A Smartphone Based Medication Management System with Real Time Monitoring and Reporting

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ABSTRACT: For medication therapy to be efficacious, it is critical that the patient take their medicine on an efficacious schedule. Taking their medicine correctly is medication adherence and is vital for the medicine to engender its maximal benefit. However, from a patient’s perspective, many times erroneous, and possibly, erroneous information drug prevails, engendering negative atmosphere for medication adherence. Prescription Viewer App is a facile to utilize medication management app which avails you to monitor and keep track of your medication. It is an android app which avails you to view your medication anytime, anywhere through your phone. A website is engendered for the medico to enter the prescription details. The prescription is then sent to the Prescription Viewer App, installed in the patient’s phone, utilizing Google cloud messaging (GCM). The app stores the prescription and exhibits it in the patient’s phone. The patient’s phone registers with the GCM accommodation by sending the sender id to the GCM server. The server registers the phone and sends back the registration id. The website stores the registration id, electronic mail address and name in a separate table. After entering the prescription. Then the prescription details are sent via the GCM server to the patient’s phone. The application in the phone exhibits the prescription details.

KEYWORDS: medication; prescription; Google Cloud Messaging (GCM); contrivance; android.

I. INTRODUCTION

In recent times health care concepts of people have undergone a tremendous change which has led to higher prospects and an incremented demand for high quality medical care and facilities. Prescription Viewer app provides an efficient method for storing the prescription details of the patient. It avails the patient to view their medication anytime, anywhere through their phone. In our project, the receptionist enters the patient details into the site and are stored in a Database for retrieval. During the consultation, the medico enters the prescription details into the database engendered above. Then the prescription details are send to the prescription viewer app utilizing Google Cloud Messaging (GCM). The prescription viewer app then exhibits the prescription which includes the medicine name and dosage.
II. RELATED WORK

A website has been developed for entering the prescription details which is sent to the Prescription Viewer App present in the patient’s phone utilizing Google Cloud Messaging. Three people have access to the website – Admin, Medico and Receptionist. They can access the website by logging in utilizing their respective username and password. The admin controls the website. Incipient Medico accounts are engendered by the admin. The receptionist enters the details of the patients into the website when the patients visit the hospital for the first time. A patient is registered under a particular medico. The medico can view the details of his patients. The medico enters the prescription details into the website and it is sent to the patient’s phone. The patient’s phone registers with the GCM accommodation by sending the sender id to the GCM server. The server registers the phone and sends back the registration id. Then the phone sends the registration id along with the patient’s name and electronic mail address to the website. The website stores the registration id, electronic mail address and name in a separate table. After entering the prescription details the medico clicks the send button. The electronic mail address of the patient is compared with the electronic mail ids stored in the incipient table and the corresponding registration ids are ascertained. Then the prescription details are sent via the GCM server to the patient’s phone. The application in the phone exhibits the prescription details.

III. PROPOSE SYSTEM

OBJECTIVE: This project aims for efficacious a more facile way to view a prescription by the patient with very less utilizer involution. It has the following advantages:

- Very reliable (can receive messages even if the app is not on).
- Ease of viewing the prescription.
- Time and cost efficacious.
- Records prescription notes.

SCOPE: To take medication felicitously and efficaciously in order to engender a maximal benefit.
IV. METHODOLOGY AND DISCUSSION

In our project, we have 3 modules where Administration module is accessed only by the admin who enters the medico details and is stored in the database. The second module is receptionist’s in which patient details are stored to the database. Determinately medico module in which medico views his patients details and makes prescription. This prescription is send to the patients android contrivance which is registered in our server through GCM.
The messages are sent to the android application via a GCM server.

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<th>COMPONENTS</th>
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<tbody>
<tr>
<td><strong>Mobile Device</strong></td>
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<tr>
<td><strong>3rd-party Application Server</strong></td>
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<td><strong>GCM Servers</strong></td>
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<th>CREDENTIALS</th>
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<td><strong>Sender ID</strong></td>
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<td><strong>Application ID</strong></td>
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<td><strong>Registration ID</strong></td>
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<td><strong>Google User Account</strong></td>
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<td><strong>Sender Authentication Token</strong></td>
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Table I: App Design Description

V. EXPERIMENTAL RESULTS

In this online prescription website, the admin, the receptionist and the doctor are the actors.
Only the authorized users can login into the site. Admin login using their user name and password, Doctors login using their unique id and password and Receptionist can login using their username and password. The login modules contains a specific id for each doctor and the patient visiting the hospital.
The administration can add new doctors as well as change the password of the receptionist. The admin monitor all the data stored in the database and the entry of the doctor and the receptionist. The administrator has the only authority to view all the activities of the receptionist and the doctor. The admin is mainly responsible for all the updates in the change in dosage of medicine.
The receptionist can add the patient details with new patient ID, First name, last name, gender, email, address, mobile number and particular disease which the person is currently suffering from. Those data will be added to the database and the receptionist allots the particular doctor for the current patient for their disease. Next the allotted doctor will view that patient details and call for the consultation.

Once the patient has been allotted. The doctor will view the details of the patient and login with their ID and password and then goes to the prescription page. The prescription page consists of the patient name, number of days,
dosage, medicine name. the prescription details are sent to the receptionist by the doctor which the is stored in database by doctor and the patient can view this prescription via Prescription Viewer App installed in the patient’s phone using GCM.

VI. CONCLUSION AND FUTURE WORK

This project will engender an efficient method for storing the prescription details. It avails the patients to view their medications anytime, anywhere through your phone. This project provides a facile and efficacious mechanism to keep track of our medication. The prescription viewer application is a simple yet puissant application.

• An alarm can be set in the app as a reminder for the patient to view the prescription.
• Nearest pharmacy from where the required medicine is available can be incorporated into the app.
• The app can additionally be acclimated to fine-tune next appointment with the medico for the patient.

REFERENCES