Eat Smart
Software Requirements Specification For
Initial Project Draft & Design

Version 1.0

Revision History

Date	Version	description	Author
19/03/2024	1.0	Initial draft of SRS document	Melido Enrique Bello Navarro Arber Krashi Esther Mallen Mohammad Mushfiqur Rahman
21/03/2024	1.0	Second draft of SRS document including some figures	Melido Enrique Bello Navarro Arber Krashi Esther Mallen Mohammad Mushfiqur Rahman
26/03/2024	1.0	Finish report of SRS document	Melido Enrique Bello Navarro Arber Krashi Esther Mallen Mohammad Mushfiqur Rahman

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Software Requirements Specification

1. Introduction

1.1 Purpose

This document specifies the software requirements for the Custom Meal Plan Tracker (CMPT) feature of the Eat Smart food order and delivery system. It describes the system's functionalities, interfaces, and interaction with users, aiming to provide developers and stakeholders with a clear understanding of the feature's requirements.

1.2 Scope

The scope of this Software Requirements Specification is limited to the Custom Meal Plan Tracker feature of the Eat Smart project. CMPT will allow users to create and manage custom meal plans based on their dietary goals, restrictions, and preferences, offering meal suggestions and tracking progress.

1.3 Definitions, Acronyms, and Abbreviations

Store: Encompasses chefs, delivery personnel, food importers, and a manager/superuser. Each group within the store has specific responsibilities ranging from menu creation, food delivery competition, handling external food purchases, to overarching management tasks including customer service, employee management, and financial adjustments.

Chef: A store employee responsible for creating menu items. Their performance and salary are directly influenced by customer feedback.

Delivery Personnel: Compete for delivery tasks and are evaluated similarly to chefs, with customer feedback affecting their status and earnings.

Food Importer (FI): Handles purchases from suppliers and is accountable for the quality and integrity of the goods. Subject to evaluation and complaints from chefs.

Manager/Superuser (M/SU): Oversees customer registrations, employee management, and acts as the final arbiter in disputes and complaints.

Customers: Divided into Registered and VIP customers, with distinct privileges ranging from ordering and voting on food, to exclusive discounts and influence.

Surfers: Potential customers who can browse the menu and apply for registration.

GUI: The user interface for the system, designed to be intuitive and personalized for customers, displaying dishes, ratings, and price information.

Complaints and Compliments System: A feedback mechanism for customers, chefs, and delivery personnel, impacting job status, salary, and service quality.

Registration and Account Management: Processes for customer engagement with the system, including deposit requirements, order management, and account closure.

CMPT: Custom Meal Plan Tracker

UI: User Interface

API: Application Programming Interface

1.4 References

[IEEE93]: IEEE Recommended Practice for Software Requirements Specifications (IEEE Std 830-1993)

Front-end:

- Reactjs: https://react.dev/

Back-end:

- Node.js: https://nodejs.org/en

Server:

- Firebase: https://firebase.google.com/docs/firestore

1.5 Overview

This SRS document is organized into four main sections, beginning with an introduction to the Custom Meal Plan Tracker, followed by a detailed description of the product, specific requirements including functional and non-functional aspects, and concluding with supporting information.

2. Overall Description

This section provides a general overview of the Custom Meal Plan Tracker, including its context within the Eat Smart system, functionalities, user characteristics, and dependencies.

2.1 Use-Case Model Survey

Actors:

- **Customer:** The purpose of the customer actors is to interact with the store actors and the platform to browse, order, and vote for various dishes and food items. They can participate in group discussions and they consist of registered customers and VIP customers with various respective perks.
- **Store:** The purpose of the store actors is to provide services to the customers. It consists of chefs, delivery people, food importers, and managers who have different roles in controlling various aspects of the customer-store experience.
- **Surfers:** The purpose of the surfers is to browse menus and ratings only. They can apply to be a registered customer.

Use Cases:

- **View Menu:** This allows all customers to view the list of items available on the menu. The actor in this case is the customer.
- **Add to Order:** This allows customers to add items to their order.
- **Remove from Order:** This would allow customers to remove from their order.
- **Place Order:** This allows for the customer to place their final order.
- **Prepare Food:** In this case, the actor is the store. This instructs the chef that an order has been placed and prepares the food items in the order.
- **Bill Customers:** This calculates the total bill for the customer's order.
- **Accept Payment:** This processes the payment made by the customer.
- **View Restaurant Reviews:** In this case, the surfer is the actor and this shows the ratings/reviews of the restaurant they would like to buy from.

