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Android App for the Hospital Automation

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ABSTRACT: Nowadays Life is becoming too busy to get medical appointments in person and to maintain a proper health care. In most of the healthcare system the primary requirement is physical presence of patient and the doctor for every consultation which is time consuming and highly prone to errors. An Android based app will be developed, providing numerous features to both, Doctor and Patients. It will digitize the complete healthcare process. The main idea of this work is to provide ease and comfort to patients while taking appointment from doctors and it also solves all the problems that the patients has to face while making an appointment. The android application acts as a client whereas the database containing the doctor's details, patient's details and appointment details is acts as a server.

KEYWORDS: Appointment, Online Application, Mobile, Android OS, Scheduling, Track, Healthcare System, voice prescription.

I. INTRODUCTION

The basic workflow of various hospitals in India is still on paper as compared to hospitals in others countries. The concept of automating the administration and management of hospital is started implementing in India. The main aim of system is to help doctors as well as patient. Our system is standalone system which can be installed on doctors and patients android phone to be used for further login, doctor understand patient related problems such that patient get replied as early as possible and he save his precious life within few seconds. Our app provides all the features which are necessary for people, before entering in the hospital.

In the existing system, most of the Hospital still goes for the old, manual system for maintaining all hospitals daily activities. Where everything is paper work with complete human efforts. This Manual System has many drawbacks viz. excessive time consumption, possibility of human error, etc. Proposed system provides User friendly interface and quick data processing and transmission. The main purpose of introducing this system is to achieve location transparency for patients and doctors. Voice-based applications are designed basically to minimize the number of prescription errors as well as facilitate real-time access to medical records. With the help of the GPS network, the system can make sure the location of the users when they are in medical trouble. It can also display all nearest hospitals to user as we deal with sensitive domain, there is need to handle the data in a secured way hence different levels of security measures were provided in each module.

The scope of the project is many applications are integrated in one application. Subtask of these applications is online appointment, Voice prescription, tracking nearest medicals, Automatic Lab Report Generator. It help user to access and view all patient's details from anywhere online. This application reduce the amount of resources required on the Consultation side, like time consumption, manpower, stationery, etc. and record patient information in digital format for future usage. Nowadays Web Technology became crucial aspect because of advance techniques. It specifies both designing and coding techniques so here we are using basic as well as advance web techniques.

II. LITERATURE REVIEW

Automation of hospital is very complex task. Now days, many healthcare organizations use smart-phones as well as some computerized system to automated their institutions. We start research on automation of hospital by studying other past systems which are similar to our systems that focusing on online appointment system, voice prescription and nearest medical store search.

[1] the management of hospital to develop software which is simple, easy to understand and performance is fast. The system collects all details related to the doctors as well as patients and retrieves these data whenever it required. The hospital management system is access by administrator and user enters into the system by using username and password. The system stores all data related to doctor, patient and staff. Due to this, work of hospital is

become easy and it saves lot of time. [2] before the mobile technology is developed user has to wait for until the doctor available for his/her check-up. As the mobile technology is developed it becomes easier and faster to get appointment from doctor. The system is mobile application based and all appointments are accepted by storing all records related to appointment which is linked with calendar. In this system, user gets notification of specified time for visit doctor. The all data related to patients and doctor is manage by admin. The application is user-friendly and easy to access. [3] In this application the patient directly approach to doctor for appointment by website or web based application and connection between doctor and patients take place by online software system. Patients can book appointment as per their convenient time and they can choose favourable doctor. The appointment booked easily by using computer and there is no need to go to hospital for booking appointment. It reduced time of patient as well a hospital staff.

The concept of electronic prescription is nothing new, there are already some systems which are deal with storage of prescription and digitalize the prescribe methods. [4] This is an app for maintain patient records and printing prescription. This app allows doctor to create prescription by input the diagnosis. It predicts the medicines on the basis of diagnosis by the doctor and automatically developed prescription. [5] Now a days, it is necessary to having system which help user to quickly find the nearest medical stores. The application user can quickly access details of nearest hospitals, doctors and medical stores despite of his/her current location. It uses GPS of android device to access location . So in case of emergency conditions or at unknown place this android application will provide facility to find hospital location, doctor’s address and contact details. [6] The health care sector is one of the very important sectors. In present days, there are some issues facing by these sectors. For example, providing appointment to patient by waiting in line. This is time consuming and needed more staff for managing this. Therefore online appointment system is developed. There are some systems ae developed which provide information about nearest medical stores which help in emergency cases. Handwritten prescriptions are used by many doctors. An error in understanding the prescription caused some health issues. This problem is overcome by electronic prescription. These technologies helps in automation of hospital by reducing time.

