FOODFIT

CALORIE TRACKER

A PROJECT REPORT SUBMITTED IN PARTIAL FULFILMENT OF REQUIREMENT FOR THE AWARD OF THE DEGREE

MASTER OF COMPUTER APPLICATION (MCA)

OF

MAHATMA GANDHI UNIVERSITY, KOTTAYAM

BY

Athul Abraham

Reg No : 22PMC119

MARIAN COLLEGE
KUTTIKKANAM
(AUTONOMOUS)

MAKING COMPLETE

Marian College Kuttikanam Autonomous

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Under the guidance of

Ms. Kochumol Abraham

Assistant Professor

PG Department of Computer Applications

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KUTTIKKANAM – 685 531, KERALA.

CERTIFICATE

This is to certify that the project work entitled

FOODFIT

is a bonafide record of work done by

Athul Abraham

Reg No : 22PMC119

In partial fulfillment of the requirements for the award of Degree of

MASTER OF COMPUTER APPLICATIONS [MCA]

During the academic year 2022-2024

Ms.Kochumol Abraham
Assistant Professor
PG Department of Computer Applications
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Mr Win Mathew John
Head of the Department
PG Department of Computer Applications
Marian College Kuttikkanam Autonomous

Examiner

Examiner

ACKNOWLEDGEMENT

I have taken efforts in this project. However, it would not have been possible without the kind support and help of many individuals. I would like to extend my sincere thanks to all of them.

I express my sincere gratitude to Dr.Ajimon George, Principal, Marian College Kuttikkanam (Autonomous) Dr. Mendus Jacob, Director, PG Department of Computer Applications for the support given throughout the project work. I extend my gratitude to Mr. Win Mathew John, HOD, PG Department of Computer Applications, who is a constantsource of inspiration and whose advice helped me to complete this project work successfully.

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With great enthusiasm, I express my gratitude to all the faculty members of the PG Department of Computer Applications for their timely help and support.

Finally, I express my deep appreciation to all my friends and family members for the moral support and encouragement they have given to complete this project work successfully.

ATHUL ABRAHAM

ABSTRACT

The Calorie Tracker is a software application that helps individuals monitor and manage their daily calorie intake. It aims to promote healthier eating habits and provide users with a tool to achieve their nutrition goals. The project involves developing a user-friendly web-based application with a comprehensive food database and features such as goal setting and progress tracking. The project has the potential to benefit individuals interested in maintaining a balance and nutritious diet.

OBJECTIVE AND SCOPE

Objective:

The objective of the Calorie Tracker is to develop a user-friendly software application that enables individuals to track and manage their daily calorie intake, promoting healthier eating habits and helping users achieve their nutrition goals.

Scope:

The project involves developing a web-based application with a comprehensive food database, allowing users to record and track their daily food consumption. The application will calculate and display total calorie intake and may include features such as goal setting and progress tracking. Privacy and data security measures will be implemented.

PROBLEM STATEMENT

Many individuals struggle with managing their daily calorie intake and maintaining a healthy diet. Without a convenient and user-friendly tool to track and monitor their calorie consumption, they find it challenging to make informed food choices and achieve their nutrition goals. Existing methods for calorie tracking often lack accuracy, ease of use, and comprehensive features, making it difficult for individuals to effectively manage their dietary habits. Therefore, there is a need for a reliable and intuitive software application that can simplify calorie tracking, provide accurate nutritional information, and support individuals in adopting healthier eating habits. The Calorie Tracker aims to address this problem by developing a user-friendly application that enables individuals to track and manage their daily calorie intake effectively.

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1.INTRODUCTION

1.1 PROBLEM STATEMENTS

Many individuals struggle with managing their daily calorie intake and maintaining a healthy diet. Without a convenient and user-friendly tool to track and monitor their calorie consumption, they find it challenging to make informed food choices and achieve their nutrition goals. Existing methods for calorie tracking often lack accuracy, ease of use, and comprehensive features, making it difficult for individuals to effectively manage their dietary habits. Therefore, there is a need for a reliable and intuitive software application that can simplify calorie tracking, provide accurate nutritional information, and support individuals in adopting healthier eating habits. The Calorie Tracker aims to address this problem by developing a user-friendly application that enables individuals to track and manage their daily calorie intake effectively.

