



Software Requirement Specification

Document

LowKcal

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1 Introduction

1.1 Purpose

This document details the software requirements for the Minimum Viable Product (MVP) of LowKcal, a mobile application designed to revolutionize the dining experience for health-conscious consumers and restaurant owners. The MVP will focus on core features that enable users to browse restaurant menus, view detailed nutritional information, customize meals, place orders, and track calories. For restaurant owners, the MVP will provide essential tools for menu management, order processing, and customer engagement.

This Software Requirements Specification (SRS) covers the functional and non-functional requirements for the customer-facing and restaurant management aspects of the LowKcal MVP. It does not include details on future features or potential integrations beyond the core functionalities outlined in this document.

1.2 Project Scope

The LowKcal Minimum Viable Product (MVP) is an application designed to empower health-conscious individuals to make informed decisions about their meals when dining out. It will achieve this by providing detailed nutritional information, customizable meal options.

This project aligns with LowKcal's mission to provide full control over what individuals eat during a meal out and its vision to achieve global awareness of how calories work while revolutionizing the dining out experience. By empowering users with customization options and insights into their nutritional choices, LowKcal aims to make healthy eating more accessible and enjoyable for everyone.

1.3 Acronyms and Abbreviations

SRS	Software Requirement Specification
MVP	Minimum Viable Product
G	Goal
R	Requirement

2 User Personas and Goals

2.1 Goals

- **G1- Help restaurant customers regain control over their meals:** Empower customers to make informed choices about their food by providing them with detailed nutritional information and the ability to customize their meals.
- **G2- Help restaurant customers know the calories they're eating:** Increase transparency and awareness of calorie intake by clearly displaying the calorie content of each meal and ingredient.
- **G3- Help restaurants manage their menu:** Streamline menu management processes for restaurants, making it easier to update and showcase their offerings.
- **G4- Providing online menu for small restaurants:** Expand the reach of smaller restaurants by providing them with an online platform to showcase their menus and attract a wider customer base.

2.2 Customer Persona

2.2.1 Demographics:

- Age: Early 30s
- Occupation: Office worker
- Location: Porto, Portugal
- Tech Savviness: High (uses fitness apps, watches documentaries online)

2.2.2 Psychographics:

- Values:
 - Health.
 - Fitness.
 - Appearance.
 - Knowledge about his food.
- Motivations:
 - Wants to make informed food choices.
 - Have a fit body.
 - Feel healthy.

- **Goals:**
 - Find restaurants with healthy, low-calorie meal options that support his fitness goals. (G1)
 - Easily understand the nutritional content of meals, including macros and ingredients. (G2)
 - Customize meals to fit his dietary needs, such as adding protein or reducing salt. (G1)
 - Track calorie intake and integrate with existing health apps. (G1)
- **Frustrations:**
 - Lack of accessible nutritional information and ingredient transparency at restaurants.
 - Difficulty finding suitable meals after the gym due to limited healthy options or an empty fridge.
 - Uncertainty about what to eat to meet his nutritional goals, especially when dining out.

2.3 *Restaurant Owner Persona*

2.3.1 **Demographics:**

- Age: 30-50.
- Occupation: Restaurant owner or manager.
- Location: Porto
- Tech Savviness: Moderate to high (Open to adopting new technologies).

2.3.2 **Psychographics:**

- **Values:**
 - Providing healthy and delicious food options.
 - Prioritizing taste and nutrition.
- **Motivations:**
 - Attract and retain health-conscious customers.
 - Streamline operations.
 - Increase efficiency.

- **Goals:**
 - Showcase healthy menu options and attract health-conscious diners (G3, G4).
 - Easily update and manage menus, adapting to customer preferences and dietary trends (G3).
 - Efficiently handle orders and improve kitchen operations, reducing errors and wait times (G3).
 - Increase online visibility and reach a wider audience, potentially through a user-friendly app (G4).
- **Frustrations:**
 - Difficulty reaching and catering to the growing health-conscious market segment.
 - Time-consuming and cumbersome menu updates and management processes.
 - Limited or outdated online presence, hindering customer reach and engagement.

3 Goal Oriented System Requirements

3.1 Goal 1: Help restaurant customers regain control over their meal.

Requirement ID	Description	User Story ID	User Story
R1.6	Customize a meal (if enabled for the restaurant)	US1.1	As a customer, I want to customize my meal so that I can control the ingredients I consume.
R1.6.1	Add ingredient (select from the restaurant's ingredient list)	US1.2	As a customer, I want to add ingredients to my meal to suit my dietary preferences.
R1.6.2	Update ingredient	US1.3	As a customer, I want to update the ingredients in my meal to ensure it meets my needs.
R1.6.3	Delete ingredient	US1.4	As a customer, I want to remove ingredients from my meal to avoid unwanted items.

