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HEALTH TRACKER

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Abstract: The abstract of the health tracker mainly discusses about the health safety and precaution method to protect from health issues The usage of this mobile application can make it easier to overlook the importance of eating a healthy diet. mobile app offer an equitable infrastructure that may be used to offer high-quality, reasonably priced tools for behaviour control and monitoring. This mobile application's design enables the user to retrieve nutrition information whenever needed, customise and personalise it, and keep a close eye on their eating patterns. This Android app provides a one-stop shop for all questions or problems pertaining to health. It performs a number of tasks, including diet monitoring, food nutrition analysis, BMI calculation, and details on several common medications. Nutritionspy is a cutting-edge mobile application designed to empower users in achieving their health and wellness goals through efficient and personalized nutrition tracking. In the fast-paced world of today, eating a healthy, balanced diet is essential for general wellbeing. it offers a user-friendly interface coupled with advanced features to simplify the process of monitoring and managing dietary habits. This app is a comprehensive nutrition tracking app that not only simplifies the process of monitoring dietary intake but also empowers users to make informed decisions about their nutrition. By leveraging advanced technology, personalized insights, and user- friendly features, it is positioned to become an essential tool for individuals committed to achieving and maintaining a healthy lifestyle. here are growing numbers of nutrition apps accessible for smartphones and other mobile devices. They can assist in lightening the laborious task of recording consumption for self-monitoring and nutritional assessment. This makes it possible for people to regulate how much food they eat, encourage physical activity, and support leading healthy lives. Research on systematic analysis mapping studies in this field is still lacking, nevertheless. Finding implementation solutions for nutritional self-monitoring using a mobile application is the aim of this project. Seven groups of recurring themes emerged from the study on mobile applications for nutritional self-monitoring: body mass index, techniques, nutrition algorithms, noncommunicable diseases, metrics for disease detection, and attitude towards improved dietary behaviours. enables real-time meal recording, the convenience of automatically calculating the calorie content of foods consumed, and the potential to improve the delivery of health behaviour modification interventions to large populations is the focus of current research trends regarding dietary self-monitoring.

Keywords: Healthcare, Nutrition tracker, Progress check, Calorie calculator

1. INTRODUCTION

The development and the incorporation of wireless technologies to promote healthy lifestyle. Our ultimate objective of enabling healthy lifestyle to prevent obesity and obesity related diseases may be addressed by the development and integration of wireless technology to support healthy lifestyle behaviour, particularly healthy eating and weight control.

All we eat in a day is our diet. Furthermore, a balanced diet is one that includes a sufficient amount of each nutrient needed each day. The six primary nutrients of a balanced diet are fats, proteins, carbohydrates, fibre, vitamins, and minerals.The foods we eat include all of these nutrients. The ratios of nutrients that are contained in different foods vary. The age, gender, and overall health of an individual determine the nutrients they need.

daily diet is important part of our life and this diet app allows the user to meet their health goal easily. The diet plan recommend eating wide variety of food including vegetables, whole grains, fruits, non-fat, low-fat, dairy products, beans, lean meat, poultry, and fish.

however,every individual has a particular dietary pattern and set of health concerns, the system customises a meal plan for each individual. The project's goal is to provide users with easy access to diet plans via an app, eliminating the need for them to visit a dietician centre.

2. OBJECTIVE OF THE PROJECT

The goal is to create an Android-based system for generating and managing dietary menus by modelling the dietitian's

process. The method is intended for use by residents of remote areas without access to certified dietitians.

To keep track of daily intake. To monitor calories intake and consumed. To provide you with guidance on healthy and nutritious food. To create a personalized meal plan.

The primary objective of developing a Health Tracker App is to empower users to proactively manage and improve their overall health and well- being through a user-friendly and feature-rich digital platform. The app aims to provide a comprehensive and personalized health monitoring experience, promoting a healthier lifestyle and facilitating informed decision-making.

When a user registers or logs in to an app, this feature asks them for information about their height, weight, gender, allergies, and more. It offers a comprehensive report based on the data supplied, helping experts create a customised nutrition plan and enabling users to meet their fitness objectives.

