

internet Mobile Medicare (iMCare)

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1. ABSTRACT

iMobile Medicare is a smart phone application which provides the plethora of facilities for patient(s), like searching hospitals and clinics in their location, doctors availability in current date, taking patient appointment using online booking through using GPS and stores the data on cloud and use the concept of cloud computing and communication perform between client site and server site using Google Cloud Messaging technique via smart phone.

In current scenario, this is new concept to synchronize the doctor(s) and patient(s) information at same platform using cloud computing with different fields of distributed system.

This application based on Artificial intelligence technique and provides the output. In this new era, everyone wants to a user friendly application(s) in their Smartphone. On the other hand, we know that smart phone(s) are now very common and used by maximum person(s). Our aim of developing this application is very simple because our busy schedule, we have no time to meet doctors in person or take an appointment from the clinic/hospital.

Our application is very user friendly and provides several facilities like finding hospital from your nearest place, best doctors in different fields, taking appointment etc. Basically, we are developing our application on android platform; we can also call it android application.

Keyword: GPS, Cloud Computing, Distributed System, Google Cloud Messaging (GCM), Artificial Intelligence.

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2. INTRODUCTION

Internet Mobile Medicare is a smart phone application which provides the plethora of facilities for patient(s), like searching hospitals and clinics with location using GPS and taking appointment using allocated time stamp scenario. This application is purely based on Artificial Intelligence concept which provides the output using speech recognition method, pattern recognition method. The speech recognition method helps in searching procedure through detecting voice.

This application provides the facility to patient, to check doctor(s) availability with concurrent updating system, but not collision of two end users when they perform appointment process at the same time.

This application helps with patient to find out the hospitals and clinic location using synchronizing the Google map in the application.

In this application patient can take appointment globally at anytime from anywhere.

From this application Doctor can see the patient online via video calling in application through Skype and more application.

This application provides more security for client site and also for server site using different security technique.

3. THE FUTURE OF MOBILE APPLICATION IN MEDICAL: INNOVATIVE MEDICAL APPS

Nowadays, mobile application market hijack the completely desktop application. The market of mobile application and mobile operating system such as ios, Android, Blackberry OS, Mozilla OS scope is increasing day by day.

Today all features and application of application software and system software are almost available in mobile, tablet.

4. ARTIFICIAL INTELLIGENCE IN iMCare:

iMCare application using the artificial intelligence concept such as speech recognition, pattern recognition for security purpose in the application and also using for recognizing the voice when patient perform searching hospital/Clinic, Doctor profile etc. through voice searching operation.

AI is used in many fields of global distributed system.

4.1 Human Agent:

The human agent is the patient and doctor for searching hospitals and clinics in their location, doctor's availability and doctor's profile and patient profile either current date or upcoming dates, taking appointment using the secure platform and allocate time stamp for communicating.

4.2 Mobile Device:

The mobile device is the android os based smart phone which is used for installing iMCare application and doctor and patient perform the searching operation, booking operation etc.

5. RELATED WORK

i Mobile Medicare gave a facility to the patients to book an appointment for a doctor at any time anywhere and of at any place.

5.1 Registration Process:

In this particular application, the doctor and the patient both have to first register by giving the necessary details.

5.1.1 For patients, they have to give their name, age, sex, mobile no. (By which verification process is also being done) email id, password for the login process and the residential address.

5.1.2 For a Doctor, he/she have to give his/her name, age, place of his/her clinic or hospital, qualification, email id, password for the login process, total experience, visiting fees of the doctor and the days on which the doctor is available for registering in iMCare.

5.2 Login Process:

After the registration process, the doctor and the patient both can login by entering the login ID and the password they have entered.

5.3 Search Procedures:

This facility is available only for the patient for searching of the doctor at remote

4.3 iMCare Security Agent:

The Security Agent recognizes the pattern in the form of text and voice, and validate and authenticate the data. It's based on AI logic with cryptography technique.

locations. The searching can be done by the patient with relevant means, by means of location, by doctor's name, clinic/hospital name, or by experience.

5.4 Searching Using GPS: The searching can be done using the GPS enabled smart phones. Using the GPS, the patient(s) can easily trace the location of the doctor(s) clinic/hospital. This is one of the most beneficial facilities provided by this application to those patients who visit different cities for their treatment.