R1.7	Order a meal	US1.5	As a customer, I want to order a meal that I've customized so that I can enjoy it immediately.
R1.8	Choose meal options	US1.6	As a customer, I want to choose meal options to fit my dietary goals.
R1.8.1	Lowest calorie	US1.7	As a customer, I want to choose the lowest calorie option to manage my calorie intake.
R1.8.2	Balanced (medium calorie, medium protein)	US1.8	As a customer, I want to choose a balanced meal option for a moderate diet.
R1.8.3	Max protein	US1.9	As a customer, I want to choose the max protein option to meet my protein needs.
R1.9	MyFitnessPal - calorie tracker integration	US1.10	As a customer, I want to integrate my meal with MyFitnessPal to track my calorie intake.

3.2 Goal 2: Help restaurant customers know the calories they're eating.

Requirement ID	Description	User Story ID	User Story
R1.4	Show the kcal of the meal	US2.1	As a customer, I want to see the calorie count of a meal so that I can make informed choices.
R1.5	Show the ingredients of the meal	US2.2	As a customer, I want to see the ingredients of a meal to understand its nutritional content.

3.3 Goal 3: Help restaurants manage their menu.

Requirement ID	Description	User Story ID	User Story
R2.2	Manage menu	US3.1	As a restaurant owner, I want to manage my menu to keep it up-to-date for my customers.

R2.2.1	Add menu	US3.2	As a restaurant owner, I want to add new menus to provide more options for my customers.
R2.2.2	Update/rename menu	US3.3	As a restaurant owner, I want to update or rename menus to reflect changes in my offerings.
R2.2.3	Delete menu	US3.4	As a restaurant owner, I want to delete menus that are no longer available.
R2.3	Manage meal	US3.5	As a restaurant owner, I want to manage individual meals to ensure accurate information.
R2.3.1	Add meal	US3.6	As a restaurant owner, I want to add new meals to my menu to attract more customers.
R2.3.2	Update meal	US3.7	As a restaurant owner, I want to update meals to reflect ingredient or recipe changes.
R2.3.3	Delete meal	US3.8	As a restaurant owner, I want to delete meals that are no longer offered.
R2.4	Manage ingredient (including the amount in grams)	US3.9	As a restaurant owner, I want to manage ingredients to keep my meal information accurate.
R2.4.1	Add ingredient	US3.10	As a restaurant owner, I want to add ingredients to keep my menu comprehensive.
R2.4.2	Update ingredient	US3.11	As a restaurant owner, I want to update ingredients to reflect changes in my inventory.
R2.4.3	Delete ingredient	US3.12	As a restaurant owner, I want to delete ingredients that are no longer used.
R2.5	Create QR code (including export function for printing)	US3.13	As a restaurant owner, I want to create QR codes for my menus to provide easy access for customers.

R2.7	Export menu as PDF	US3.14	As a restaurant owner, I want to export my menu as a PDF to share it easily with others.
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3.4 Goal 4: Providing an online menu for small restaurants.

Requirement ID	Description	User Story ID	User Story
R1.1	Show a list of restaurants' menus	US4.1	As a customer, I want to see a list of available restaurants so that I can choose where to eat.
R1.2	Show an individual restaurant's menu	US4.2	As a customer, I want to see the menu of a specific restaurant to decide what to order.
R2.1	Register a restaurant	US4.3	As a small restaurant owner, I want to register my restaurant to provide an online menu to customers.
R2.6	Preview menu (link to R1.2)	US4.4	As a restaurant owner, I want to preview my menu to ensure it displays correctly online.
R2.8	Delete restaurant	US4.5	As a restaurant owner, I want to delete my restaurant listing if I no longer offer online menus.
R3.1	Show kitchen mode (for showing orders)	US4.6	As a restaurant owner, I want to show kitchen mode to my staff so they can see incoming orders.
R3.2	Accept order	US4.7	As a restaurant owner, I want to accept orders to confirm to customers that their order is being processed.
R3.3	Deny order	US4.8	As a restaurant owner, I want to deny orders that I cannot fulfill to inform customers promptly.
R3.4	Complete order	US4.9	As a restaurant owner, I want to mark orders as complete to keep track of finished tasks.

3.5 Goal 5: Provide administrative control over all restaurants.

Requirement ID	Description	User Story ID	User Story
R4	Includes all restaurant actions but access for all restaurants	US5.1	As a system admin, I want to manage all restaurant accounts to ensure smooth operation and compliance.

