Smart Health Portal

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Abstract **– Most of the Hospitals/clinics face difficulty in managing records of patients and track the information of their interest as they still rely on paperwork and manual processes. A web-based patient management system will reduce the manual work by deploying centralized software incorporated with various loosely coupled services which interact with each other to address above mentioned issues and improves the way of treating the patient by having a centralized database of patient's medical history. Irrespective of place the patient is present, the doctor can access to his details using website and also by using a mobile android application.**

I. INTRODUCTION

Nowadays hospitals are really important to our society. Every person in our society is busy in his work that he is not able to take care of his health. Hospitals play a vital role in everyone's life. Providing a good service in hospitals is really important. In such condition maintaining the patient's records, the doctor's records are important. In existing system most of the managing process is done through paper work. It is really a space consuming, hectic and tedious job. Quality and easily obtainable access to healthcare services is considered to be a fundamental right in any modern society. So we introduce a health care portal to maintain such records. We find such portal in almost every hospital, our idea is to introduce a common database to patient such that he

can travel anywhere and any authorized doctor can access his data anywhere and can treat him by referring his database using a web application or an android application. By having such facility at large and small scale hospitals, it benefits both patient and the doctor. By having an android application of such systems the doctor can treat the patients at some remote places where carrying or having a computer is not possible. The main objective is to provide easy access to all the previous medical reports.

II. LITERATURE SURVEY

In our country there are many hospitals, some of the hospitals are completely digitalized, they use modern methods to maintain their records. But there are some hospitals that still rely on traditional paper work for maintaining the records. The patients attending such hospitals need to carry every document like their previous prescription, blood reports. Even though some hospitals are modernized, these hospitals are not connected, that is if patient refers a doctor at some place and travels at some other place and there if he want to visit a doctor he has to carry the documents. Even though the hospitals are modernized they are not connected. So having a centralized database of patient can help both the patient and the doctor.

III. SYSTEM ANALYSIS

3.1 Hardware Requirements

3.1.1 For Web Application

Memory: 2GB RAM
Processor: Dual/Quad Core Processor

3.1.2 For Android Application

Memory: 512MB RAM
Processor: 1.0GHz Dual Core

3.2 Software Requirements

3.2.1 For Web Application

Operating System: Windows/Linux
Browser: Chrome/Mozilla
Language: PHP, HTML, CSS, JavaScript
Database: MySQL Server
Editor: Notepad++
Local Server: WAMP Server

3.2.2 For Android Application

Operation System: Android 3.0(Ginger Bread)
Language: Android
Database: MySQL server
IDE: Eclipse
Local Server: Apache Server

3.3 Functional Requirements

3.3.1 Appointment Scheduling

Being sick and waiting at the hospital is most unpleasant experience. Knowing the number of patients in queue we assume the time of the meeting of patient with the doctor

3.3.2 Patient Management

It will help both patient and doctor by keeping their records. It will be easy to access all the previous medical records. These facilities will be provided to the authorized users only.

3.3.3 Doctor's Profile

Doctor's profile will help the patient to know about them. It also gives information about the experience of the doctor, patient's comments and recommendations and also related information.

3.3.4 Patient's Profile

The patient's profile is only available to the authorized doctors only. The profile will maintain the privacy of the patient.

3.3.5 Prescription

The prescription will help the patient to find the medicines they need. They need not carry any document to get those medicines. It also provides information about proper dosage at proper time.

3.4 Non-functional Requirements

3.4.1 Availability

It the important requirement, the system must be available and operational 24hours.

3.4.2 Usability

The system must user friendly, it must be easy to learn how to use both the web application and android application.

3.4.3 Security

Security is most important requirement; the patient's data must be kept secured. The authorized users can only access the data.

3.4.4 Reliability

The system must be reliable in terms of its functions and it must deliver all its functions efficiently.

