

Medicare Mobile Applications Implemented Using Android

S. Muthuselvan, S. Rajaprakash, K. Karthik, R. Jaichandran, Suman Sharan

Abstract: Medicare access and quality assurance are problems in the fast-evolving globe. There are well established disparities based on income and geography, and the high costs of health care present affordability challenges for millions of people especially in our country. Large number of individuals does not receive the proper medication as and when required. Networking technologies has been consistently improving with time and increasingly finding its way to contribute towards helping with both of these issues. We focus to develop an android application to allow users to electronically search the medicines available near one's location with higher consistency and provide a caregiver satisfaction. It is being looked upon as a solution to provide easy medical facilities along with enhanced accessibility to the patients. Application allows both patients and Medicare providers to have access to medical records just a fingertip away using mobile devices. Patients need not remember their medicine dosage timings as they can set a reminder with an ease for that. Portability provided by this application, uses GPS which enables the user to carry the exact information of the surrounding pharmacies at all times and also the efficiency among pharmaceutical staff is increased by using this newly available application. The application would hopefully transform the lives of many people across our country who is deprived of quality medical facilities at the proper time.

Keywords: Medicare, Android, Mobile Application, Medicines

I. INTRODUCTION

“MediOne” is java-based application which deals with patient and retailer. It is very much useful for the customer who is in emergency situation. This application provides lots of features where customer can buy medicine 24 hours before and so many. The application would hopefully transform the lives of many people across our country who is deprived of quality medical facilities at the proper time. The purpose of this project is to facilitate the users with an android application which will help them to locate the nearest medical store with all the required medicines which will save a lot of time an effort while searching for medicines.

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They can book the medicine for 24 hours, in case the medical store is inaccessible at that time. The app also provides a reminder facility which can be set according to the dosage timings. The project will also help the pharmacists to maintain the online database of the list of medicines which are available in their store at that current time. The software product “MediOne” will not only be helpful in day-to-day need but will be a lifesaver in case of emergency medication. As the database can be easily updated, the pharmacists will have the ease to inform the users about the medicine availability. Nearby locations of the stores will be shown by the GPS before the user approaches the farther ones.

II. LITERATURE REVIEW

This work presenting a more modern conception entitled “real time health care observance system victimization mechanical man mobile”. The project is intended and enforced as explicit and it's operating with success fine. The planned system updates the patient parameters in real time in each the laptop and mechanical man GUI. Mechanical man GUI is the noticeable improvement in this work. Relying upon the ZigBee module capability variety of patients will be accrued, for demo purpose we tend to enforced 2 patients and will be accrued. Its one time investment system however associate effective one. Mechanical man application allows licensed doctor to grasp the standing of patient anytime, anyplace across the globe [1].

The “Smart health consulting “Android Applications useful for patient to look the hospital supported specialist. This application is alter the task of patient and doctor. This application facilitates the interaction between patient and doctor. It helps to optimize the work of patient and doctor. Installation of the app within the Smartphone is kind of straightforward and a lot of helpful to patients UN agency have traditional plan of robot mobile. Sensible health consulting robot system is a simple, economical and important mobile application for the society [2].

We have developed an attention App that is terribly user friendly and economical in communication and news. The application developed has met all the objectives that were portrayed as the blessings of the planned system. By deploying the application on mobile phones we have a tendency to have been in a position to bring the attention App on the palm of each individual. The application will be deployed on the cloud by integration totally different hospitals and linking their servers through the cloud. Ample security measures have been adopted still there may be a scope to increase the protection parameters. With respect to the feedback of the App users additional enhancements will be incorporated inside the system to create it additional user's friendly [3].