4 Use case Diagrams.

4.1 US.1.1

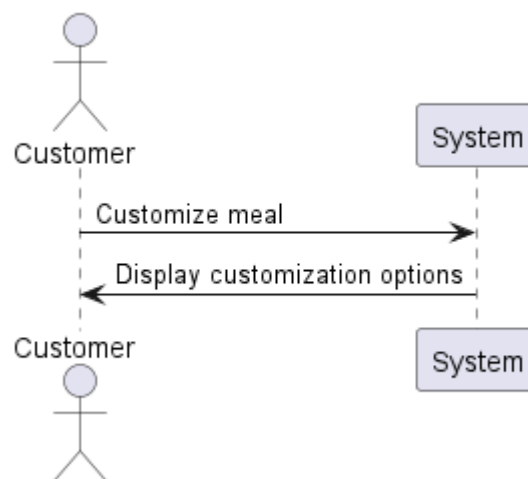


Figure 1

4.2 US1.2

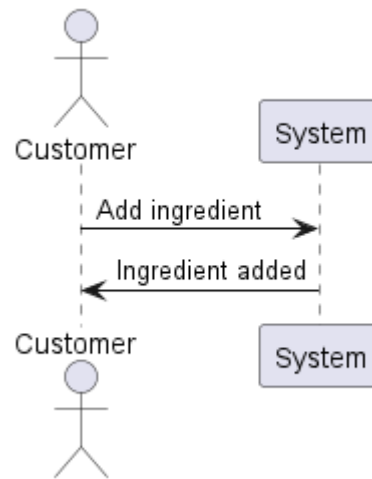


Figure 2

4.3 US1.3

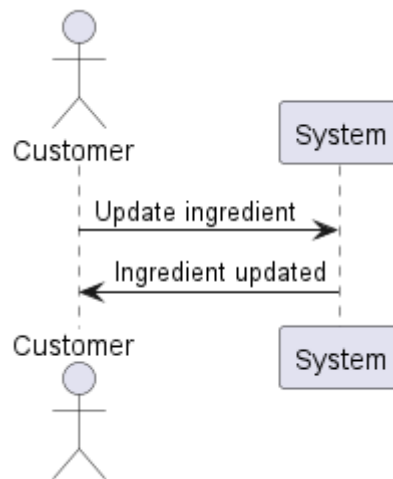


Figure 3

4.4 US1.4

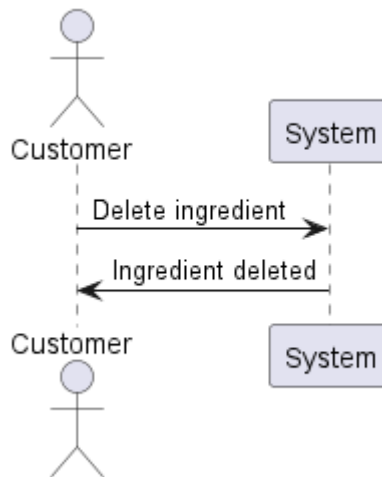


Figure 4

4.5 US1.5

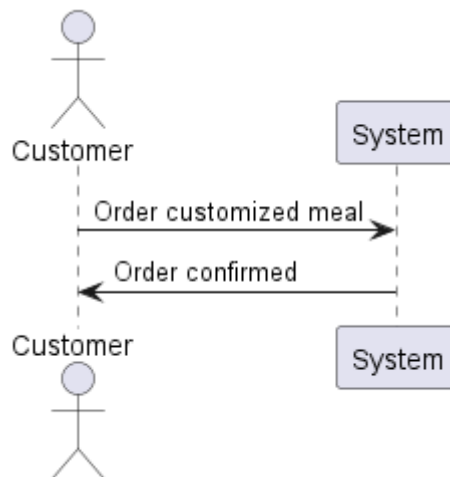


Figure 5

4.6 US1.6

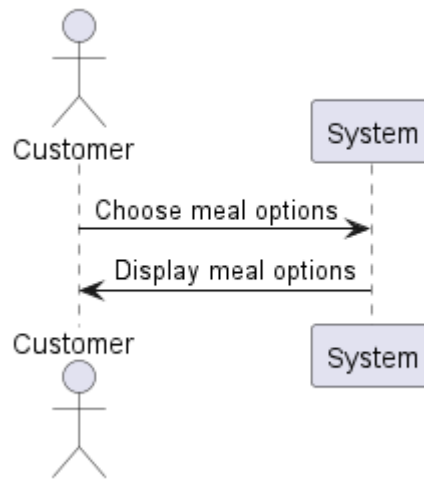


Figure 6

4.7 US1.7

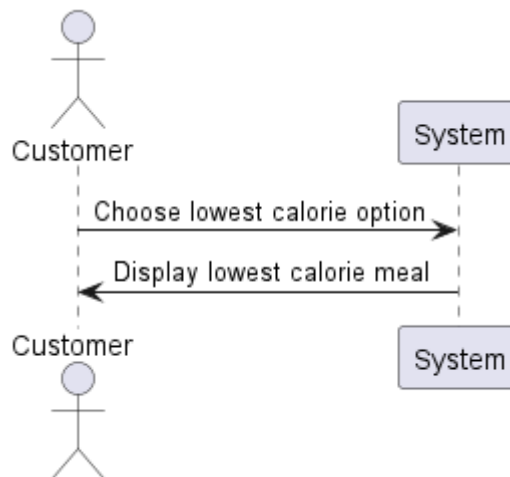


Figure 7

