MealsMyWay
Requirements Document Final

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Introduction

Meal prepping is a valuable way to maintain a healthy lifestyle, save time, and reduce food waste. However, it can quickly become overwhelming due to the effort involved in managing recipes, planning meals, and organizing grocery shopping. For people with busy schedules, meal prepping can help reduce stress and free up time, but the process itself can feel like a lot of work. Additionally, more and more people are looking to add a social aspect to meal prepping. Whether it's sharing recipes, meal plans, and grocery lists with friends or family; which only adds another layer of complexity.

While there are apps available that aim to support meal prepping, they often come with significant limitations. Many restrict users to use specific ingredients and/ or meal types, which can affect users with dietary restrictions or preferences. Additionally, these apps often fail to consider ingredients users already have at home when generating shopping lists or recipes, which leads to unnecessary purchases and food waste. Another common drawback is the lack of social sharing and collaboration on recipes. Most existing apps do not allow users to easily share recipes, meal plans, or grocery lists with friends or family members, which makes it difficult to coordinate and collaborate with others on meal prep. To address these issues, the development of **MealsMyWay** offers a solution that makes meal prepping not only more efficient but also more flexible and social. By utilizing both web applications and mobile platforms, the app provides users with a convenient way to organize and manage their meal prep. Users will be able to fully customize meal prep calendars, easily manage their recipes, and generate smart shopping lists based on the ingredients they already have on hand. The app will also feature robust sharing capabilities, allowing users to collaborate with others by sharing grocery lists, recipes, and meal plans. Additionally, as a bonus feature, artificial intelligence may be integrated to recommend meals based on user preferences and past meal history.

Meal planning is a growing need for convenient, waste-reducing meal solutions among busy families and individuals. **MealsMyWay** seeks to fill a unique niche in this market with family-centered, customizable, and social features. Dr. Ana Paula Chaves, the project sponsor and a mother of two, developed a manual meal prep system during the pandemic to balance her teaching career and family needs. Inspired by the benefits and challenges of this approach, she envisioned **MealsMyWay** as a flexible, collaborative platform to simplify meal prepping, helping families spend less time planning and more time enjoying meals together.

Problem Statement

Meal prepping is a valuable practice for maintaining a healthy lifestyle, saving time, and reducing food waste. However, many individuals find the process overwhelming due to the need to manage recipes, plan meals, and organize grocery shopping. For busy individuals, this can quickly become a stressful task. Additionally, the growing desire for a social aspect in meal prepping—where users can share recipes, meal plans, and grocery lists with friends or household members—adds another layer of complexity.

While there are apps currently available that aim to support meal prepping, they often come with significant limitations. Many of these apps restrict users to a predefined set of meals, such as breakfast, lunch, and dinner, and offer only a limited selection of recipes sourced from specific websites. They also typically lack robust sharing functionalities, making it difficult for users to connect with others. Moreover, these apps fail to consider ingredients users already have at home when generating shopping lists, leading to unnecessary purchases. Most of these apps are also mobile-only, limiting the user interface to smaller screens, which can be restrictive for many users.

The current meal prepping process for our client gets broken up into multiple days over a weekend. Dr. Chaves has described it as a planning day, a shopping/preparation day, and a cooking day. On the planning day Dr. Chaves gathers up the recipes that she would like to cook for the coming week and goes through her pantry to find what ingredients she still needs to buy. On the shopping/preparation day she goes to the store and gathers those ingredients, prepares them for being cooked the next day, and compiles an overarching recipe that will let her cook all of the meals at the same time, so when overlapping items in the meals get cooked, she does not have to go through the process twice. On the cooking day as one would expect all of the meals get cooked and stored for the coming week. This process can be long and cumbersome to have to decide on the meals, figure out the grocery list, and prepare the overarching recipe for all of the meals. That is where **MealsMyWay** comes in.

Solution Vision

The solution we are bringing to this problem is a meal prepping web and mobile application. It will be a web-first focused application with implementations for both IOS and Android mobile devices that handles all the complexities that come with weekly meal prepping. The goal of our system is to be as flexible as possible for users to plan around even the most tight schedules. Some aspects of meal planning we plan to tackle are:

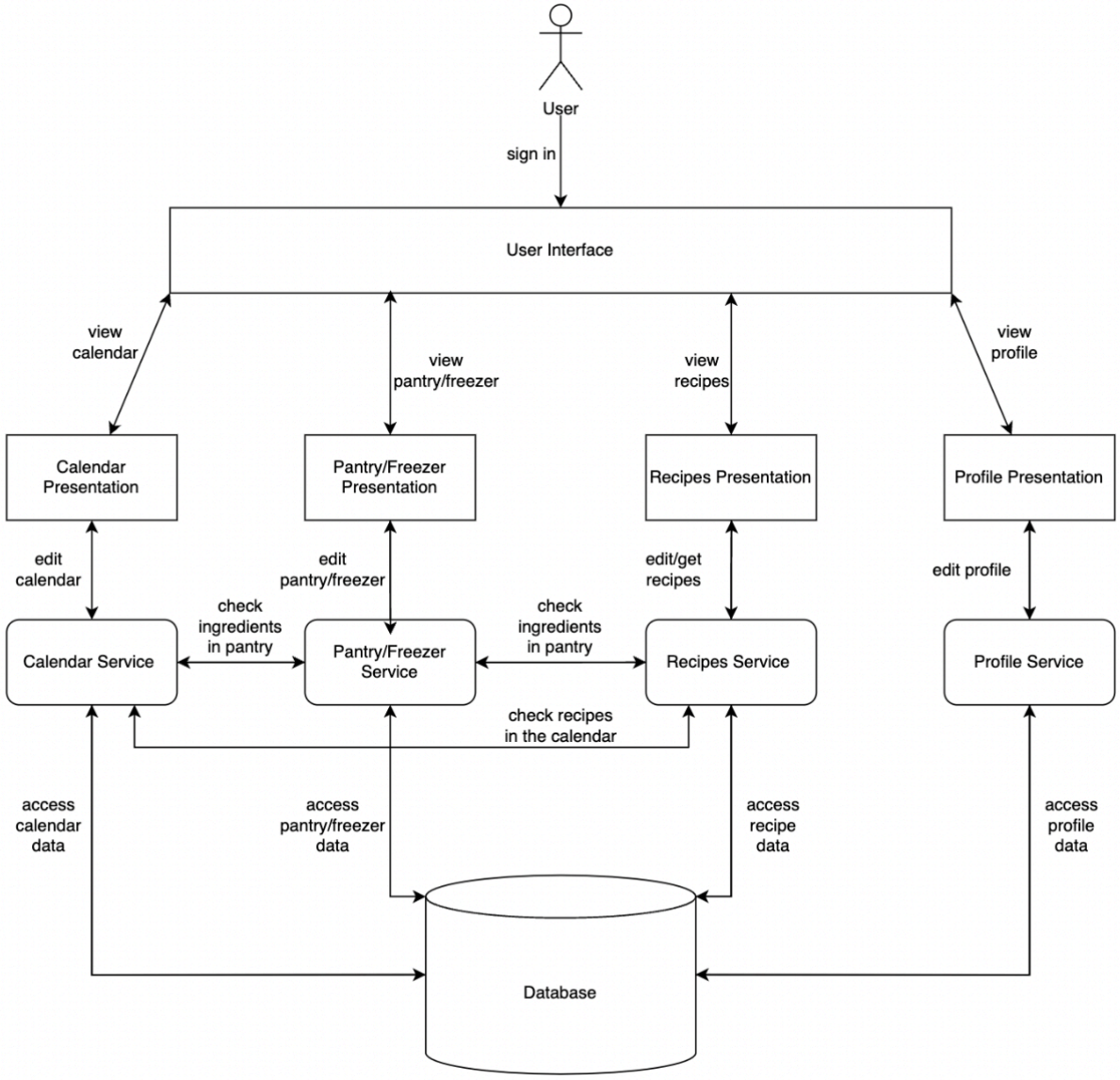
- Calendar Planning and Management
- Recipe Selection/Generation
- Pantry and Freezer Management
- Ingredient Incorporation
- Grocery List Generation
- Prep List generation
- Sharing Meal Plans/Schedules with Others

The data that our system uses is recipes, ingredients and allergies. The recipes and ingredients are collected in a multitude of ways. The main way that they are gathered is through an open-source recipe database along with the ingredients involved, as well as recipes/ingredients curated by the Culinary and Nutrition students at Northern Arizona University. The last data aspect our system uses is allergies which are collected from the users upon creating an account and later updating their profile.

Our system generates data on user profiles and preferences, meal plans and history, shopping and prep lists, pantry/freezer management, and recipe recommendations. User profile data includes allergy information and account privacy settings, which affect sharing capabilities. Meal plan and history data includes a weekly calendar and past plans to help users avoid meal fatigue and reuse plans. Shopping list data breaks down planned meals by date, considering pantry contents. Pantry management data helps create smart grocery lists and suggests recipes based on available ingredients. Recipe recommendation data helps build curated meal plans tailored to user needs.