This paper offers the summary of health consulting system to focuses on supporting patients to self-regulate wounds in occasions of minor scenes. It helps patients to self-manage injuries case of minor incidents. If patients have any question regarding the minor health drawback, they can send the question and get the info regarding however to manage the injuries. This involves bi-directional exchanges of the Electronic health record (EHR) amongst patients and the care facility. This work took advantage of the omnipresent nature of mobile cloud computing and proposes a middleware, that facilities economical method of medical knowledge synchronization, and with negligible latency [4]. The goal of this application is to implement and style an epitome mobile health care system consisting of 3 components: records information from a patient in period, associate degree automaton mobile that forwards the received information to a central server and eventually a server accountable to store and analyze that information by knowledgeable system [5]. The purpose of the review is to read the present technology in location primarily based services for health care and make use of the gift technology for development in the longer term findings. additionally the study helped United States to perceive the varied existing and blooming technologies within the attention like graph ,EMG watching through robot apps, usage completely different protocols for transferring data's such as MQTT,TCP/UDP, OCN echt mode ,WLAN technologies etc [6]. Thus we have a tendency to conclude on our analysis and finding that health care application can offer U.S. the medical help at quicker rate. Symptom analyzer analyses the symptoms of the patient that helps the doctor to treat their patient in additional helpful method. As chat area service is provided during this application it adds Associate in nursing feature to connect the doctor and patient directly. Use of Health Care golem application will ease the Medical help in case of emergency. It helps doctor to monitor the patient standing via this application .Authentication ensures the protection of knowledge of doctor and patient. Finding of donor nearest from the hospital become additional easier and economical [7]

Health of the patients square measure monitored victimization web of things (IoT) and permits the doctor to watch their patients outside the clinic and conjointly apart their consulting hours. Connected health care devices utilize resources to offer Associate in Nursing improved quality of care, leading to higher clinical outcomes. Measureable edges of connected medical devices embrace reduce clinic visits, together with reduction in bed days of care and length o stays in hospitals. victimization web of Things (IoT), patient conditions square measure obtained and hold on for more analysis. In this project the heart rate and blood pressure o patient unmonitored. From this work it is expected to monitor the whole body of the patient from remote location and improve the technology to worldwide for patient watching by providing customized and optimized services, it can promote a more robust standard of living. Nations across the planet to boost patient care and IoT provides a timely and cost-efficient response to those essential things. Healthy and active folks will conjointly like IoT-driven watching of their well-being, It conjointly permits options for the aged persons United Nations agency need solely a monitor that may discover a fall or alternative interruption in each day activity and report it to emergency responders or members of the family [8].

The “Smart health consulting” Android Applications helpful for patient to look the hospital supported specialist. This application is modify the task of patient and doctor. This application facilitates the interaction between patient and doctor. It helps to optimize the work of patient and doctor. Installation of the app within the Smartphone is quite easy and more helpful to patients United Nations agency have traditional plan of automaton mobile. Smart health consulting automaton system is Associate in Nursing effortless, economical and influential mobile application for the society [9].

At finish of this proposal we wish to recollect that this can be totally distinctive system and that we sure that it'll useful North American country all also as any hospital business will add this with their existing feature. Hope this application will be terribly demandable in coming future [10].

III. EXISTING SYSTEM

In the existing “Medione”, all the functions in medical management was little e-way. In remote areas, there is lack of sophisticated medical treatments and doctors. Moreover, there is no data recording system in order to keep the previous health reports and lab reports of patients. Other than, there was not GPS location and dosage remainder. So, this web-based tries to overcome these drawbacks by providing a perfect link between retailer and patient through e-way. The system is named as “MEDIONE”. In this new, we had created android application with more features which will help to interact more between retailer and patients.

IV. PROPOSED SYSTEM

Using the java based mobile application the day to day activities of the remote construction site can easily be updated to the remote database server. Initially the site supervisor using his login credentials, has to login in the mobile application loaded in his device? After which he has to upload the day to day activities along with the photographs of the works performed. Using a Web Service, the data in the mobile device can be updated in the remote database. Thus, the data in the remote database can be projected as MIS [Management Information System] Web Application. Thus, the works carried out at different geological points can easily be monitored using this system. The proposed system consists of the following advantages, Time Saving, Secured Environment, Will prevent any possible corruption, and Work efficiency.