4.8 US1.8

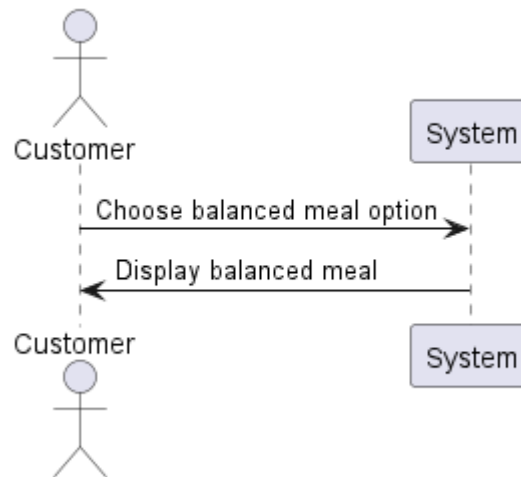


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4.9 US1.9

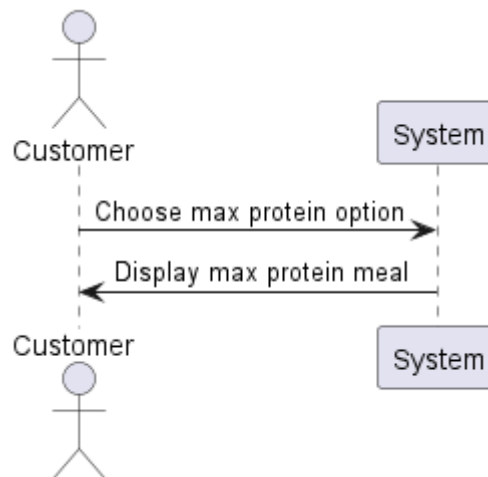


Figure 9

4.10 US1.10

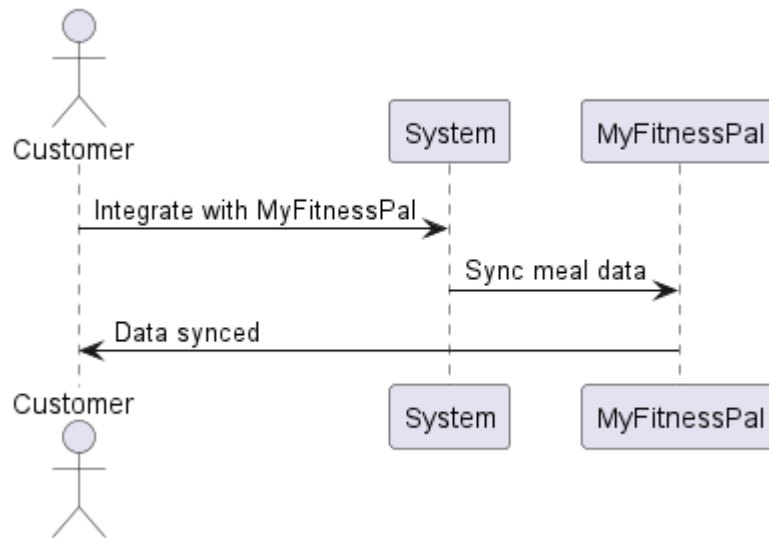


Figure 10

4.11 US2.1

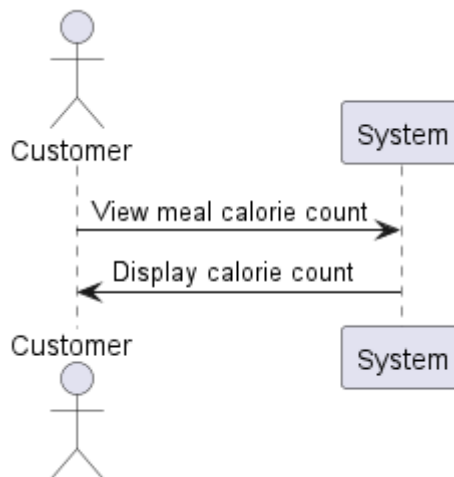


Figure 11

4.12 US2.2

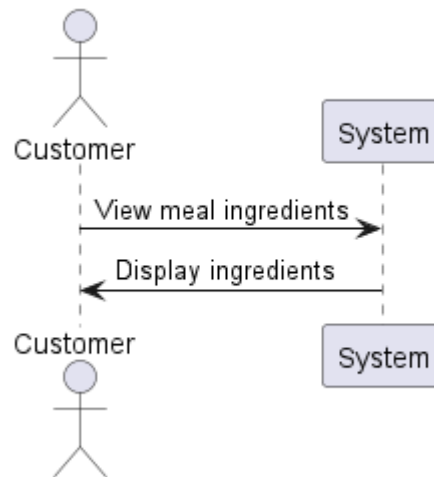


Figure 12

4.13 US3.1

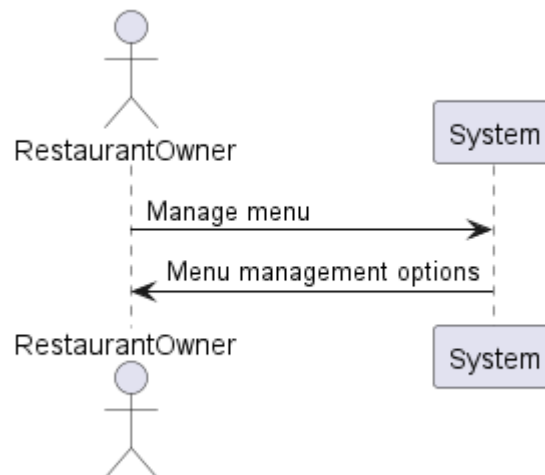


Figure 13

4.14 US3.2

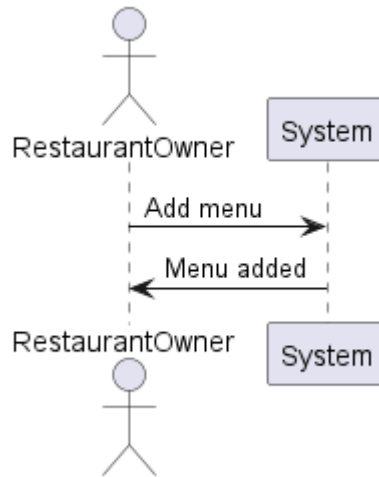


