

HealthBuddy

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Abstract - HealthBuddy is a concept to supply a use of mobile application to ease the medical help by providing economical and effective responses to users. Since the employment of good phones has significantly grown up, the model 'HealthBuddy' can offer user the access to all or any the facilities anytime and from anyplace. During this fashionable and digital world, it's vital to resolve the matter through digital and quicker means, that the want throughout emergency should be consummated in easy means. Within the gift life, it's arduous to recollect everything, that the medication reminder and water intake reminder keeps the user hip to concerning the medication dose and water intake while not missing any. Information integrity is extremely thought-about as a result of multiple varieties of accounts that helps in maintaining security by solely giving access to the information that the user is permitted to. This application conjointly encompasses a conversation area through that the patient will consult a Chatbot concerning symptoms.

Key Words: Android Application, Medical assistance, Symptoms Analyzer

1. INTRODUCTION

The huge worth of health to human life has been universally acknowledged.

The means of "health" are often individually viewed from various perspectives. Understanding how different individuals consider health on a private level could provide professionals with useful indications on what can influence behavior with relevance health and wellness within the final population.

So as we all have heard the famous saying "HEALTH IS WEALTH". Health has become an awfully important factor for every individual among the world. But unfortunately this factor has been now neglected by most of the persons as all have busy schedules happening in everyone's life.

Every day we will hear some new diseases or new symptoms of the prevailing disease being discovered. However with the growing range of diseases and their symptoms, everybody cannot manage to be updated with it. So to cater to such situations, we are developing an android application "HealthBuddy" which incorporates a list of number of diseases, their symptoms. Also have another features like BMI calculator, Medicine Reminder, Health Tips. User can explore for nearby hospitals and clinics.

2. REVIEW OF LITERATURE

Development of Monitoring and Health Service Information System to Support Smart Health on Android Platform, Aisya Nur Aulia Yusuf, Fitri Yuli Zulkifli, I Wayan Mustika, 2018[1]

The purpose of this study is to develop a health information system that is able to provide patient health information to the health workers using android platform and to assist patients to schedule appointment with doctors. Based on the research that has been carried out, we can conclude that:

1. An android-based mobile application has been developed to watch patient's health condition to hold out health look after patients as early as possible and to boost health services

2. The developed android application has 11 features, they're patient registration, login, insert health condition, view health condition chart, request appointment with doctor, view appointment schedule, view medical treatments, view health article, view message from doctor, do emergency calls and logout feature. All features contained within the android application is fully function and are tested using recording machine testing method.

Modified and Advanced System for Health Care Application by Naveen Vaswani, Vandana Patel, Ashish Saheta, Smit Shah, Sumit Shah[2]

Health care application will provide us the medical help at quicker rate. Symptom Analyser analyses the symptoms of the patient which helps the doctor to treat their patient in additional beneficial way. As chat room service is provided during this application it adds a feature to attach the doctor and patient directly. Use of Health Care robot application will ease the Medical Assistance just in case of emergency. It helps doctor to observe the patient status via this application. Authentication ensures the protection of data of doctor and patient. Finding of donor nearest from the hospital become easier and efficient.

Doctor Chatbot – Smart Health Prediction by Seema J, Suman S, Chirag S R, Vinay G, Balakrishna D[3]

The most implemented Chatbot use AI and data processing algorithms like SVM, Decision tree, Genetic algorithm, Naïve Bayes, Pattern Matching, NLP, and more using tools like WEKA or MATLAB for analysis or execution. Some algorithms were tested and compared supported accuracy after giving input datasets. Some Chatbot used AIML for the QA structure. This paper specifies Dialogflow because the Conversation Interface. Under the medical domain, the information mining model which provides the most effective accuracy for predicting these diseases from the guts disease dataset was the Support Vector Machine algorithm. AIML also can be used for creating Chatbot by using XML format to store questions and answers. MATLAB and Weka tools were used for analysis purposes including pre-processing, clustering, and graph plotting.

