

“PATIENT AND HOSPITAL COMMUNICATION USING ANDROID APPLICATION”

Bruce Andre Stafford Godinho¹, K.BALAMURUGAN²

1.UG Student, IT, Btech St.Peter's Institute of Higher Education And Research, Chennai, India.

2. Prof – IT, St. Peters Institute of Higher Education and Research, Chennai.

ABSTRACT

In recent times health care concepts of people have undergone a tremendous change which has led to higher expectations and an increased demand for high quality medical care and facilities. The Doctor-Patient Medi App provides an efficient approach for its users to register with the hospital, make appointments, storing prescription details and receive reminders on dosages. The major benefits of this app is to avoid unnecessary waiting time, cut down on the use of paper in turn saving the trees from paper production and helps the user to remain consistent with his/her health status. A website has been developed for entering the details which is sent to The Doctor-Patient Medi App present in the patient's phone using Google Cloud Messaging. Two people have access to the website – Admin/Receptionist and Doctors. They can access the website by logging in using their respective username and password. The admin controls the website i.e New Doctor accounts are created by the admin. The doctor can view the details of his patients. The doctor enters the prescription details into the website and it is sent to the patient's phone. Thus the dosage is set by the doctor and automatically sets a reminder for patient's dosage intake.

1. INTRODUCTION

Every second of every day our society is redefining the momentum of life. What was considered fast yesterday is no longer a good enough measurement of speed today. When everything around us is moving forward into digital mobiles and social platforms, it is only necessary for hospitals to be updated and brought up on the map. This is why I created the “doctor patient medi app”. This app will allow the user to become a member patient of the respected hospital via his/her mobile phone conveniently at home, work etc. once the patient has registered with the hospital, he immediately receives a unique id that is generated by the server of the hospital. Once the patient has fulfilled this process he/she has permission to make appointments whenever they want. They will receive a queue number/token number, also receiving status on how much longer to wait. The patient can peacefully wait at home until his token number is next. Once the patient's turn comes up he will meet the doctor, the doctor will do a quick check up. He then goes to his computer to logins to the website and gives a prescription under the patients id, which will then be directed with proper dosage to the patient's app. The patient then previews the prescription to any pharmacy and receives medicine. The app also gives reminders to the patient when they have to take their medicine.

There is also a website developed for the hospital but only admin/receptionist and doctors have access to it. The admin page allows more permission grants than the doctor. The admin can add new doctor details into the website data base etc. The doctor logins with their doctor id and password, having access to all the patient details that have been assigned to the doctor. The doctor checks how many appointments he has for the day and provides medical prescription with proper dosage for the patient

2. METHODOLOGY

2.1 EXISTING SYSTEM

A new patient registers with the hospital by filling up an application form from the hospital's reception desk. Once the details have been filled in, the patient is given a membership card/id. Using the membership id the patient can make appointments at the reception desk or via phone call. The patient is then provided with a token number. Waits in queue at the hospital among all the sick people waiting to consult the

doctor. Once the patient meets the doctor, a checkup is done and they are provided with a prescriptions which notes when the dosage is to be taken.

2.1.1 DISADVANTAGES OF THE EXISTING SYSTEM

- Have to go to the hospital to do 90% of the normal procedures.
- Have to wait uncomfortably at the hospital among sick people.
- Takes up too much time at the hospital.
- Small chance of forgetting to take dosage that is prescribed.