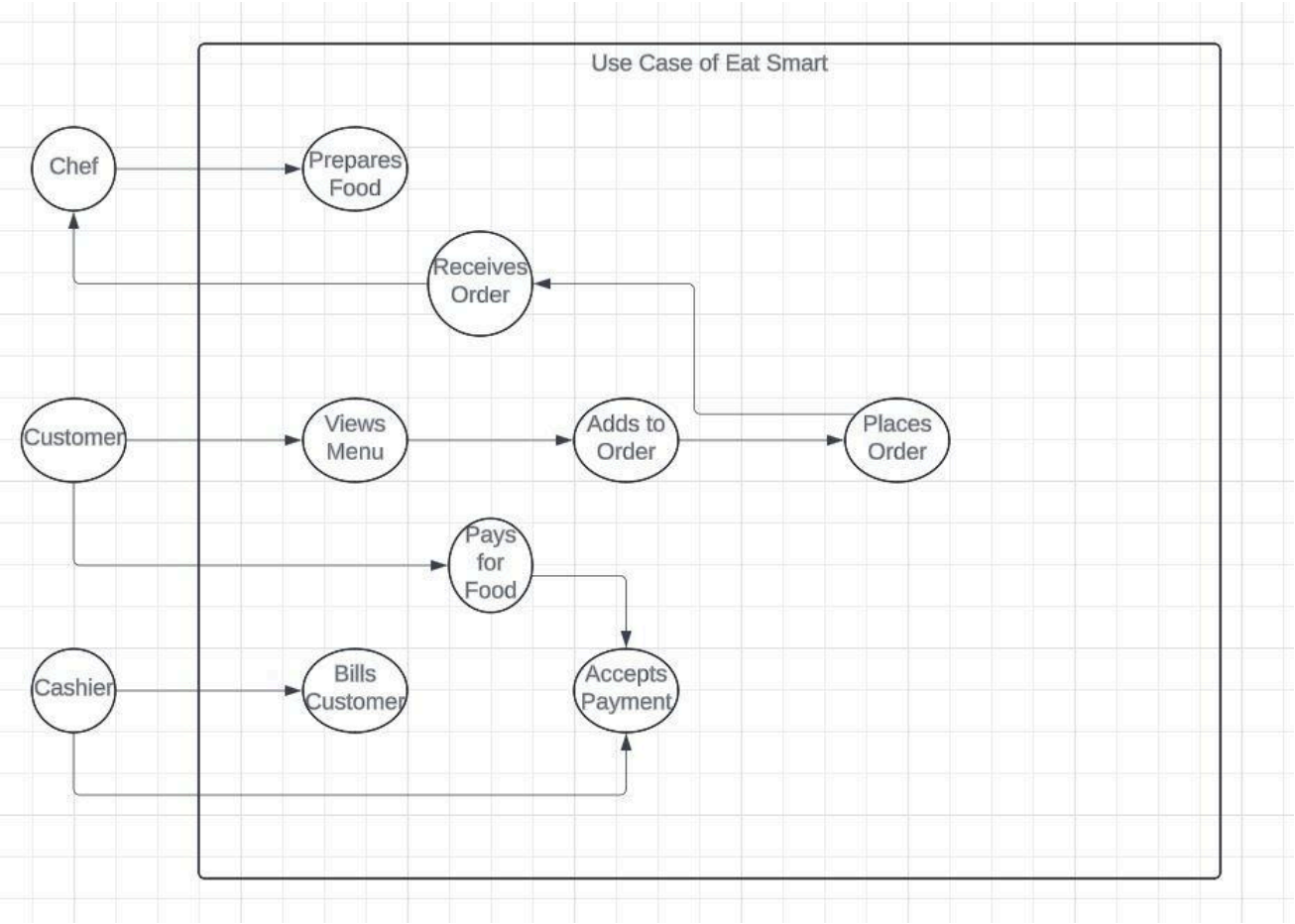

Figure 1: Simple Diagram for Use-Case

2.2 Assumptions and Dependencies

Assumptions

- The feature assumes that users have basic technological proficiency to interact with digital platforms.
- CMPT's effectiveness is dependent on the availability and accuracy of the Eat Smart system's food database.

Technologies

- **React.js**: Utilized for the front-end development to create a responsive and dynamic user interface. React.js enables the efficient rendering of web pages, improving the user experience by making the application fast and interactive.
- **Node.js**: Serves as the runtime environment for the back-end server. Node.js allows for the development of scalable and high-performance server-side applications using JavaScript, providing a unified language for both front-end and back-end development.
- **Firebase**: Serving as the external database, Firebase provides a comprehensive suite of cloud-based tools and services along with out of the box authentication services.

