

CUSTOMIZED AI DIET PLANNER

Rohit Sandeep Shinde , Prof Priya .S Mahajani

Abstract— One of the essential factor of diet is it provide essential nutrient to our body, our food must be nutrient dense it must contain all Macro nutrients (proteins,carbohydrate, fat) and right amount of calories based on the person’s energy expenditure. While the field of dietetics and nutrition has been bombarded with food recommender systems over the years, little research has been performed on meal planner applications grounded on macro nutrients compliance. This paper proposed web based meal planner app called “customize Diet Planner” .good nutrition is required in our daily life.

Keywords: Macro nutrients ,Micro nutrients

I. INTRODUCTION

Just similar to a human dietician, this web system will also act like your dietician. When you go to a doctor of nutrition, then she will ask you your personal details related to body and health such as your age, your height, your weight and how much water do your consumer in a day and how much walk to do take regularly and how much work do you do regularly. Just similar to this doctor, this artificial intelligent dietitian also asks you similar questions in your device and you have to answer all those questions and then this AI consultant will also advice you about what should your intake in your diet and what should you ignore in order to keep yourself healthy via your diet.

A diet recommendation engine needs to calculate the macros and calorific needs based on user data. This can be done by collecting user input and making use of quadratic equations to automate the process of suggesting a diet at a specified time interval. Automation Anywhere consists of a control room and a client application [1] It is likewise possible that these systems are too reliant on user preference and not on nutrition guidelines like Food-Based Dietary Guidelines. In pursuit to develop a meal recommender system grounded on nutrition knowledge, this study proposed the “customized diet planner”, a progressive web application that generates meal plans [2] compliant to the necessary macronutrient distribution of daily calories based on individuals’

Many people don’t know how much is their daily calories need and according to their Body type and their Height and weight How much calories they must consume, what should be their goal, all progress depend on body type and according to your body type you must decide your goal weather to gain weight or to loose weight or to do fat loss etc.,All your calories intake is calculated by using formula of Basal Metabolic Rate (BMR)

$$\text{BMR For Men} - 66.5 + (13.75 * \text{weight kg} + (5 * \text{height cm}) - (6.78 * \text{age})) \text{-----}(1)$$

$$\text{BMR For women} - 655 + (9.56 * \text{weight kg} + (1.85 * \text{height cm}) - (4.68 * \text{age})) \text{-----}(2)$$

Through BMI app will get to know that Your weight in normmal, underweight, overweight and according to that your BMR will be calculated and based on that calories your Diet will be designed means foods will bw placed in such a way that it will match the calories calculated by BMR .

II. SCOPE AND OBJECTIVE

In this system of artificial intelligence dietitian, using the technique of artificial intelligence, you will get access to all the facilities via this web application, which is actually provided by a human dietician. The main advantage of using this web application is that the time required by the people to travel to the dietician will be reduced and also it reduces the cost of hiring dieticians for some particular purpose. Also, this application offers more than one diet plan also, for some particular kind of functionalities of human bodies.

III. MODULES AND THEIR DESCRIPTION

- 1) User Login:
Here, the Consulting user put his credentials in the Login page and also new user can register on this website
- 2) Online Consulting Ability:
Here, the User is able to consult online with the Bot Dietitian regarding various queries and exchanging information.

3) Calculate BMI:

Based on details provided by the user, system automatically calculate the BMI of the user.

4) Calculate BMR :

Based on details provided by users, system automatically calculates the BMR of the user

5) View Diet Plan:

The diet plan for the user is generated by the system itself using artificial intelligence.