III. SYSTEM DESIGN

III.I. BLOCK DIAGRAM

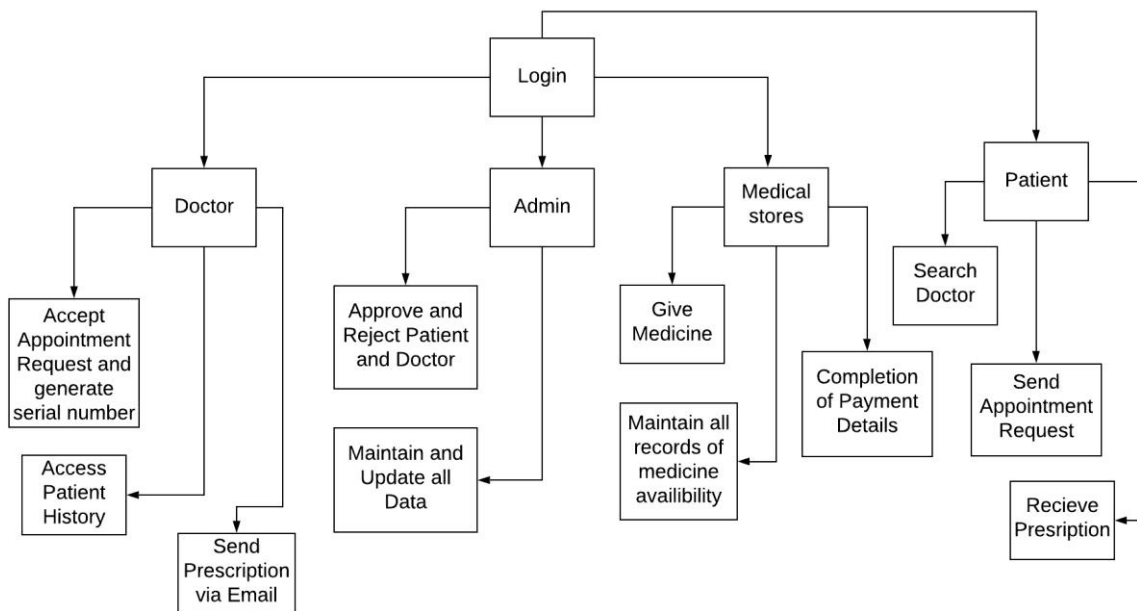


Figure.1. Block Diagram for Automation of Hospital

III.II. FLOWCHART

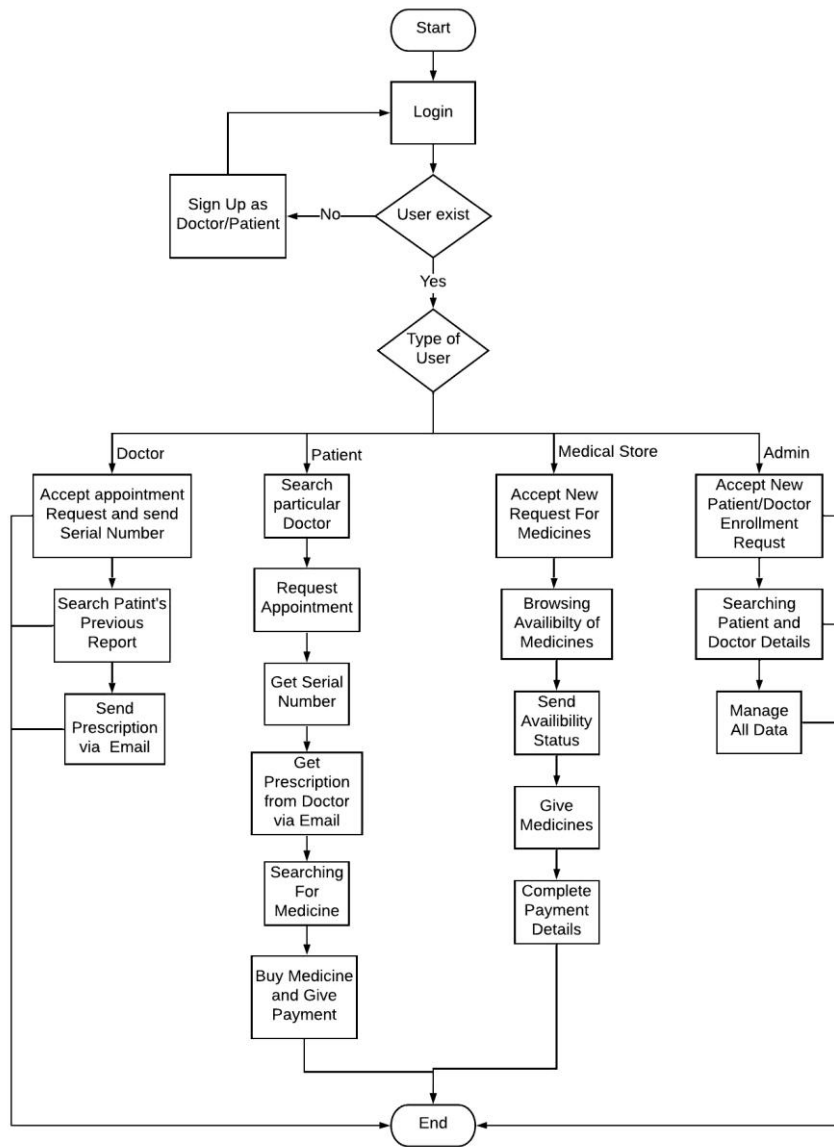


Figure.2. Flow Diagram for Automation of Hospital

III.III. CONCEPT OF THE SYSTEM

System provides User friendly interface and quick data processing and transmission.

Our system consists of two parts:

- a. Client
- b. Server

The client is deployed on an android-based cell phone The server is deployed on a computer, which may be located in a hospital, and be operated by a doctor.

Voice prescription is main feature of the system. Doctor speaks the names of medicines and speech to text conversation is take place. After printing the text, prescription will send to the patient via email. With the help of the GPS network, the system can make sure the location of the users when they are in medical trouble. It can also display

all nearest hospitals to user. Availing health service facilities such as scheduling an appointment, finding the nearest medicals.

IV. IMPLEMENTATION

