A

Mini Project Report

On

HealthyMe- Calorie Intake Tracker System

Submitted in partial fulfillment of the requirements for the

degree

Second Year Engineering – Computer Science Engineering (DataScience)

by

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CERTIFICATE

This to certify that the Mini Project report on Healthy me has been submitted by Sanyog Chaudhari(23107025), Parth Bidave (23107016) and Vedant Gole(23107063) who are a Bonafede students of A. P. Shah Institute of Technology, Thane, Mumbai, as a partial fulfilment of the requirement for the degree in **CSE(DATA SCIENCE)**, during the academic year **2024-2025** in the satisfactory manner as per the curriculum laid down by University of Mumbai.

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Chapter 1

Introduction

This is one of the most important tools for users who want to lead a healthy lifestyle, participate in exercises for achieving certain levels of fitness, or have a balance of their dietary intake for health reasons. Our project, based on the concept of a calorie management system, enables the user to efficiently track and manage his daily caloric intake as well by showing comprehensive data about various food items. Such a system would render calorie-tracking easy, effective, and specific for its users so that guesswork no longer plays a role in their nutrition goals.

The purpose of such a system is to enable users to record the meals and snacks consumed in a list of food items-accessible from an accessible database-whose number of calories is appended to the same. Even their favorite personal food items can be put in the system, and so it becomes flexible and adaptable to any diet or cuisine. The system can account for each product consumed by the user at any point in the day and can measure the total calorie consumption against the set targets. This avoids overeating or under-eating-in general, unhealthy and detrimental to fitness goals.

One of the salient features of the calorie management system is that it gives out the amount of macronutrients in every food item, such as proteins, fats, and carbohydrates, which lets users know not just the calories they are counting but also the nutritional quality of the meals. Further, the system might suggest food choices according to one's individual goals of weight reduction, building muscles, or maintaining the existing body weight.

The system is also equipped with enabling tracking of improvements over time, analysis of trends in eating behavior, and intelligent decisions about the dieting pattern. With the integration of day-to-day exercise and activity data, users can balance calorie intake with calories burned at all times to ensure a more holistic approach to managing health. This calorie management system, therefore, is a complete tool for anyone who wants to take charge of his nutritional needs and achieve any one of his health goals in an informed and structured way.

1.1. Purpose:

The calorie management system involves aiding the user in keeping records of how to achieve and track their calorie intake and decision-making concerning diet habits. It provides an easily manageable platform wherein information about the availability of food items is detailed, and with this information, users can keep track of the calorie intake and make it become consistent with their goals. It supports healthy eating by showing nutritional information for every meal and provides users with the ability to create target calorie intake based on individual needs. The system makes the tracking of calories very convenient and consistent, thus making it easier for users to control diets and maintain fitness objectives.

1.2. Problem Statement:

The problem definition for the calorie management system project involves identifying key challenges that users face in tracking their daily calorie intake and managing their nutrition effectively

Challenges:

- **Inaccurate Calorie Tracking**: Many people find it difficult to estimate the calorie content of the food they eat. Without an accurate system in place, they may miscalculate their daily intake, leading to under- or over-consumption. This inaccuracy can hinder users from reaching their health and fitness goals.

- **Time-Consuming Manual Logging**: Manually logging meals and tracking calories can be time-consuming and tedious. Users often have to search for calorie values, write down their meals, and calculate the total intake. This process can discourage consistency and lead to users abandoning their calorie-tracking efforts.

- **Lack of Nutritional Insights**: Most users focus solely on calories without understanding the macronutrient balance (proteins, fats, and carbohydrates) needed for optimal health. Without a system that provides this information, users may struggle to maintain a balanced diet, potentially impacting their health goals.

- **Difficulty in Tracking Progress**: Without a structured system to monitor and visualize their progress over time, users may find it challenging to assess whether they are on track with their nutrition goals. This can lead to a lack of motivation or confusion about what changes are necessary to improve their eating habits.

