

# Health-On-The-Move based on ANDROID Operating System

Rutuja Kulkarni, Ankita Deshmukh, Manjiri Shivankar, Prajakta Gore, Tanmay Patil

**Abstract**— At the start of the second decade of 21st century, the time has come to make the Smart Phone a reality for regular use. The different parts of a Smart Phone are researched but there are still distances from an applicable system, using the modern technology. The Smart phone can be also used in the health domain to develop the patient-doctor relationship. In this paper we present an overview of the Android App based on a platform for consumers ,doctors, patients and the medical service providers at their finger-tip. The platform is suited for follow-up consultation in chronic disease management or minor ailment, where in-person examination is not necessary. The Android application is written in Java using Eclipse; it provides the user to interact with the doctors and the service providers.

**Keywords**— Online-Consultation, Set-Schedule, Fix Appointment, Search-using-GPS, View-EMR

## I. INTRODUCTION

In the fast and busy life, its not easy to keep track with one's health regular check-ups, taking appointments with the doctors, going to pathology laboratories, medical stores. 'Health-On-The -Move' is an application which is the best option in such situation. It is a platform for doctors, patients and all the medical service providers to interact with each other. It is suited for follow-up consultation in chronic disease management for minor ailment, where in-person examination is not necessary. However, it is not designed to handle emergency and acute cases and in such cases consumers need to visit the doctors. So in such cases, patients can take appointment with the doctors according to the doctor's schedule. The main aim is to connect the consumer with doctor directly when he is on

work. The application intends to bridge the gap between the doctor and the patient by just a click.

## II. DESIGN PROCEDURE

### A. Android Graphical User Interface (GUI)

The GUI will be built on the Android platform and run on any Android based smart phone. The intuitive GUI will allow the consumers that are the patients, doctors and the service providers that are the chemists and the pathologists to interact with each other. The doctors can upload their schedules for the appointments of the patients. The doctors can also upload details about the new events or any new inventions in the field of medical domain. The patients according to the notification from the doctor can take appointment for the consultation which can be online through video-calling or by visiting the doctor. The chemists can notify about the orders placed by the patients or doctors through e-prescription. The pathologists can direct upload the reports for the tests. The service providers can also process their bills online on the application itself. The GUI issues features for uploading the reports, searching through GPRS supported by the Android platform. Eclipse was chosen as the IDE tool for developing the Android because it provides extensive support for many aspects of developing Android application code. It is the top recommendation by [www.developer.android.com](http://www.developer.android.com), which is the most important developer's guide for programming Android applications. Various features such as auto-correction, forward and back referencing, as well as its automatic management of XML files for GUI layouts make Eclipse the easiest and most straightforward IDE for writing the Android application.

### III. DESIGNING THE MOBILE APPLICATION

#### A. Use-Cases

The consumers which are the doctors and the patients and the service providers that are the pathologists and the chemists are the main actors of the application. The main server keeps the record of the doctor's profiles, their schedules and other details as well as the patient's details.

The patients can get notifications of the upcoming appointments. Search is also a use case, which enables the patient to search doctors, chemists, pathology & radiology labs according to his desired constraints. The use-case Upload will allow the user to upload his past reports on his profile as well as his past medical history and allergies.

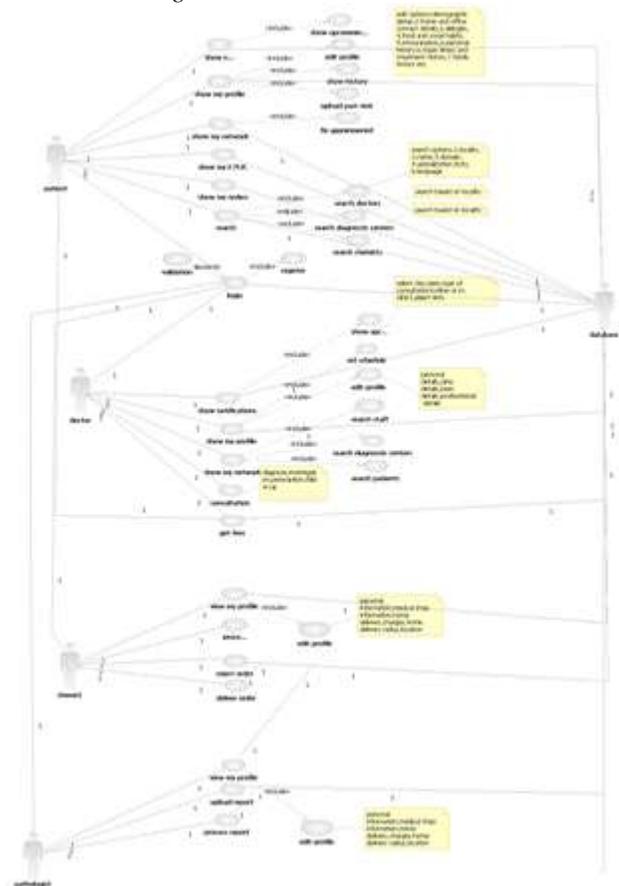
The doctors can notify their appointment details, set schedules for the same, consult the patients online.