IV.I. INTERFACE DESIGN FOR DOCTOR

The main purpose of developing this application is to make online interaction between patient and doctor. So interface should be more attractive, simple to use, quickly response, is to understand and it should be also consistent on all the way. So this many feature makes the application more popular. The figure.3 shows the main page of application. To this interface user able to make his /her registration process.

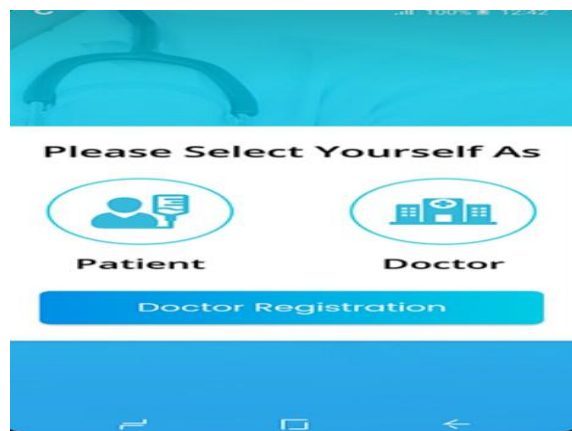


Figure.3.Main page of application

After registration process, at first user needs to be login by entering his/her user id and password. Is the provided credentialed are corrected then user able to access the application for further process.

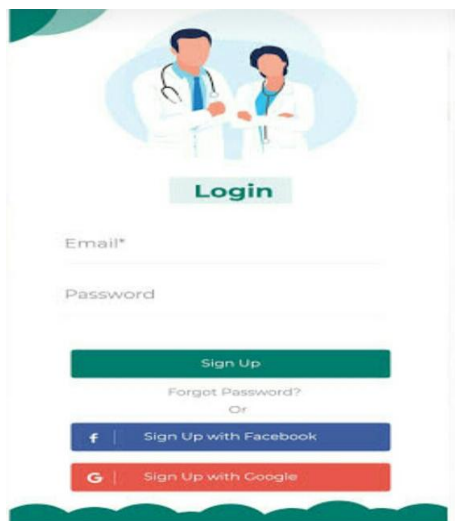


Figure.4.Login page of Doctor

As the doctor enter the correct credential and logged in to system then he will get this notification about the patient appointment request as well as he will also able to see the total patient list who want meet him/her for their crack-up and suggestion.

