International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 05 Issue: 05 | May-2018 www.irjet.net p-ISSN: 2395-0072

MULTIPUPOSE MOBILE APP FOR PATIENTS

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Abstract - *Usage of Mobile phones and mobile applications has drastically increased. Mobile phones are used by people of all groups of ages. We can put the mobile phones into good use, one of which is greatly helpful for older people on medication, people suffering from dementia, or any other disorder to provide health care. This paper's main aim is to build an app to make their life easier to take good care of themselves and to provide accurate assistance for Outpatients. With this app they can get various services such as medicine reminder system, finding the right and easily accessible hospital in their city, finding a doctor, first aid information, emergency service calling. It is also seen that it is error-prone procedure of medication practiced by Outpatients. Therefore, the app is a medication error prevention system. It helps them to alert about the drug dosage. The software produces simplest schedule with least number of intakes.*

***Key Words*: Healthcare, accurate assistance, Doctor's appointment, Finding a hospital, Emergency service, medication error prevention system.**

1. INTRODUCTION

In recent years and the years to come, the most important is health care. Health care has become as important as education has, it is a basic need. In this paper, we develop an app which makes it easy for people to access health care. Out-patient prescription blunders were made when patients purchased endorsed over-the-counter (OTC) medications from various medication stores and utilize them at home without direction.

1.1 Application Uses

The application will provide:

Cabin booking.
Suggestion of clinics according to cost and quality and their areas.
To make an doctor's appointment.
Assistance to the user to make an emergency call for an ambulance or health care service.
Alert system to take medicines in a fixed time.
Body Mass Index (BMI) calculator.
Issue pharmaceutical in-take updates.
Keep up prescription in-take records.
Provide drug recognizable proof and in-take updates.

2. EXISTING SYSTEM

There are many existing system present such as:

Nokia Smart Home (NSH) is based on NSH Gateway device which is the central hub that controls all the devices and sensors, enables if/then scenarios, and triggers appropriate actions. These smart home gateways support both simple and more complex scenarios to ensure all conditions can be monitored in the right circumstances. While service providers can deliver best in class smart home platforms, you may want to cooperate with selected partners to maximize the success of smart home services, especially one as critical, and sensitive, as aging in place. By partnering with a healthcare provider or insurer, you can boost credibility, thought leadership and also enable the introduction of value add services like 24/7 monitoring.

The Pebble is a popular state of the art smartwatch, which was released in 2013, by Pebble Technology Corporation. It can communicate with Android and iOS devices using the Bluetooth 4.0 (Low Energy) protocol and receive vibrating alerts for text messages, incoming calls or social media notifications. It features a 1.26-inch 144 × 168 pixel, black and white e-paper display with a backlight, a vibrating motor, integrated sensors, such as an accelerometer, and a rechargeable battery that lasts for 5-7 days [9]. An open Pebble software development kit (SDK) is available to developers. Applications for the Pebble are distributed through the Pebble appstore.

Philips Lifeline medical alert system provides fast, reliable access to the help any time with the press of a button, and rest easy knowing if a fall should occur, the AutoAlert feature can still place the call for help if the fall is detected. AutoAlert fall detection will automatically place a call for help if it detects a fall and you can't push the help button yourself, even if you are disoriented, immobilized or unconscious. This solution is also based "as-a-service" type of product. The Lifeline service can be used in any emergency. From a fire, medical emergency, or if user is simply locked out of house.

Third product is the Amazon Echo, a voice-activated technology innovation that has amazing potential for helping seniors with dementia. This product can improve quality of life for older adults with Alzheimer's or dementia as well as for seniors with mobility limitations and other health conditions. Older adults with mobility issues or health

conditions like Parkinson's can also benefit from an Echo. It gives them more control over their environment and more independence.

3. IMPLEMENTATION

1. System Architecture

The system consists of two major modules. One for administrators and one for the general users. The administrator section is for creating and updating information about hospitals and cabins. And the other section provides several prominent features for the general users that will enable them to get quick and effective health care. The app can be used offline, but it needs internet for updating and synchronization. It is shown in fig 1.

Fig. 1: System architecture

2. Application

This application is produced in android OS. The first page offers clients a rundown of highlights. It has sections for administration, hospital information, cabin booking in hospital, section for appointment making with doctor, section for emergency health care, section for aid and medication information, BMI index calculation section, medicine reminder section and hospital suggestion section. The admin section provides an easy way to create and update the hospital and cabin booking information. An administrator will be given a password to login to admin section. After successful login, admin can update hospital information such as list of specialist doctors, number of cabin, amount of charge for service, facilities provided by a hospital, information about Operation etc. Furthermore, an admin can see who booked cabin with payment information. Admin will use the payment information to verify the identity of the one who booked cabin. Demonstrated in fig 2.

