**A Website To Make Meal Plans Easy**

**- Features Analysis & Design**

Web Technologies

SET08101

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Organized to help reader find specific information and what topics are

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# Introduction and description

It has been tasked to design, implement, and evaluate a website on the topic of food. In this report, the features, analysis, design and plan for implementation are laid out and discussed.

This project is designed to demonstrate an understanding of client-side web development along with abilities to implement a design using HTML, CSS and JavaScript.

The initial idea was to create a website that could generate a week plan of meals and add ingredients from all selected recipes to a shopping list. However, upon researching this idea, it seems this would be overly ambitious. Personalized collections of html pages would be better suited to a dynamic website rather than a static one. Upon redesigning the website, the aim is now towards creating a collection of recipes organized by cuisine, courses and diet. Outputting to a shopping list will remain, and is expected to be one of the more challenging aspects of creating this site. This is most likely going to be in the form of outputting the list of ingredients of a single recipe to a pdf. It would be nice to incorporate adding ingredients from multiple recipes, but this will be a late addition if time allows. Saving ingredients from multiple recipes of the users selection is most likely subject to the same problems presented above, but the idea will continue to be considered.

The home page will consist of a ‘Recipe of the Week’ article, along with a section for ‘Popular Recipes’. The navigation section will contain links to list pages by ‘All Recipes’, ‘Cuisine’, ‘Courses’ or ‘Diet’. The user should be able to easily navigate through the pages to find a recipe based on the category chosen. Ideally each of the sub pages will also contain a filter to further narrow down the recipes displayed. There will also be an educational quiz, navigated to from an aside section on the home page. This quiz will be based on testing ones culinary knowledge and should hopefully be a fun addition to the rest of the website.

Each recipe should be presented to the user in a consistent manner such that when the user navigates from recipe to recipe, the flow and presentation maintains consistency. All pages should keep to a simple and clean presentation in an attempt not to clutter the users screen so to aid navigation and reduce any confusion.

At this stage in the design process, the aim is also to include additional user aids for each recipe such as adjusting ‘units’ and/or ‘number of servings’. It is noted that there is a lot of content to implement in the given timeframe. Due to this, further in this discussion, the features and pages will be will be broken down into ‘sprint’ like stages of implementation. This should lead to at the very least, a functional site. As time allows, the extra aids, features and functionality can be added at various stages.

# Background Research

“Usability is critical for the success of any website” says (SocialMediaToday, 2013). They go on to say “Usability is about making it easy for visitors to find the information they need quickly and easily”. In this article, the author lists and discusses various characteristics of a user-friendly website. Some that stand out are:

* Well formatted content that is easy to scan (the average internet user skims through the content on a web page instead of reading each and every word – headings, sub-headings, paragraphs, bullets or lists help to break up text).
* Fast load times (website loads within 4 to 6 seconds – one of the main reasons visitors leave your site); common factors being third-party plugins, widgets and social media.
* Contrasting colour scheme – lack of contrast makes it very difficult for visitors to read your content.
* Usable forms – offer tooltips and suggestions. Display on-screen message on completion.

(SocialMediaToday, 2013) recommends using Pingdom (SolarWinds, 2023) to test the speed of websites.

Some examples of the above points can be found in similar websites to which this project aims to create. On (Condé Nast, 2023) epicurious website, the layout is broken up well making it easy to scan. Contrasting colours can be seen on (Discovery, inc., 2022) Food Network site, making text stand out and readable. (Dotdash Meredith, n.d) Allrecipes website, keeps things simpler with a minimalistic colour scheme as well as utilizing an ‘F-shaped’ based reading pattern and grid based layout as recommended by (Feeling Peaky, 2022).

Something which appears to be mentioned in almost every article on the subject of website features ((Ideas On Purpose, 2023), (NSDesign Ltd, 2023) and (Top Design Firms, 2023), to name a few), is ‘strong calls-to-action’. These are to guide visitors as to what to do next. Good examples of ‘strong’ calls-to action can be seen on the BBC Good Food (Immediate Media Company Ltd, 2023) site, with bright purple buttons against a white background for their search bar, along with the main article recipe button and further down for their ‘more’ buttons. Delish (Hearst Magazine Media, Inc, n.d) on the other hand, have chosen to put focus into their subscribe button with black text on a bright green button against a white background. Delish also use breadcrumbs throughout their website showing the user where they have come from, aiding usability.

(DK New Media, LLC., 2022) provides a helpful article listing 68 different features for websites and where to place each. Feature 2 in the article is ‘Logo’, and it is suggested that they are “requiring contrast, recognition at any size, creativity, [colors](https://martech.zone/colors-and-purchase-decisions/) that target your audience, and perhaps sending a visual message that impacts your audience. Be sure to link your logo to back to your home page”. All good points that will be taken into account for this project.

Incorporating audio into the website has been considered for the home page in an attempt to engage users further when they visit the site (The satisfying sound of a sizzling pan). (Mozilla Foundation, 2023) provides an article on using the <audio> tag to embed sound contents in html documents. They also list the various events that may be used in conjunction with the tag. This article will be utilized when adding audio into the projects home page.

For inspiration on a quiz, the “Name That Food” quiz on (Merriam-Webster, Incorporated, 2023) is well laid out, interactive and user-friendly. Each question is displayed one at a time, and upon submitting an answer, a tick or cross is displayed along with highlighting the correct answer. Further information is then displayed below. This would be a good aim for the project, however it may be a difficult challenge to implement a quiz with similar aesthetics. An optional timer slider button is also incorporated at the start. Further research in this area will be required.

