

## Smart Doctors Appointment and Prescription System

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**Abstract:** Smart Doctors Appointment and Prescription System is an application that provides services to the Doctors and Patients. The Doctor's Appointment and Prescription system connects between Doctor and Patients using web and android apps and patients are able to search a Doctor and ask for his/her appointment as well as for prescription using their Smartphone. This application shows the Doctors the previous history of a particular patient and can prescribe on basis of the history of patient. The main objective of this research is connecting doctor and patient very quickly and easily from any location without any involvement of any third party. Any doctor and patient can easily use this application by registering themselves, and doctor can prescribe the patient based on disease using listed medicine and number of days etc. This system also notifies the Doctor and patient through apps about the request of doctor appointment and prescription within shortage possible time.

**Keywords:** Doctor's Appointment and Prescription System, ECG, Prescription, Patient, Doctor, DAP.

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### I. Introduction

As mobile technologies continue to evolve and grow in popularity, the healthcare sector has to quickly adapt in order to meet the demands of the modern day's patient and healthcare professional. We have developed android apps without purchasing and using another extra device and also no payment for this service. These apps will help patient and doctor to communicate each other for appointment and prescription at any time using mobile with internet. The objective of the research:

- ✓ To introduce Doctors' Appointments and Prescription System for mobile user.
- ✓ Facilitate mass people to connect doctor through mobile to get appointment.
- ✓ To reduce time and hassle of doctors and patients
- ✓ To record patient information in digital format for future usage.

### II. Literature Review

PoloyeeLabs, Developed an apps "Doctorola", October- 2015, Updated September, 2016 [1]. In this project they designed an android application which is developed to find a doctor or a dentist easily and take an appointment with the doctor instantly.

Mahesh Londhe, SandipVandre, AtulNarote, Amol Nirmal, SumitKhandelwal published a paper with the title "Android Based Health Monitoring System" on the journal of International Journal of Advance Foundation and Research in Computer[2].In this article they designed a system which is continuously monitor the heart-rate, temperature etc.

Dayspring Limited, Developed "Doctor Apps Pulse", October-2014 [3].It is purchasable and subscription based apps where doctor can confirm patient appointment, write patients history and provides prescription and communication can be established through internet.

Tia Gao, Dan Greenspan, Matt Welsh, Radford R.Juang, and Alex Alm published a paper with the title "Real Time Patient Monitoring System Using Lab view" on the journal of International Journal of Scientific & Engineering Research [4].In this research they show the patient's vital parameters such as ECG, heart rate, pulse rate and temperature are measured using a patient monitoring system.

Pharma and Medical Concepts PvtLtdDeveloped "Book Doctor Appointment." System [5].They used "Appy Pie" to develop the app and also available in Google Play store which is purchasable .User can manage online appointment of listed doctor. There is an easy and quick search option for trusted Doctors across all cities based on their specialty, clinic or doctor's name.

### III. System Design

#### 3.1 Block Diagram

A block diagram is a diagram of a system in which the principal parts or functions are represented by blocks connected by lines that show the relationships of the blocks.