V. MODULE DESCRIPTION

A. Android App Description

Application called as “Medione” which provides with best features like patients can book their medicine before 24 hours when retailer is offline, you can check out the medicine where that kind of medicines are available and which is near to you through GPS location. This app provides remainder like alarm when patient should take medicine incase patient forgot.

Any medicine is order from this app will provide you instant delivery. This is more helpful for minor injuries because you can send photos of the injuries to the doctor. In case of bleeding and big injuries, you should make call through this app which will more helpful to pickup of the patient through GPS location.

B. Customer

1) Setup

First to create account by giving personal details like email id and password by selected option. Then it will show successfully registered. User can proceed for login. While login user has to give email id and password.

2) Register

User has to enter his/her Registration details. The users have to register prior to using the app for the first time. The details entered are checked for the existing users. If the user already exists, he/she is asked to login instead of reregistering, else a new id is assigned to the user. User is navigated to the home screen of the app.

3) Login

User has entered his/her Email and password. The users who are already registered can access the app by logging in. The email and password are checked for the verification of the customer. The user is navigated to the home screen of the app or error message is displayed.

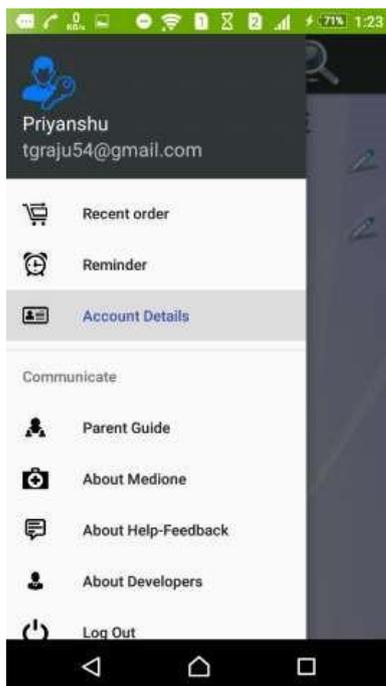


Fig. 1. Patient profile

4) Search bar

Medicine names are entered in the search bar and search button is pressed. The new page with the details of the nearby medical stores is displayed. It will be showing local stores through GPS location.

5) First character selected

A character selected from A-Z. The list of medicine names starting with the opted character is displayed. For example, if user type A, it will be showing the medicine's starting with A.

6) Medicine search

The medicine selected from the list. The medicine is searched similar to the search made by entering its name in the search bar. The nearby stores which have the selected medicine are displayed.

7) Book

User can book the medicine by the Book button. An order id is generated in response to the order. This order id is used for any references regarding this order.

A particular medicine is booked from a store.

8) Menu

Menu button is pressed or the screen is swiped from left to right. The menu contents are listed which are: account, booking history, payments and many more.

9) Account overview

The user name along with email is displayed as the first element in the list. The menu has to be open either by pressing the menu button or by swiping the home screen left to right.

10) Reminder

User can use reminder option to set remainder. The user is displayed an interface using which a new reminder can be set or the existing reminder can be modified or deleted.

11) Set reminder

User can set time, repetition days and a description. A new reminder is saved when the set button is pressed.