Figure 14

4.15 US3.3

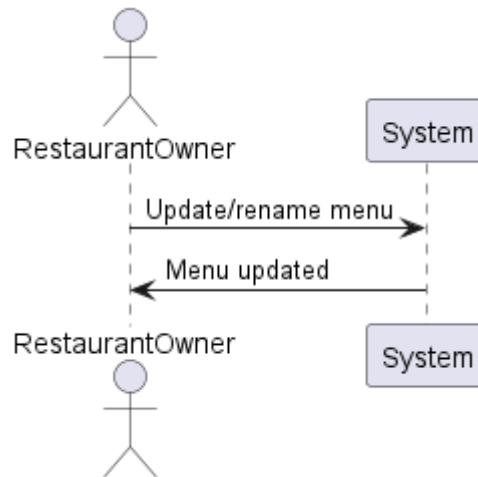


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4.16 US3.4

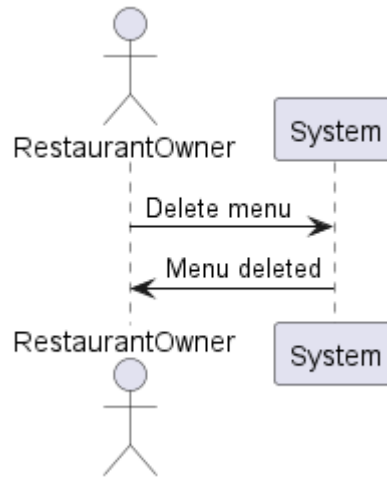


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4.17 US3.5

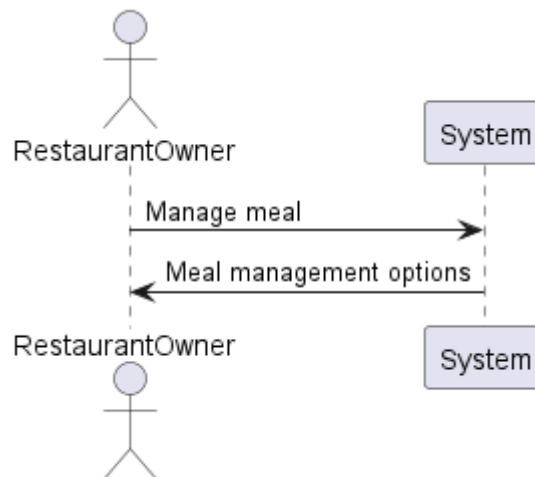


Figure 17

4.18 US3.6

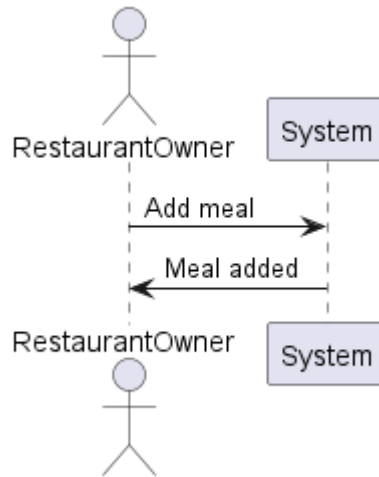


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4.19 US3.7

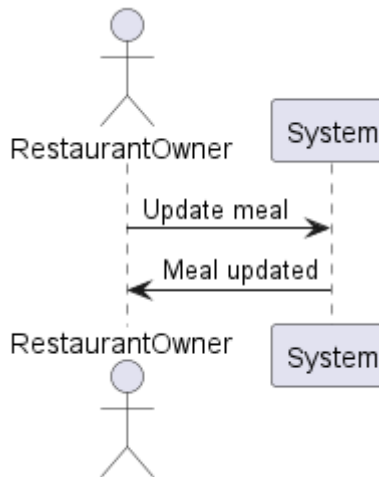