3. PROBLEM STATEMENT

People bemoan the responses feeling scripted and the uneven (some would even say nonexistent) coaching. Additionally, many report that tracking food on this plan is very difficult and that the database is lacking on a lot of things. That's a significant disadvantage since, as the research indicates, tracking is essential to the success of this programme. Notable numbers of complaints have also been made regarding the program's cancellation.

Licenced dietitians possess more qualifications than health coaches do. Any programme or strategy that helps individuals feel better both physically and mentally is something I support. But I will say that an RD and a health coach are very different in terms of education and training. You would be better off working one-on-one with someone who can help you figure out what works best for your particular body and circumstances if you have any food allergies, medical concerns, or other obstacles to eating healthier (including lifestyle issues, such business travel or inexperience cooking).

4. COMPONENTS

Creating a nutrition tracker using Flutter involves designing a user interface, handling user inputs, managing data, and possibly integrating external APIs for nutritional information. Here are the essential components and steps you might consider for developing a nutrition tracker app:

Flutter:

Flutter software uses the programming language Dart. It's also cross-platform and compiles to native code. I loved working with Flutter, it made developing the front-end super easy and quick. Everything is a Widget. So to make something you combine parent and child widgets together in a massive widget tree. If you want a container box, then you'd use the Container widget, if you want to add padding to that box, then wrap it in a Padding widget.

Dart:

Google developed Dart, an open-source general-purpose programming language that may be used to develop client-side and server-side programmes. However, it is most commonly used for developing Android and iOS apps, Internet of Things (IoT) applications, and web applications that use the Flutter Framework.

Firebase:

The back-end was built using Firebase. This handled user authentication, the database, and the storage. I have had a decent amount of experience with SQL and using relational databases but Firebase doesn't use these. It uses NoSQL.

However, it was really easy to get to grips with and quick to set up.it is handling authentication and the database was really useful. It made setting up database rules really easy so that only the current authenticated user could access their documents in the database.

API Integration :

Nutritional Database API: Integrate with a nutritional database API to fetch nutritional information for food items.

Authentication: If the API requires authentication, implement a secure authentication mechanism.

5. SYSTEM ANALYSIS

Nutritionspy is a cutting-edge mobile application designed to empower users in achieving their health and wellness goals through efficient and personalized nutrition tracking. In today's fast-paced lifestyle, maintaining a balanced and nutritious diet is crucial for overall well-being. Nutritionspy offers a user-friendly interface coupled with advanced features to simplify the process of monitoring and managing dietary habits.

Intuitive User Interface:

Nutritionspy boasts a clean and intuitive interface that allows users to effortlessly log their daily meals, snacks, and beverages. The seamless design enhances user experience, making nutrition tracking accessible to individuals of all ages and technical proficiency.

Personalized Nutrient Analysis:

The app employs state-of-the-art algorithms to provide personalized nutrient analysis based on individual dietary preferences, restrictions, and health goals. Users receive real- time insights into their daily intake of macronutrients, micronutrients, and calories, enabling them to make informed decisions about their diet.

Barcode Scanner and Database Integration:

Nutritionspy simplifies the process of logging food items with a built-in barcode scanner. Users can quickly scan product barcodes, accessing a comprehensive nutritional database to instantly retrieve accurate information. This feature streamlines the tracking process, saving time and ensuring data accuracy.

Meal Planning and Goal Setting:

The app goes beyond mere tracking by offering robust meal planning and goal-setting functionalities. Users can set personalized nutrition goals, whether it's weight management, muscle gain, or specific dietary requirements. Nutritionspy provides actionable insights and recommendations to help users align their meals with their health objectives.

Progress Tracking and Insights:

Nutritiospy tracks users' progress over time, offering detailed insights and trends in their nutritional habits. Visual

representations, charts, and graphs help users understand their achievements and areas for improvement. This feedback loop motivates users to stay committed to their nutritional goals.