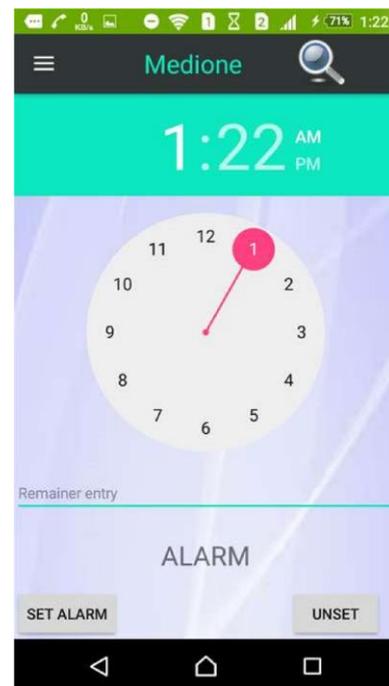


Fig. 2. Diagram for Setting reminder

12) Edit reminders

User can edit reminder is selected from the reminder page. User is displayed the list of existing reminders which can be turned on/off or modified or deleted according to the user requirements.

13) Recent orders

User can check recent order which is opened from the menu. The orders which are bought by the user are displayed in green boxes while the pending orders which are booked and yet to buy are displayed in red along with the cancel option. The list of previous orders is displayed.

14) Account details

User can check account details which are selected from the menu. The credits are calculated based on the previous orders. The details which are updated are sent to the server for maintaining the user credentials. The user details are displayed along with the edit option. Also, the credits are displayed according to the orders placed by the customer.

15) Help and feedback

User can give help and feedback selected from the menu. The user is provided with a set of FAQs' for helping him/her using the app. Feedback option provides the user to give a feedback to the developer team.

16) Parent guide

User who doesn't know how to use this application can check Parent guide option from the menu. The user is guided with the steps for performing a particular function using the app.

17) About Medione

User can know about Medione which can be selected from the list of menu items. The details of the app are shown.

18) Logout

The last option in the menu i.e. Logout is selected. The user gets logged out from the app. Now to avail the facilities of the app the user shows re-login.

C. Notification

1) Reminder notification

The app uses the preset timings for a reminding. The app gives a notification for reminding the customer about the dosage of a medicine. The app uses the preset timings for a reminding.

2) Booking notification

The user is alerted by prompting a notification, four hours prior to the expiry of the order, to buy a medicine which he/she had booked in the last 24hours and not yet bought.

D. Retailer

1) Setup

First to create account by giving personal details like email id and password by selected option. Then it will show successfully registered. Retailer can proceed for login. While login retailer has to give email id and password.

2) Register

User has to enter his/her Registration details. The users have to register prior to using the app for the first time. The details entered are checked for the existing users. If the user already exists, he/she is asked to login instead of reregistering, else a new id is assigned to the user. User is navigated to the home screen of the app.

3) Login

User has entered his/her Email and password. The users who are already registered can access the app by logging in. The email and password are checked for the verification of the

customer. The user is navigated to the home screen of the app or error message is displayed.

E. Search

1) Search bar

Keywords are entered in the search bar and search button is pressed. The medicine availability is displayed.

2) First character selected

A character selected from A-Z. The list of medicine names starting with the opted character is displayed. For example, if user type a, it will be showing the medicine's starting with A.

3) Insert

Insert button is pressed. A new medicine is added to the list of retailer's inventories User is invoked to enter the details of the new entry in the inventory.

4) Menu

Menu button is pressed or the screen is swiped from left to right. The menu contents are listed which are: account, booking history, payments and many more.

5) Account overview

The menu has to be open either by pressing the menu button or by swiping the home screen left to right. The user name along with email is displayed as the first element in the list.

6) Pending orders

Retailer can check pending order which is opened from the menu. The list of medicines ordered by the customer but not yet bought is displayed.

7) History

History option can be selected from the menu. The medicines will be displayed in two shades. One shade for the medicines which were sold on time and the other shade for the orders which got expired. All the medicines which were previously booked by the customers will be displayed.

8) Remove medicine

Remove medicine option of menu to be selected. The name of medicine to be deleted is entered. The retailer can remove the one with proper potency.

9) Account details

Account details option is selected from the menu. The user details are displayed along with the edit option.

10) Help and feedback

Help and feedback option selected from the menu. The user is provided with a set of FAQs' for helping him/her using the app. Feedback option provides the user to give a feedback to the developer team.