1.2 PROPOSED SYSTEM

The proposed system for the Calorie Tracker is a user-friendly software application designed to simplify and enhance the process of tracking and managing daily calorie intake. The system will offer a range of features and functionalities to address the limitations of existing methods and provide an effective solution for individuals striving to maintain a healthy diet:

1.3 FEATURES OF THE PROPOSED SYSTEM

The features of this website are:

- Food Database.
- Calorie Tracking.
- Goal Setting.
- User Friendly Interface.
- Privacy and Security.

2. FUNCTIONAL REQUIREMENTS

FUNCTIONAL REQUIREMENTS

1. **User Registration:** Users should be able to register and create an account in the system.
2. **User Login:** Registered users should be able to log in to their accounts using their credentials.
3. **Food Database Management**: The system should provide functionality to manage the food database, including adding new food items, updating nutritional information, and removing outdated or inaccurate entries.
4. **Calorie Tracking:** Users should be able to log their food consumption by searching and selecting items from the database or manually entering custom food items. The system should calculate and display the total calorie intake in real-time.
5. **Goal Setting**: Users should be able to set personalized calorie goals based on their weight management objectives, dietary requirements, or health goals. The system should allow users to define specific targets for daily or weekly calorie intake.
6. **Privacy and Security**: The system should prioritize the privacy and security of user data, implementing measures such as secure authentication, data encryption, and compliance with data protection regulations.

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3.NON FUNCTIONAL REQUIREMENTS

ON-FUNCTIONAL REQUIREMENTS

The non-functional requirements for this website are:

- Usability: The proposed website is simple, provides enough insight about features and packages, interactive, lets user select packages and schedule pick-ups and all this data is stored in the database.
- Reliability: The system must perform without failure in 95 percent of use cases during a month.
- Maintainability: The mean time to restore the system (MTTRS) following a system failure must not be greater than 10 minutes. MTTRS includes all corrective maintenance time and delay time.
- Availability: Describes how likely the system is accessible to a user at a given point in time. A user-friendly system with global accessibility should be available around-the clock. In the event that the database is corrupted or the hardware fails, a replacement page will appear. Additionally, a database backup should be kept in case of hardware failure or database corruption.
- Security: Database should be backed up every hour. Under failure, system should be able to come back at normal operation under an hour. All data must be stored, protected, or protectively marked.

4.THIRD-PARTY LIBRARIES

THIRD-PARTY LIBRARIES

Third-party applications and libraries in Django are pre-built components or packages developed by the community or other companies that you can use to extend the functionality of your Django projects. These libraries provide pre-built solutions for common tasks, saving developers time and effort in implementing certain features fromscratch. They are designed to seamlessly integrate with Django and follow its best practices.

Third-party libraries can be installed using package managers like pip, and they usually come with their own documentation and examples to guide developers in their usage. These libraries can cover a wide range of functionalities

The third-party libraries used in this project are:

- **Django jazzmin:** Django Jazzmin is a third-party library for Django that provides an improved admin interface. It is a modern, responsive, and customizable replacement for Django's default admin interface, a drop-in app to jazz up your Djangoadmin site, with plenty of things you can easily customize, including a built-in UI customizer.

5.FEATURES AND HIGHLIGHTS

FEATURES AND HIGHLIGHTS

1. User-Friendly Interface.

2 Food Database.

3. Custom Food Entry.

4. Calorie Calculation .

5. Goal Setting.

6. Privacy and Security.

7 .The Admin can view

1.Customers

2.Foods

3.Update and Delete Foods.