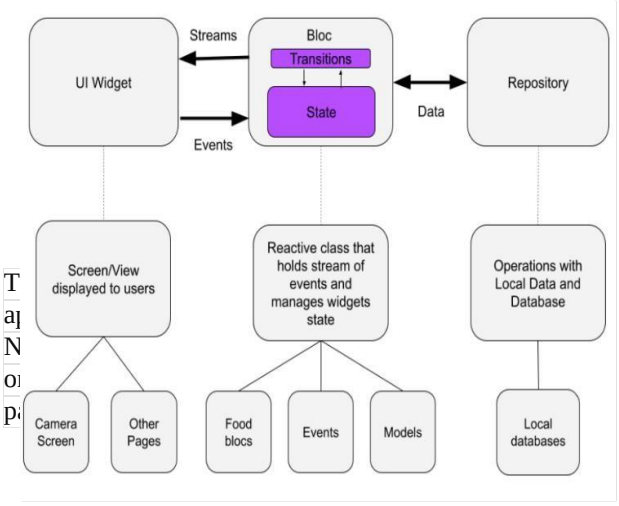
Integration with Wearable Devices:

o enhance user engagement and convenience, Nutritionspy seamlessly integrates with popular wearable devices, allowing users to sync their activity data. This integration provides a holistic view of users' health by combining nutrition and fitness metrics.

6. PROPOSED SYSTEM

The proposed Dietitian application is online having number of diet plans. A user's body mass index is calculated by the system using their height and weight. After entering his or her eating schedule, the user is shown the diet plan that would be most beneficial for them specifically. The user is presented with all of the food products and their quantities.

The technology adjusts food items while maintaining the same overall nutritional value if the user decides they don't like the existing diet plan.



Client sees the BMI count structure after successfully
logging in and enters personal information such as age,
height, and weight. The BMI and BMR are obtained
via
weight. receives good recommendations.

In the unlikely event that the customer would prefer not to give input, they can simply log out of the website. On the administrator's end, the administrator enrols the nutrition details, uploads videos using the Video Upload Form, and replies to customer inquiries via the Admin Query Form. All client points of interest or database recoveries from the registration, login, and BMI calculation forms are handled by the administrator.

The two main points behind this project were:

1.To try and create a tool to help tackle the current obesity epidemic.

2.To learn more about software engineering principles and grow software development skills.

As someone who really cares about their own diet, I believe that by improving diets we can eliminate many lifestyle diseases such as heart disease and diabetes. After doing research into average diets in the Western World it became clear that people were eating too much because they just did not know what was in their food. In other words: people lacked an understanding of what nutrients made up their food.

Studies showed that most people do not pay much attention to food labels. Government schemes such as “traffic light” labels, which marked high amounts of bad nutrients and red, and low amounts in green, proved not to be very effective. Taking on board this information I decided to try and implement a gamification system in the app to help increase food nutrient awareness.

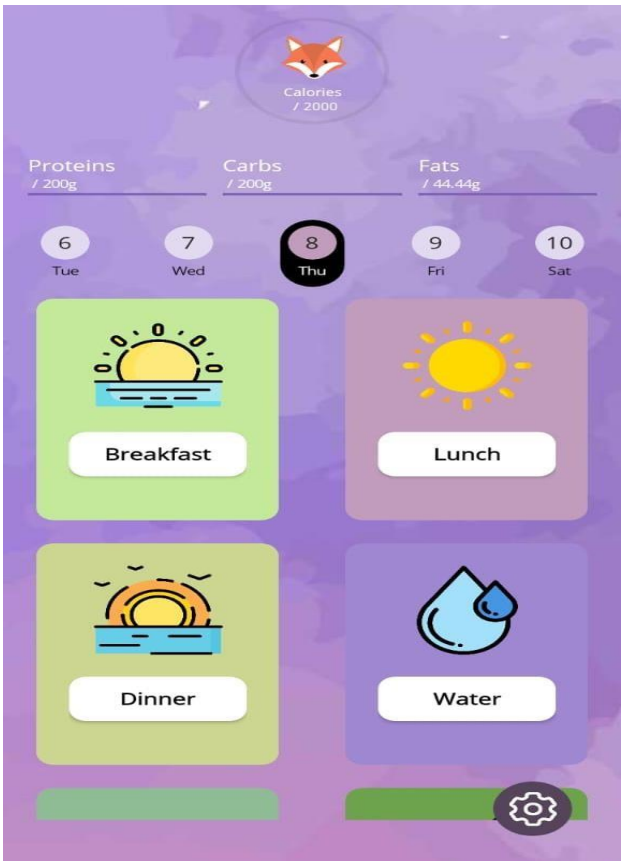
7.PROJECT IMPLEMENTATION

We used the Open Food Facts API to get the data on each food item. They have an extensive open source database a long with barcodes so a barcode scanner can be used to get the information. Then there’s a leaderboard to view your all time and weekly scores compared to your friends. Finally, a main profile, where you can see how are you doing this week, as well as your last 6 weeks of progress.