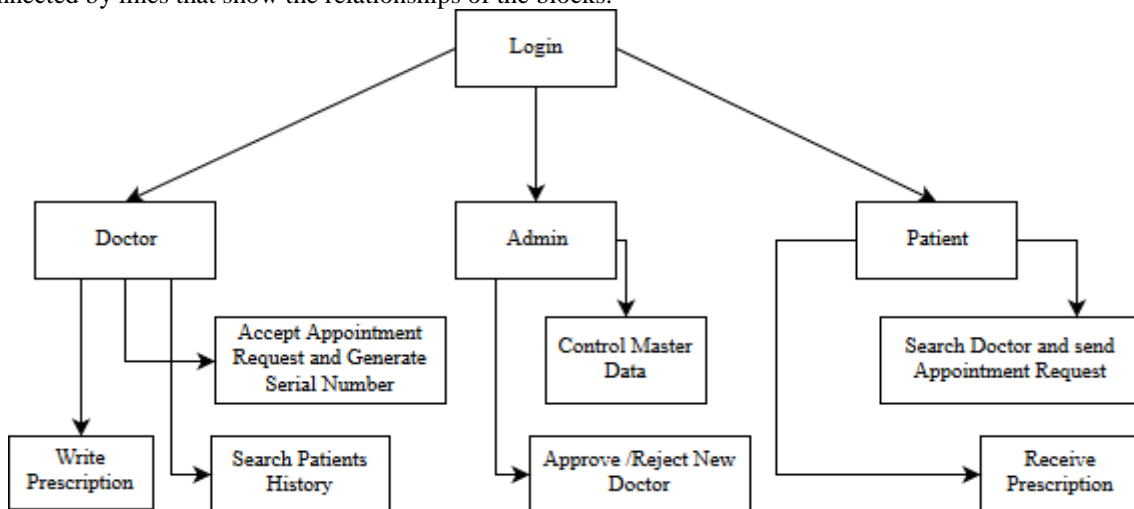


Fig1. Block Diagram System

The above Figure shows different functions of Admin, Doctor and Patients in different blocks of Doctors Appointment and Prescription System.

#### 3.2 Flowchart

A flowchart is a formalized graphic representation of a logic sequence, work or manufacturing process, organization chart, or similar formalized structure.

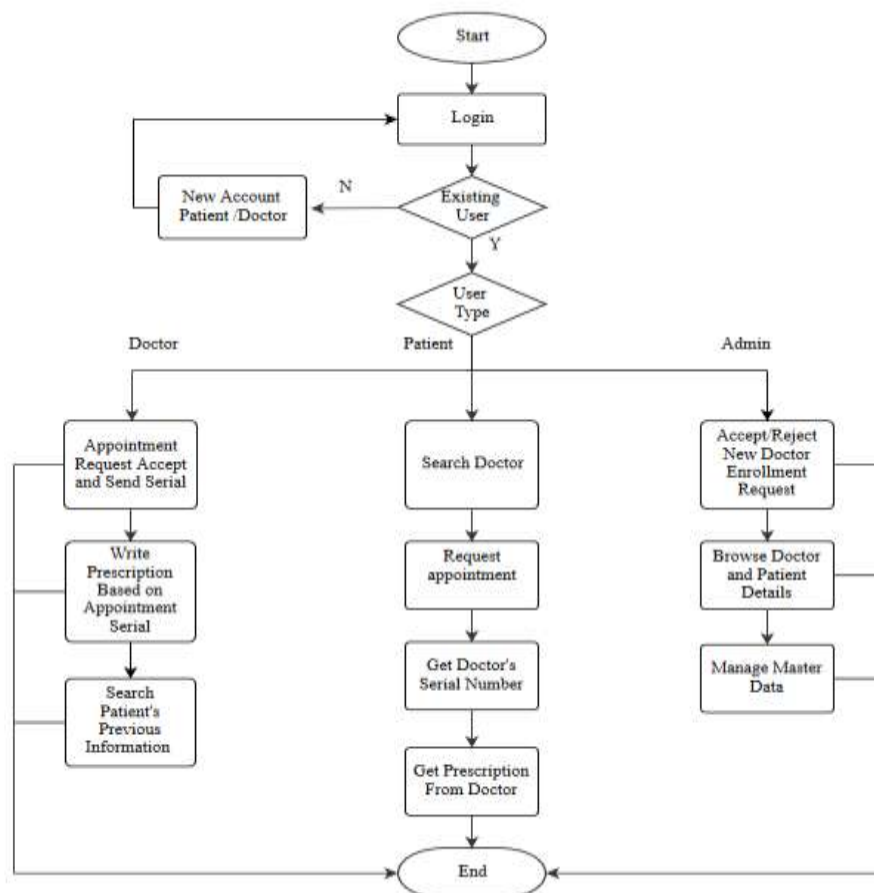


Fig2. Flowchart of the system.

The above Figure shows the process of application using flow symbols, in which any user can login into system, if the user has no account then system ask to create an account first, after creation of an account user can use this system based on user type and able to access respective functionalities as shown in flow diagram.