IV. SYSTEM DESIGN

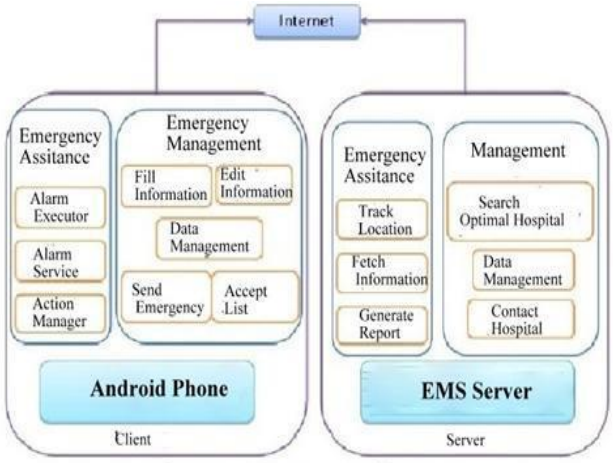

Figure 4.1 System Architecture

System Architecture is divided into two parts client (or user) side and server side. At user side all user function takes place like filling personal and medical details of users end emergency, editing user information, etc. User android phone is connected with server by internet. Figure 4.1 shows the system architecture of the emergency system for the android application. Searching optimal hospital, creating and viewing appointment, finding its distance from user, informing hospital about the patient's location and emergency and informing patient about the hospital is done by server. Database management is also done by EMS server.

V. IMPLEMENTATION

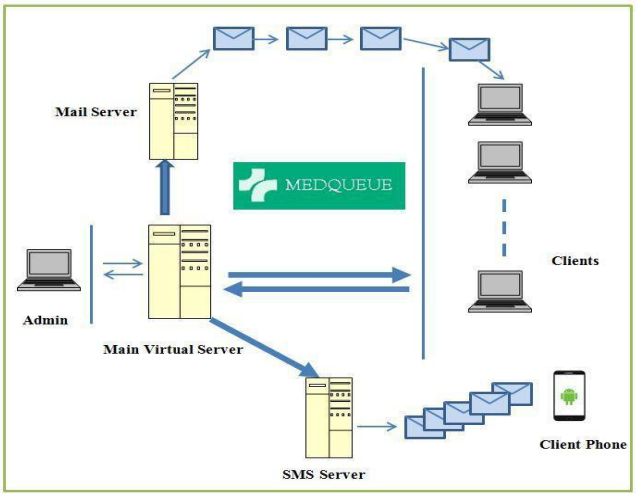

Figure 5.1 Sever Side Infrastructure

The Figure 5.1 represents the service side infrastructure. A main server will be maintained that will host the system and will be maintained by an administrator of the service. The client devices will communicate with the main server through the internet. Updates and notification messages will be transmitted to the clients in the form of emails and SMS, the service for which will be provided by email and SMS servers with which the main server shall also communicate.

VI. SNAPSHOTS

Here are some of the snapshots of the system.

The web based patient registration form looks like give below Figure 6.1

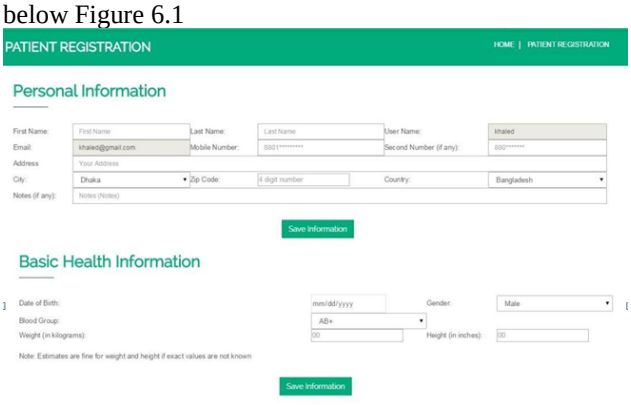

Figure 6.1 Patient Registration Form

Figure 6.2 and Figure 6.3 shows the snapshots of android application. Figure 6.2 shows the login page and Figure 6.3 shows the doctor panel.

Figure 6.2 Login page

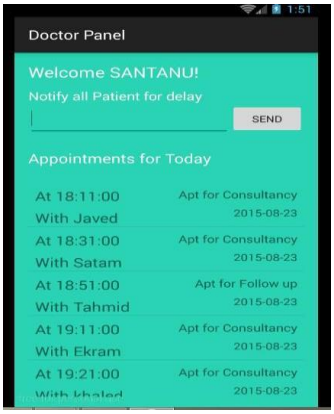

Figure 6.3 Doctor Panel

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