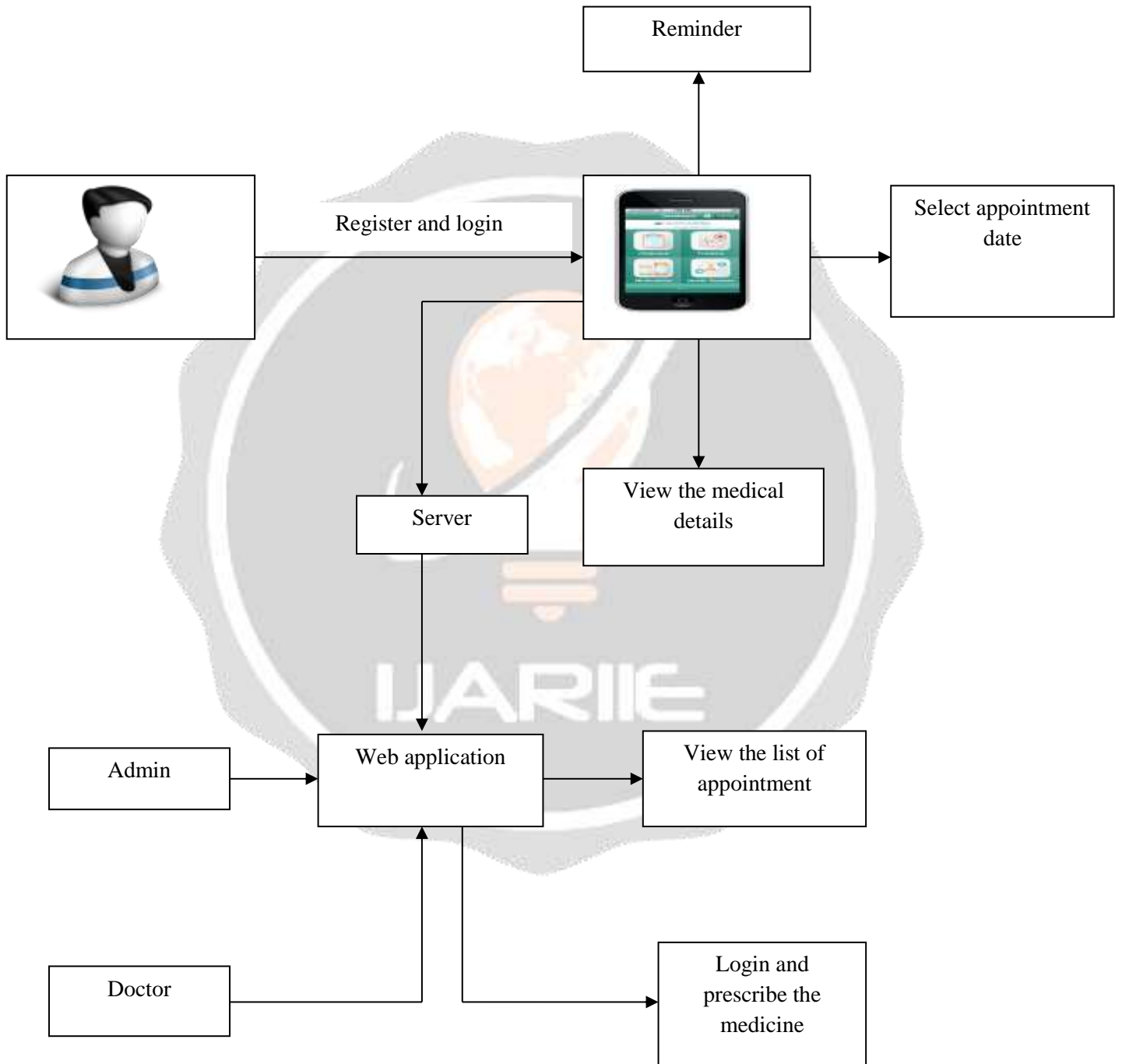
2.2 PROPOSED SYSTEM

For a patient to become a member patient of a hospital, he/she can register via the app on the mobile phone conveniently at home, work etc. once the patient has registered with the hospital, he immediately receives a unique id that is generated by the server of the hospital. Once the patient has fulfilled this process he/she has permission to make appointments whenever they want. They will receive a queue number/token number, also receiving status on how much longer to wait. The patient can peacefully wait at home until his token number is next. Once the patient's turn comes up he will meet the doctor, the doctor will do a quick check up. He then goes to his computer to logins to the website and gives a prescription under the patients id, which will then be directed with proper dosage to the patient's app. The patient then previews the prescription to any pharmacy and receives medicine. The app also gives reminders to the patient when they have to take their medicine. There is also a website developed for the hospital but only admin/receptionist and doctors have access to it. The admin page allows more permission grants than the doctor. The admin can add new doctor details into the website data base etc. The doctor logins with their doctor id and password, having access to all the patient details that have been assigned to the doctor. The doctor checks how many appointments he has for the day and provides medical prescription with proper dosage for the patient

2.2.1 DISADVANTAGES OF THE PROPOSED SYSTEM

- Requires internet to utilize the app and website
- Requires large data storages
- Needs a server

3. SYSTEM ARCHITECTURE



4. SYSTEM IMPLEMENTATION

4.1 MODULES:

- 1. LOGIN/REGISTRATION MODULE**
- 2. CREATE/VIEW APPOINTMENT MODULES**
- 3. ADMIN MODULE**
- 4. DOCTOR MODULE**

4.2 MODULE EXPLANATION

1. LOGIN/REGISTRATION MODULE

This is the android part that allows the patient the process of registering with the hospital and receiving a unique membership id, and then the user can login to the app and have access making appointments, checking patient's own medical prescription and setting reminders taking dosage

2. CREATE APPOINTMENT MODULES

This is a field in the android app what allows the user to make appointments with a doctor of their choice and receive messages via GSM methodology on when to meet the doctor

3. ADMIN MODULE

Here the admin/receptionist has to login to the website first. Then the admin can add more doctors into the system, providing the doctor with his username and password. The admin can check all the appointments for the day

4. DOCTOR MODULE

The doctor logs in to the website by entering his username and password that was provided to him/her by the admin. Then the doctor can check all the patients he has been appointed to for the day. Send messages to the user and provide prescription details which is directed to the patients phone via the app