The main computational processes of the program is the recipe recommendation and grocery list generation. The recipe recommendation will be calculated by assigning a weight to each recipe and ingredient, based on whether the user likes or dislikes it a recipe, it will increment or decrement each ingredient's weight. The higher weight an ingredient or recipe has, the more likely the system will recommend that recipe. The other computational process will be for the grocery list generation. When a list is generated, it will take all the ingredients involved with each recipe and create a list. Then it decrements all the ingredients that are contained in the freezer/pantry section by the maximum amount possible. The main data transformation of the system will be generating the prep list. This will involve transforming the meal calendar and steps of the recipes into a properly ordered and simple to follow plan that takes into account the order of the meals in the meal plan, along with the expiration dates of the ingredients to prep.

This application will free up our clients time and take a lot of heavy lifting out of the planning and preparation phases of their weekly meal prepping. By eliminating the need to manually create a shopping list and a prep list as well as providing options for recipes at the click of a button we help to eliminate much of the time consuming work that meal prepping can cause. This will allow our client to have more time to spend with their family or relax overall improving their weekly workload.



Project Requirements

This section outlines the core requirements for the design and development of the **MealsMyWay** web application. Focused on the primary objectives of simplifying meal prepping, reducing food waste, and enhancing social engagement, these high-level needs define the essential capabilities necessary to achieve a flexible and successful system for meal planning, smart shopping, and efficient inventory tracking. These objectives inform the functional and performance standards essential for the application's success.

A progressive approach will be used to organize these requirements, starting with a high-level overview and moving into the technical specifications that support each functional area. Functional requirements will be presented hierarchically, with top-level functions broken down into the detailed operations needed to implement them. Performance requirements will follow, defining expectations for responsiveness, usability, and efficiency, alongside measurable benchmarks to ensure optimal system performance. Lastly, we will address environmental constraints, specifying any hardware, software, and regulatory considerations. Collectively, these requirements establish a comprehensive and verifiable foundation for the successful implementation of **MealsMyWay**, ensuring it meets both user expectations and industry standards.

Functional Requirements

The functionality requirements for **MealsMyWay** define the essential features that will enable users to streamline their meal prepping experience. Each functionality has been designed to address specific user needs, from customizable meal planning to smart shopping list generation, recipe management, and inventory tracking. By breaking down these high-level functions into detailed operations, we ensure that every aspect of the app supports users in organizing meal plans, managing ingredients, and sharing meal prep resources with friends and family. These functionalities form the core of the app, providing users with a flexible, user-friendly, and socially connected meal planning tool that simplifies the process from start to finish.

Calendar Planning and Management

The **MealsMyWay** app will offer a comprehensive calendar planning feature, enabling users to create and manage meal plans across daily, weekly, and monthly views. This calendar system will allow users to add meals to specific days and times, with easy drag-and-drop

functionality for rearranging items. Each meal entry on the calendar can include recipe links, notes, and reminders for meal prep tasks, helping users stay organized and on schedule. Users will be able to tag meals to reflect different categories, such as breakfast, lunch, or dinner, to improve organization.

Beyond standard meal planning, the calendar feature will integrate seamlessly with other functionalities, including grocery lists, recipe selection, and ingredient tracking. The system will automatically update meal plans when ingredients run low or expire, notifying users to ensure they have what they need in stock. This flexibility in planning will allow users to maintain a well-organized meal schedule, helping them balance busy lifestyles and reducing the stress associated with daily meal preparation.

Pantry and Freezer Management

To help users keep track of the ingredients they have on hand, the **MealsMyWay** app will include a pantry and freezer management system. This feature will enable users to log all ingredients they currently have at home, including fresh, frozen, and dry goods, and categorize them by location (e.g., pantry, fridge, freezer). The pantry management system will also keep track of current stock to help keep a real-time record of ingredient availability.

In addition, the freezer section of the app will specifically track pre-cooked meals or batch-prepared items. This feature will allow users to make better use of their meal prep efforts, ensuring that nothing goes to waste. By linking the pantry and freezer management with meal planning and grocery list generation, the app will enable users to plan meals around ingredients they already have, reducing unnecessary purchases. This comprehensive tracking capability will simplify inventory management, giving users an efficient, organized approach to meal prep and ingredient usage.

Recipe Selection/Generation

The app's recipe selection and generation functionality will provide users with a robust platform for discovering, saving, and customizing recipes. Users will have access to a library of recipes, which they can filter by tags (breakfast, lunch, dinner, etc.). Each recipe entry will include ingredients, step-by-step instructions, and nutritional information, empowering users to make informed choices about their meals. Users can also upload or manually enter their favorite recipes, enabling them to create a personalized collection over time. The recipe feature will support tagging and sorting options, allowing users to organize recipes in a way that best suits their cooking style.