Fig -2: App displaying details for cabin

In this application there is a special element called healing hospital suggestion . Here an exhaustive proposal of healing hospitals can be got. It presents two classes of proposal to the client. To begin with is quality based, and second is taken a cost based. The first alternative sorts the doctor's facilities by the offices they accommodate like, the quantity of full time specialists, number of pro specialists, number of activity theaters, number of specialists and client rating from online destinations. In case of cost based suggestion, the application sorts the hospital based on their cabin fee per day. This is demonstrated in Fig 3.

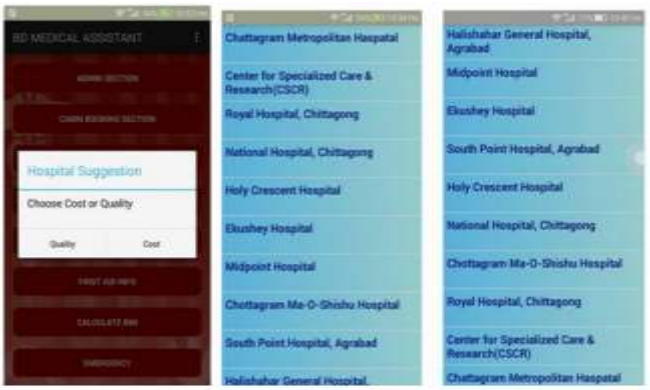

Fig -3: Hospital suggestion

The app helps get the hospital location. Users can easily find location of hospital with a single tap. The system will open up the google map application and mark the hospital's location. Demonstrated in fig 4.

Fig -4: Hospital location

In case of emergency when an ambulance or doctor is not at hand, this application can help by providing quick links for calling a doctor or an ambulance. There is an option for emergency calling in this app which takes just a tap to make a call to the desires service as shown in Fig. 5.

Fig -5: Emergency call system

4. RESULTS

After developing the system, we can perceive user feedback and their opinions . Accumulate feedback from different male and female. Praise them to rate this application, whether it is useful or not. 68% users rated this application as very useful. They suggested that this will be a prodigious opportunity to enunciate on community problems without any trouble. Feedback is demonstrated graphically in Fig.6.

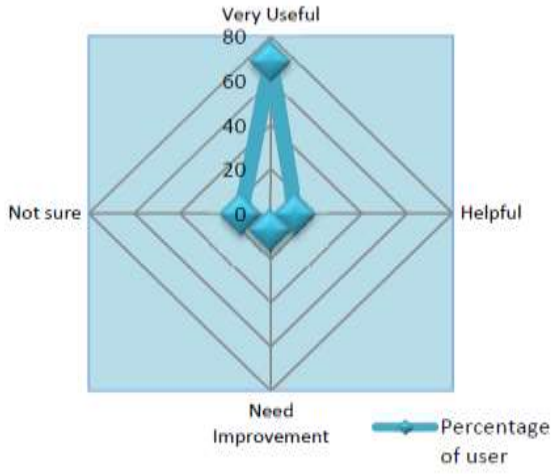

Fig -6: Feedback

5. CONCLUSION

This age of science and technology , has made the life of people easier and convenient ways to solve their everyday problems. The health care is also getting attention of the scientist and researchers, and they are developing a helpful system to save life and care for life. This paper demonstrates a mobile application based health care tool that can be a friend like company for the masses. Using the app they can find many conveniences that can change the way people react in emergency situations. Instead of being panic, people may find a quick and effective way to reach the solution with the help of this app. In future, we hope to work extensively on this to develop it to a new level for the betterment of people, especially the poor. We are also looking forward to use artificial intelligence in helping people detecting disease based on symptoms. This way, it is hoped that mobile based health care system will be a useful part and parcel of everyday life.

REFERENCES

[1] "Mobile Reminder System for Furthering Patient Adherence Utilizing Commodity Smart watch and Android devices" - Ilias Maglogiannis, George Spyroglou, Christos Panagopoulos.

[2] "A Smartphone based Application to Improve the Health Care System of Bangladesh"- Ahmed Imteaj and Muhammad Kamrul Hossain.

[3] "Smart Phone Based Medicine In-take Scheduler, Reminder and Monitor"- John K. Zao, Peihsuan Tsai, Jane W.S. Liu.

[4] "Smart Home Medication Reminder System" - Milan Ramljak.