1.1. Scope:

The scope of the Healthy me extends far beyond simply Management of your Calorie's It represents-

1. Can be applied in personal health and wellness.

2. Can be useful to fitness enthusiasts and athletes.

3. Can be used by healthcare professionals.

4. Can support weight management programs.

5. Can be integrated with educational institutions.

1.2. Objectives:

1. Users/Customers can create their own profile by filling out personal information.

2. Users can set a specific calorie goal for the day/week/month

3. A search bar will be provided which will fetch data of the food entities in the backend.

4. The admin can feed the data to the database in the backend (MySQL) using his admin login.

5. Summary of calorie intake will be accessible to the user at any point of time.

Chapter 2

Proposed System

The proposed system for the calorie management project is designed to address the challenges identified in the problem definition by offering a comprehensive, user-friendly platform for tracking daily calorie intake and improving nutritional awareness.

- **User-Friendly Calorie Tracking Platform**: The system will offer an intuitive interface for logging meals, snacks, and beverages. It includes a food database with calorie values, allowing users to easily search and select items. This simplifies calorie tracking and ensures accuracy, helping users manage their diet from anywhere

- **24/7 Access to Calorie Data**: The system will be accessible at all times, allowing users to log their meals and check their calorie intake at any time of the day. This flexibility ensures that users can keep track of their nutrition regardless of their schedule, offering real-time insights into their progress toward their daily calorie goals.

- **Automated Nutritional Breakdown**: The system will automate the calculation of calorie totals for each meal, along with a breakdown of macronutrients (proteins, fats, and carbohydrates). This feature will eliminate the need for manual calculations and give users instant feedback on the nutritional content of their meals, helping them make informed decisions about their diet.

- **Real-Time Progress Tracking:** The system will provide real-time tracking of daily calorie intake and long-term progress. Users can view visual charts and summaries to monitor trends, set goals, and adjust

their eating habits. This instant feedback will help users stay consistent and informed about their diet.

- **Simplified and Accessible Interface**: A design focused on ease of use, making it accessible for users of all tech skill levels.

This system is designed to empower users by providing a seamless, automated, and reliable tool for tracking their calories, improving their dietary habits, and achieving their health goals.

2.1 Features and Functionality

Comprehensive Food Database:

An intuitive interface for logging daily food and beverage consumption, automatically calculating and displaying total calories and key nutrients

A Seamless Search bar:

Users can easily search for and log their meals to accurately track their calorie intake and nutritional values.

Personalized Goal Setting:

Users can set and customize personal calorie goal and track their progress to help them stay on target with their objectives

Real-Time Calorie and Nutrient Tracking:

 An intuitive interface for logging daily food and beverage consumption, automatically calculating and displaying total calories and key nutrients.

Progress Tracking:

Track changes in calorie intake, nutritional consumption, and goal achievement over time. This feature helps users monitor their success and stay motivated.

Chapter 3

Project Outcomes

Project Outcomes for Calorie Management System:

Improved Calorie Awareness:

Users will have a better understanding of their daily calorie intake, enabling more informed dietary decisions.

Simplified Calorie Tracking:

The system will make it easy for users to log food and monitor calories, reducing the effort involved in managing their diet.

Personalized Health Goals:

Users will be able to set and track progress toward personalized nutrition and fitness goals, such as weight loss or maintenance.

Increased Consistency:

The ease of use and automated tracking features will encourage users to consistently log their meals, leading to better diet management and healthier habits

Chapter 4

Software Requirement

Java Development Kit (JDK 22)

Provides essential libraries and tools for developing and running the Java-based calorie management system.

IntelliJ IDEA/NetBeans IDE:

A powerful Integrated Development Environment (IDE) for coding, debugging, and managing the Java project efficiently. It supports smooth handling of database integration for food data and user records.