Additionally, users will be able to customize existing recipes to adjust serving sizes or substitute ingredients based on dietary needs. This functionality will serve as the core of the meal-prepping experience, giving users the flexibility to find or create meals that align with their schedules and preferences

Use of Ingredients at Home

The **MealsMyWay** app will emphasize ingredient incorporation, allowing users to manage and integrate their ingredients seamlessly across all features. With ingredient tracking linked to the pantry and freezer management system, users will have an accurate view of what they currently possess and what they need to purchase. Ingredients used in recipes will automatically adjust inventory counts, helping users maintain a real-time list of available items. This seamless incorporation will also support substitutions, so if an ingredient is unavailable, users will receive suggestions for viable replacements, ensuring flexibility in meal planning and preparation.

With automated ingredient tracking and updates across recipes, pantry lists, and meal plans, **MealsMyWay** will offer users a cohesive and efficient system for managing ingredients, ultimately reducing food waste and making meal prep more intuitive.

Grocery List Generation

MealsMyWay will simplify shopping by generating grocery lists based on planned meals and current inventory. This functionality will automatically compile a list of ingredients needed to complete users' meal plans, taking into account items already in the pantry or freezer. By integrating pantry data, the grocery list will exclude items that are in stock, focusing only on essentials that need replenishing. This approach will save users time and prevent over-purchasing, helping them make more efficient shopping decisions.

The grocery list feature will also be highly customizable, allowing users to add or remove items as they see fit. By streamlining the shopping process, the grocery list generation feature will make meal prep easier and more efficient for users, while supporting budget-conscious and waste-reducing habits.

Prep List Generation

To further support the meal-prepping process, **MealsMyWay** will provide a dedicated prep list generation feature that breaks down meal plans into actionable prep tasks. Based on the recipes selected, the app will automatically generate a list of prep activities (such as chopping, marinating, or cooking specific ingredients) that users can complete ahead of time. This functionality will enable users to tackle meal prep in batches, saving time during the week and reducing day-to-day cooking effort.

The prep list will also be customizable, allowing users to organize tasks by priority, day, or meal type. By organizing meal prep tasks in advance, the app will help users streamline the cooking process and make efficient use of their time, supporting busy lifestyles and simplifying meal management.

Sharing Meal Plans/Schedules with others

The **MealsMyWay** app will include social sharing features that allow users to share meal plans, grocery lists, and prep schedules with friends, family, or household members. Users will have the option to invite others to collaborate on meal planning, making it easier to coordinate meal prep for families or group living situations.

For increased flexibility, shared items will automatically update if the owner makes changes, ensuring that everyone stays in sync. This social aspect will transform meal prepping into a collaborative activity, making it easier to plan meals as a team and promoting shared responsibility in households.

AI Integration (stretch goal)

As a powerful enhancement, **MealsMyWay** will include AI integration to provide personalized meal recommendations and planning assistance. The AI will analyze users' meal histories, preferences, and ingredient inventories to suggest recipes and meal plans that align with their dietary needs and preferences. This functionality will help users discover new meals and plan balanced, varied diets without having to search manually for recipes, saving time and adding variety to their meal plans.

Additionally, the AI will factor in pantry and freezer data, suggesting meals that use available ingredients to minimize waste. Users will be able to provide feedback on

recommendations, allowing the AI to learn and improve over time. This intelligent feature will enhance the user experience, offering convenience and customization that adapts to each user's unique habits and preferences, making **MealsMyWay** a smarter, more user-centered tool for meal prepping.

Performance (Non-functional Requirements)

Non-functional requirements define the qualities and standards that **MealsMyWay** must meet to deliver a reliable, secure, and user-friendly experience. While functional requirements specify what the app does, non-functional requirements outline how well it performs, addressing critical aspects like security, usability, and performance efficiency. These requirements ensure that the application is not only useful but also accessible, responsive, and dependable. For an app centered around meal planning, these qualities are essential to build user trust, enable easy interactions, and encourage consistent engagement with the app's features. In **MealsMyWay**, non-functional requirements focus on essential factors such as data privacy, device synchronization, and secure allergen filtering, which together create a robust experience for users managing their dietary and meal prep needs.

By establishing clear standards for non-functional aspects, we lay the groundwork for an app that is adaptable to user needs while maintaining strict safeguards around data handling and privacy. These requirements will be continuously assessed and refined, as the app will need to scale effectively as its user base grows, respond efficiently across platforms, and maintain compliance with privacy regulations. With non-functional requirements in place, **MealsMyWay** aims to deliver a stable, consistent, and enjoyable experience, ensuring that the app remains reliable, secure, and ready to handle a variety of user scenarios while meeting high standards for quality and performance.