3. METHODOLOGY

Health Buddy is an Android application which helps the user to ease medical situations User can register and Login through Google Account as well as with Mobile number and Email-ID.

A medical Chatbot is constructed to be a informal agent that motivates users to debate regarding their health problems and supported the symptoms provided by them, Chatbot returns the diagnosis.

Also have other features like BMI calculator, Medicine Reminder, First Aid Tips. User can search for nearby hospitals and clinics.

4. BLOCK DIAGRAM

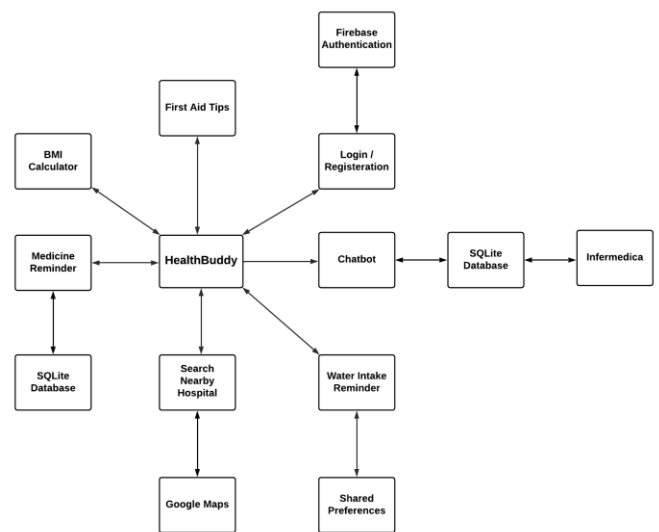


Fig - 1. System Flowchart of 'HealthBuddy'.

The block diagram shows the major functional blocks that are part of the system being described, the outside entities and the major interfaces between them. Login and Registration is done through firebase authentication. Chatbot is implemented using SQLite database and infermedica API. Nearby hospitals and clinic are searched using google maps API. Medicine Reminder is implemented using SQLite database for storing alarm and notification details. Water Intake Reminder implemented using shared preference.

5. IMPLEMENTATION

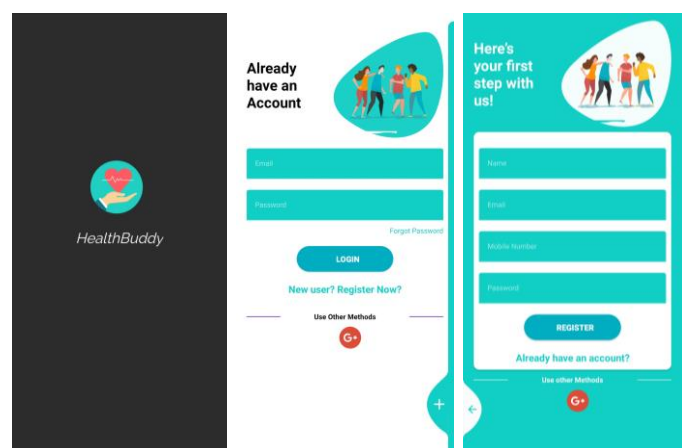


Fig - 2 Register and Login

User can Register and Login through Google Account as well as with Mobile number and Email-ID.

