need for using tablets in the kitchen, archos designed a tablet specifically for cooking in the kitchen making it kitchen ready with silicone casing to protect for keeping it safe for splashes and an adjustable stand making the tablet easy to read.

<http://press.allrecipes.com/wp-content/uploads/AR_July2012_MeasuringCup_Fnl_HR3.pdf>

<http://press.allrecipes.com/wp-content/uploads/Allrecipes-May-2013-Measuring-Cup-TabletTrends.pdf>

All recipes audience (2014):



All recipes is one of the largest cooking websites with over 30 million + unique vistors each month and is a top 10 ranked social site (2014).

<http://press.allrecipes.com/fact-stats/>

<http://press.allrecipes.com/community/>

<http://www.nytimes.com/2011/11/09/dining/are-apps-making-cookbooks-obsolete.html?pagewanted=all&_r=0>

Personas:

Home cook

Young person

Blogger

Cafe

**Requirements gathering**