- **GitHub**: Essential for version control and team collaboration, GitHub will be used to manage the project's codebase, track changes, and facilitate code reviews, supporting efficient and coordinated development efforts across teams.

3. Specific Requirements

This section details the specific requirements for CMPT, including functional and non-functional requirements, system features, and user interaction through use cases.

Functional Requirements:

- FR1: User account integration for personalized experience
- FR2: Input interface for dietary goals and restrictions
- FR3: Algorithm for personalized meal suggestions
- FR4: Tracking and visualization of dietary intake and progress

Non-functional Requirements:

- NFR1: Intuitive and accessible user interface
- NFR2: Secure storage of user dietary preferences and history

3.1 Use-Case Reports

Set Dietary Goals

Applicable user types: Ordinary User, VIP User

Description: Allows users to set and adjust their dietary goals based on calories, dietary restrictions (e.g., gluten-free, vegetarian), and nutritional targets (e.g., protein, fat, carbohydrates). The system stores these preferences in the user's profile for personalized meal planning and tracking.

View Meal Suggestions

Applicable user types: Ordinary User, VIP User

Description: Users receive daily meal suggestions tailored to their dietary goals and preferences. The system accesses the user's dietary goals from their profile and matches them with available meal options, prioritizing dishes that meet the user's nutritional requirements.

Track Food Intake

Applicable user types: Ordinary User, VIP User

Description: Users can log their daily food intake, including meals and snacks, in the tracker. The system allows for manual entry of foods not available in the "Eat Smart" menu, including homemade meals, providing an estimate of nutritional content based on similar items.

View Nutritional Dashboard

Applicable user types: Ordinary User, VIP User

Description: Provides a comprehensive overview of the user's nutritional intake compared to their set goals. The dashboard displays daily and historical data, including calorie consumption, macronutrient breakdown, and progress towards dietary objectives.

Receive Dietary Tips

Applicable user types: Ordinary User, VIP User

Description: Users can access dietary tips and advice tailored to their goals and food preferences. This includes suggestions for improving their meal plans, alternative food options, and educational content on nutrition.

Earn Rewards

Applicable user types: Ordinary User, VIP User

Description: Rewards users for meeting their dietary goals and consistently using the meal tracker. Points or badges are awarded for achievements such as sticking to daily calorie limits or completing a streak of logged meals. VIP users may receive additional perks or discounts.

Adjust Dietary Goals

Applicable user types: Ordinary User, VIP User

Description: Users can revisit and adjust their dietary goals and restrictions at any time based on changing health objectives, preferences, or dietary advice. The system updates meal suggestions and tracking metrics accordingly.

Block User

Applicable user types: Super User (Dietitian/Expert)

Description: Allows dietitians or nutritional experts to block users who misuse the advice feature or consistently provide false dietary logs, ensuring the integrity of the platform.

Manage User Types

Applicable user types: Super User (Dietitian/Expert)

Description: Dietitians or experts have the ability to categorize users based on their engagement and adherence to dietary plans, promoting them to VIP status based on achievements or downgrading them for misuse.

Direct Messaging for Dietary Advice

Applicable user types: Ordinary User, VIP User, Super User (Dietitian/Expert)

Description: Facilitates private communication between users and dietitians or between users for peer support. Messages are securely stored and only accessible to the participants in the conversation.

3.2 Supplementary Requirements

User Types: Within the "Eat Smart" system, users can be categorized into several distinct types based on their interaction with the Custom Meal Plan Tracker feature and overall platform functionalities:

- **Surfer**: Users who have not registered but can browse menus and nutritional information. They have limited access and cannot use the Custom Meal Plan Tracker feature until they register.
- **Ordinary User**: Registered users who can utilize the basic features of the Custom Meal Plan Tracker, including setting dietary goals, tracking food intake, and receiving meal suggestions.
- **VIP User**: Users who have met certain criteria, such as completing a set number of orders or achieving their dietary goals consistently over time. VIP users have access to additional features such as advanced meal planning options and priority customer support.
- **Banned User**: Users who have been restricted from using the platform due to violations of the terms of service, such as repeatedly entering false dietary information or misusing the meal suggestion feature.
- **Super User** (Dietitian/Expert): A specialized user type, possibly including registered dietitians or nutrition experts, who can provide personalized meal planning advice and dietary suggestions to other users. They have the ability to moderate user-generated content related to dietary advice on the platform.