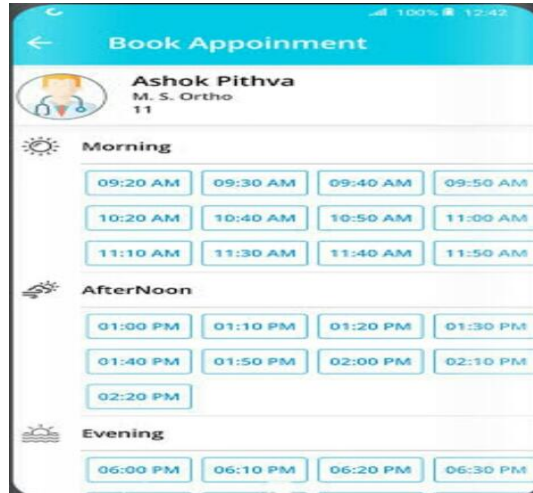


Figure.5.Home Page For Doctor

Once the doctor completed the check-up of patient, the doctor enters the patient medical details (Observation details) and doctor provided the prescription to the patient. This prescription created with the voice based system which save the doctor time .After performing all this task, doctor has to save prescription in to this database so that user can view the same prescription from his/her apps.



Figure.6. prescription

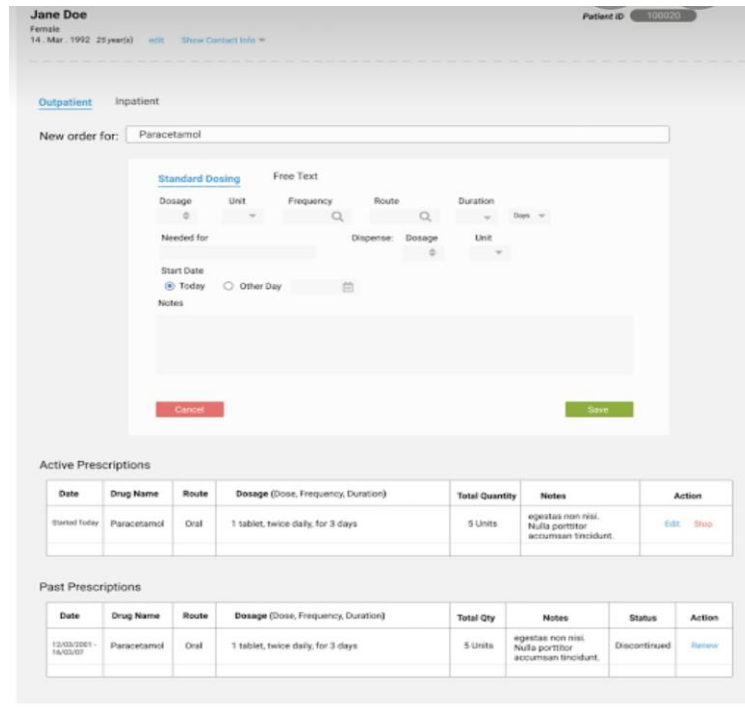


Figure.7. Medical details entered by doctor

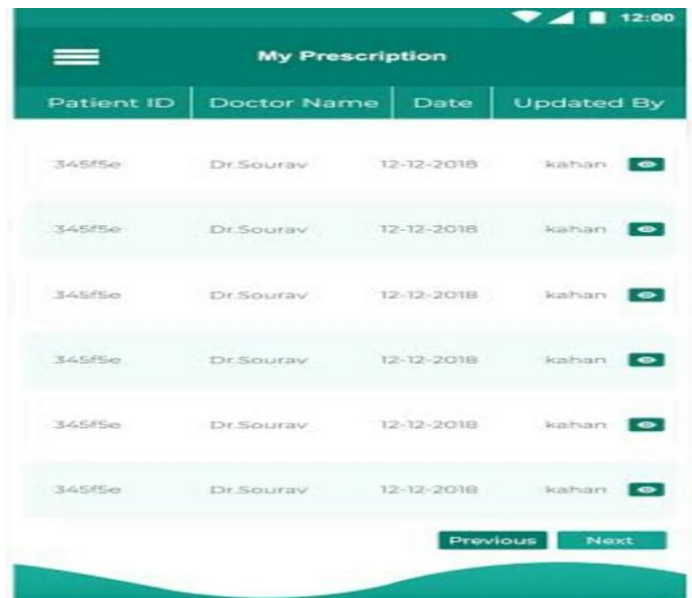


Figure.8. Prescription viewed by patient his/her app

IV.II. INTERFACE DESIGN FOR PATIENT

We have designed user friendly and quickly responsive interface for patient so that patient can easily understand and access the system. The figure.9. show the main page designed for patient to which patient can make appointment. User able to see his previous prescription by pressing My Info. Button.