### 3.3 Concept of the system

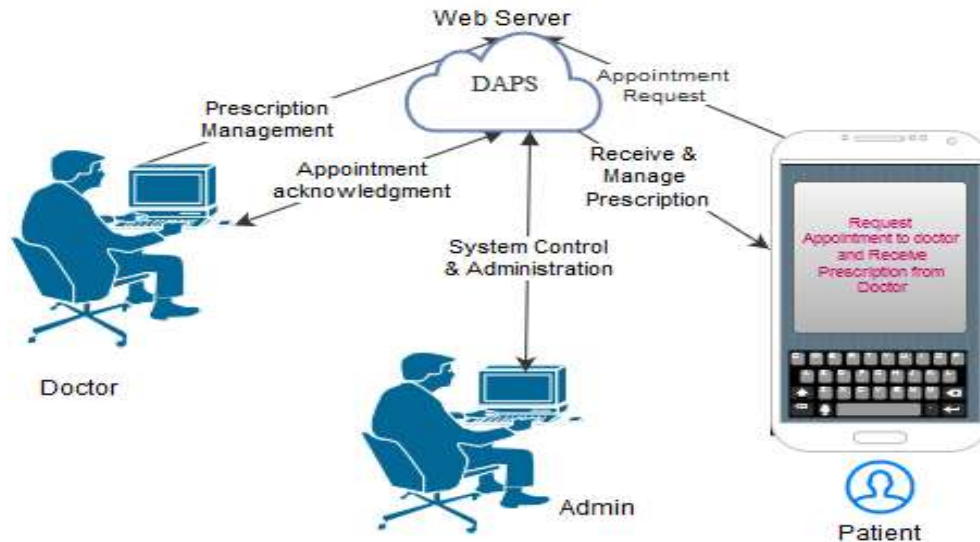


Fig3. Concept Diagram of the System.

The above Figure shows the high level conceptual view and interaction of Doctor’s Appointment and Prescription system. In this system a registered user can request for particular doctor’s appointment then the system will send an acknowledgement to the patient if the doctor accepts the request and doctor writes prescription through the system. The admin can control and manage the whole system.

## IV. Implementation

### 4.1 Interface Design for doctor

The system becomes more popular if its user interface is attractive, Simple to use, responsive in short time, clear to understand and consistent on all interfacing screens. The figure-4 is the main page of the system. Using this interface, a user can complete his / her registration process.



Fig4. Main page of the apps.

After completing registration, at first the user has to login providing his/her user id and password as figure5, if the supplied information is correct he/she will be able to access the system.

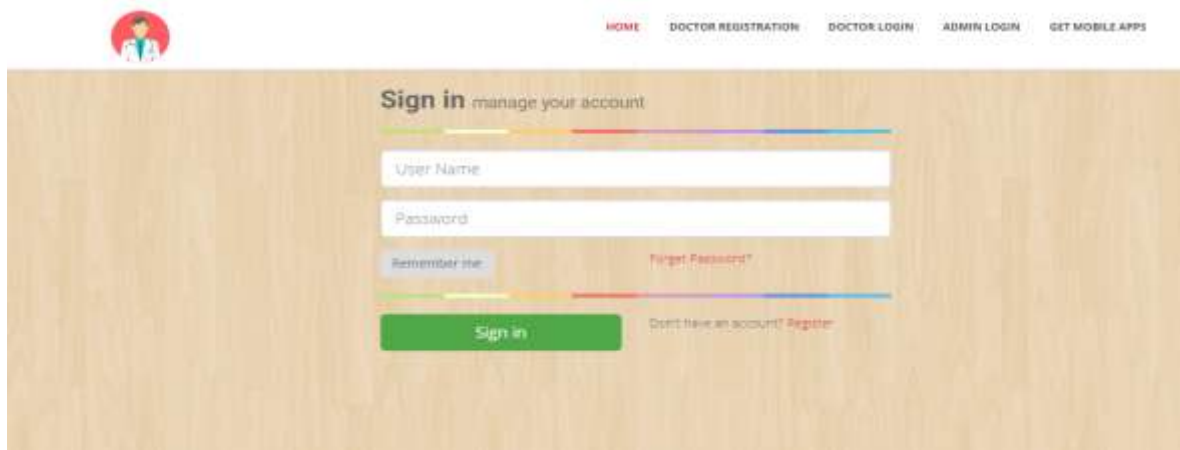


Fig5. Login Page of Doctor/Admin

If the doctor login on the system will get notification regarding patient appointment request as well as the doctor will be able to see total patients list in the app, who can meet him/her for their health checkup and suggestion example as figure-6.