Allergy Filtering

Allergy filtering is essential for **MealsMyWay**, ensuring users with dietary restrictions can safely navigate the app. Users will be able to specify allergens, such as gluten, nuts, or shellfish, in their profiles. The app will then automatically filter recipes, pantry items, and meal suggestions to exclude these allergens. If an allergen is present in a selected recipe, a clear warning will alert the user, safeguarding them from potential health risks.

Additionally, **MealsMyWay** will suggest allergen-safe substitutions where possible, allowing users to enjoy a wider variety of recipes. This feature will undergo thorough testing to

ensure accuracy and reliability, with updates and a feedback system for continuous improvement. Users will also have the option to report issues or suggest new allergen preferences, helping the app stay adaptable to individual dietary needs.

Security

Security in **MealsMyWay** is prioritized through strong password requirements to protect user accounts. When creating a password, users will be required to enter it twice to confirm accuracy and avoid errors. To ensure the password is secure, it must include at least one uppercase letter, one lowercase letter, one number, and one special character. This structure helps create strong passwords that are less vulnerable to hacking attempts.

By enforcing these guidelines, **MealsMyWay** encourages users to adopt secure passwords, adding an essential layer of protection to their accounts. These requirements are part of the app's broader security measures designed to keep personal and dietary information safe from unauthorized access.

Data Privacy

Data privacy in **MealsMyWay** offers users the choice between private and public account settings. Private accounts keep all data—such as meal plans and dietary preferences—accessible only to the user, ensuring full privacy. Public accounts, on the other hand, allow users to share specific data, like recipes or meal plans, with others on the platform. This flexible approach supports both a secure, private experience and a collaborative option for those who wish to engage socially.

To implement this, **MealsMyWay** uses a privacy setting in each user’s profile to control data visibility. When switching from public to private, all shared content immediately becomes private, while switching to public prompts users to select which items to share. Access control in the backend enforces these settings, and cached links to previously shared items are invalidated when a user goes private. This system ensures privacy is managed smoothly, giving users full control over their data visibility.

Data synchronization Across Devices

Data synchronization across devices is essential for **MealsMyWay**, enabling users to access up-to-date meal plans, grocery lists, and preferences regardless of which device they use.

Changes made on one device, like adding a recipe or updating a meal plan, will automatically sync to all other devices. This ensures users can switch between mobile and desktop without losing continuity in their meal planning.

To support reliable synchronization, **MealsMyWay** will use real-time data syncing protocols that keep information consistent across devices. Offline support will also be included, allowing users to view meal plans and grocery lists without an internet connection. Once connectivity is restored, these changes will automatically sync, ensuring data stays accurate across all platforms. This setup provides flexibility and convenience for users who manage their meal planning on multiple devices.

Environmental Requirements

Environmental requirements outline the technical and compatibility standards necessary for **MealsMyWay** to function smoothly across various platforms and devices. These requirements ensure that the application remains accessible and performs consistently, regardless of the user's choice of device or operating system. Cross-platform integration and device compatibility are essential for delivering a seamless experience, as users may switch between web, mobile, and tablet platforms for convenience in managing their meal planning.

To meet these requirements, **MealsMyWay** will support multiple device types and operating systems, ensuring the app works equally well on iOS, Android, and web browsers. Additionally, the app will be optimized for varying screen sizes and input methods, maintaining a cohesive user interface across devices. By addressing these compatibility and integration needs, **MealsMyWay** aims to provide users with a flexible, reliable experience across all supported devices.

Cross Platform Integration

To achieve seamless cross-platform integration, **MealsMyWay** will utilize the Ionic framework, allowing us to develop a single codebase compatible with iOS, Android, and web platforms. Ionic's cross-platform capabilities enable **MealsMyWay** to maintain a unified design and functionality across different devices, ensuring users experience the same features and interface, regardless of the platform they choose. By using Ionic, we can efficiently deliver updates and enhancements to all platforms simultaneously, making it easier to keep the app consistent and up-to-date.

Ionic also supports real-time data synchronization, meaning changes made on one device, like updating a recipe or modifying a grocery list, will be instantly reflected on other devices. This capability is essential for users who switch between devices throughout the day. Whether users are on their smartphone, tablet, or desktop, Ionic's robust cross-platform integration ensures that **MealsMyWay** delivers a cohesive, reliable experience tailored to diverse user needs.