MySQL Database Server:

Serves as the relational database for storing and managing data such as food items, calorie values, user information, and their progress history.

MySQL Connector:

A JDBC driver that enables the Java application to interact seamlessly with the MySQL database for querying, updating, and retrieving calorie-related data.

Java Runtime Environment (JRE):

Provides the necessary runtime environment to execute the calorie management system on users' devices post-development.

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Chapter 5

Project Design

The basic navigation and functionality of a calorie management system is shown in figure 5.1. The process begins at the landing page, where users can either sign in or register. After signing in or registering, they are directed to the profile page, where they can set up personal information. From there, users can proceed to add meals by searching food items from a database. Separately, admins can log in and access the "Add Food to Database" functionality, enabling them to update or expand the food item database, ensuring accurate data for users when tracking their meals. The system provides clear pathways for both user and admin actions.
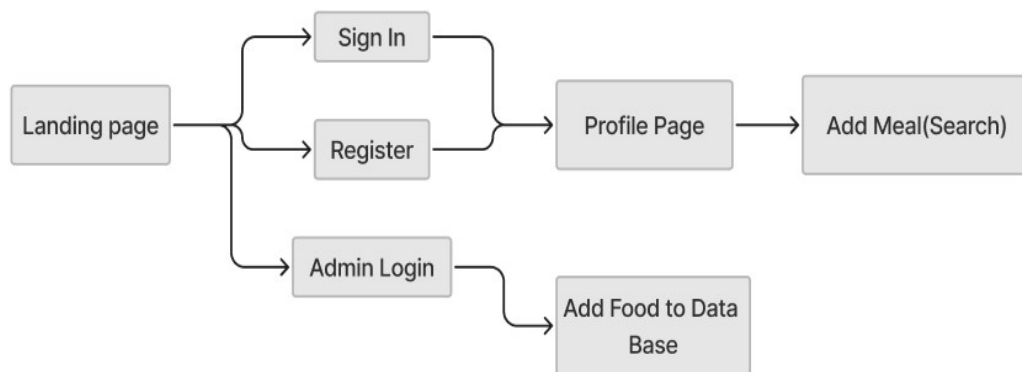
Figure 5.1: Block Diagram of HealthyMe