4.3 STEP BY STEP SCREENSHOTS

4.3.1 ANDROID APP PART

REGISTRATION

Jio 4G 90% 06:01

919576

Brucegodinho

06/06/1995

22

Male

8838293356

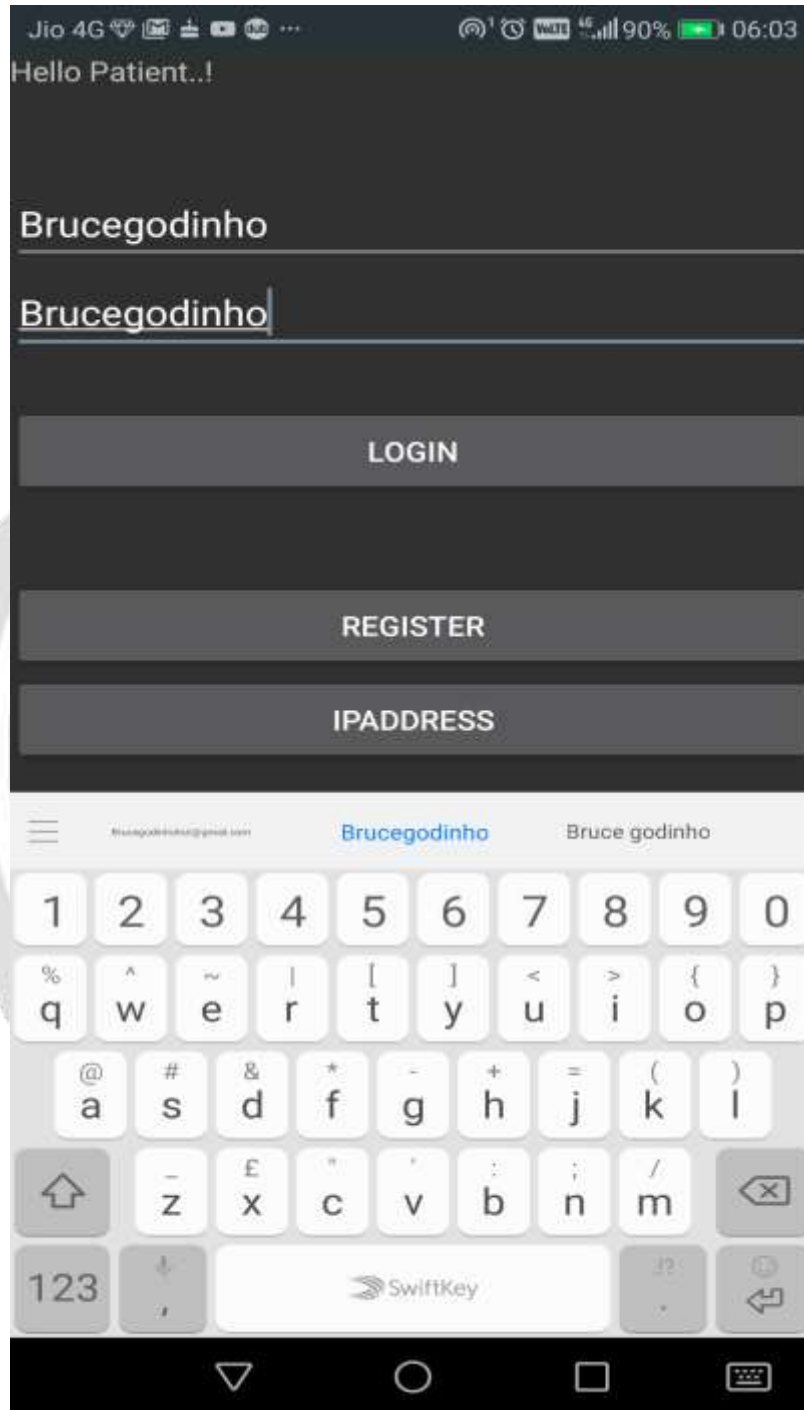
Fortkochi

Brucegodinho

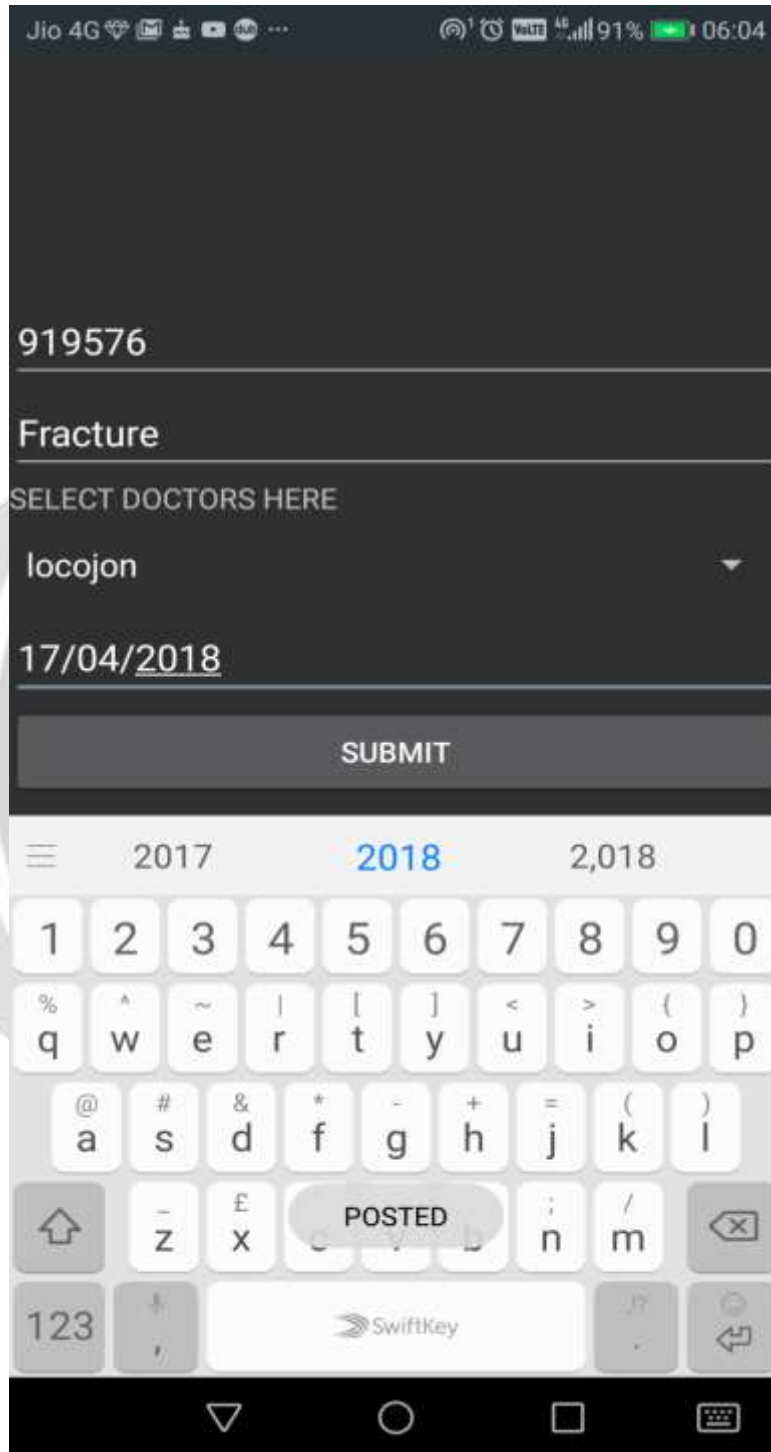
