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**Abstract**

Cooking applications share similar features; the majority share functionalities that allow users to create and search for recipes. These recipes are poorly constructed, especially the structure of the methodology, which is too detailed and difficult to follow.

A survey was created to determine what resources people utilise in cooking a particular recipe. Analysis of the study displayed that most of the audience watched YouTube tutorials or read instructions from recipes online. However, there was an issue of waiting for a particular process to finish. Furthermore, respondents also indicated that they would rather have a diagram illustration compared to just text.

On this basis, I created a web project called Fastcook to tackle the issue of poorly constructed recipes. The projects aim is to solve these flaws by allowing users to interact with the system and constructing a flowchart that can better illustrate the current layout of recipes. This is designed and implemented using the Django web framework, python and a library written in JavaScript named mxGraph.

For my project, I have chosen a diagrammatic approach to resolve this issue because in general, information being processed via text is more difficult to remember than visual images. Research supports this as they have found that the human brain can handle images up to 60,000 times faster than words (Linkedin.com, 2018). Therefore, using graphs can support my stakeholders to comprehend the set of instructions more quickly compared to reading long paragraphs. Furthermore, a visual representation of the recipes can allow users to work simultaneously. This is because it provides an ideal representation of what the user can do overall. Whereas, when a recipe is written in steps, it makes the user follow the methods sequentially to ensure they have finished each step.

**Introduction**

The background context illustrates the research on the project; this will include the market research on current applications and what issues they face. This will then be followed up by the details on the requirements for my app, the designing and implementation phase including the knowledge gained within creating the project.

**Project outline**

Fastcook is a web application which allows users to interact with the system to create a graphical flowchart that illustrates the instructions of preparing a certain meal. This application will contain images that will represent the different events for those instructions. The images will be connected to each other by arrows to illustrate the recipe as a graph.

**Project aims**

The project aims to combat the poor layout of the instructions when following a particular recipe. Typically, the methods are portrayed in a way that shows the cook what to do per step. This consumes a lot of time as the cook would have to wait for every step to be completed. The user will be able to create a simplified flowchart that can demonstrate to the cook how to work simultaneously. This would be visually appealing to the user and will make cooking more efficient as they can see what to do while waiting for a particular step to finish.

**Motivation for work**

With the availability of recipes online, I could see that they faced a massive issue of portraying the preparation section. The problem I encountered was that when I finished completing one step in the recipe, I could see that the next instruction could have been accomplished within the previous step.

People who love to cook seem to have the issue of learning to cook efficiently. There are numerous amount of resources that can be utilised online to provide recipes for any meal. However, the problems with these are the way the information is presented. Most of the websites that I have visited such as BBC, EndOfTheFork have a simple layout but with detailed sets of instructions. This is what makes it difficult to comprehend when learning to cook. One reason for this is that it is extremely time-consuming. As information is presented in steps, it is within human nature to follow each step independently. This, however, means there is a less efficient way of cooking, as there will be time gaps in which the person could use to do something else. My approach to tackling this issue is to allow users to create a flowchart representation of the recipes for users to be able to work simultaneously; hence, make their cooking more methodical.

# **Background Literature**

This section provides the background research I carried out to obtain the requirements for my Fastcook project.