Chapter 6

Project Scheduling

The Gantt Chart that is given below in the figure 6.1 outlines the timeline for the **"HealthyMe-Calorie Intake Tracker System"** project, dividing it into phases with specific tasks assigned to different team members. The project consists of key stages: **Project Conception and Initiation**, **Project Design and Implementation**, and **Final Presentation**. Each task is broken down by weeks, with colored bars representing the duration of each task and showing progress percentages.
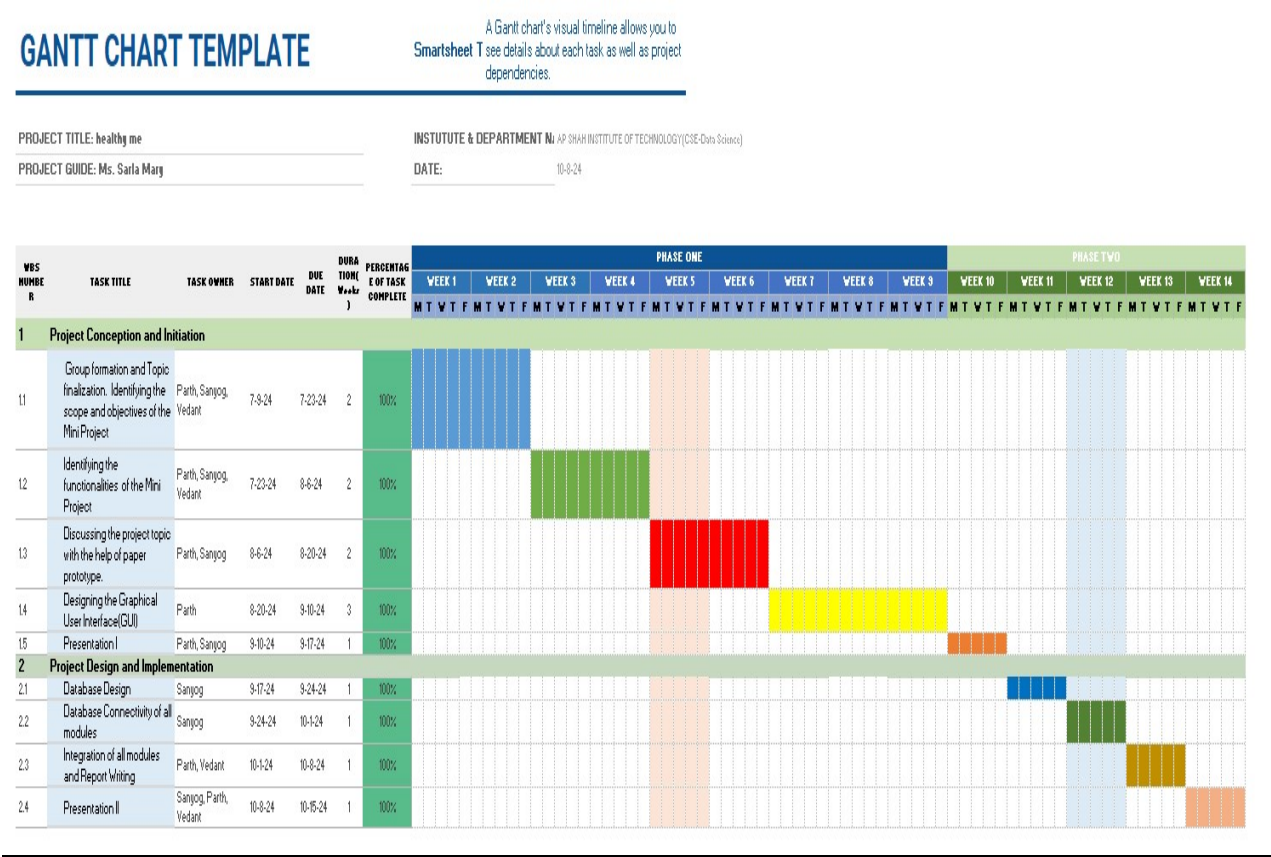
Figure 6.1: Gantt chart