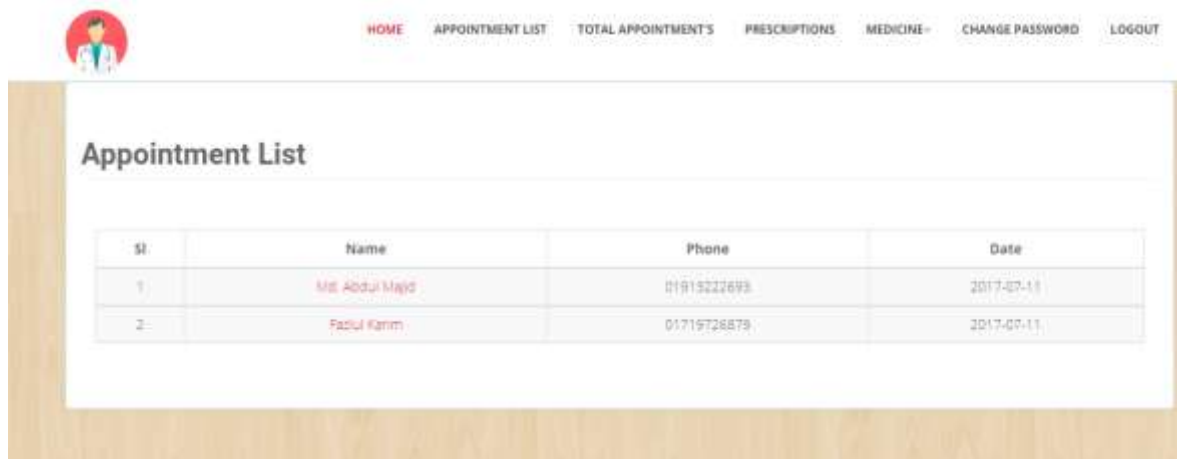


Fig6. Home Page for Doctor

After completing checkup to patient, the doctor can entry the observation details and can provide prescription for a the patient as like as figure-7 and completing doctor’s task the doctor has to save the prescription into the database then the prescription easily can be viewed by patient from his/her apps.

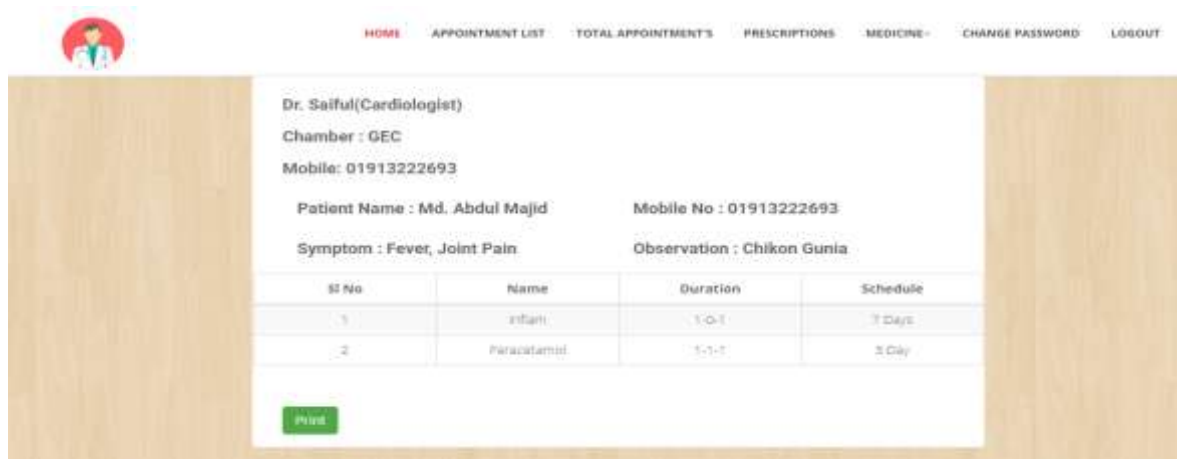
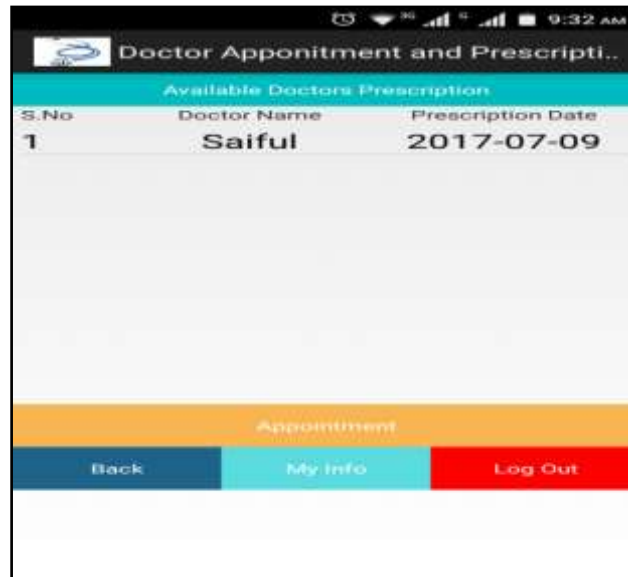