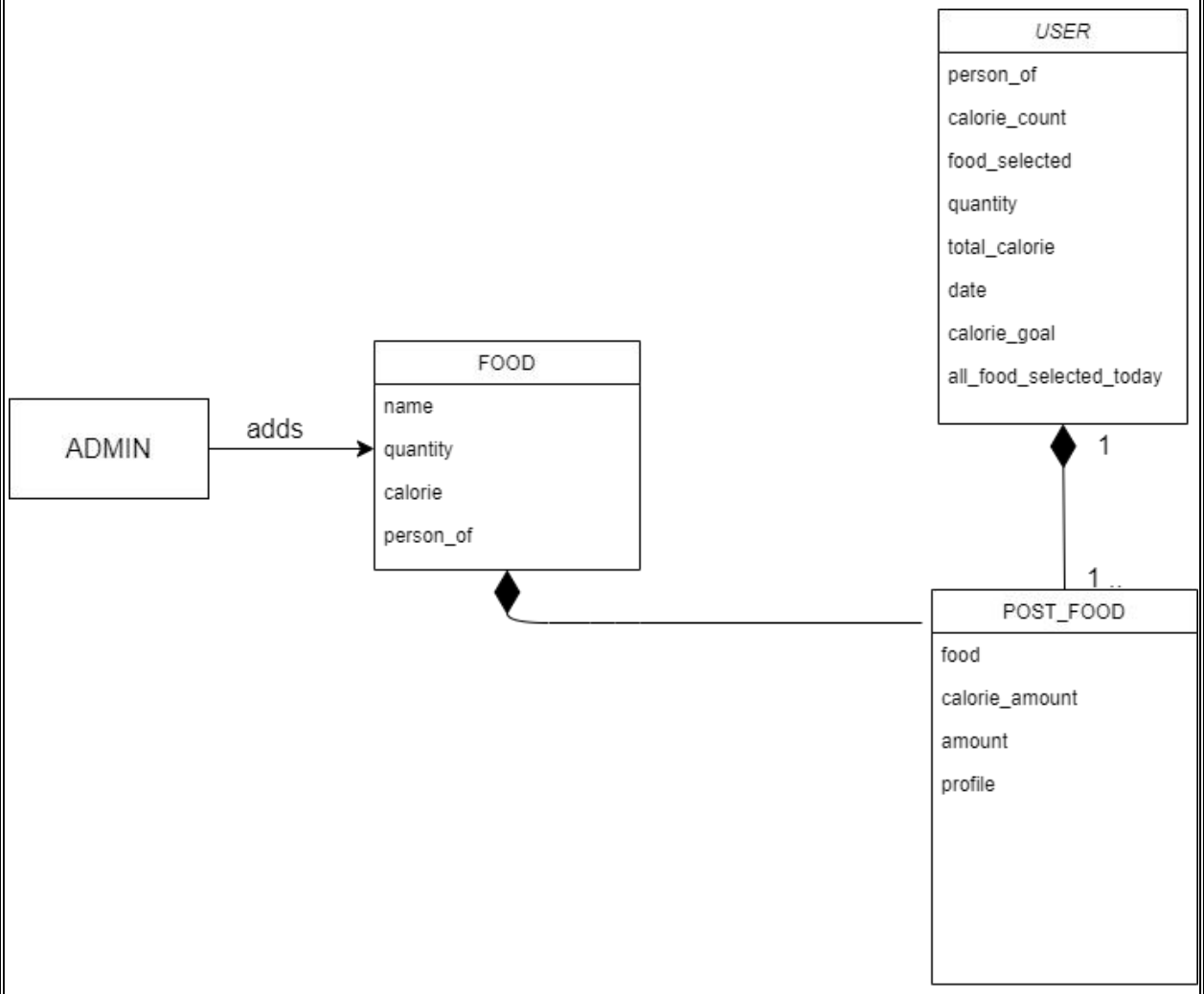
1. Admin can add food.

TECHNICAL ASPECTS

- Presentation Layer:
    - User Interface (UI): This layer includes the components that interact with users, such as web pages or mobile app screens.
    - Django Templates: Django's built-in template engine allows you to define HTML templates that render dynamic content and interact with the back-end.
- Application Layer:
    - Django: Django serves as the back-end framework, handling HTTP requests, routing, and managing the application's business logic.
    - Django Views: Views receive requests from the user interface, process data, and generate appropriate responses. They interact with models, services, and external APIs as needed.
    - Django Forms: Forms handle user input validation and data submission, allowing users to input and update travel-related information.