6) Diet Data Processing:

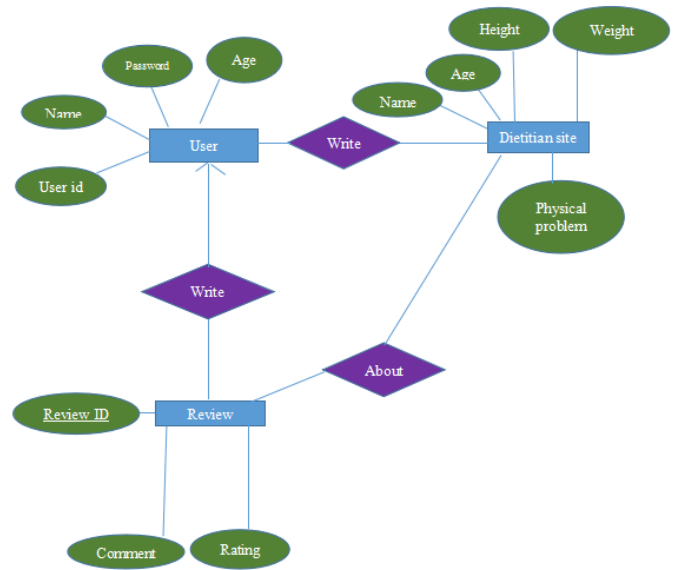
Here the system will process the input query information provided by the Consulting User and will generate the appropriate Diet information as output.

7) User Nutrition Counselling:

Here, the System provides the counselling to the Consulting User regarding Diet, Health, and Nutrition etc...

8) Efficient User Handling:

Here, system handles the Consulting User by providing them appropriate diet information, satisfying the user's needs and keeping the track of the history for future use.



IV. PROPOSED SYSTEM

Considering the anomalies in the existing system computerization of the whole activity is being suggested after initial analysis. **“customized AI diet planner”** is a BOT with artificial intelligence about human diets. It acts as a diet consultant similar to a real Dietitian User may login and view various diet information A Dietitian consults a person based on his schedule, body type, height and weight. The system too asks all this data from the user and processes it. **“customized AI diet planner”** asks about how many hours the user works, his height, weight, age etc. **“customized AI diet planner”** stores and processes the above data and then calculates the nutrient value needed to fill up user’s needs. **“customized AI diet planner”** then shows an appropriate diet to the users and asks if user is ok with it, else it shows other alternate diets to fill up user’s needs.