Device Compatibility

Device compatibility ensures that **MealsMyWay** performs optimally on a range of devices with different screen sizes, resolutions, and input methods. The app will be developed to adapt to various display types, from smaller phone screens to larger desktop monitors, providing a responsive layout that maintains readability and usability on all platforms. This adaptability is essential for users who rely on the app in various contexts, such as using their tablet for cooking instructions or smartphone for grocery shopping on the go.

Additionally, **MealsMyWay** will support both touch-based inputs on mobile and tablets as well as keyboard and mouse interactions on desktops, creating an intuitive experience regardless of the device used. By ensuring compatibility across devices, **MealsMyWay** can meet user expectations for consistent performance, accessibility, and ease of use, creating a versatile platform that fits seamlessly into users' daily routines.

Potential Risks

There are several potential risks associated with developing **MealsMyWay**, especially given its crowd-sourcing capabilities and the unique features we plan to integrate. One notable risk involves the synchronization of data transfer between desktop and mobile applications, which may lead to continuity issues if users cannot seamlessly pick up where they left off across different devices. While this limitation might not heavily impact development timelines, it could affect the user experience by creating friction in a multi-platform workflow. To address this, we'll prioritize a successful cross-device synchronization system to ensure a smooth and consistent experience, helping users access their meal planning information effortlessly on any device.

A critical risk relates to allergen management within **MealsMyWay's** recommendation system. Given that a stretch goal of the app is to suggest meals based on user preferences and

history, it's essential to carefully filter out allergens to avoid recommending ingredients that could trigger adverse reactions, especially for common allergens like nuts, gluten, or shellfish. To address this, the app will allow users to specify allergens in their profiles, and all recommended recipes will be automatically filtered to exclude these allergens. If an allergen is present in a selected recipe, the app will display a prominent warning and, where possible, suggest safe substitutions. This feature will undergo extensive testing to ensure it is reliable, with an option for users to report any issues, enabling continuous improvement in allergen safety.

User-generated content also presents a potential risk, as **MealsMyWay** allows users to contribute recipes to the app's database. Without adequate moderation, there's a chance of unsuitable or harmful content, from inaccurate information to inappropriate ingredients, appearing in the app. To manage this, we'll implement a content filtering and moderation system to screen recipes before they're made visible to the public. A reporting feature will also be available, allowing users to flag any inappropriate content for review. This two-layered approach helps maintain the quality and trustworthiness of the app's content.

Lastly, while there are numerous meal-prep applications on the market, most do not offer the unique combination of allergen safety, personalization, and cross-platform accessibility that **MealsMyWay** provides. In the event of project discontinuation, the app's structure allows for easy reactivation by renewing the database software subscription, giving the project sponsor flexibility to continue or expand **MealsMyWay** if desired, and ensuring the app's lasting relevance in the meal-prep market.

Project Plan

Milestone 1: Database Organization

Our database setup will be essential for storing user information, recipes, ingredients, and all other data required for the application's functionality. A primary focus will be on structuring the database for efficient recipe acquisition, as we want to launch with a robust collection of recipes for users to explore. Additionally, enabling users to add their own recipes will be vital to enhance personalization and foster an interactive community within the app.

This database setup is our first milestone because a solid backend foundation will make testing and development significantly more efficient. With a well-organized database in place early on, we'll be able to streamline the integration of features, allowing us to ensure consistent functionality and refine user interactions. This proactive approach will ultimately create a smoother experience for users from day one.

Milestone 2: Architecture Layout

A thoroughly planned out architecture will lead to a more smooth and easy to use user experience. This milestone is designed to fully finalize how each frontend element will interact with each other and how to create an architecture that supports that. Once that architecture is clearly laid out the foundation of it can be built into the code which allows for a strong and functional basis for the rest of our code development.

The architecture is the second milestone because like the database it is a foundational step towards the larger goals of this project. Once the Architecture and Database have been established the real features can be implemented and tested without much issue, ensuring that future growth of the application is achievable.

Milestone 3: Recipe and Menu Creation

Recipe and menu creation is a pivotal component of our project, as it is required to let the end user decide what they want to cook and when based on the menu or calendar they make. Our goal is to have hundreds if not thousands of recipes available to users to use and enjoy as they please while also maintaining plenty of options to choose from while sectioning off certain undesired ingredients. Additionally, the functionality to edit recipes is extremely important as it allows the user to take an already enticing recipe and either add things they'd like to see to the recipe or cull certain parts they dislike.

After this milestone is finished we will have the basis of the main requirements for the application. The main goal of this project is to be able to select and create recipes that can be stored and cooked as meals for the week. Finishing this milestone will again allow us to test further functionalities such as grocery list generation later down the line.