Fig7. Prescription and observation details entered by doctor

**4.2 Interface design for patient**

We have designed very user friendly interface for the patient so that any patient can use this system very easily. The figure-8 shows the main page for patient, where a patient can request appointment from a doctor just pressing the appointment button also a patient able to see his/her prescription which is given by a doctor.



**Fig8.** Main Page for Patient in Apps.

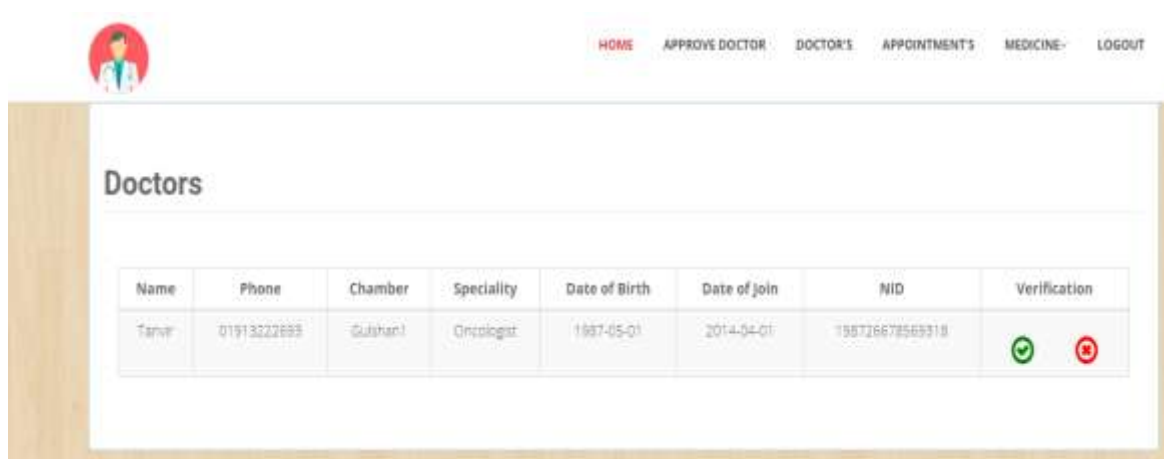
**V. Application**

There are many Features of the Apps

- It is user friendly and It works in different version of android
- Patient can take appointment from doctor
- Doctor can prescribe a patient based on appointment in system.
- Patient can see the prescription in apps.

**VI. Result and Discussion**

The result of the research has been shown in different diagrams with discussion. The figure-9 shows login result for the doctor and admin. The admin has the authority in the system to accept or reject any doctor’s membership request.



**Fig9.** Admin page

After that an admin can check numbers and details of the doctors who have registered in the system as like as figure -10.