11) Parent guide

User who doesn't know how to use this application can check Parent guide option from the menu. The user is guided with the steps for performing a particular function using the app.

12) About Medione

User can know about Medione which can be selected from the list of menu items. The details of the app are shown.

13) Logout

The last option in the menu i.e. Logout is selected. The user gets logged out from the app. Now to avail the facilities of the app the user shows re-login.

F. Notification

New order notification

The new order arrived is stored in the pending order list along with the order placed time. The retailer is notified for the arrival of the new order.

1) Order expiry notification

When the time allotted for order run out the order is expired and the retailer is sent a notification regarding this order expiry.

VI. CONCLUSION

We focus to develop an android application to allow users to electronically search the medicines available near one's location with higher consistency and provide a caregiver satisfaction. It is being looked upon as a solution to provide easy medical facilities along with enhanced accessibility to the patients. Application allows both patients and Medicare providers to have access to medical records just a fingertip away using mobile devices. Patients need not remember their medicine dosage timings as they can set a reminder with an ease for that. Portability provided by this application, uses GPS which enables the user to carry the exact information of the surrounding pharmacies at all times and also the efficiency among pharmaceutical staff is increased by using this newly available application. The application would hopefully transform the lives of many people across our country who is deprived of quality medical facilities at the proper time.

REFERENCES

1. Soumya S. Kenganal, Dr.Rengaprabhu P, "Real Time Health Care Monitoring System Using AndroidMobile", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, Vol. 5, Issue 5, May 2016
2. Ravi Aavula, M.Kruthini, N.Ravi teja, K.Shashank, "Smart Health Consulting Android System", International Journal of Innovative Research in Science, Engineering and Technology, Vol. 6, Issue 3, March 2017
3. Prof.D.V.Chandran, Sayali Adarkar, Apurva Joshi, Preeti Kajbaje, Digital Medicine: An android based application for health care system, International Research Journal of Engineering and Technology (IRJET), Volume: 04 Issue: 04 | Apr -2017
4. S.Sundhar, R.Suresh, D.Vasanth, V.Saraswathi, "Survey: Novel Framework for Smart Health Consulting Using Android Device", International Journal of Advance Engineering and Research Development, Volume 4, Issue 2, February-2017
5. Mr. Ketan D. Bodhe, Dr. R. R. Sawant, Mr. A. N. Kazi, "A Proposed Mobile Based Health Care System for Patient Diagnosis using Android OS", IJCSMC, Vol. 3, Issue. 5, May 2014, pg.422-427
6. Rameshwari.R ,Divya.N, "Smart Health Care Monitoring System Using Android Application", International Journal of Recent Technology and Engineering (IJRTE)ISSN: 2277-3878, Volume -7 Issue-4S, November 2018.
7. Naveen Vaswani, Vandana Pate, Ashish Saheta, Smit Shah, Sumit Shah, "Modified and Advanced System for Health Care Application", International Research Journal of Engineering and Technology (IRJET), Volume: 05 Issue: 03 | Mar-2018 .
8. Chesti. Altaff, Hussian, K. Vuha, M. Rajani, J. MadhuVineeth, "Smart Health Care Monitoring using Internet of Things and Android", International Journal of Advanced Research in Electronics and Communication Engineering (IJARECE) Volume 6, Issue 3, March 2017.
9. Ravi Aavula, M.Kruthini, N.Ravi teja, K.Shashank, "Smart Health Consulting Android System", International Journal of Innovative

Research in Science, Engineering and Technology,
Website:www.ijrset.com, Vol. 6, Issue 3, March 2017.

10. Konde T.R, Konde D.R, Khokrale, P.V. Phulwade S.P, "Health Prediction System", International Journal of Advance Engineering and Research Development, Technophilia-2018. Volume 5, Special Issue 04, Feb-2018 (UGC Approved).

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