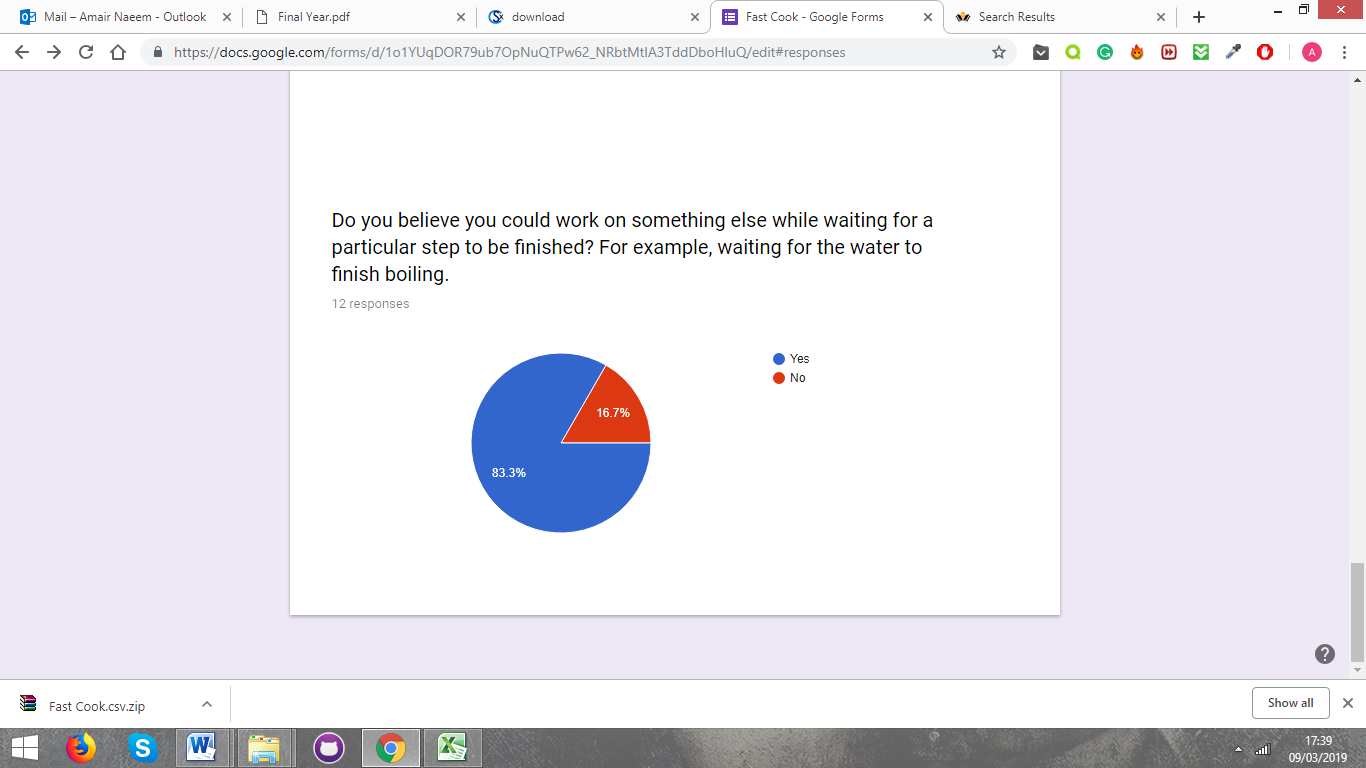
**What is a flowchart?**

A flowchart is a diagram that describes sequential steps to be followed and perform an algorithm or process. Each step in the process is represented by a symbol that can have different definitions (Breezetree.com, 2018). Arrows connect the steps which illustrate a logical representation of information, allowing users to follow the process with ease.

**Market research**

In order to conduct my market research, I created a questionnaire where I asked people who love to cook on the issues they are normally faced with, how they learnt to cook and resolutions of the problems they faced while following a recipe.

From my research, I discovered that most of my audience watched YouTube tutorials or read instructions from recipes online. However, they had the problem of waiting for a particular process to be finished. They believed that they could have used the time to prepare another part of the meal. Figure 1 illustrates that 83.3% of people could have easily accomplished another step while waiting for an action to be finished. Furthermore, the data also indicated that people familiar with cooking are more likely to have a visual representation, compared to a set of instructions written in plain text.