When the user scanned a food item, they would periodically be asked how many either how many calories, fat, protein, or carbohydrates they thought were in the food they has just eaten. If they got it right they would get a point.

A diet plan based on the BMI result will be provided.
According to popular belief, those with a BMI under 18.5 are too thin, people with a BMI over 25 are overweight, people with a BMI between 18.5 and 25 are thought to be at a healthy weight, and people with a BMI over 30 are considered corpulent.If acustomer's BMI is less than 18.5, recommendations about weight gain are given, and if it is greater than 25, a weight reduction plan is given. In most cases, the client

RESULTS: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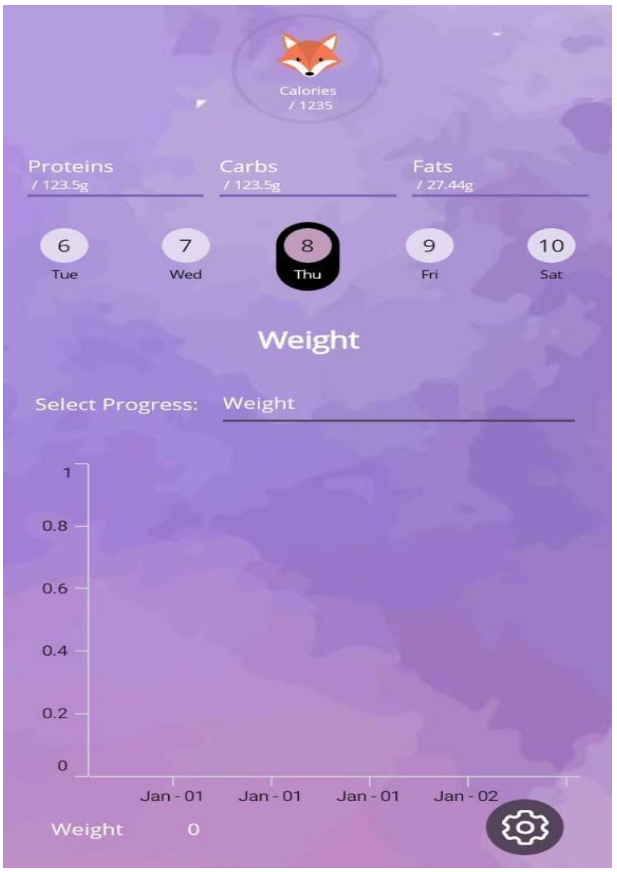
/ 2000
Proteins
/ 200g
Carbs
/ 200g
Fats
/ 44.44g
6 Tue
7 Wed
8 Thu
9 Fri
10 Sat
Breakfast
Lunch
Dinner
Water