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4.20 US3.8

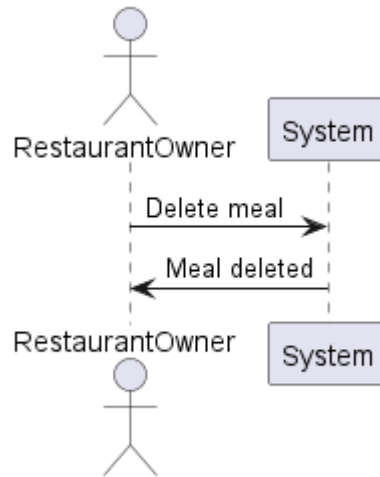


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4.21 US3.9

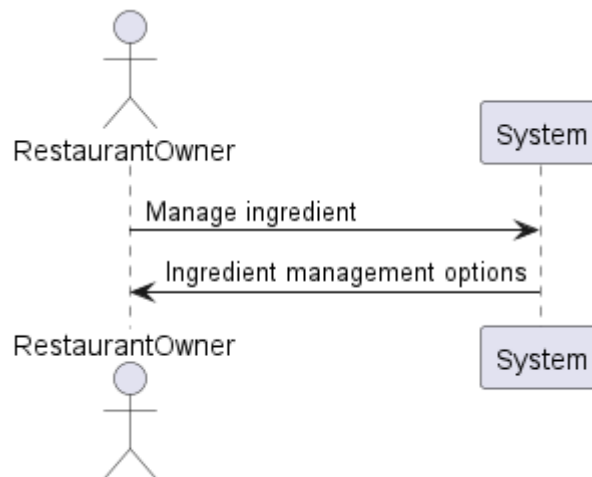


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4.22 US3.10

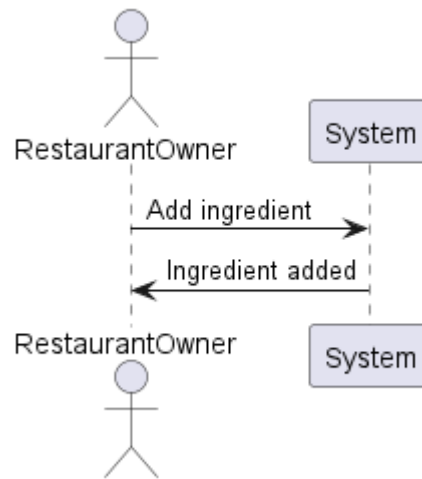


Figure 22

4.23 US3.11

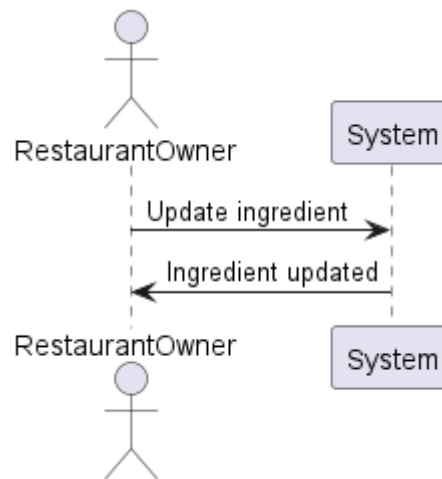


Figure 23

4.24 US3.12

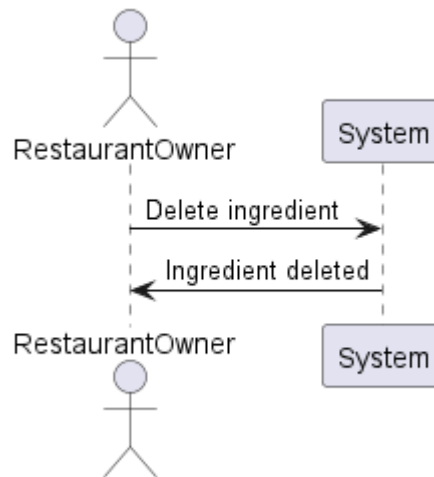