6.DATABASE
CLASS DIAGRAM

6.1.CLASS DIAGRAM



7.CHALLENGES FACED DURING THE DEVELOPMENT

- Food Database Accuracy: Building and maintaining a comprehensive and accurate food database can be a challenge. Ensuring the correctness of nutritional information for a wide range of food items requires careful data collection and validation.
- Data Entry and Updating: Incorporating new food items and keeping the database up to date can be time-consuming. It may involve manual data entry, sourcing information from trusted sources, and verifying the accuracy of nutritional data regularly.
- User Experience Design: Creating an intuitive and user-friendly interface is crucial for the success of the application. Designing an interface that is easy to navigate, visually appealing, and accommodates different device screens and resolutions can be a complex task.
- Calorie Calculation Accuracy: Accurately calculating calories from various food items, considering portion sizes, cooking methods, and nutritional variations, can pose a challenge. Ensuring accurate and reliable calorie calculations is essential for providing users with trustworthy information.
- Privacy and Security: Safeguarding user data and ensuring privacy and security can present challenges. Implementing robust security measures, complying with data protection regulations, and preventing unauthorized access to personal information are critical aspects of the development process..

8.FUTURE ENHANCEMENTS

FUTURE ENHANCEMENTS

- Integration with Wearable Devices: The application could be integrated with wearable devices, such as fitness trackers or smartwatches, to automatically track and sync users' calorie intake and activity data. This integration would provide a seamless and convenient experience for users.
- Integration with Fitness Apps: Integrating the calorie tracker with popular fitness apps or platforms would allow users to have a holistic view of their health and wellness journey. This integration could provide insights into the correlation between calorie intake and exercise, offering a more comprehensive understanding of overall health and fitness.
- Enhanced Data Analytics: Implementing advanced data analytics capabilities, such as predictive analysis and trend identification, would enable users to gain deeper insights into their eating patterns, identify potential areas for improvement, and receive proactive recommendations for maintaining a healthy diet.
- Multi-Language Support: Expanding the application's language support to cater to a broader user base would enhance accessibility and usability, allowing individuals from different regions and cultural backgrounds to benefit from the calorie tracking system.

9 .CONCLUSION

CONCLUSION

In conclusion, the Calorie Tracker Project aims to develop a user-friendly software application that empowers individuals to track and manage their daily calorie intake. The project addresses the challenge of maintaining a healthy diet by providing a comprehensive tool that promotes healthier eating habits and assists users in achieving their nutrition goals.

With features such as a comprehensive food database, calorie tracking, goal setting, progress tracking, and personalized recommendations, the Calorie Tracker Project offers a valuable solution for individuals seeking to adopt a balanced and nutritious diet. The proposed system focuses on user experience, accuracy, and privacy to ensure a seamless and secure tracking process.

Moreover, the project has potential for future enhancements, including integration with wearable devices, meal planning features, social interactions, and advanced data analytics, to further enhance the user experience and provide comprehensive support in achieving health and wellness goals.

Overall, the Calorie Tracker Project strives to empower individuals to make informed food choices, monitor their calorie intake, and ultimately lead healthier lifestyles. By providing a user-friendly and effective tool, the project aims to contribute to improved overall health and well-being