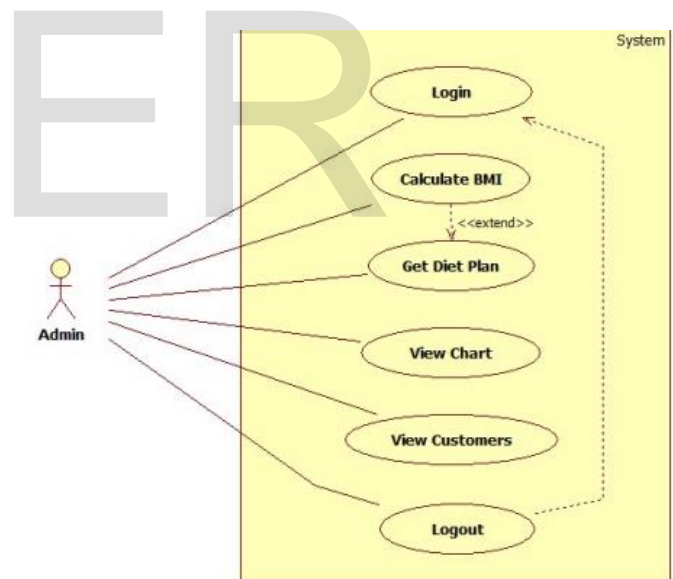


Fig. User Case Diagram for Admin

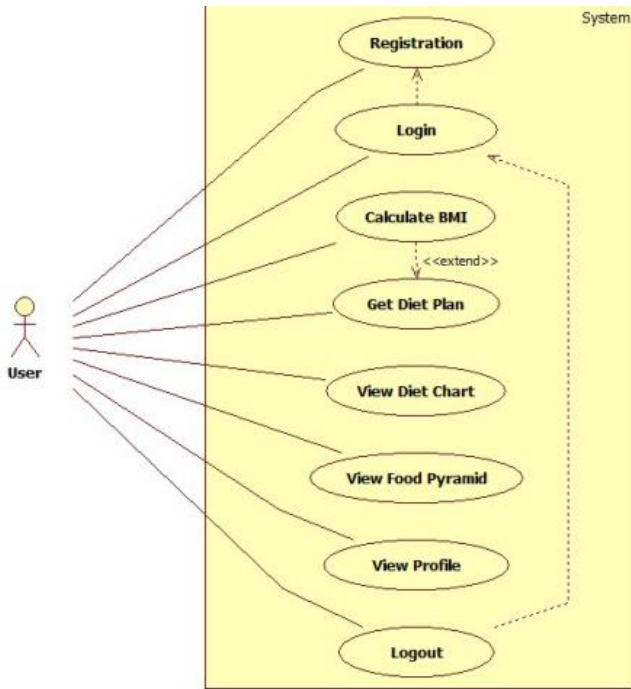


Fig. Use Case Diagram of User

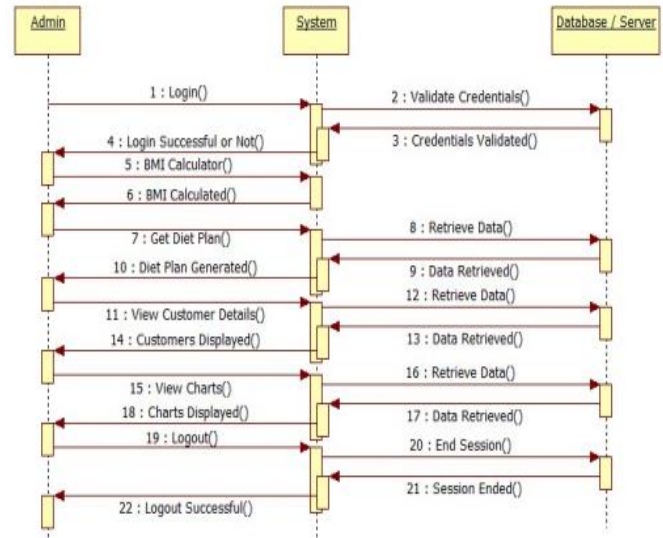


Fig. Sequence Diagram of Admin

V. IMPLEMENTATION

The Project is loaded in Visual Studio 2010. We used Visual Studio for Design and coding of project. Created and maintained all databases into SQL Server 2008, in that we create tables, write query for store data or record of project. The .NET Framework is a new computing platform that simplifies application development in the highly distributed environment of the Internet. The .NET Framework is designed to fulfill the following objectives: To provide a consistent object-oriented programming environment whether object code is stored and executed locally, executed locally but Internet-distributed, or executed remotely. To provide a code- extension environment that minimizes software deployment and versioning conflicts and that guarantees a safe execution of code , including an unknown code created by third party To provide a code-execution environment that eliminates the performance problems of scripted or interpreted environments To make the developer experience consistent across widely varying types of applications, such as Windows-based applications and Web-based applications.