REGISTER

Inserted Successfully

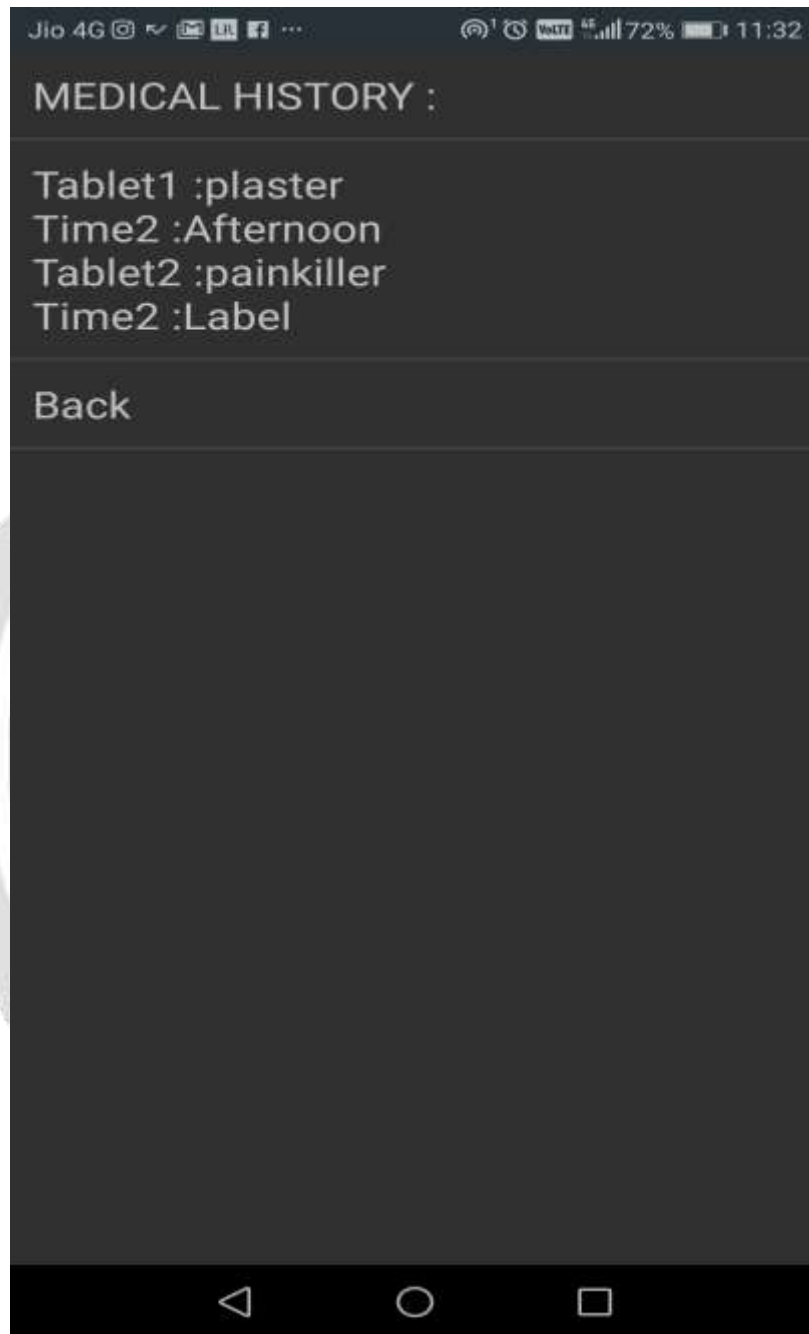
LOGIN



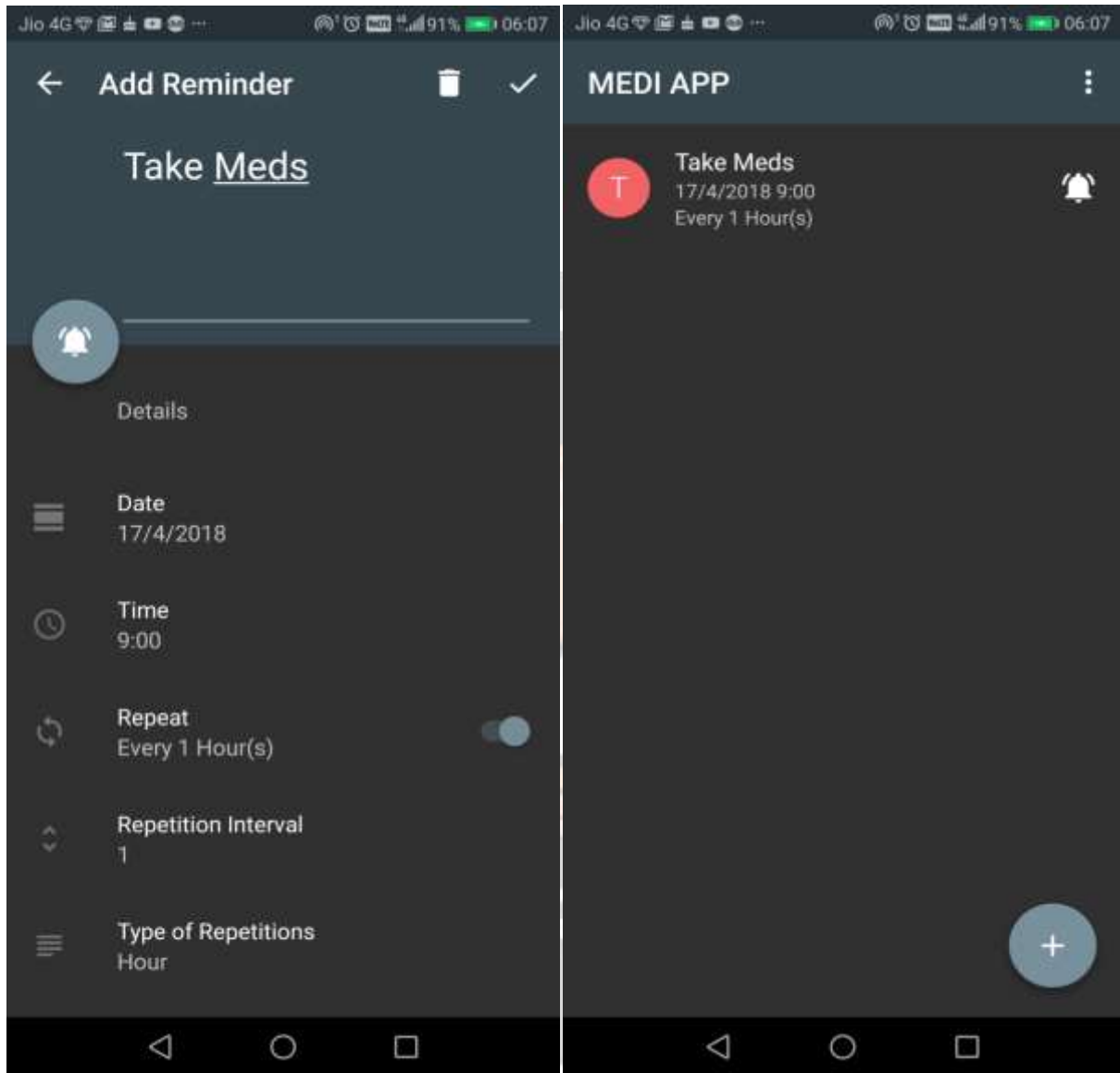
MAKE APPOINTMENTS



VIEW PRESCRIPTION



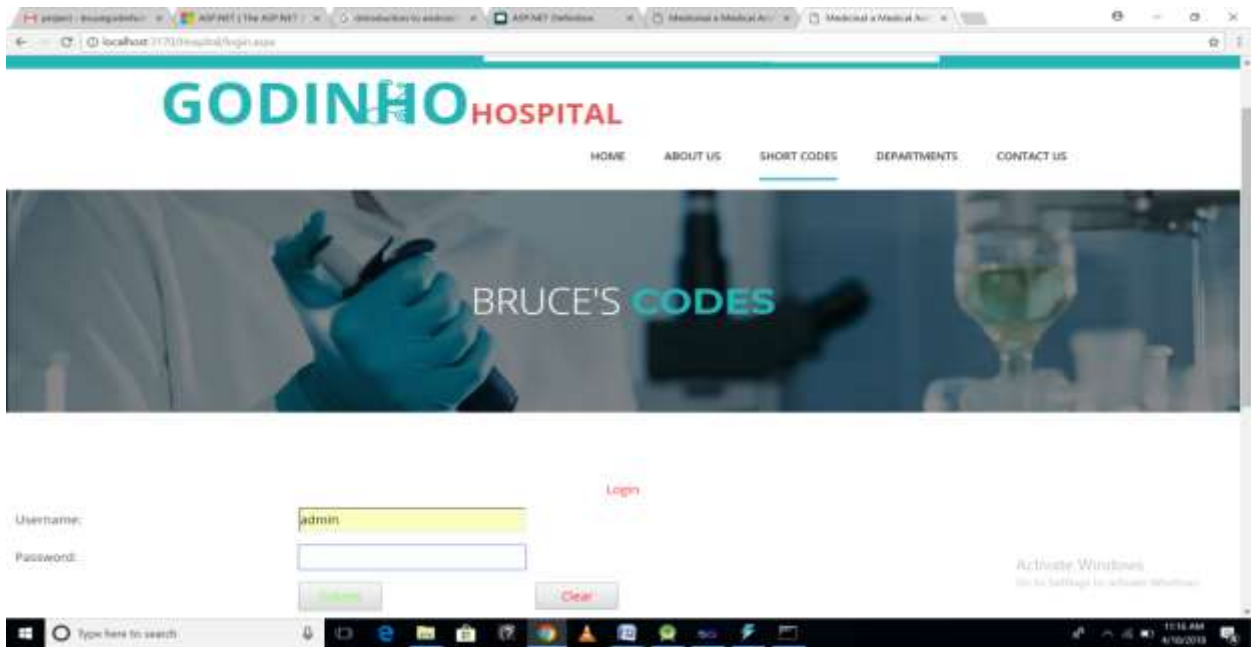
SET REMINDER



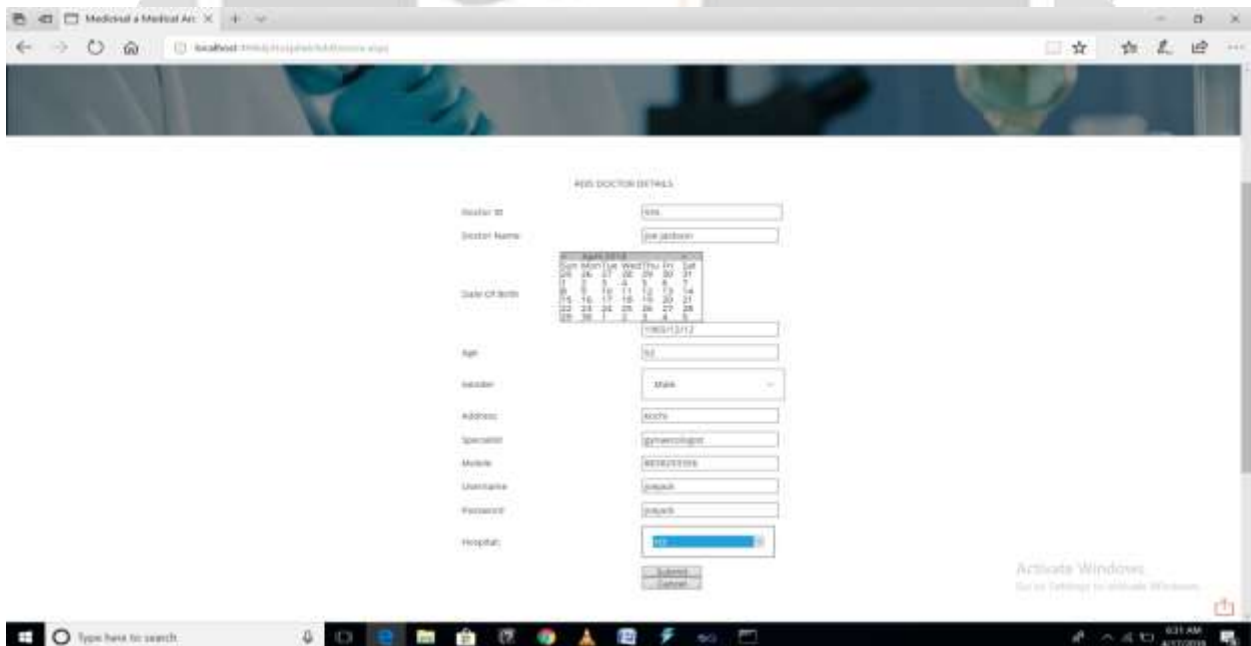