Warning System: The "Eat Smart" platform will implement a warning system to monitor and manage user interactions and ensure adherence to dietary tracking integrity and platform guidelines. Users who consistently enter false or misleading dietary information may receive warnings. Accumulating a specified number of warnings may lead to temporary restrictions or being categorized as a banned user.

Login System: The Custom Meal Plan Tracker will incorporate a secure login system, enabling users to register and sign in using their email addresses. Additionally, integration with third-party authentication services like Google and Facebook will be provided for convenience, allowing for a seamless login experience.

Taboo Words Check: To maintain a positive and supportive community environment, the system will implement a check for taboo words or inappropriate content in user-generated content, such as dietary logs, comments, and meal suggestions. Content found to contain blacklisted words will be flagged for review or automatically removed.

Transaction Check: For any in-app transactions, such as purchasing premium meal plans or tipping for dietitian advice, the system will implement transaction checks to prevent duplicate charges and ensure transaction security. Users will receive confirmation notifications for each completed transaction.

Privacy/Direct Messages System: To facilitate private communication between users and dietitians or between users themselves for support and advice, a direct messaging system will be implemented. This system will ensure that all messages are encrypted and only accessible to the participating users, preserving privacy and confidentiality.

4. *Supporting Information*

Prototype of Website:

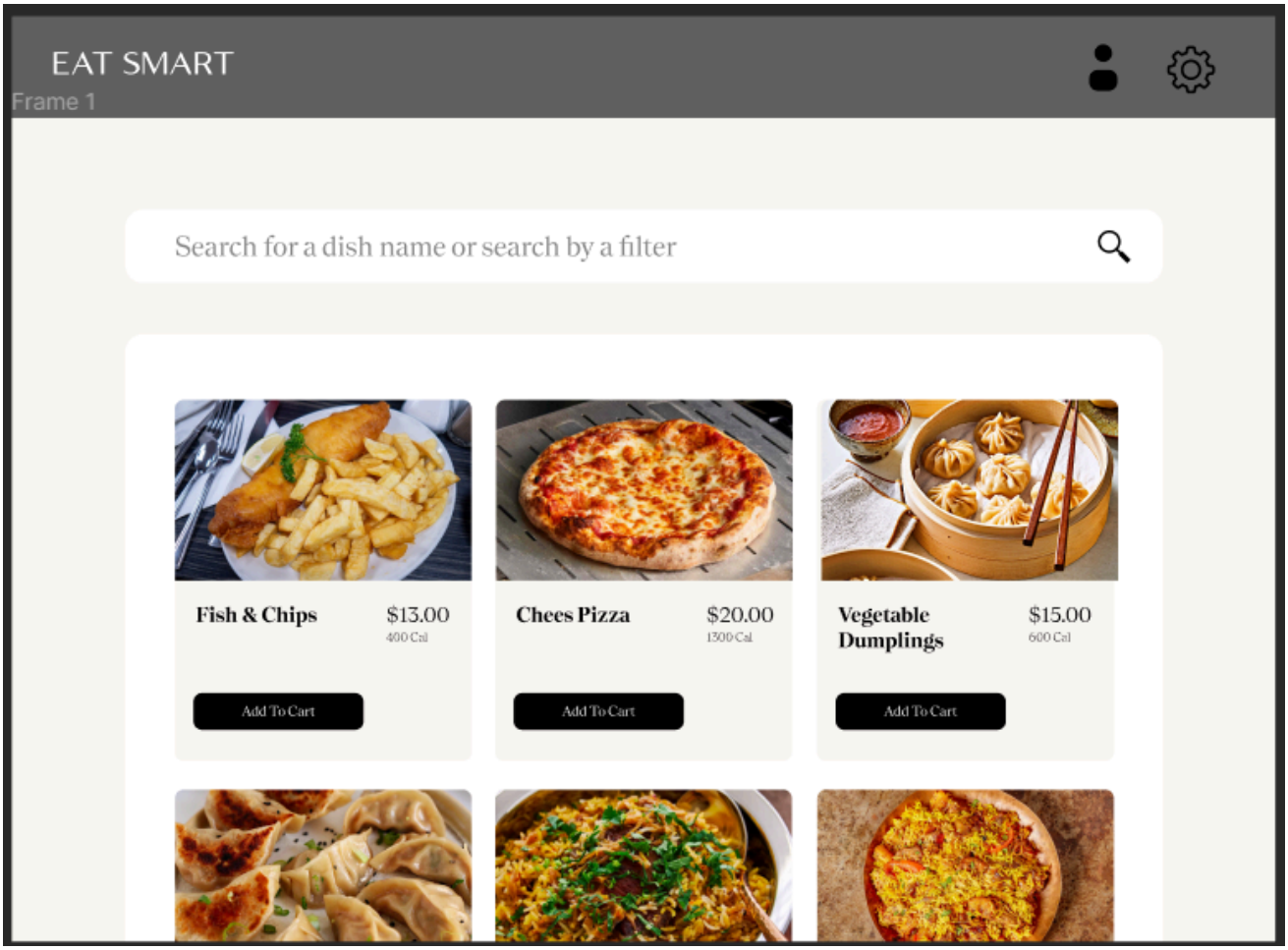

Figure 2: Page 1 of Website Prototype (Dish selecting page for customer)

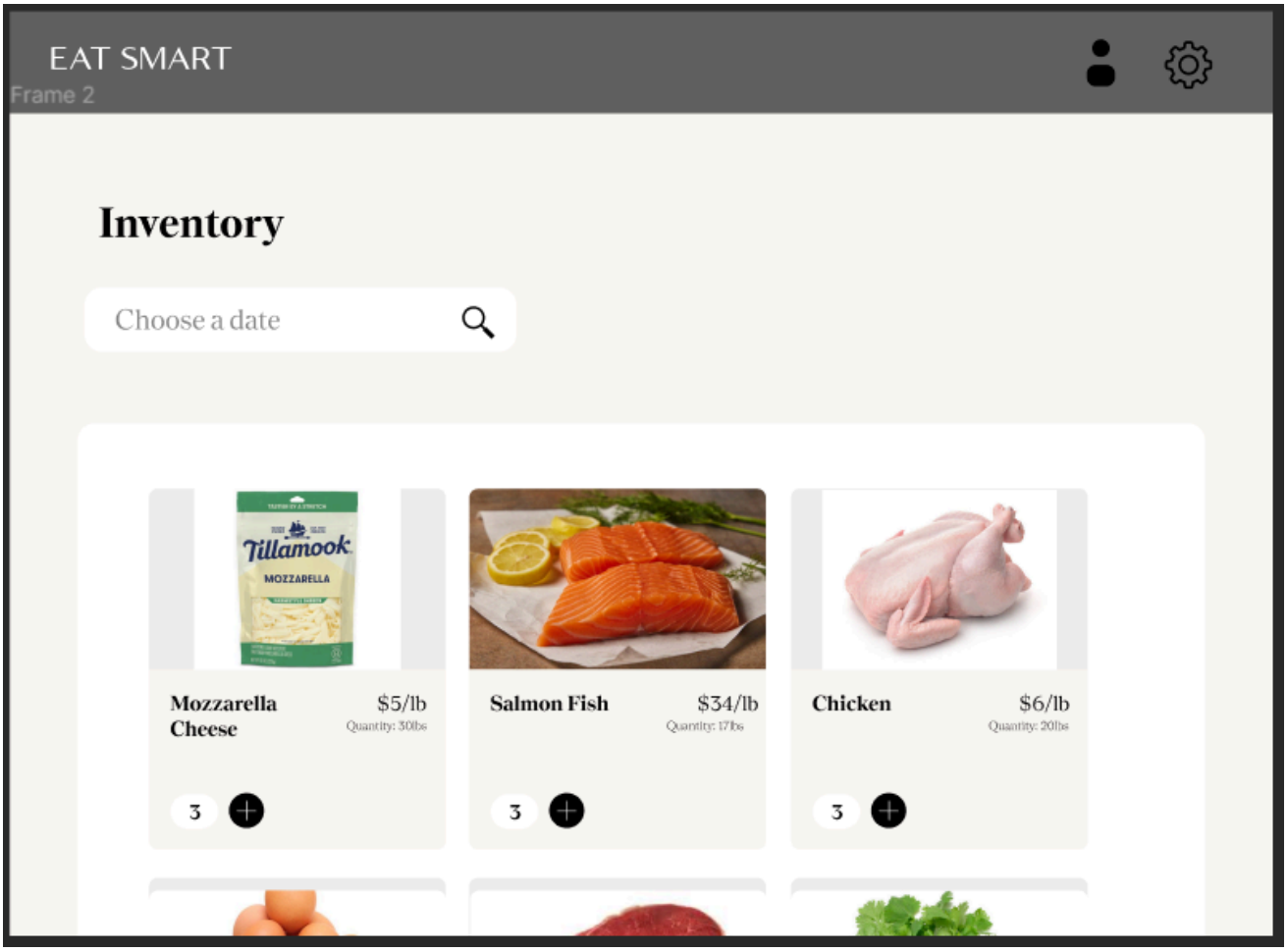

Figure 3: Page 2 of Website Prototype (Stock ordering page for store users)