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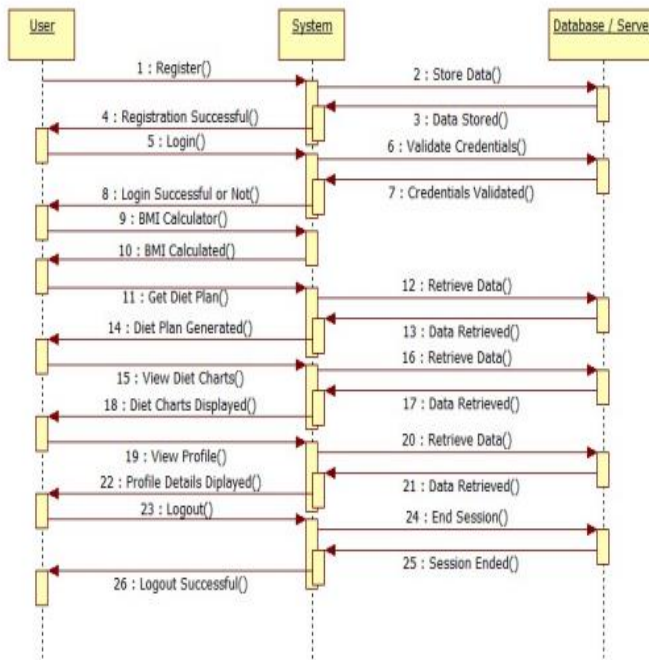
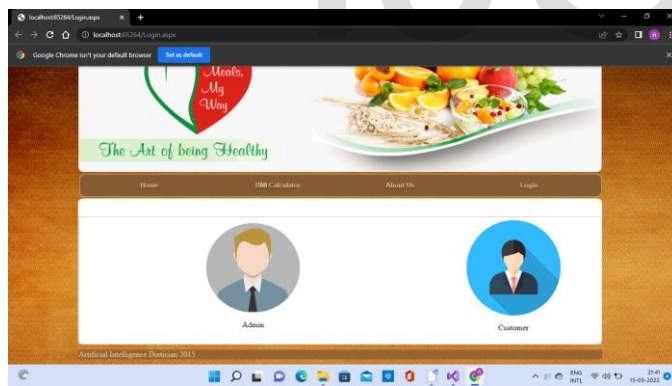
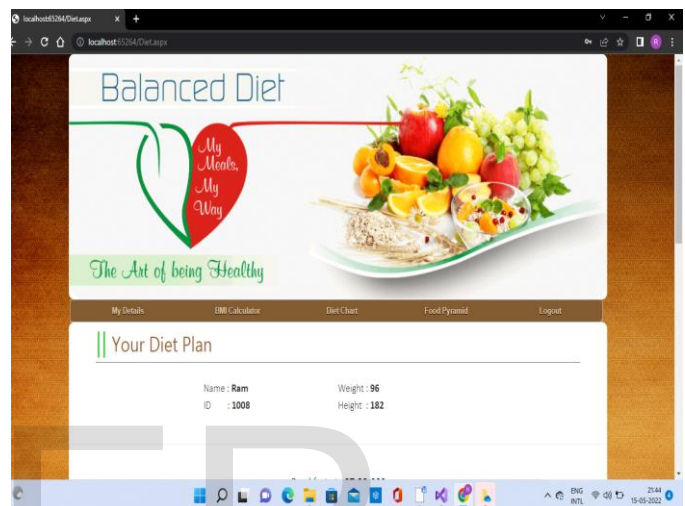
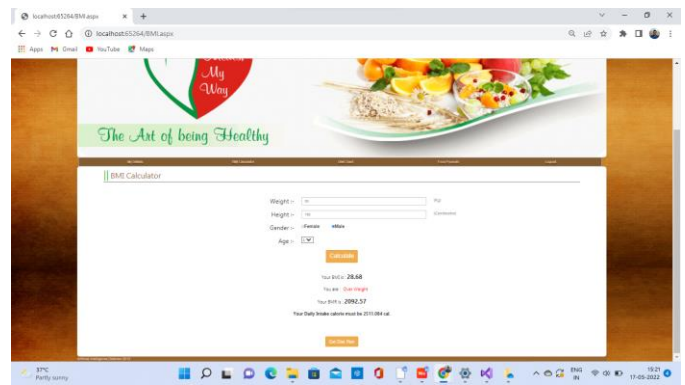


Fig. Sequence Diagram of User

VI. RESULTS



First we have to register than in registration we have to select veg or non veg after you have to login using user Id and password than you have to enter your age, Height and weight after wards app will calculate BMI and BMR than click on get the diet plan option



VII. CONCLUSION

Artificial Intelligence and the technology are one side of the life that always interest and surprise us with the new ideas, topics, innovations, products ...etc. AI is still not implemented as the films representing it (i.e. intelligent robots), however

there are many important tries to reach the level and to compete in market, like sometimes the robots that they show in TV. Nevertheless, the hidden projects and the development in industrial companies.

At the end, we've been in this research through the AI definitions, brief history, and applications of AI in public, applications of AI in military, ethics of AI, and the three rules of robotics. This is not the end of AI, there is more to come from it, who knows what the AI can do for us in the future, maybe it will be a whole society of robots.

VIII. REFERENCES

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