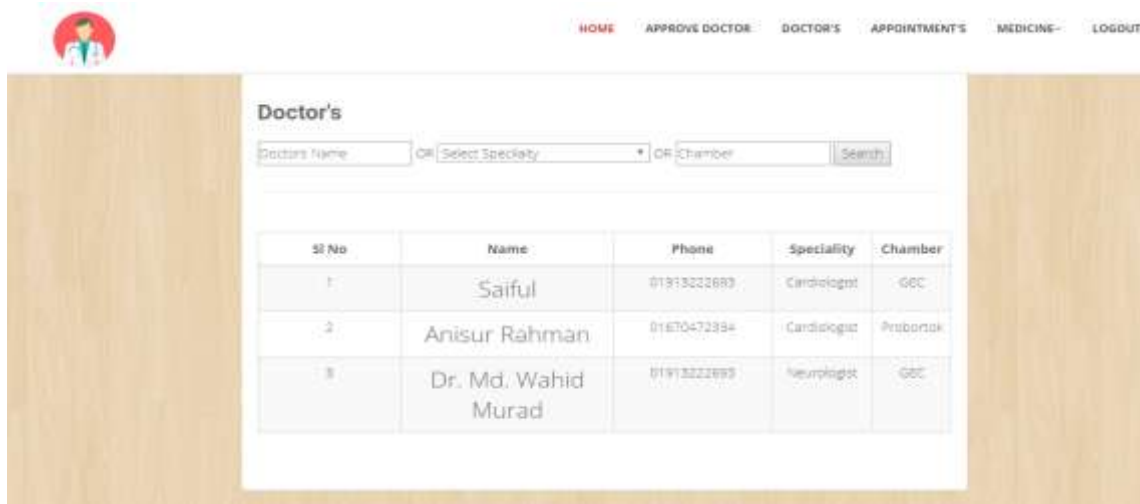


Fig10. List of total registered Doctors.

The admin and the doctor also can view the total numbers of appointed patients against the particular doctor. Using this system admin or doctor can also add or delete name of the medicine.

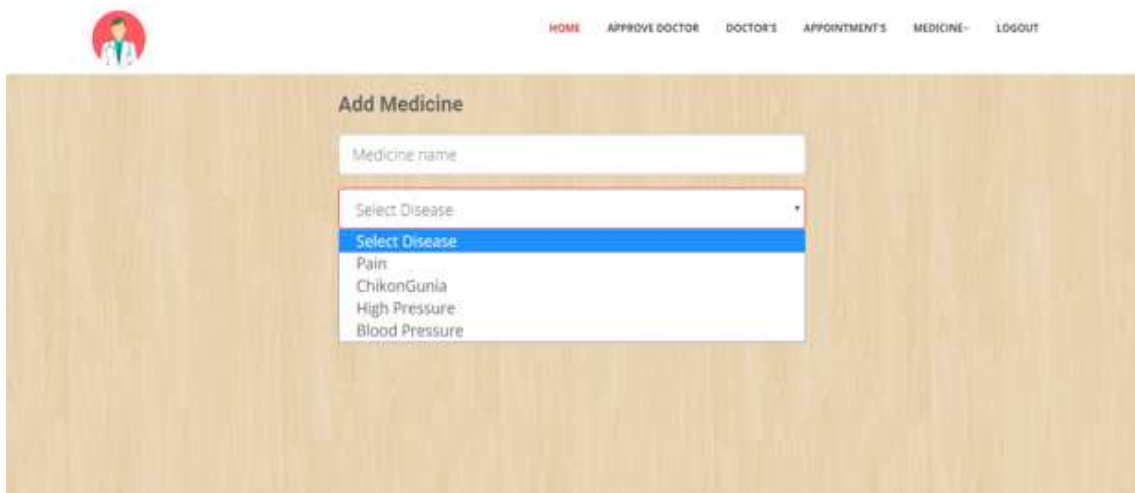


Fig11. Adding Medicine in the apps by Doctor and Admin.

Finally a patient can be able to view the prescription which has uploaded by a doctor after checking him/her from their mobile at anytime from anywhere.



Fig12. Prescription of the patient.

**VII. Comparison**

**Table-1** comparison among different applications with the DAP

| System                                     | Smart Doctors Appointment and Prescription System | Doctorola | Doctor Apps Pulse   | Book Doctor Appointment | Free Doctor Appointment Apps |
|--|---|-----------|---------------------|-------------------------|------------------------------|
| <b>Facilities</b>                          |   |           |                     |                         |                              |
| <b>Availability of Web and Mobile Apps</b> | Yes   | Yes       | Only Apps available | Only Apps available     | Only Website available       |
| <b>Appointment Manage System</b>           | Yes   | Yes       | Yes                 | Yes                     | Yes                          |
| <b>Doctor's History</b>                    | Yes   | Yes       | Yes                 | Yes                     | Yes                          |
| <b>Patient's History</b>                   | Yes   | Yes       | Yes                 | Yes                     | Yes                          |
| <b>Prescription Manage</b>                 | Yes   | No        | Yes                 | No                      | No                           |

**VIII. Conclusion**

The major goal of this application is to make an online interaction between doctors and patients. Smart Doctor's Appointment and Prescription system for Android meets most of the functionality to manage appointment and prescription for doctors and patients accordingly. Patient can use online appointment to save time and money. This application facilitates the interaction between patient and doctor. The developed system is efficient, effective and interface is very user friendly, Where the Doctor will get previous detail information about the Patient that stored permanently in the database so that if doctor get any problem they can check easily previous prescription of particular patient.

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