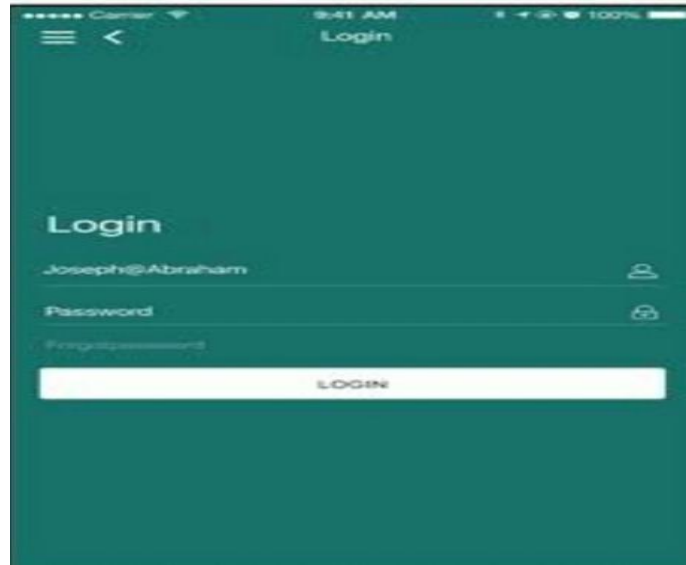


Figure.9.Main Page for Patient

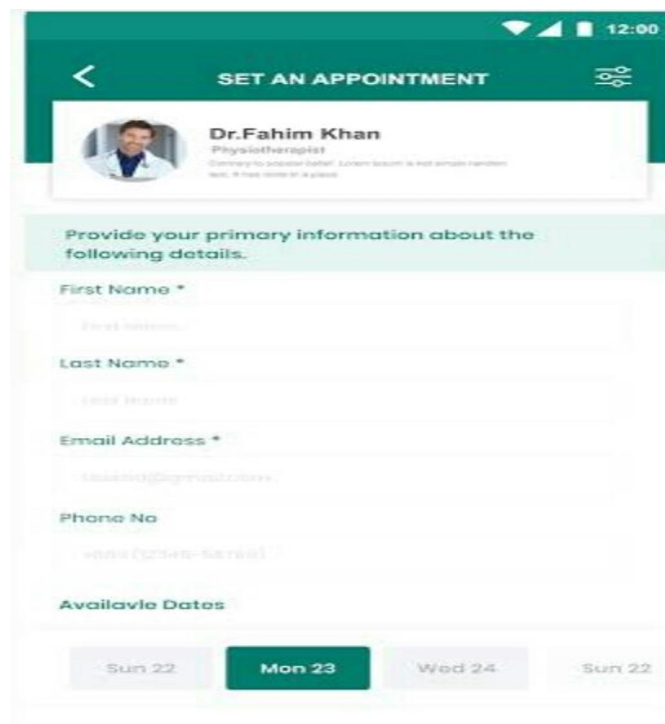
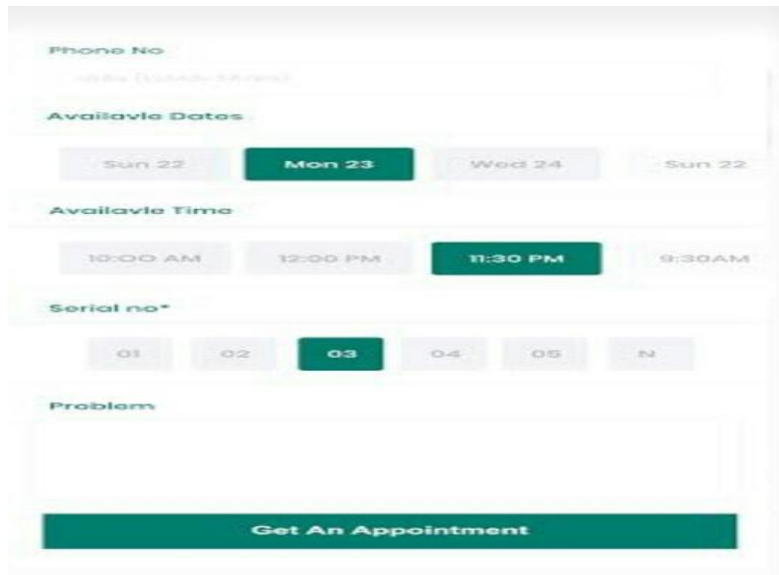