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4.25 US3.13

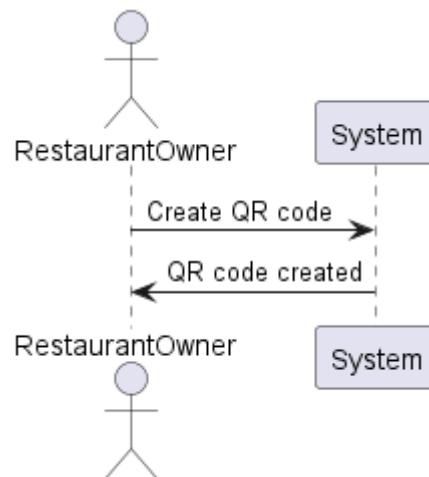


Figure 25

4.26 US3.14

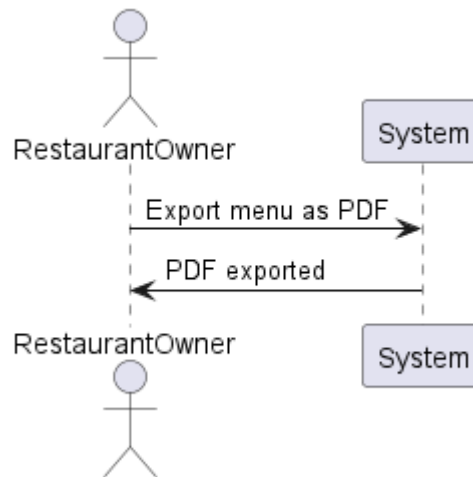


Figure 26

4.27 US4.1

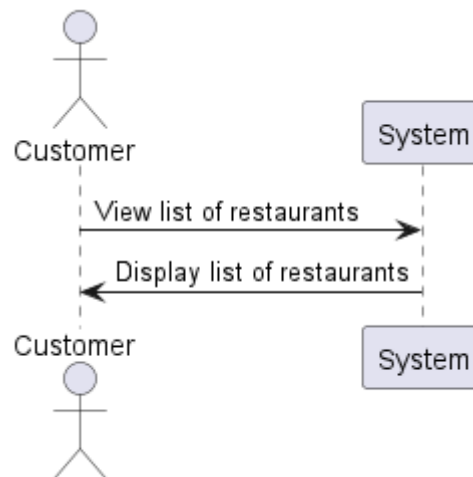


Figure 27

4.28 US4.2

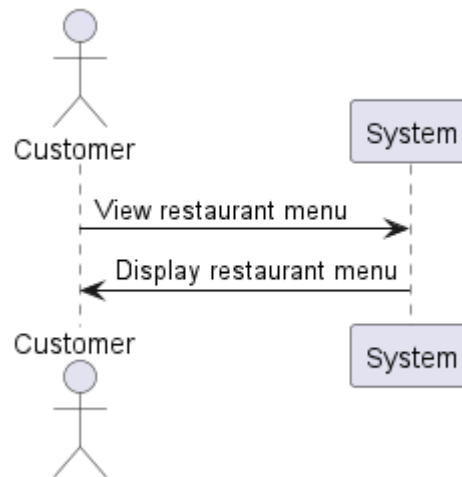


Figure 28

4.29 US4.3

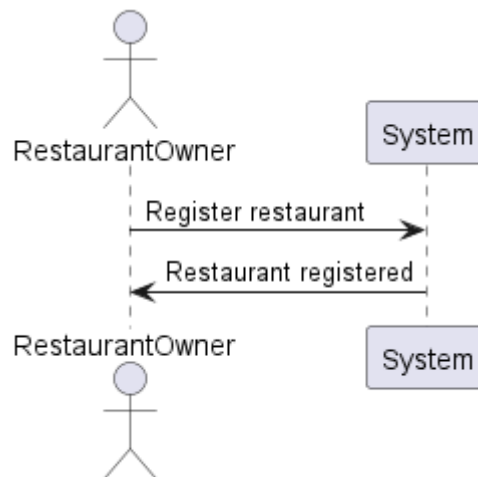


Figure 29

4.30 US4.4

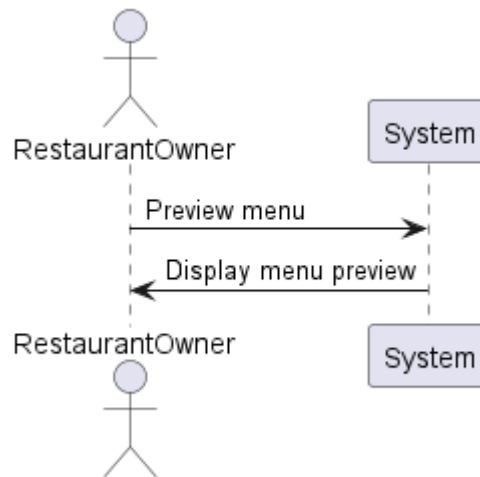


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4.31 US4.5