Milestone 4: Pantry and Freezer Development

Pantry and freezer development is a brief but nonetheless important part of the app's evolution towards completion. It holds all the user's ingredients separated by if they need refrigeration or not, and is later used for recipe recommendation. It also translates the quantity of each ingredient by portion, a set size given by the user instead of imperial or metric units so the information is more digestible for the user. The pantry and freezer will have a plus and minus button to add portions as they receive more of the item, allowing for intuitive tracking of all the ingredients they have and giving the software more accurate information to give different recipes. Additionally, it informs the user when they are out of a certain ingredient by showing a quantity '0' next to the entry without disappearing, which gives them a heads up to get more or allows them to delete it by clicking the trash can button that would show up next to it.

This feature is largely interchangeable with the recipe and menu generation because they are at the same level of requirement importance. The pantry and freezer development along with recipe creation allows our program to generate grocery and prep lists for the user so it is crucial

that this feature is working as soon as possible. Once this milestone is done the functionality of a single user in the app will largely be finished.

Milestone 5: Social Sharing Features

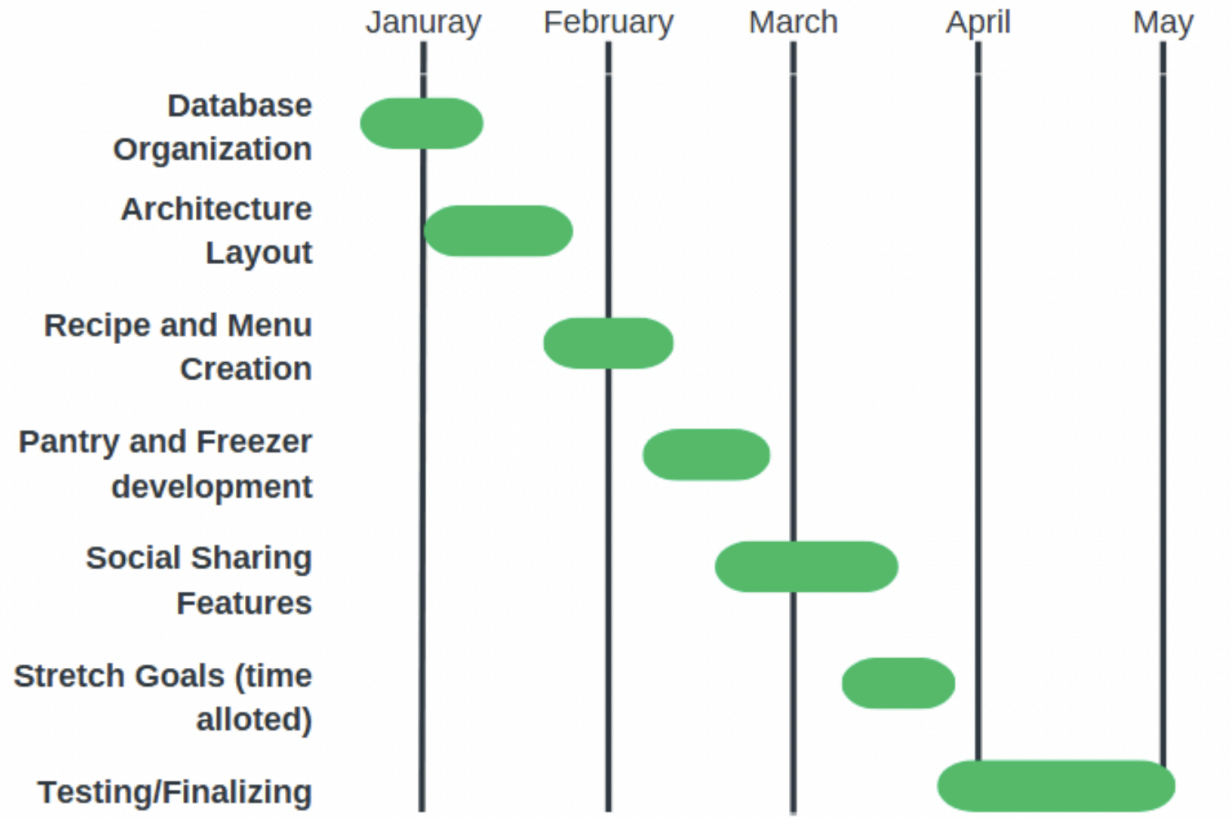
The ability to share menus or calendars with someone else is a key feature for this project as specified by the client. It will allow people to share and work on the same calendar at once as well as view all the recipes inside it so they can collect all the ingredients together and update the counter for each item to ensure they are on-track to being able to complete the calendar by the time any given menu item is set for that day or week.