Chapter 7

Results

Landing Page:-

The figure 7.1 displays the main login screen for an application called Healthyme. It includes three buttons: Sign In, Register, and Admin Login. The design features a light background with soft, blurred illustrations of vegetables, which aligns with the health and wellness theme of the application. This screen is likely the entry point for users to access their accounts or for new users to register. The admin login is also prominently available for administrators to manage the system.
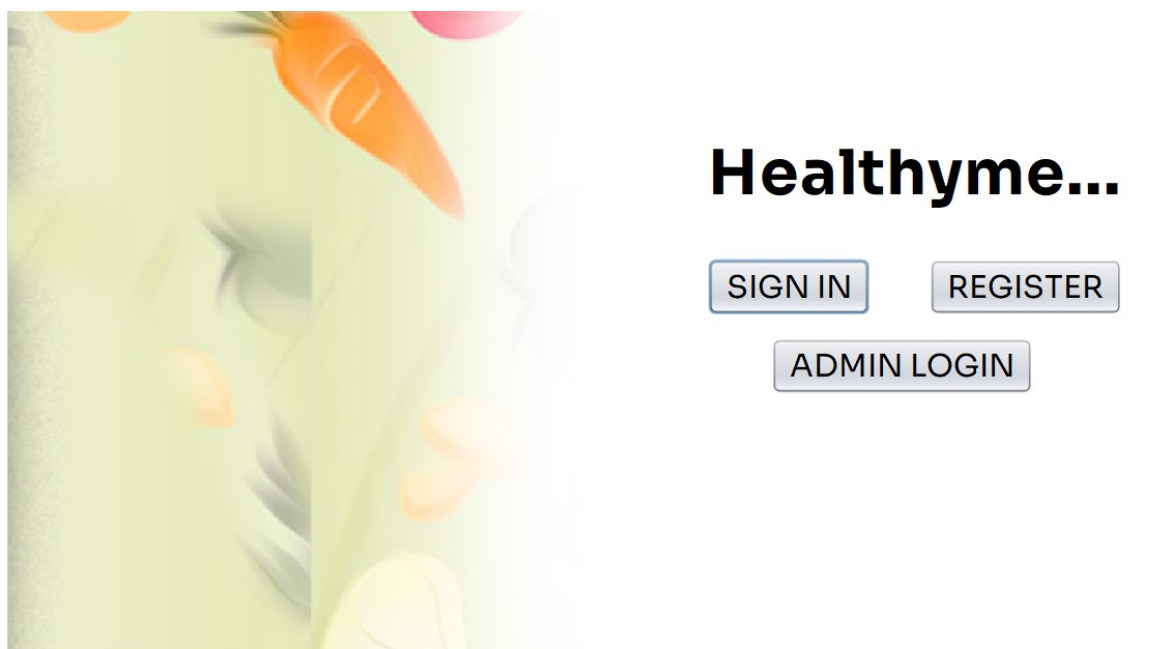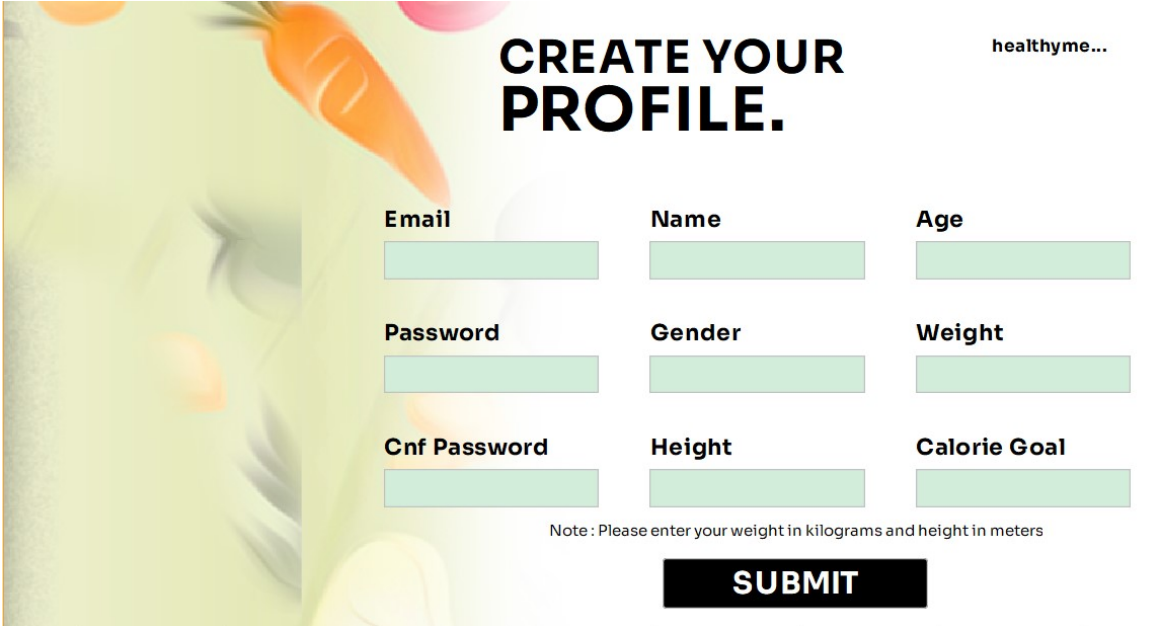
Figure 7.1: Landing Page

Register Page:-

The register page allows the user to register. The Figure 67.2 shown below creates a detailed profile where users can input essential health data like name, weight, height, age, and set their daily calorie intake goals. This profile serves as the foundation for personalized health and nutrition tracking. It allows the system to provide accurate feedback on your daily progress, ensuring you stay on track with your fitness or dietary objectives. The profile also makes it easy to update information as your goals evolve, ensuring the app continuously adapts to your needs.