10.REFERENCES

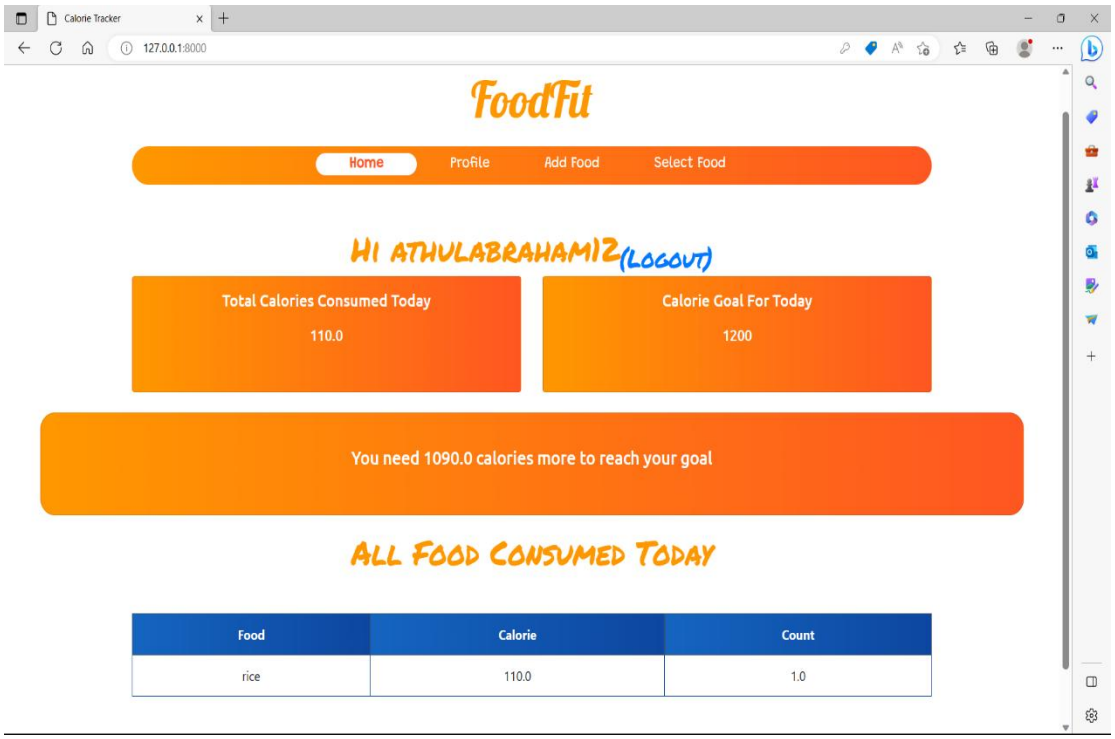
REFERENCES

- Mayo Clinic - https://www.mayoclinic.org/
- https://www.cdc.gov/

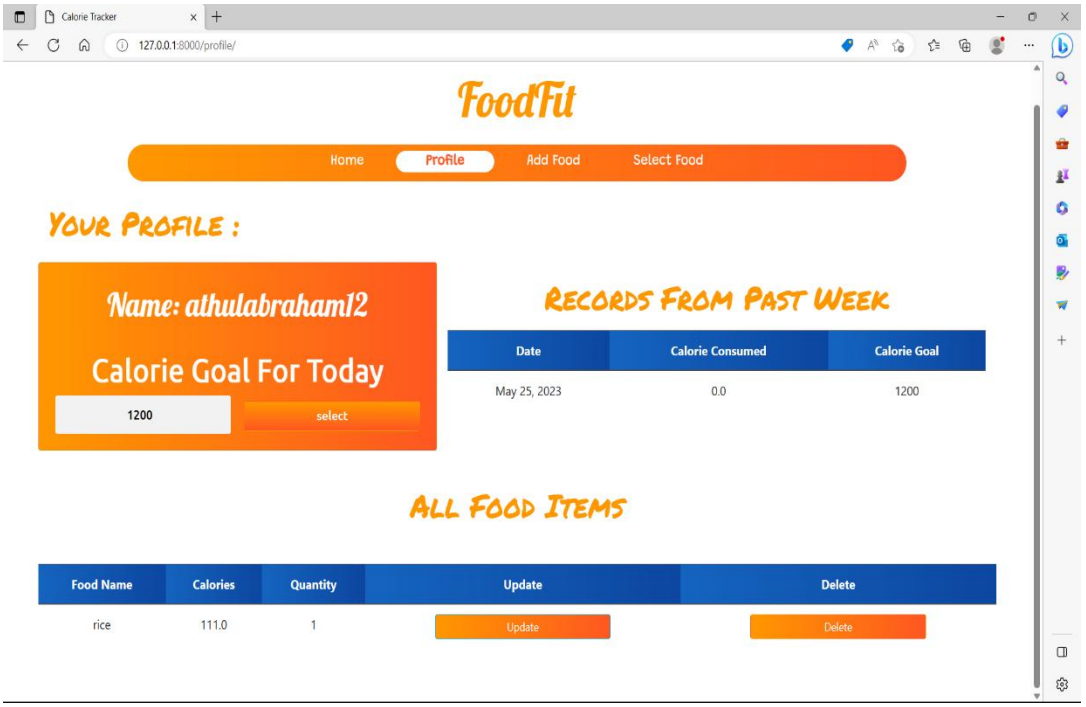
11.SCREENSHOTS

SCREENSHOTS

HOME PAGE



PROFILE


Calorie Tracker
127.0.0.1:8000/profile/
FoodFit
Home
Profile
Add Food
Select Food
YOUR PROFILE :