Calories
/ 1235
Proteins
/ 123.5g
Carbs
/ 123.5g
Fats
/ 27.44g
6 Tue
7 Wed
8 Thu
9 Fri
10 Sat
Weight
Select Progress: Weight
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0.8
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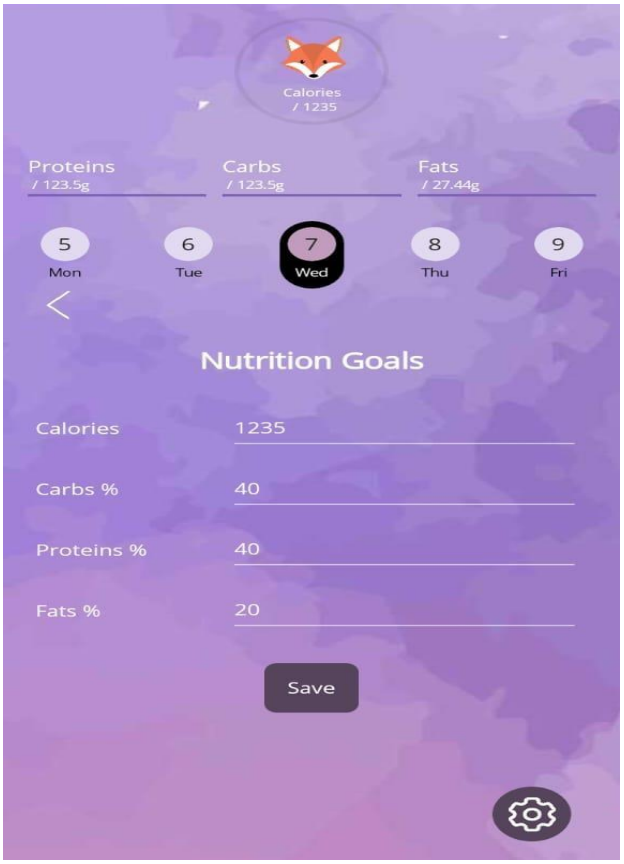
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Proteins
/ 123.5g
Carbs
/ 123.5g
Fats
/ 27.44g
5 Mon
6 Tue
7 Wed
8 Thu
9 Fri
Nutrition Goals
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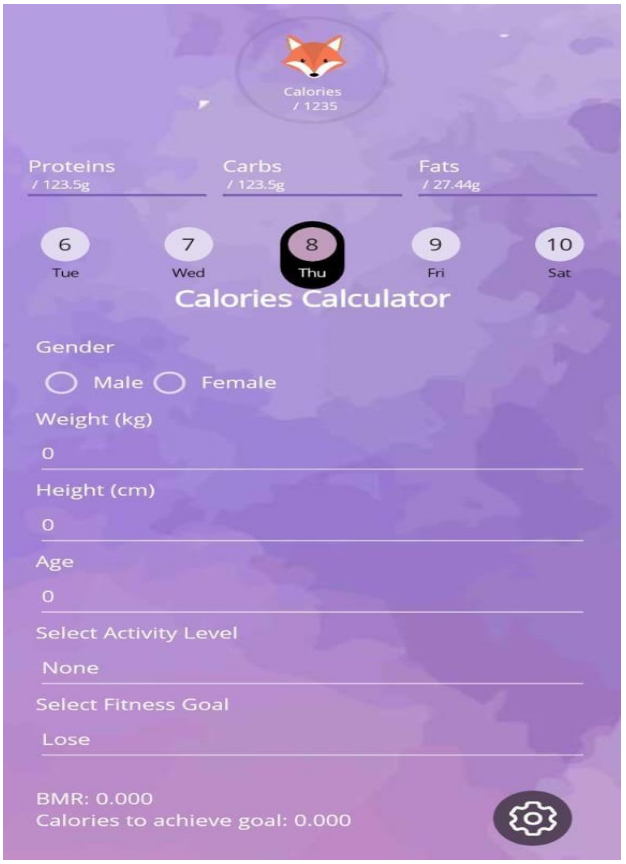
Carbs % 40
Proteins % 40
Fats % 20
Save


Calories
/ 1235
Proteins
/ 123.5g
Carbs
/ 123.5g
Fats
/ 27.44g
6 Tue
7 Wed
8 Thu
9 Fri
10 Sat
Calories Calculator
Gender
Male Female
Weight (kg)
0
Height (cm)
0
Age
0
Select Activity Level
None
Select Fitness Goal
Lose
BMR: 0.000
Calories to achieve goal: 0.000

8. CONCLUSION

A health tracking app proves to be a valuable tool for individuals striving to maintain a healthy lifestyle and make informed dietary choices. By providing users with a convenient and accessible way to monitor their food intake, track nutritional content, and set personalized goals, these apps empower users to take control of their health and well-being.

9. FUTURE SCOPE

We shall initially take into account all previously expected but undeveloped options for future development. By doing this, we can make the application more engaging when used, making it a well-liked health app.

Currently, a few future developments need to be considered, including

1. Providing customised diets for different patients, such as those with cancer, diabetes, etc.
2. Email the password to user.
3. An AI-based scanner will be used to monitor our diet.
4. To help folks get fit, we'll incorporate easy exercises.

We should search for every opportunity in the near future to create a well-liked, successful, and user-friendly programme that is regularly updated with new features and improvements to the user interface.

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