Figure 7.2: Create Profile

Home Page:-

The below Figure 7.3 displays the information about the user which they have inputted in the create profile page which has Calorie goal and the user can edit the data
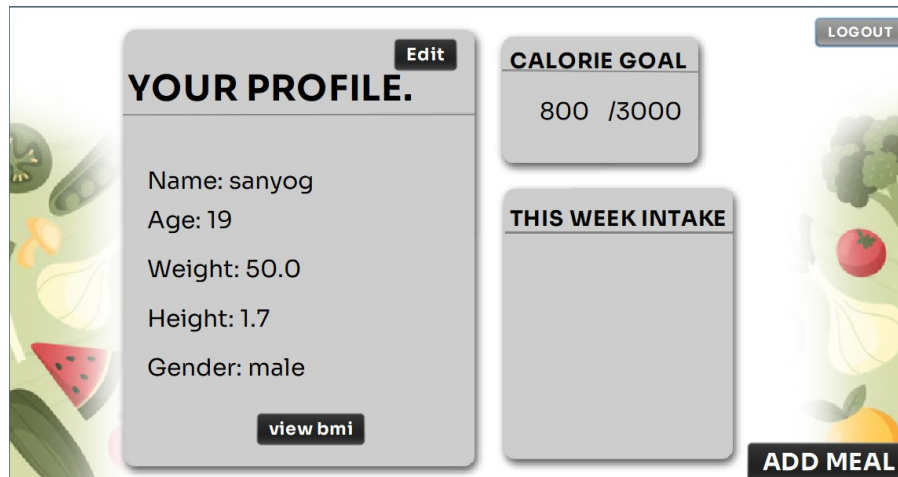

Figure 7.3: Home page

View BMI:-

The figure 7.4 shows your BMI calculation according to your data which the user has inputted in his create profile page
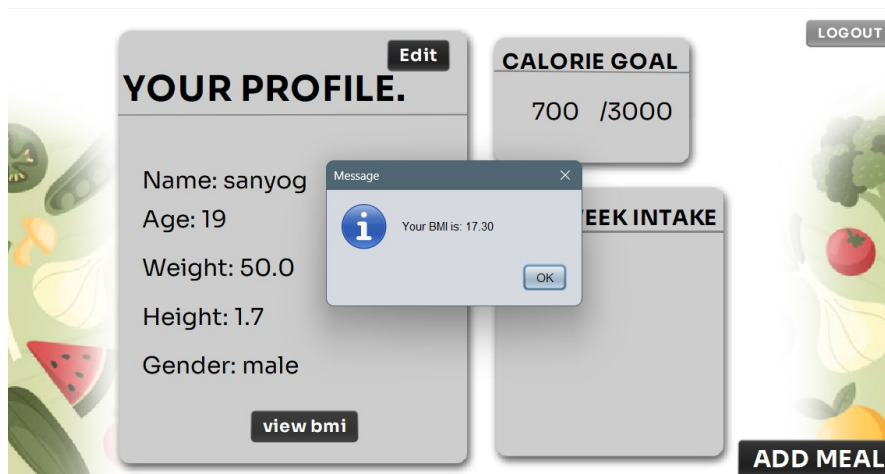