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Calorie Goal For Today
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select
RECORDS FROM PAST WEEK
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Calorie Consumed
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May 25, 2023
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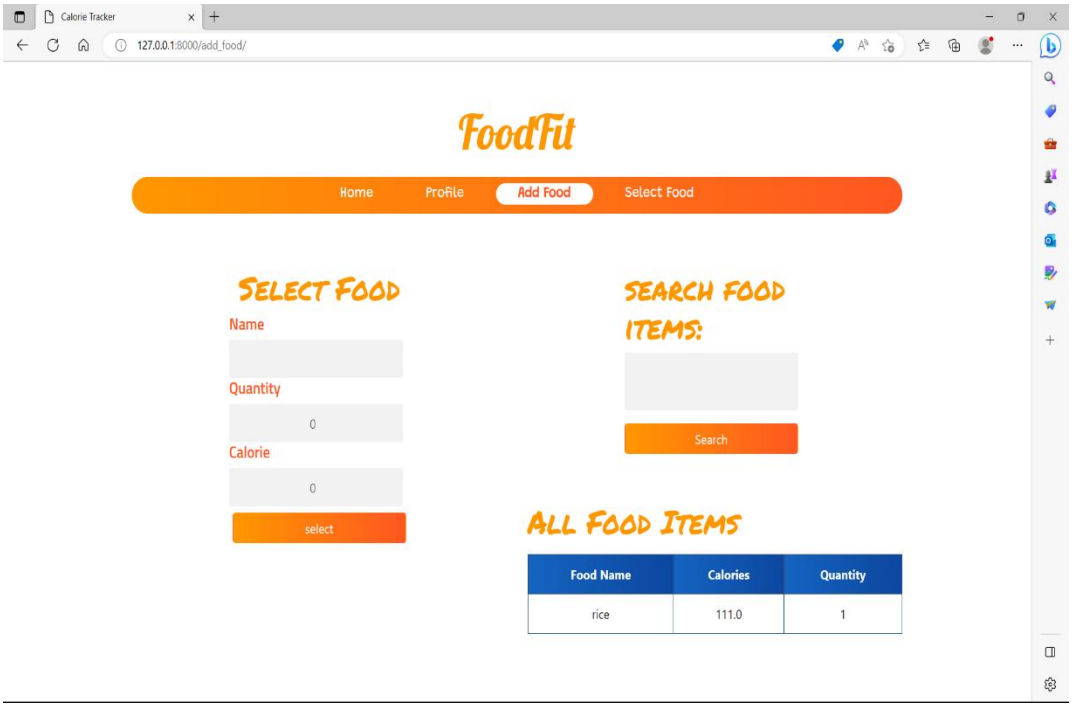
ADD FOOD