Figure.10.Patient takes appointment for doctor



The screenshot shows a mobile application interface for booking an appointment. It includes the following fields and options:

- Phone No:** A text input field with a placeholder "(9999) 1234567890".
- Available Dates:** A row of date buttons: Sun 22, Mon 23 (highlighted in green), Wed 24, and Sun 22.
- Available Time:** A row of time slot buttons: 10:00 AM, 12:00 PM, 11:30 PM (highlighted in green), and 9:30 AM.
- Serial no*:** A row of buttons: 01, 02, 03 (highlighted in green), 04, 05, and N.
- Problem:** A large text input area.
- Get An Appointment:** A large green button at the bottom.

Figure.11. Appointment details filled by patient

Here patient is also able to track the nearest medical by clicking on view medical button. After clicking on this button Map is showing nearest medical. Figure.12. Shows how this map looks

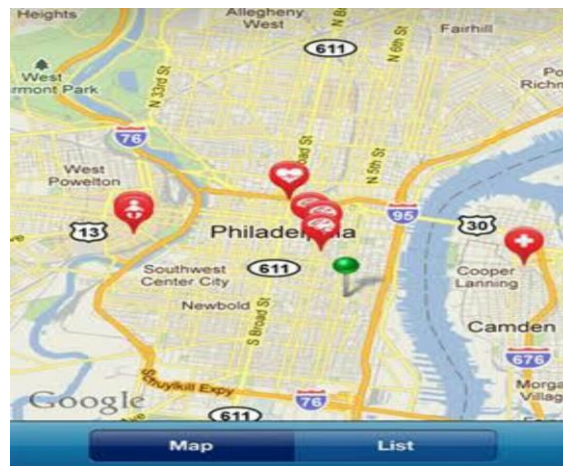


Figure.12. Shows how the map look like.

V. CONCLUSIONS

We have developed this Healthcare application which is having user friendly interface and it is going to develop efficient communication link between doctor and patient. The main Purpose of developing this application is to make online interaction between doctor and patient and we have also included the voice based Prescription System which is time reducing as compared to the existing system. By using this application patient also able to view the nearest medicals so that this will saves the patient's time.

As we get the feedback from the user side further improvements will be incorporated within the application to, make it more user friendly.

ACKNOWLEDGMENT

Report is on the topic: **“Android app for the hospital automation ”**All the Relevant and essential details are included in the paper . At the beginning we have given the summarized details of the project which we are building and



we have also proceed details about how the project is going to be implement and which web technologies we are going to use to develop this project.

We are thankful to **Prof. Deven Ketkar** who guides us and helps in preparing the paper .We thank him for providing us the confidence and most importantly giving us the track regarding the project topic whenever we needed it.

REFERENCES

- [1] Adebisi O.A, Oladosu D.A, Busari O.A and Oyewola Y.V, “Design and Implementation of Hospital Management System”, Published in 2015 at International Journal of Engineering and Innovative Technology (IJEIT), ISSN: 2277-3754 July 2015
- [2] A. Karnik, “Performance of TCP congestion control with rate feedback: TCP/ABR and rate adaptive TCP/IP,” M. Eng. thesis, Indian Institute of Science, Bangalore, India, Jan. 1999.
- [3] J. Padhye, V. Firoiu, and D. Towsley, “A stochastic model of TCP Reno congestion avoidance and control,” Univ. of Massachusetts, Amherst, MA, CMPSCI Tech. Rep. 99-02, 1999.
- [4] *Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specification*, IEEE Std. 802.11, 1997.
- [5] iRxClinics, —Digital Prescription Writing & Smart Pen | iRx Clinics – Digitally Yours | Digitized patient record. || [Online]. Available: <https://www.irxclinics.com/>. [Accessed: 13-May-2019].
- [6] International Journal of Computer Applications (0975–8887) Volume 118–No. 9, May 2015



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