Figure 7.4: View BMI

Search page:-

The figure 7.5 displays Search Page which enables users to quickly find food items from a comprehensive database by typing the name of a food or beverage into a search bar. The system displays a list of matching items, including their calorie values and nutritional information. Users can select the desired item to add it to their daily log, simplifying the process of tracking calorie intake. The search results may also include portion sizes to ensure accurate logging. Additional filters may be available, allowing users to refine their search based on meal type or dietary preferences. Overall, this feature enhances users' ability to manage their diet effectively and make informed dietary choices.
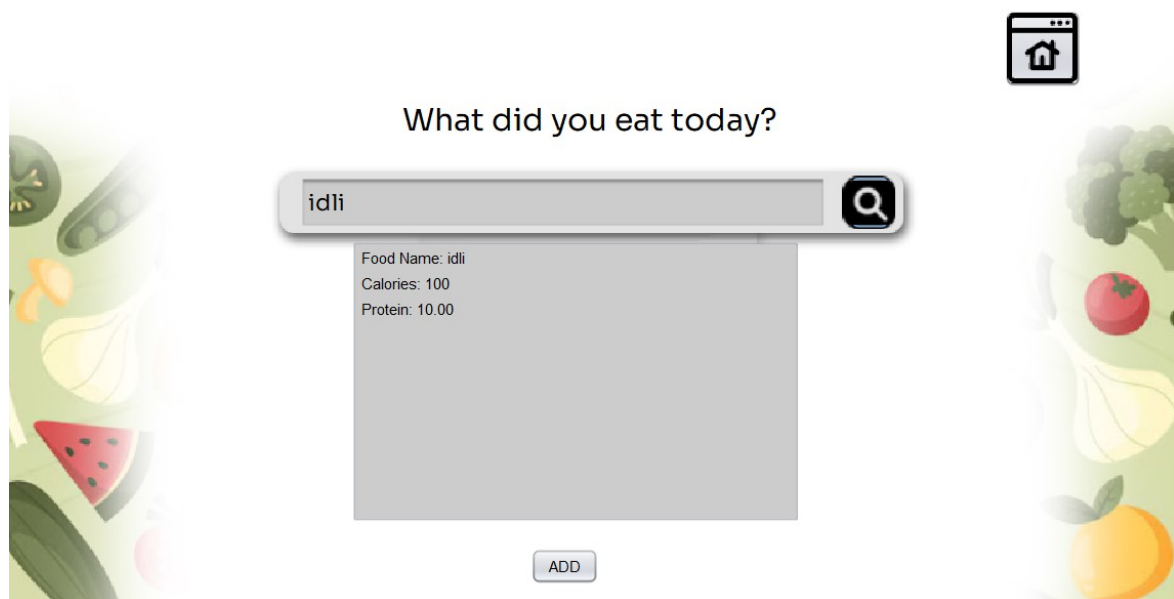