Calorie Tracker
127.0.0.1:8000/add_food/
FoodFit
Home
Profile
Add Food
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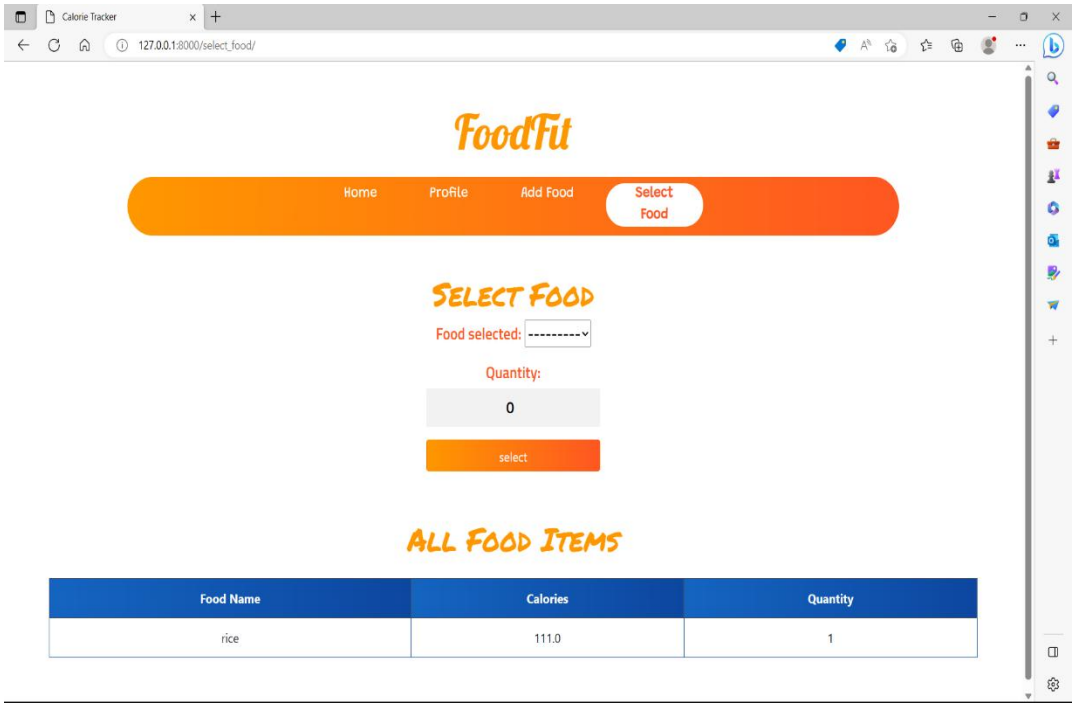
1