5.5 Booking an Appointment:

After searching and selecting the required doctor, the patient can book a day for visiting the doctor's clinic/hospital. In this procedure, he/she have to select the day and time for visiting and an id will be generated for the patient and nominal amount will be detected for user's mobile balance. Only by the patient's id he/she will be authorized to visit a doctor for treatment, otherwise he/she will not be considered authentic.

5.6 Updating the Status:

This facility will be applicable to both patient and the doctor. In this, both doctor(s) & patient(s) would be able to update their necessary details that have been given in the

registration process. They can update their telephone no., address, fees (for doctors), etc.

5.7 Availability of Doctor:

By this facility, the doctor can set their availability as available or not available. It is an important point because there would be some days when they cannot be able to visit to their respective clinic /hospitals due various reasons such as, he/she is ill, moved

out of town, busy in some other works, etc. By this, it would also be helpful for the patient to book an appointment according to the availability of the doctor in this context.

5.8 Video Calling: Doctor can see the patient online through video calling using Skype. It is beneficiary for patient to checkup the health online in emergency case also

6. iMCARE SECURITY TECHNIQUE

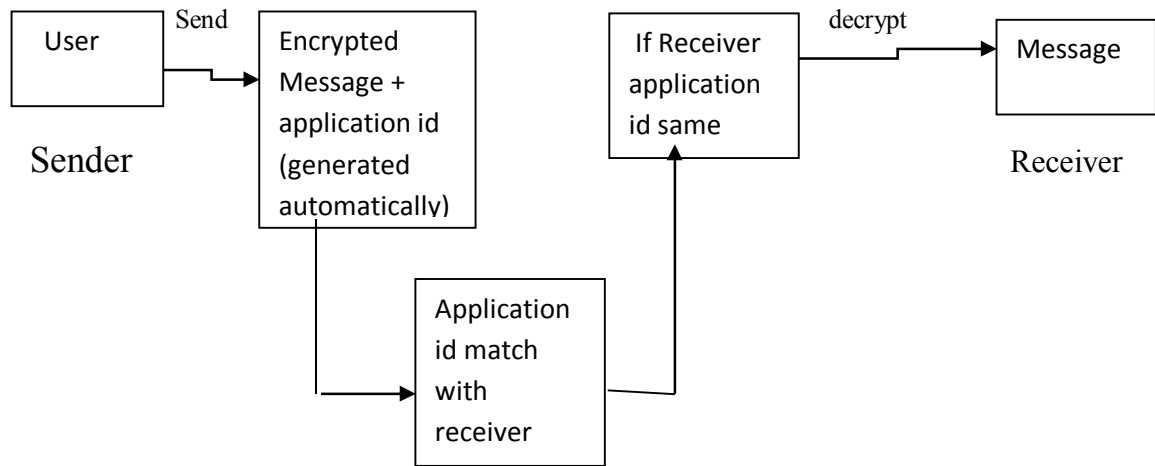
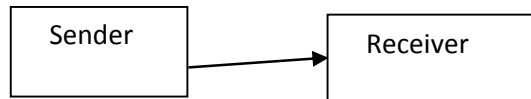


Fig2: iMcare Security Technique

Now we will describe the figure,

Step1:-



Should be predefined.

Step2: -Sender generates application id with limited duration of timestamp for receiver automatically.

Step3: -In communication duration sender sends the message with encrypting and also adding randomly generated application id.

Step4: -When the receiver receives the message, before it automatically match with application id, and then decrypt the message.

Step5: -If any third party attacks during communication, then data will be crash and convert in garbage value because third party does not have automatically generated application id.

7. Advantages of *iMCare* application:

- 1) Patient can take the appointment of hospital/clinic globally via mobile application from anywhere any time in their location.
- 2) The Doctor can see the patient through video calling in this application.
- 3) Patient can search hospital/Clinic location using GPS.

8. Disadvantages of *iMCare* application:

- 1) Currently this application is only for Android OS.
- 2) In *iMCare* security technique, one problem is here that if application id is trapped in the initial stage then this application security is not secured.

8. CONCLUSION & Future Work:

Now a day, maximum people are using android based smart phones. This application is user friendly so that every person can use this application easily. This application is

Secure. Patient can take appointment from hospital/clinic in a structured way.

This application is currently supportable for the only android operating system, but in upcoming version this application will be supported in all operating systems.

In *iMCare* security technique the problem of trapping of application id in the initial stage by a third party, it's a disadvantage of this application. In newer updates we will remove this problem

9. REFERENCES

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