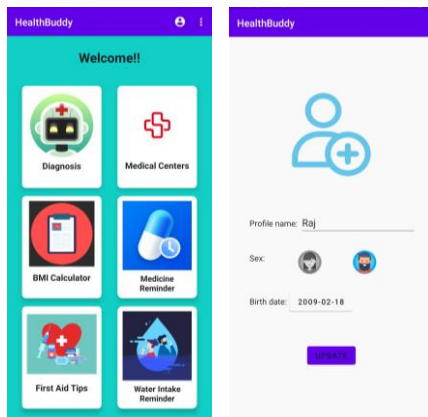


Fig - 3 Home screen and profile screen

It is the Home screen of the HealthBuddy which provides multiple services to the user

User can search nearby hospital with the detail information of the hospital

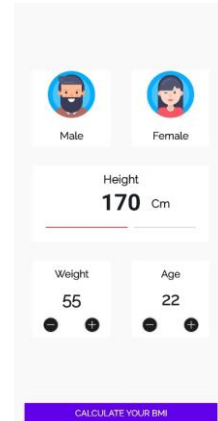


Fig - 6 BMI Calculator

BMI Calculator to calculate the body mass index using height, weight and age as parameters.

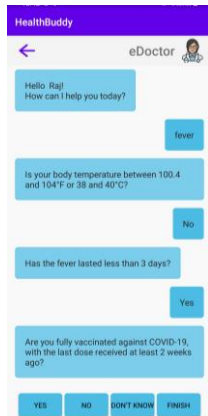


Fig - 4 Chatbot screen

A medical Chatbot is made to be an informal agent that motivates users to dialogue regarding their health issues and supported the symptoms provided by them, Chatbot returns the diagnosis.

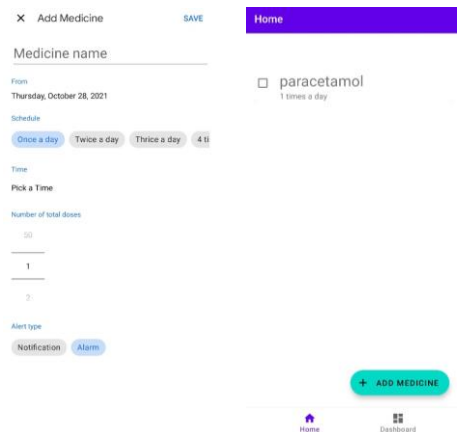


Fig - 7 Medicine Reminder

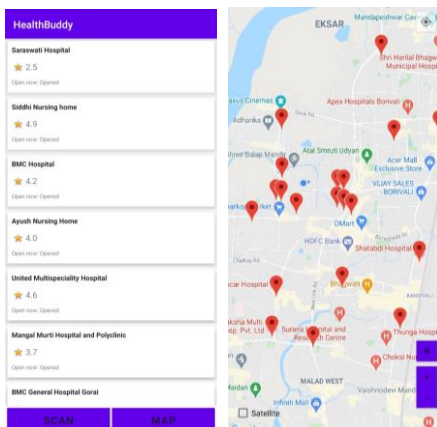


Fig - 5 Nearby Hospitals or clinics



Fig - 8 First aid tips

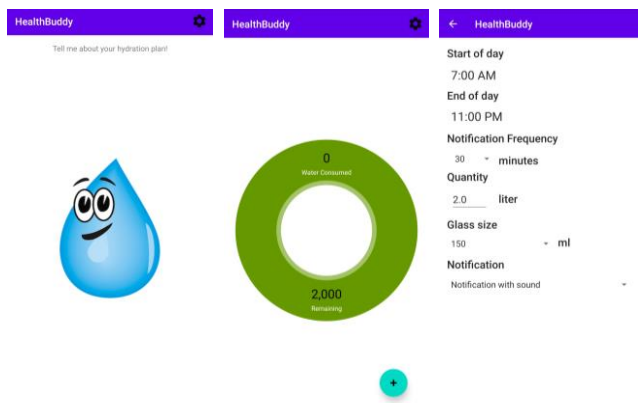


Fig – 9 Water Intake Reminder

6. CONCLUSION

The app was created keeping in mind the simplicity of use by the users and to enable them the power of machine learning for their day to day work and also during the emergency cases. Thus we conclude on our research and finding that HealthBuddy will provide us the medical assistance at faster rate. Hence providing quality health care services to all the users and therefore contributing more towards the Digitalization and Smart Technology.

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