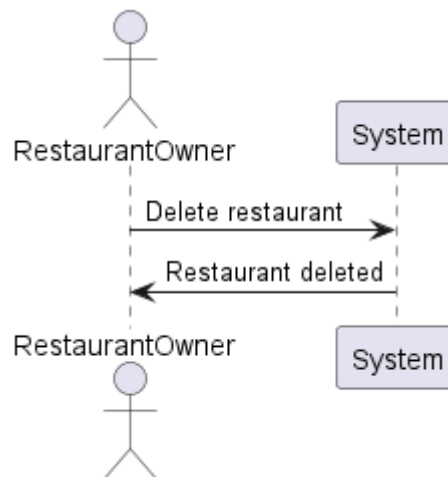


Figure 31

4.32 US4.6

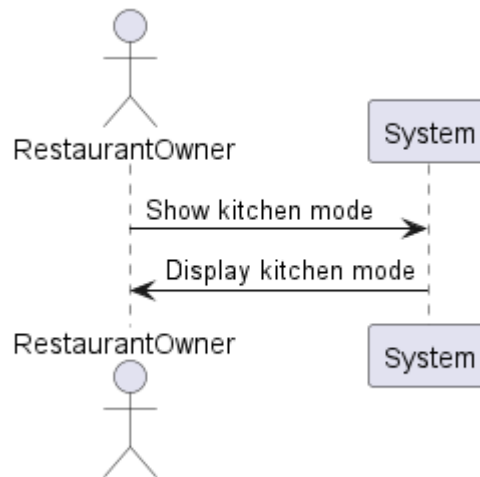


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4.33 US4.7

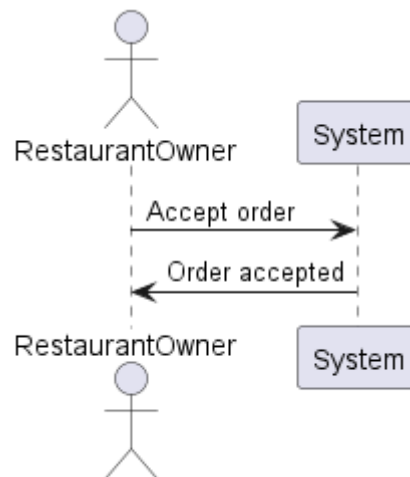


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4.34 US4.8

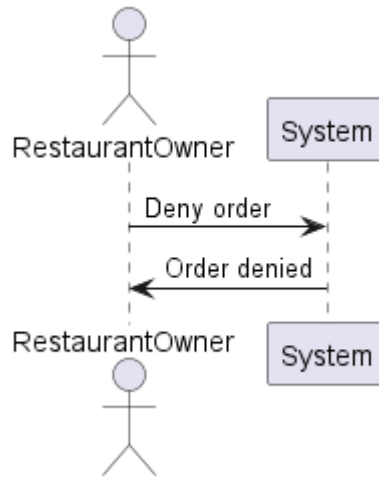


Figure 34

4.35 US4.9

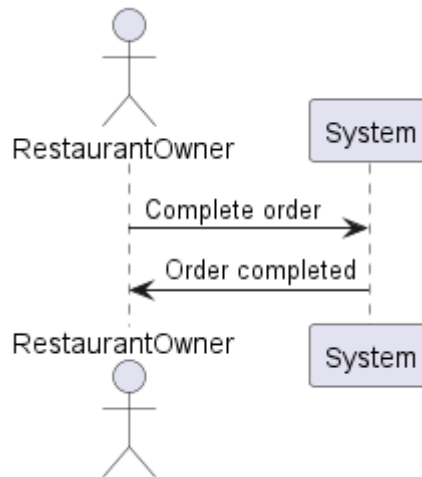


Figure 35

4.36 US5.1

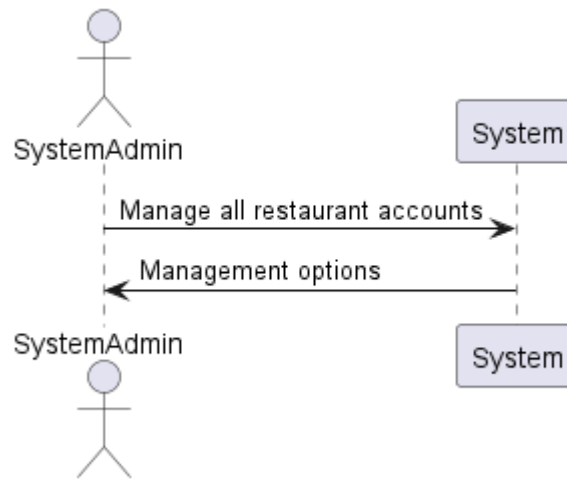


Figure 36