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# Application To Provide Customized Diet Plan And Ingredient Portion Of The Same

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***ABSTRACT***

*Most people are concern about what they eat everyday. this is often because "we are what we eat". People tend to look information about the items that they eat or what associated with their diet. Nowadays, there are systems which help people to manage their diet. However, the systems aren't specifically that specialize in the user's own needs. Different people would require different dietary needs or nutrition for his or her body. this is often thanks to sort of weight, daily activity level then on. in order that they need something which will help them with their own personal body needs. The system that has been developed is a web Diet Planning System. This website will help user to urge information about their dietary intake. there'll be dietary recommendations for the user supported what they have .With the expansion of recipe sharing services, online cooking recipes related to ingredients and cooking procedures are available. Many recipe sharing sites have dedicated to the event of recipe recommendation and retrieval mechanism. However, there's a requirement for users to plan menu of meals by ingredients. The menu are often wont to organize several recipes to form whole meals for daily dinner, holiday events, party planning, and so on. Food is usually central to the human life. Besides the air we breathe, food is that the only physical matter, which humans take into the body. within the youth , humans faced the task of identifying and gathering food for his or her survival. at the present , the dietary choice is becoming vital in satisfying diverse needs, like basic nutrition, calorie, taste, health and social occasions. consistent with the International Diabetes Federation, about 415 million people world wide suffer from diabetes, and therefore the rate of diabetes incidence is projected to further increase by quite 50% by 2040, becoming one great*

*threat to global health. The dietary factor is one main explanation for the dramatic increase within the incidence of obesity and diabetes.*

***KEYWORD:*** *Recommender system, balanced diet,nutrion,calories*

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## I. INTRODUCTION

In today's lifestyle, people are moving towards achieving a fit and healthy body. This shift has changed the way people live immediately in almost every household. Hence, healthy eating and nutritious food became an important a part of everyones lifestyle to realize a balanced and healthy life in such busy and hectic environment. On the opposite hand, an imbalanced diet can cause disastrous results on ones health, which can cause diseases like obesity, diabetes, etc. However, such conventional diseases and their symptoms are often reduced or prevented by active living and by including better nutritional diet. Realizing the limited capabilities of existing systems, this paper, therefore, describes the event of an automatic Web-based menu-generating system, consistent with a typical procedure and practice adhered to by dietitians in managing patients, and based upon a user-needs study conducted before the event of the system. This project may be a collaboration between the school of data Science and Technology and therefore the Faculty of Allied HealthAt the instant , the system is meant to be used by dietitians and health professionals to extract patients' dietary recalls and to style suitable menus supported a patient's dietary habits and nutritional requirements. With the expansion of recipe sharing services, online cooking recipes related to ingredients and cooking procedures are available. Many recipe sharing sites have dedicated to the event of recipe recommendation mechanism. However, there's a requirement for users to plan menu of meals by ingredients. While most research on food related research has been on recipe recommendation and retrieval, little research has been done on menu planning. A growing pr oportion of the worldwide population is becoming overweight or obese, resulting in various diseases (e.g., diabetes, ischemic heart condition and even cancer) thanks to unhealthy eating patterns, like increased intake of food with high energy and high fat.

## II. LITERATURE SURVEY

1. SmartDiet: a private diet consultant for healthy meal planning October 2010 Conference: IEEE 23rd International Symposium on Computer-Based Medical Systems (CBMS 2010), Perth, Australia, October 12-15, 2010 Authors: Jen-Hao Hsiao1,Henry Chang,IBM

personal dietary guidelines are essential for health management and preventing chronic diseases. the target of this research is to realize nutrient-balanced food recommendations for every individual, while considering individual's requirements at an equivalent time. to succeed in this goal, we developed a location-aware interactive diet consultant named SmartDiet supported the multi-objective optimization. The proposed personalized diet planning approach not only translates nutrient recommendations into realistic dish choices, but also accepts feedbacks from users to fine-tune their meal plans. The results showed that daily nutrition needs are often fulfilled by the designated meals, and therefore the interactive diet planning scheme helps a user adjust the plan in a neater way. the rules generated by SmartDiet are expected to potentially improve the general health and reduce the danger of chronic diseases of people .