This feature should be implemented after the other features have been tested and determined to be working. This implementation should simply be the ability to edit the same menu as another user which means that all of the functionalities need to be in place before this can be thoroughly tested.

Milestone 6: Stretch Goals

We have two major stretch goals to complete for this project - AI integration for recipe recommendation and advanced filtering options for different diets and allergies. AI Integration is the furthest off stretch goal as it is the most complicated process out of any previous feature but would be a great help in giving more accurate recommendations while also going off to completely different cuisines that may suit the user because it is a lot more advanced that simply keeping track of liked and disliked recipes and ingredients. Advanced filtering is a slightly more niche option but still important, allowing people with specialized diets like Keto or Vegetarian so they don't have to take extra time filtering out recipes themselves. It also provides extra layers of safety for those with allergies as to not risk getting a recipe and missing that it is something potentially dangerous to them.

These will come last because our client has not specifically said these are needs but has expressed interest in these features being there. These stretch goals would allow for a smoother, more in depth user experience for the client but for the purposes of what has been specifically asked of us these were not required and therefore will be developed as time allows.


Januray
February
March
April
May
Database Organization
Architecture Layout
Recipe and Menu Creation
Pantry and Freezer development
Social Sharing Features
Stretch Goals (time alloted)
Testing/Finalizing

Conclusion

In conclusion, meal prepping offers an efficient path to a healthier lifestyle, freeing up time during the week by reducing the need for daily cooking. Yet, the initial time investment for planning, selecting recipes, and creating shopping lists can feel overwhelming. **MealsMyWay** is designed to address these challenges by providing a web and mobile application that simplifies the meal-prepping process. With features like one-click grocery list generation, allergen filtering, and a streamlined cooking prep list, **MealsMyWay** makes meal planning more approachable and effective, giving users a reliable tool to help manage their meals efficiently.

This document outlined the problem that drives the need for **MealsMyWay** and defined the proposed solution, detailing each critical component and milestone. From foundational elements like database setup and architecture layout to advanced functionality, such as recipe customization, pantry tracking, and social sharing, we mapped out the key steps required for the application's development. These milestones serve as a roadmap, ensuring the development team focuses on the essential elements needed for a complete, seamless user experience.

In addition to functional elements, the document outlined the non-functional requirements, such as robust security, allergen filtering, data privacy, and synchronization across devices. These standards will be integral to providing a trustworthy, secure, and user-friendly application. **MealsMyWay's** cross-platform design, using the Ionic framework, will enable compatibility on mobile and desktop devices, ensuring users can access their meal plans and grocery lists seamlessly from any device.

The outlined milestones and requirements reflect a detailed plan for creating a functional, accessible, and secure application that will serve a diverse audience with different dietary needs and preferences. Each element contributes to the project's overarching goal: to make meal prepping more efficient and accessible for users, enabling them to enjoy the benefits of a healthy lifestyle without the burden of time-intensive planning.

As the project progresses, the **MealsMyWay** team remains committed to building a tool that aligns with the daily needs of busy users. The proposed features, from allergen filtering to real-time data synchronization, reflect the app's goal to be a reliable, adaptable resource for meal prep management. With a clear vision and actionable milestones, **MealsMyWay** stands poised to make a meaningful impact in the lives of users, ultimately transforming meal planning from a complex task into a seamless, enjoyable process.

Glossary

Architecture Layout – The structured design of the app's systems and components, defining how data flows between the database, UI, and backend.

Artificial Intelligence (AI) – The simulation of human intelligence in machines to analyze data, recognize patterns, and make recommendations. In *MealsMyWay*, AI helps personalize meal suggestions.

Cross-Platform Accessibility – The app's accessibility across different device platforms, such as web, iOS, and Android.

Data Synchronization – Ensuring consistent and updated data across devices, such as web and mobile, so users have access to the latest information on any platform.

Data Transfer – The process of sending or receiving data between devices, such as syncing data between web and mobile platforms.

Ionic – An open-source framework for building cross-platform apps using HTML, CSS, and JavaScript for consistent performance on iOS, Android, and web.

Keto – A low-carb, high-fat diet designed to shift the body's metabolism toward burning fat for fuel instead of carbohydrates. Often used for weight management and blood sugar control, keto-friendly recipes are low in sugar and refined carbs.

Crowd-Sourcing Capabilities – A feature that allows non-developers to add data to the program for others to use.

User Interface (UI) – The visual and interactive elements of the app that allow users to navigate and engage with its features.