Figure 7.5: Search Page

Admin Login:-

The figure 7.6 displays Admin Login Page allows administrators to securely access the backend of the calorie management system. It includes fields for entering a username and password, a login button to submit credentials. Admins can manage user accounts, update food databases, and monitor system usage once logged in.
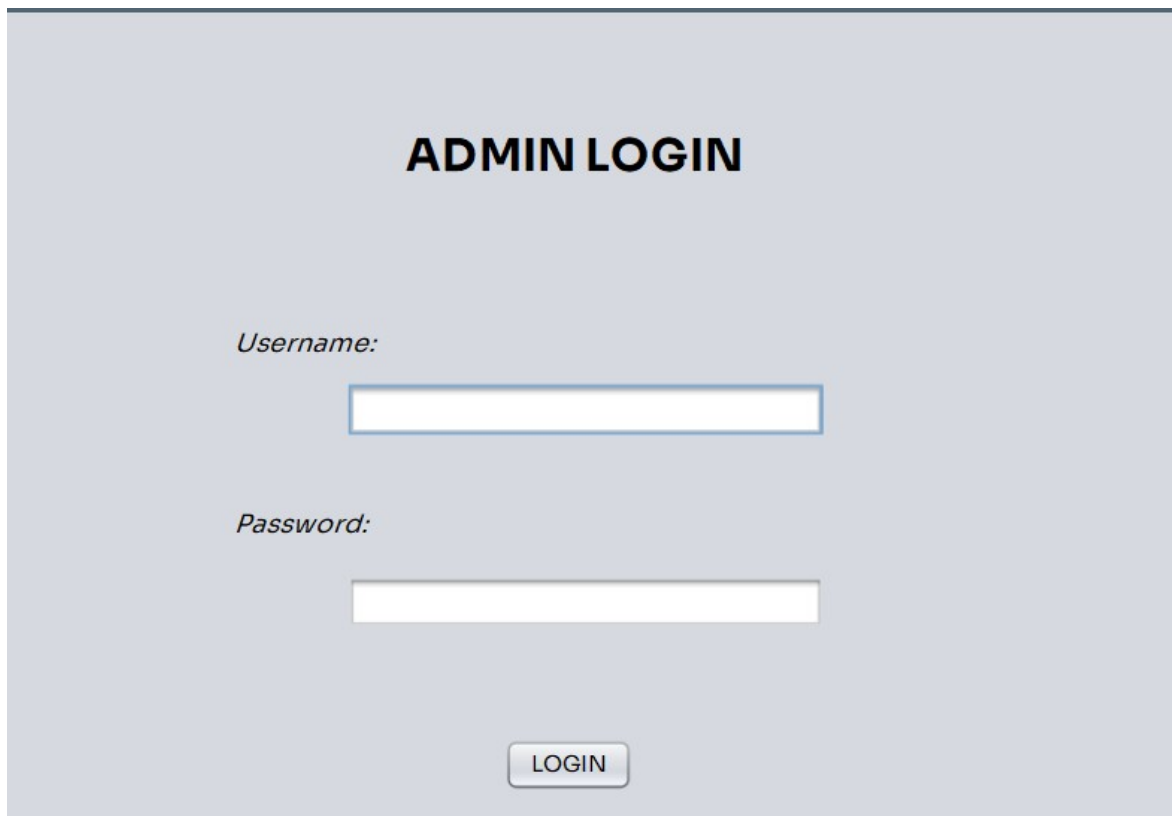

Figure 7.6: Admin Login

Food Item Entry page:-

The figure 7.7 displays. The Food Item Entry Page which is an essential tool for administrators to manage the food database effectively. It allows admins to add new food items. Admins can input key details such as the food name, calorie content, portion sizes, and nutritional information, ensuring users have access to accurate data. This page streamlines the management process and maintains an up-to-date database crucial for effective calorie tracking

Figure 7.7 Food Item Entry Page

Chapter 8

Conclusion

In conclusion, the calorie management system is a comprehensive and highly effective tool designed to promote healthier eating habits and provide users with the means to track and manage their dietary intake efficiently. The system's user-friendly interface allows individuals to easily log their meals, search for food items from an extensive and well-maintained database, and track their calorie consumption in real time. By offering features such as progress tracking, visual summaries, and personalized goal setting, the system empowers users to take control of their nutrition, helping them make informed decisions to meet their health and fitness goals.

Additionally, the administrative functionalities, including the Food Item Entry Page, ensure the system is continuously updated with accurate and relevant nutritional information. Admins can seamlessly add, edit, and categorize food items, providing users with reliable data for more precise calorie tracking. This dynamic approach guarantees that the system remains a valuable resource for long-term dietary management.

Ultimately, this calorie management system not only simplifies the complexities of monitoring daily calorie intake but also fosters a more conscious approach to food choices. By integrating real-time tracking, personalized goals, and a rich database of nutritional information, it serves as an indispensable tool for users looking to maintain or improve their overall health. Whether users are aiming to lose weight, maintain their current physique, or adopt healthier eating patterns, this system provides the necessary tools to guide them toward achieving their objectives, making it a robust solution for long-term nutritional well-being.

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