2. Diet-Right: A Smart Food Recommendation System June 2017 KSII Transactions on Internet and Information Systems 11(6):2910-2925

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Inadequate and inappropriate intake of food is understood to cause various health issues and diseases. thanks to lack of concise information about healthy diet, people need to believe medicines rather than taking preventive measures in food intake. thanks to diversity in food components and enormous number of dietary sources, it's challenging to perform real-time selection of diet patterns that has got to fulfill ones nutrition needs. Particularly, selection of proper diet is critical for patients affected by various diseases. In this article, we highlight the difficulty of selection of proper diet that has got to fulfill patients nutrition requirements. To address this issue, we present a cloud based food recommendation system, called Diet-Right, for dietary recommendations supported users pathological reports. The model uses ant colony algorithm to get optimal food list and recommends suitable foods consistent with the values of pathological reports. Diet-Right can play an important role in controlling various diseases. The experimental results show that compared to single node execution, the convergence time of parallel execution on cloud is approximately 12 times lower.

3. Developing an expert system for diet recommendation Publisher: IEEE Menu construction is a crucial task for institutions that require to plan menus within certain constraints. There is also aPersonal need for professional menu construction by clients or patients who should eat consistent with a planned diet. For menu construction and dietary analysis, there are several approaches (e.g., applied mathematics , genetic algorithms, rule-based expert systems, etc.) and commercial IT systems. In this paper, we propose a case-based approach for diet recommendation. Based on this approach, we are getting to construct an expert system which is meant to be used during a health record management system. Our approach is predicated on ripple down rules (RDR), however, a special representation is additionally needed for patient attributes and rule actions.

## III. PROPOSED SYSTEM

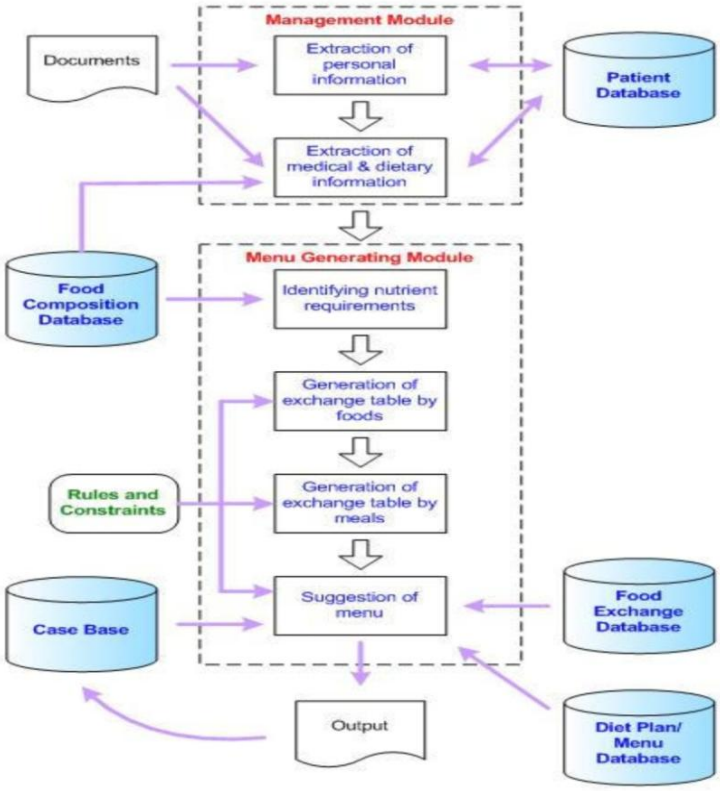
In the Proposed solution the web site "Personal Dietitian" will use knowledge representation and semantic web technology within the sort of the Food Ontology APIs to producethe diet plans for the users.

The meal planner of the web site will help the user to feature meal plans for breakfast, lunch, and dinner to the users food log

Features and Functionalities:-

1. Calculate the left calories from the activity tracker and meal planner.
2.Health Blogs
3. Weekly diet plan
4. Weight loss weight gain diet plan
5.TB patient diet plan
6. blood pressure patient diet plan

As illustrated in DietPal's system architecture the system consists of 5 databases with 2 main modules, the Management module and therefore the Menu Generating Module. The Management module is meant to manage information concerning patients' personal and medical information and to assess patients' compliance to dietary regime. The Menu Generating module is meant to interactively assist users in planning suitable menus and diet plans for patients. The Patient database is employed to store the patient's information, which incorporates the private data, anthropometric and biochemical data, medical history , and knowledge on dietary recall. This database is heavily utilized in the Management module. The Food Composition database consists of data about foods and nutrient composition.