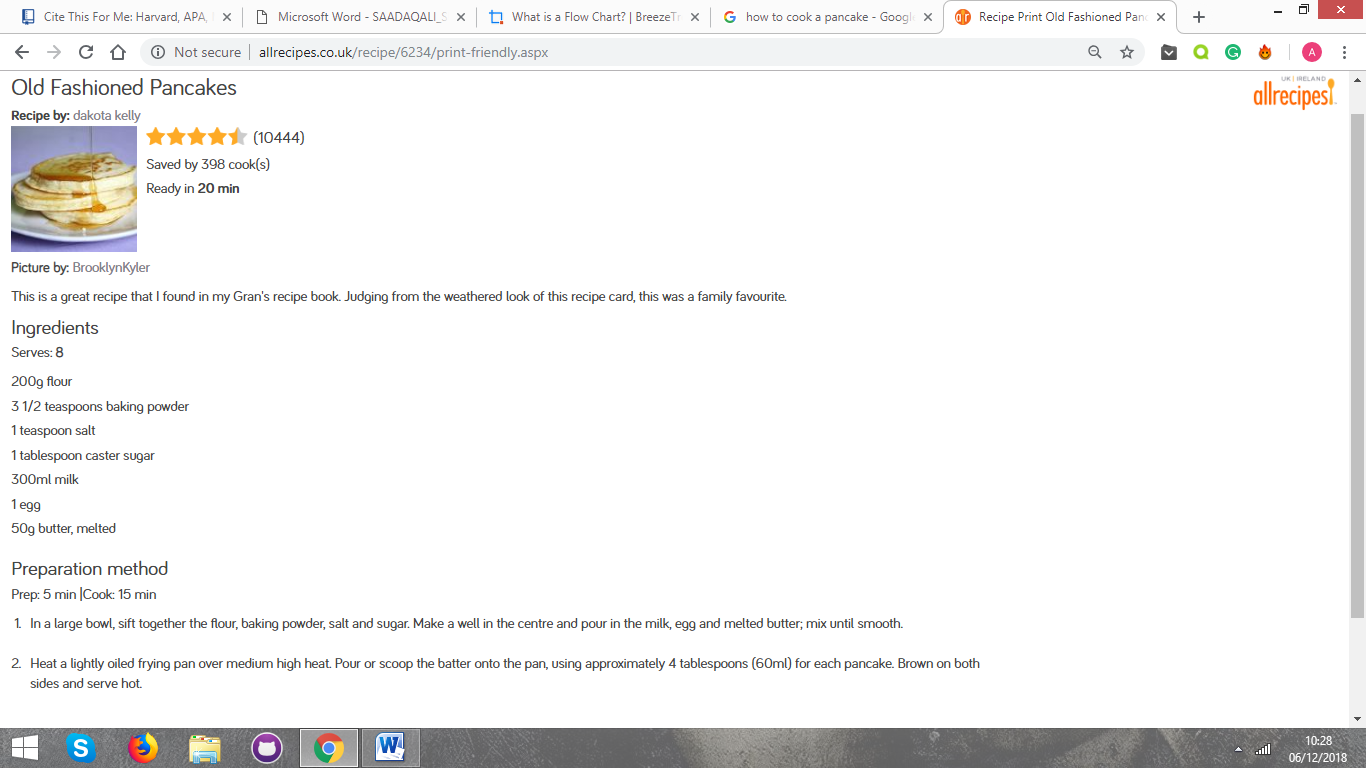


**Figure 1 – Survey result**

**Allrecipe**

Allrecipe is a community website application which allows users to upload their recipe by video or in text format. It contains a form where you can include the description, ingredients and directions on how to cook a particular meal. The layout of the web application is well presented as it has separated the paths, ingredients, additional notes and nutritional facts of the meal (see Figure 2). However, it still does not illustrate the sets of instructions via a diagram which disallows people to work effectively.

Title of recipe



Ingredients section

Preparation

Figure 2 – Allrecipes (Allrecipes.co.uk, 2018)

The layout is poorly constructed and the recipe as a whole does not look visually appealing. There is not any indication of colours used to display the method, which makes it difficult to follow. One appealing factor of the site was that it was easy to navigate from the different section of pages as it had a standard navigation bar located at the top of the page. Another feature that intrigued me was the way the user could browse through the recipes. From figure 2.1, we can see the different types of ways to browse through recipes such as ingredients, meal type, diet and health. This can narrow down the search for a recipe; hence make it easier for the user to get what they’re looking for.