SELECT FOOD


Calorie Tracker
127.0.0.1:8000/select_food/
FoodFit
Home
Profile
Add Food
Select Food
SELECT FOOD
Food selected: ---------
Quantity:
0
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ALL FOOD ITEMS
Food Name
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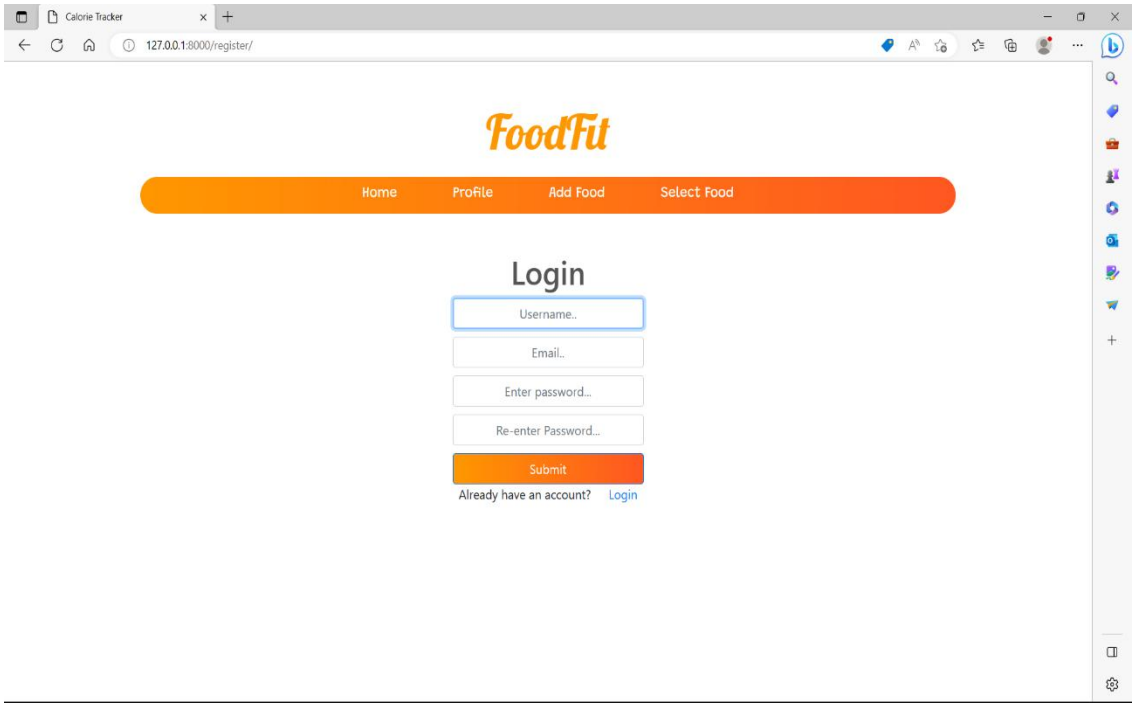
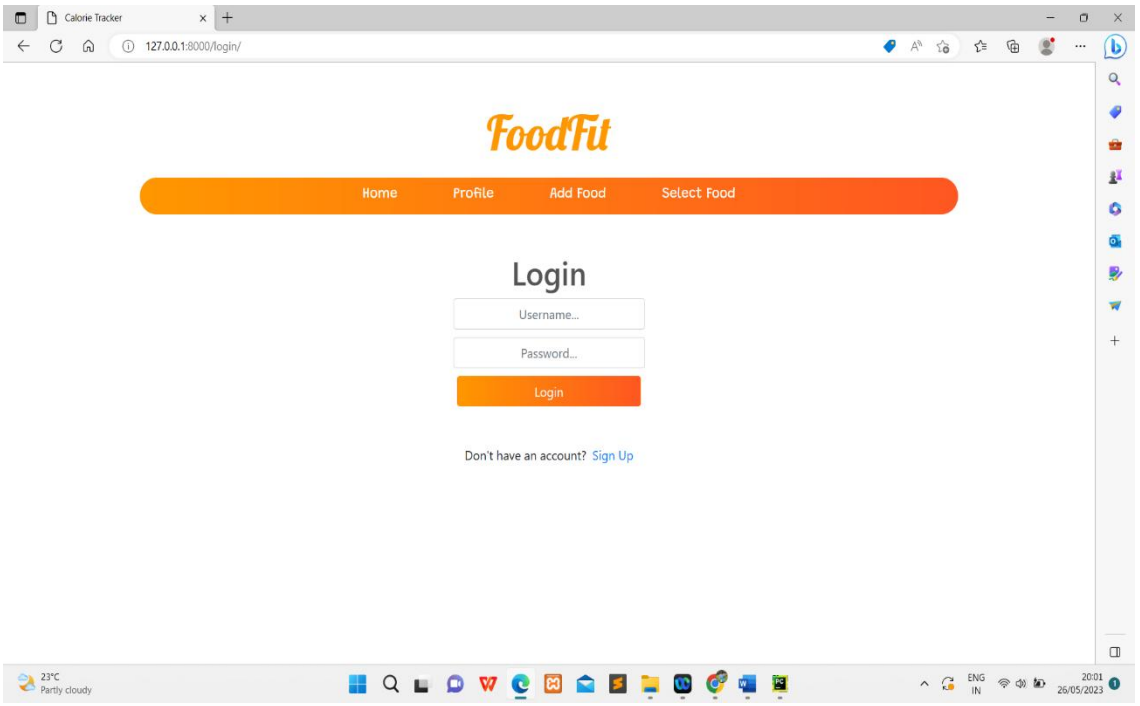
REGISTRATION



LOGIN


Calorie Tracker
127.0.0.1:8000/login/
FoodFit
Home
Profile
Add Food
Select Food
Login
Username...
Password...
Login
Don't have an account? Sign Up
23°C
Partly cloudy
ENG
IN
20:01
26/05/2023