The DietPal system architecture

DietPlan was developed as a Web-based system so as to extend outreach, particularly in rural areas. The main scripting language used is Active Server Pages (ASP) along side other scripting languages, mainly VBScript and JavaScript.The development of DietPal took under consideration the key findings of the user-needs study and therefore the consultation flow currently adhered to by dietitians.

## IV. RESULT & DISSCUSSION

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**3.4.7 Meal Planner: Progress Report**

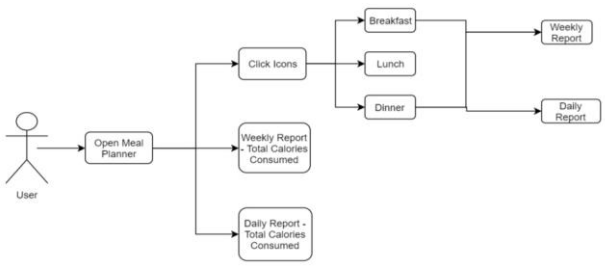


Figure 24: Meal Planner Report Flow Diagram

In this figure show the complete workflow of this website on the start of the website new user then click on the create a diet for the particular disease like TB and BP and also weight gain diet and weight loss diet provided by this website.

## V. CONCLUSION

The system has the potential of enhancing the standard of services with the supply of ordinary and healthy menu plans and at an equivalent time increasing outreach, particularly to rural areas. With its potential capability of optimizing the time spent by dietitians to plan suitable menus, more quality time could be spent delivering nutrition education to the patients.This project presents an intelligent menu planning mechanism to recommend sets of recipes for any user-specified ingredients. Food recommendation may be a promising and important research direction for its importance to quality of life for people and potential applications in human health. It provides people with ranked food items using rich context and knowledge, personal model constructed dynamically using Foodlog, and heterogeneous food analysis to understand nutrition and taste characteristics. However, there are very few systematic.

## REFERENCES

[1]. A. Tirosh,E.S.Calay,G.Tuncman, K.C.Claiborn, K.E.Inouye, K.Eguchi,M.Alcala,M. Rathaus,K.S.Hollander,I.Ron R. Livne, Y.Heianza,L.Qi,I.Shai,R.Garg,and G. S. Hotamisligil, " The shortchain fatty acid propionate increases glucagon and FABP4 production, impairing insulin action in mice and humans," Science Translational Medicine, vol. 11, no. 489, 2019.

[2]. G. . R. F. Collaborators, " Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990-2017: a systematic analysis for the global burden of disease study 2017," The Lancet, vol. 392, no. 10159, pp. 1789 – 1858, 2018.

[3]. Jong-Hun Kim, Jung-Hyun Lee, Jee-Song Park, ―Design of Diet Recommendation System for Healthcare Service Based on User Information‖, 2009 Fourth International Conference on Computer Sciences and Convergence Information Technology

[4]. Yu-Hsien Ting, Qiangfu Zhao, Rung-Ching Chen, ―Dietary Recommendation Based on Recipe Ontology‖, Awareness Science and Technology (iCAST), 2014 IEEE 6th International Conference on 29-31 Oct. 2014

[5]. U. Zulaika, A. Gutierrez, and D. Lopez-de Ipina, "Enhancing profile and context aware relevant food search through knowledge graphs," Proceedings, 2018.

[6]. E. Strickland, " 3 sensors to track every bite and gulp [news]," IEEE Spectrum, vol. 55, no. 7, pp. 9– 10, 2018.

[7]. https://www.hsph.harvard.edu/nutritionsource/healthy-weight/best-diet-quality-counts

[8]. https://www.researchgate.net/publication/221030630_SmartDiet_A_personal_diet_consultant_for_healthy_meal_planning

[9]. https://www.researchgate.net/publication/313723698_Diet-Right_A_Smart_Food_Recommendation_System