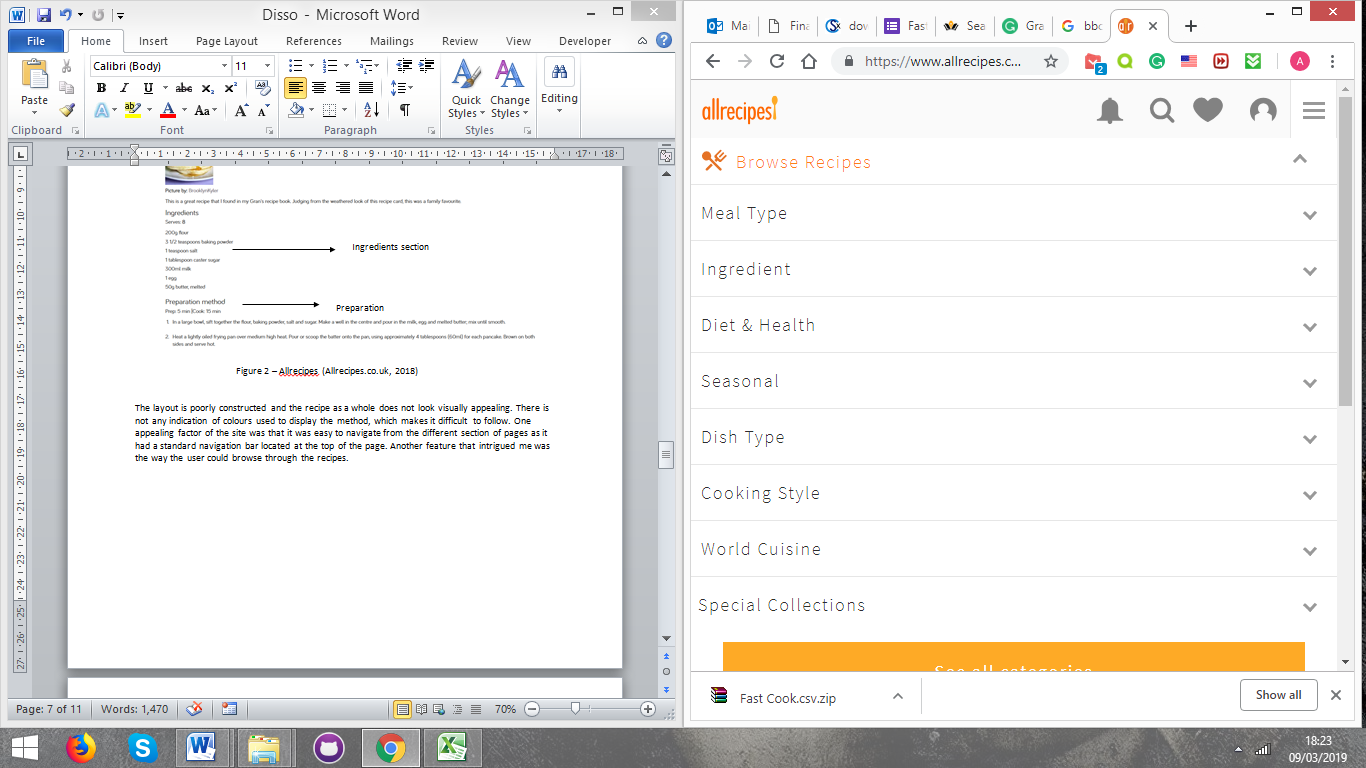


Figure 2.1 – allrecipes sections

**BBCGoodFood**

BBCGoodFood is another website that posts recipes of food online. The format and the way the sections are divided are presented more attractively, but it still does not solve the issue of cooking efficiently as the methodology is written in a series of steps.

**Endofthefork**

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allrecipe