**Project Overview**

**Title:** MA-I-RECIPE Management App

**Objective:** To develop a web-based recipe management system that allows users to search, add, modify, and manage recipes conveniently.

**Target Audience:** Home cooks, culinary enthusiasts, and professional chefs looking for an efficient way to store and access recipes.

**Technical Specifications**

**Frontend:**

* **Languages:** HTML5, CSS3, JavaScript
* **Frameworks/Libraries:** None specified, but consider using Bootstrap for responsive design and jQuery for simpler DOM manipulation if needed.

**Backend:**

* **Server-side Language:** PHP
* **Database:** MySQL
* **Server:** Apache or Nginx

**Security:**

* **Data Validation:** Backend validation of all inputs using PHP.
* **Authentication:** Secure login system with hashed passwords.
* **Authorization:** User roles and permissions for recipe management.

**Functional Requirements**

**User Authentication:**

* Users can register, log in, and log out.
* Sessions to track logged-in users.

**Recipe Management:**

* **Search Recipe:** Users can search for recipes based on keywords and filters (meal type: meal, dessert, drinks).
* **Add New Recipe:** Users can add new recipes, including name, type, image, brief introduction, and detailed steps.
* **Modify Recipe:** Users can modify existing recipes. The form is pre-filled with existing data that can be updated.

**Database Schema:**

* Users (id, username, password\_hash, email)
* Recipes (id, user\_id, name, type, image\_url, brief\_intro, detailed\_recipe)
* Type (id, description)

**User Interface Design**

**Layout:**

* **Header:** Contains the application logo and user account information.
* **Sidebar:** Navigation buttons for different functionalities like Search, Add, and Modify.
* **Main Content Area:** Displays dynamic content based on user interaction.

**Pages:**

* **Home Page:** Initial landing page after login, showing search options and latest or featured recipes.
* **Search Results Page:** Displays search results in a list format.
* **Add/Edit Recipe Form:** A form to input or update recipe details.

**Development Plan**

**Phase 1: Setup**

* Set up the development environment.
* Configure Apache/Nginx, PHP, and MySQL on the development server.

**Phase 2: Backend Development**

* Develop and test PHP scripts for handling authentication and recipe management.
* Design and implement the MySQL database schema.

**Phase 3: Frontend Development**

* Create HTML templates for each page.
* Style pages using CSS.
* Implement interactive elements with JavaScript.

**Phase 4: Integration**

* Integrate frontend with backend functionalities.
* Ensure forms are properly sending data to backend and displaying dynamic content.

**Phase 5: Testing and Quality Assurance**

* Perform thorough testing, including unit tests, integration tests, and user acceptance testing.
* Fix any issues and optimize performance.

**Phase 6: Deployment**

* Prepare the production environment.
* Deploy the application to the server.
* Conduct final testing in the production environment.

**Phase 7: Maintenance**

* Monitor the application for issues.
* Regularly update the system and implement new features as required.

**Post-Launch Support**

* Provide technical support to users.
* Regular updates and bug fixes based on user feedback.

This document serves as a comprehensive guide for developing the MA-I-RECIPE Management App, ensuring all team members have a clear understanding of the project's goals, requirements, and development workflow. If there are any additional functionalities or changes you'd like to incorporate, let me know so we can adjust the plan accordingly.