The service providers-chemist can accept E-prescription from different patients; the pathologist can upload the reports of the patients for the performed tests through the application. The activities are mentioned in the Fig 1 which is the use-case diagram.

#### B. Server connection

The android application will use HTTP to connect to the server. The server is stored on a live Cloud. After validation, the application will allow the user to access his information and search for other medical service providers available on the server.

#### C. Use-case diagram:



### IV. FUTURE WORKS

As mentioned earlier, it intensively works on health domain to help the doctors and patients to interact with each other.

More features can be added to the application like embedded devices which can send digital readings directly to the doctor. For example, heat sensor which takes the patients temperature digitally or a stethoscope which can read the patients heart beats and send its digital form to the doctor.

### V. CONCLUSION

In this paper, we presented an overview of the need of development in the health domain with the use of Android and cloud computing, which can lead an effective development and help to the consumers and service providers in the field. It discusses about the way a doctor and patient can interact with just a touch. It also discussed about

the way a chemist pathologist can communicate with the patient through a mobile application. We also proposed a way of new check-up which can be through video-chatting. We described the use-cases of both the database server which is a cloud and mobile application. We finally explained the design of the mobile application and the data records needed for transferring the data to mobile application in an efficient way. We finally described the main parts of the implementation of this application in the Android Mobile platform and which played an important role in the development of the patient-doctor relationship through application form in the busy world.

#### ACKNOWLEDGMENT

This is a great pleasure & immense satisfaction to express our deepest sense of gratitude & thanks to everyone who has directly or indirectly helped us in completing our project work successfully.

We express our gratitude towards seminar guide Prof. Ruta Kulkarni and Prof. S.M.Sangve, Head of Computer Science Department, Dnyanganga college of Engineering and Research, Narhe, Pune who guided & encouraged us in completing the project work in scheduled time. We would like to thank our Principal, for allowing us to pursue our project in this institute.

No words are sufficient to express our gratitude to our parents for their unwavering encouragement. We also thank all friends for being a constant source of our support.

#### REFERENCES

- [1] Professional Android Application Development 4 By Reto Meir.
- [2] Google Inc. (2012, February). Android Developer's Guide [Online]. Available: <http://developer.android.com/guide/index.html>
- [3] Androidmarket. (2012, august) Androidzoom [Online]. Available: [http://www.androidzoom.com/android\\_applications/tools/unified-remote-full\\_wzva.html](http://www.androidzoom.com/android_applications/tools/unified-remote-full_wzva.html)
- [4] Androidlirc <http://www.zokama.com/androlirc>
- [4] IEEE paper on Online Consultation:- [http://ieeexplore.ieee.org/xpl/freeabs\\_all.jsp?arnumber=5742268&abstractAccess=no&userType=inst#Abstract](http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=5742268&abstractAccess=no&userType=inst#Abstract)



**Rutuja Kulkarni,**  
B.E. (Computer),  
M.E.(CSE)Pursing, Lecturer,  
Zeal Institute's Dnyanganga College of Engineering and Research, Narhe, Pune 41, INDIA, University of

Pune, INDIA.



**Ankita Deshmukh,** B.E(Computer) pursuing, Zeal Institute's Dnyanganga College of Engineering and Research, Narhe, Pune 41, INDIA, University of Pune, INDIA.



**Manjiri Shivankar,** B.E(Computer) pursuing, Zeal Institute's Dnyanganga College of Engineering and Research, Narhe, Pune 41, INDIA, University of Pune, INDIA.



**Prajakta Gore,** B.E(Computer) pursuing, Zeal Institute's Dnyanganga College of Engineering and Research, Narhe, Pune 41, INDIA, University of Pune, INDIA.



**Tanmay Patil,** B.E(Computer) pursuing, Zeal Institute's Dnyanganga College of Engineering and Research, Narhe, Pune 41, INDIA, University

of Pune, INDIA.