4.3.2 WEBSITE PART

4.3.2.1 ADMIN PART

LOGIN



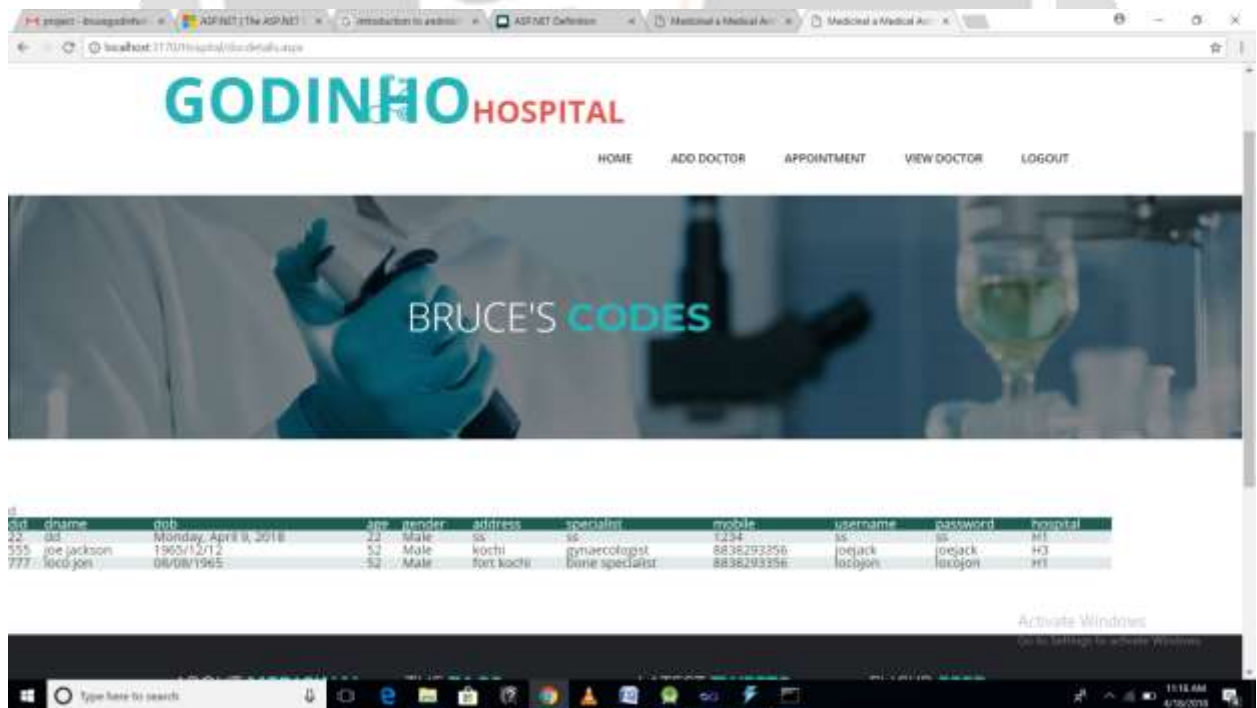
ADD DOCTOR



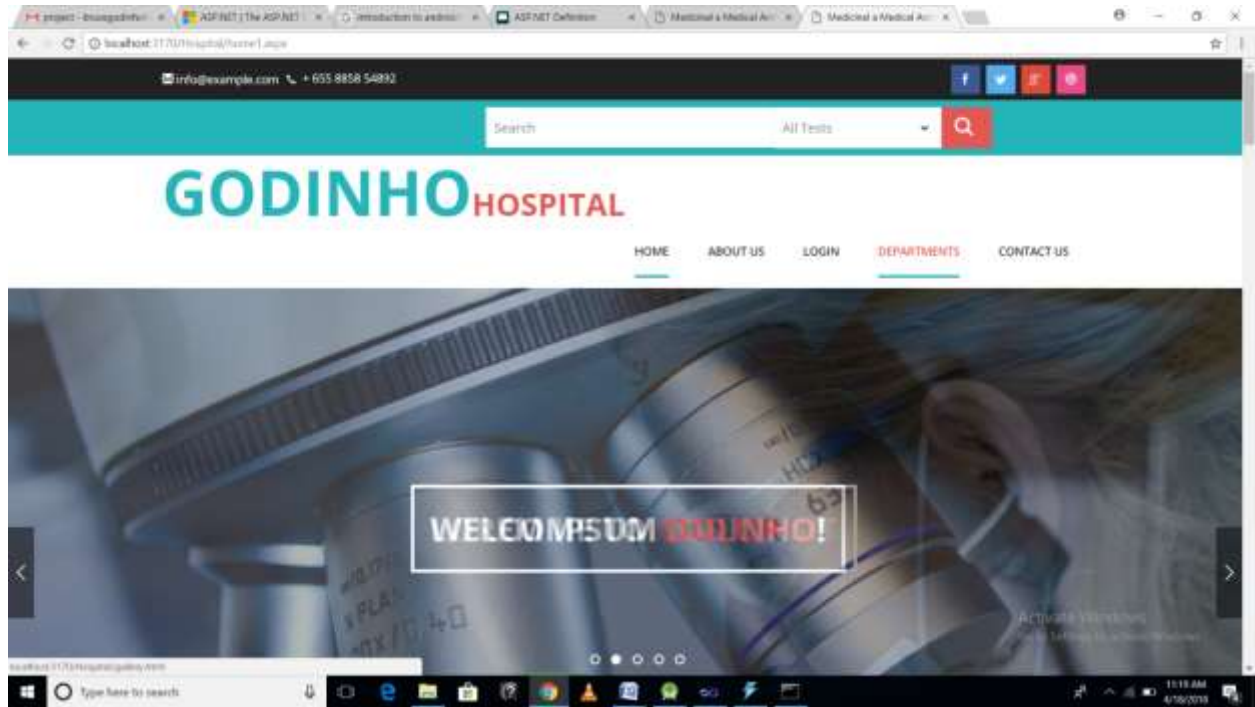
CHECK APPOINTMENTS



VIEW DOCTORS

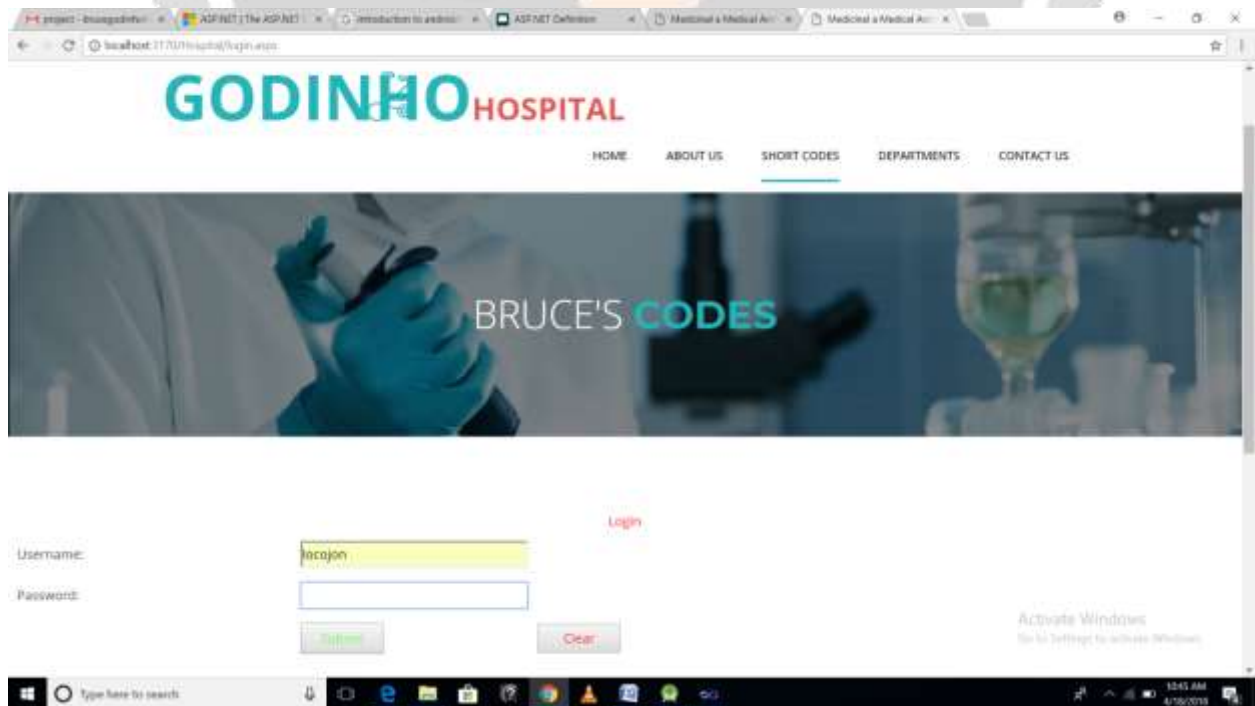


LOGOUT



4.3.2.2 DOCTOR PART

LOGIN



CHECK APPOINTMENTS

Date:

Patient id:

medical id:

Tablet name:

Time: Morning Afternoon Night Label:

Tablet name:

Time: Morning Afternoon Night Label:

id	patid	patname	docname	date
13	214865	Leggari	locoyan	17/04/2018

PREVIOUS PRESCRIPTIONS

Date:

id	tablet	time	tablet2	patname	time2
1	ss	Morning	ss	214865	Morning
2	ss	Morning	ss	214865	Evening
123	ss	Morning	ss	214865	Morning
1231	ss	Morning	ss	214865	Morning

Patient id:

medical id:

Tablet name:

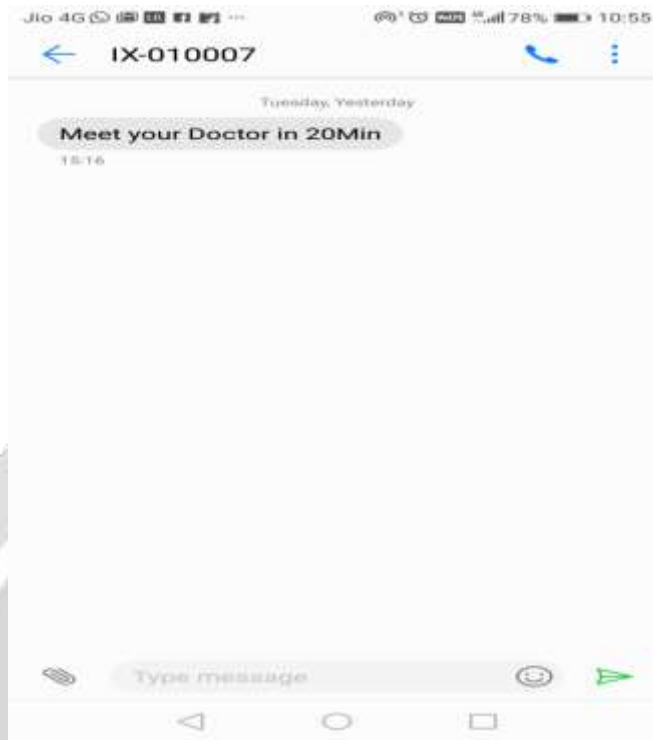
Time: Morning Afternoon Night Label:

Tablet name:

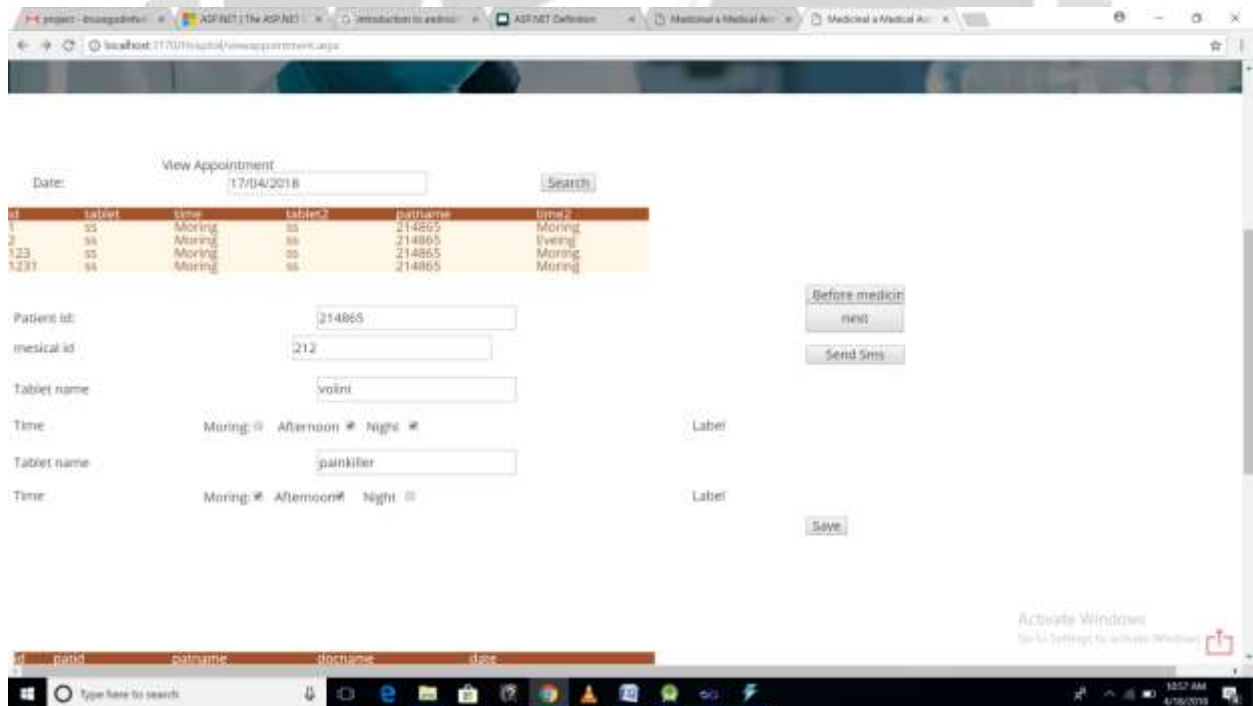
Time: Morning Afternoon Night Label:

id	patid	patname	docname	date
----	-------	---------	---------	------

SEND SMS



PROVIDE PRESCRIPTION



NEXT PATIENT

The screenshot shows a web browser window with the URL localhost:21707/nextpatient/nextpatient.aspx. The page title is "NEXT PATIENT".

Form fields include:

- Date: 17/04/2018 (with a "View Appointment" dropdown and a "Search" button)
- Patient ID: 09092
- Medical ID: (empty)
- Tablet name: (empty)
- Time: Morning (selected), Afternoon, Night
- Tablet name: (empty)
- Time: Morning (selected), Afternoon, Night

Buttons on the right side include "Before medicine", "next", "Send Sms", and "Save".

ID	patid	patname	docname	date
16	09092	Headache	Jacobin	17/04/2018

5. CONCLUSION

We were able to revolutionize the hospital management scheme to a much convenient approach for patients and doctors. Patients can now have access to registering with hospitals just through their phones. Patients made their appointments via the app and even selected their own doctor. Giving them freedom to have a choice and made their visit to the hospital much more convenient and comfortable. Patients received sms to their phone via GSM methodology and the estimated time on when they have to meet the respective doctor. The doctor prescribed medications to the respective patient which was directly sent to the patient's app. The patient now always has his/her prescription with them at all times. The patient also got reminders on when they had to take their medications. The experimentation results shows that the project works well with any hospital management system and the results are satisfactory. This project is implemented and tested in Sangeetha Hospital with real time data and the expected outcome is achieved.

FUTURE ENHANCEMENTS :

- to include more features into the web page.
- to include an option for booking ambulance from near by hospital.
- Prescriptions can be sent to the hospital's pharmacy directly.

6. REFERENCE

- www.w3schools.com
- [http://en.wikipedia.org/wiki/Android_\(operating_system\)](http://en.wikipedia.org/wiki/Android_(operating_system))
- <http://developer.android.com/google/gcm/index.html>
- www.stackoverflow.com