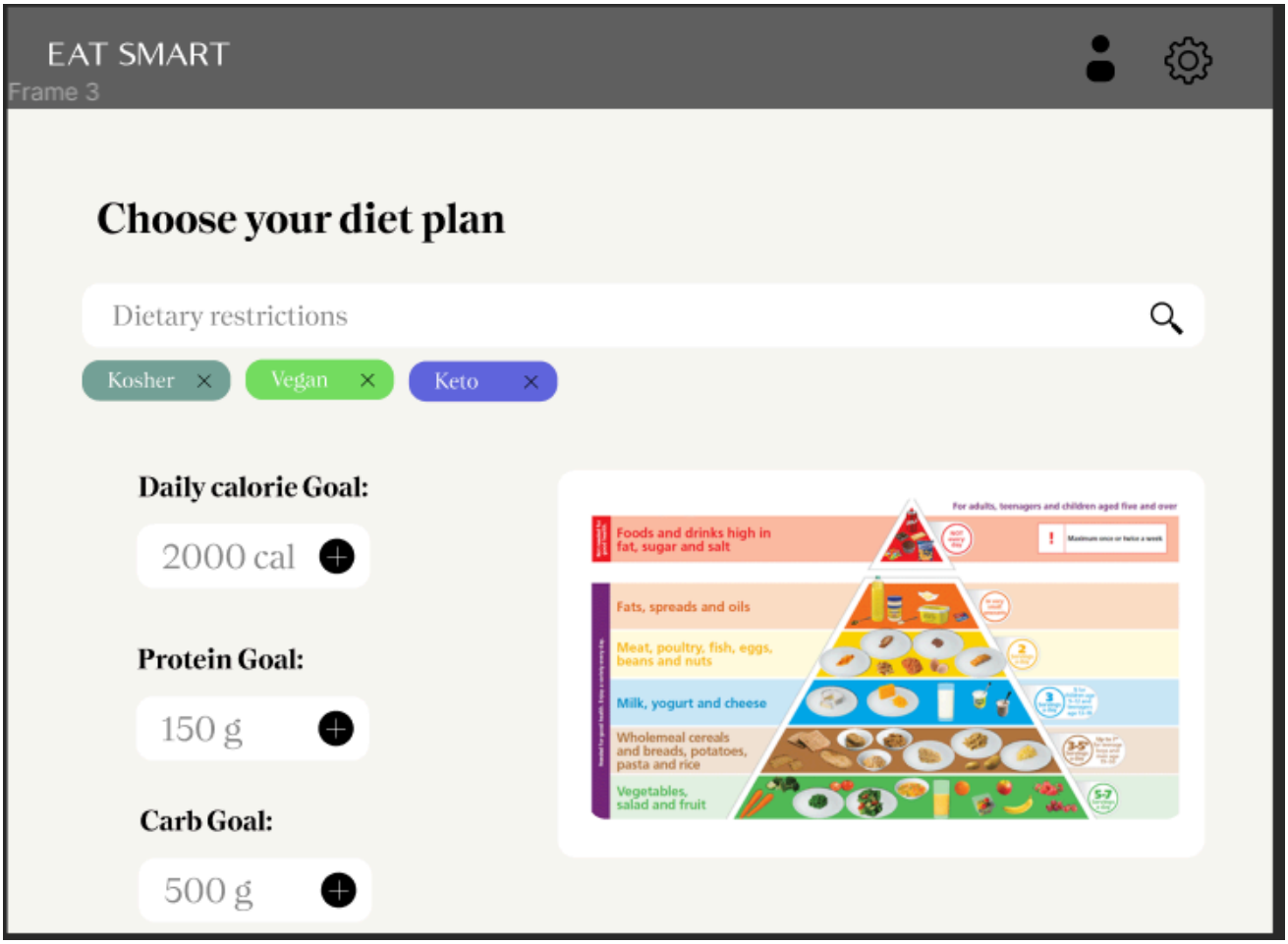

Figure 4: Page 3 of Website Prototype (Diet planning page for customer user)