In reference to exporting a recipes ingredients, this is most likely going to be done by generating a pdf, though other methods will be considered as time allows. (Medium, 2022) and (GeeksforGeeks, 2023) both provide details on how to generate a pdf using client-side JavaScript jsPDF library via cloudfare.com links. This will only be part of the challenge to be able to output the ingredients. (Tesco.com, 2023) recipes have the feature to be able to print a recipe. This first removes the websites header, footer and unrelated sections of the page and only printing the recipe. This is similar to the aims of the project website, however the project aims to only output the ingredients to create a shopping list. To be able to achieve this, content must be retrieved with element ID tags. (Tutorials Point, 2023) provides an article that gives an overview of the steps required to achieve this. Another option may be to use a JSON file to store specific information, however it has proven difficult to locate information that is specific to this situation thus far with my current knowledge. Further research may be required if difficulties arise using jsPDF and element ID tags.

# Core Features

Below is a list of the intended minimum features aimed to be implemented in the projects website. Each is followed by a short reason why each is included.

* **Website title** – To display websites name in the browser tab so users can easily identify website among others.
* **Readable text** – Text should be in a readable font and easy to scan.
* **Logo** – For brand recognition and for visitors to be able to click from any page and return to the home page for easy navigation.
* **Strong calls-to-action** – To help guide visitors what to do next.
* **Simple, but contrasting colour scheme** – To assist readability of website content and make elements stand out.
* **Clearly labeled links** – To aid navigation and help direct users.
* **Article** – Recipe of the week on the home page containing a clickable button which takes the user to the mentioned recipe.
* **Clickable images** – To help breakup content and not present user with lots of text. Images in the ‘Popular recipes’ section, should be clickable to reach the relevant recipe.
* **All recipes page** – All recipes to be displayed on one page for browsing, accessed from the navigation bar.
* **Recipes by cuisine** – Recipes to be categorized by cuisine e.g. Chinese, Italian, accessed from the navigation bar.
* **Recipes by Course** – Recipes to be categorized by course e.g. Lunch, Dinner, Dessert, accessed from the navigation bar.
* **Recipes by Diet** – Recipes to be categorized by diet e.g. Vegetarian, accessed from the navigation bar.
* **Copyright information** – To be displayed in a footer section.
* **Recipe page** – Each recipe to be displayed in its own page, but all should be in identical format to aid usability.

# Additional Features

In addition to the core features set out, the following will hopefully be added as time allows. Note these will be implemented only after the core features have been incorporated.

* **Contact information** – To contain a contact form and contact details to allow visitors to easily get in touch about issues (or complements) about the site. Accessible from a link in the footer section.
* **About us page** – To give users additional information about the website. Accessible from a link in the footer section.
* **Site map** – Guides visitors to where they want to go for easy navigation. Accessible from a link in the footer section.
* **Use of breadcrumbs** – Tells uses where they have been to assist in easy navigation.
* **Generate shopping list** – Output ingredients of a recipe (to pdf) for users to easily reference required items for cooking.
* **Tool tips** - Most likely only required for shopping list output icon to assist users to correctly interpret icons function. Required on any unlabeled icons.
* **Change units** – Each recipe should be able to adjust what unit ingredients are displayed in. Quantities should adjust accordingly. Increases usability.
* **Change servings** – Each recipe should be able to adjust number of portions. Ingredient quantities should adjust accordingly. Increases usability.
* **Use of audio** – On home page, to engage users further when they visit the site.
* **Quiz** – To add an element of entertainment and hopefully also educational to further engage users. Accessed via a clickable button in an aside section on the home page.
* **Usable form controls** – Form controls (used in quiz and contact us pages) should be usable to the user, i.e. not too many fields, descriptive labels, use of tooltips or suggestions.
* **Search bar** – To allow users to easily search the website.
* **Social media icons** – To link to websites social media pages.

It is noted that there is a lot listed here. As such it is quite likely that not all of these will be possible to implement in the given timeframe. Later in the report, the implementation is laid out in stages. This is in an attempt to create at least a minimal functional website and create a plan to implement as much as possible of the additional features.

# Site organization

As the features have been designed to be implemented in multiple stages, Figure 1, below, shows the site organization of the core features. Figure 2, below, shows the full implementation of core features and additional features. It should be noted that every page should be able to return to the home page via clicking on the logo.

It can be seen in both Figure 1, and Figure 2, below that recipe pages can be accessed in multiple ways. Either directly from the home page via either the clickable images in the popular recipes section, or via the clickable button on the recipe of the week article. Alternatively, users could go via a list page such as the all recipes page, or one of the category list pages (Cuisine, courses, or diet). The additional features plans to implement a site map, about us page and contact us page. These will be contained in the footer section (as seen in Figure 2) which should be on every page, and hence accessible via every page on the site. The site map should allow direct access to every page on the website. Similarly, the navigation bar should be on every web page, allowing access to all of the recipe list pages (add search page if implemented) from any page.

# User Interface

A

# Implementation plan

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In strict **alphabetical order** of all sources related to in report.

Book, single author:

Author’s surname, Initial. (publication year). *Title in italics.*  Publication place:

Publisher name.

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*essay).*  place of publication: name of publisher.

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Bibliography

A list of all readings referenced or not in strict alphabetical order

Appendix

Page numbering to be appendix section – number, e.g A-1, A-2, B-1, B-2

Section here is manually labelled, so careful it matches section and doesn’t change earlier footers

**Appendix A - Each appendix**

Each appendix to be a letter of the alphabet with a short header

Contains important data, explanatory and illustrative material not included in the text.