APP FOR ONLINE OPD APPOINTMENT AND HOSPITAL INFORMATION SYSTEM

¹Ashwini Prakash Naiknaware. ²Dhanvant Satish Chaudhari. ³Shriraj Dilip Mahajan. ⁴Pushpak Devidas Kumbhar.

[1,2,3,4]*SSBT's College of Engineering and Technology,Bambhori, Jalgaon*

ABSTRACT

Life is becoming too busy to get medical appointments in person and to maintain a proper health care. The main idea of this work is to provide ease and comfort to patients while taking appointment from doctors and its also resolve the problems that the patient has to face while making an appointment .This android application acts as a client whereas the database containing the doctor's detail, patients detail and appointment details are maintain by a website that act as sever. As the patients have to wait for long time to get the doctors appointment ,even if they get the appointment sometimes the doctors does not visit the hospital and the patient leave without visiting the doctor and the appointment get canceled .By using technologies like android and web base application the issue will resolve and patients get timely updates. patients can book appointments from anywhere anytime and it will save patients precious time.

1. INTRODUCTION

There is need for improvement in the interaction system between the doctor and the patient. Patient appointment scheduling system is very critical in hospitals to ensure efficient and effective service delivery in the health sector in hospitals . Whereas in some hospital the patient has personally or person with the patient has to go to the registration desk ask for the appointment to get registered. Whole system is pen paper based. This type of appointment scheduling system has a range of constraints, such as patients being required to fill in appointment forms upon arrival at the hospital clinic, and there is no possibilities to register while anywhere anytime therefore, patients spend a lot of time waiting in queues. Vast increase in technology to develop a appointment system for patients to book appointment for a doctor. By using appointment scheduling application they can book the appointment from home or anywhere before going to hospital. In order to meet the target of effectively facilitate delivery of health services, this proposed mobile application for the patient appointment would help in delivery the better health services in hospitals. The patient also waits in a queue while getting appointment .If the doctor cancels the appointment for some emergency reasons then the patient is not able to know about the cancellation of the appointment unless or until he or she visits the hospital. OPD (Out-Patient Department) is responsible for managing out-patients who just come for a doctor for their issue/ disease checkup and managing front desk operations such as managing a visitor book, call log, postal records, and complaints. This system will be mainly used by: Receptionist, Patient, Medical Officer , Admin .

BACKGROUND OF STUDY

In Today's World, Healthcare especially in the developed world is characterized by rapidly increasing use of information technology in patient care, increasing documentation, coding and billing ,and management. Rise of health information technology worldwide is increasing the efficiency of health service delivery, reducing medical errors, improving quality of care and providing better information for patients and physicians.

The overall goal of the information management function is to obtain, manage, and user-information to improve health care and medical services, performance, governance and management and supportive processes .

PROJECT PLANNING AND MANAGEMENT

Feasibility is the analysis of risks, costs and benefits relating to economics, technology and user operation. There are several types of feasibility depending on the aspects they cover. Some important feasibility is as follows:

Economical Feasibility-Fastest getting information Small response time and better services Easy and fast Time management Reduce cost of minimal data management Easy Update and retrieval on stored records Better decision making Better service For crime holding Little job burden for detectors and other police officers .Operational Feasibility -It might not be possible to see fully operational system with the given limit of time of software development. However with great co-operation of the project team the system can overcome and fix the all problems.

SCOPE

This application will help user to access and view all his reports from anywhere online. Most of the analysis and interpretations, made for this report, are based on secondary data obtained. This data could have some inherent mistakes and errors Due to limited time available survey could not be undertaken for intended 20 consumers and thus had to be limited to 10. Communication gaps exist between employees and management, as seniors don't share problem with subordinates resulting in violation of psychological contract, Poor rewarding system(slow),Poor working conditions.

OBJECTIVE

The main objective the project is to develop android base application that will give the every possible detail of hospital and doctor to the patient and book their appointment online from there comfort. The application will make patient logged in to the application and book their appointment.

- Taking an appointment become easy.

- Patient can book appointment from anywhere and anytime.

- In current system Lot of unnecessary work will be avoided.

- Enhance the online appointment scheduling system through android base mobile application.

- There will be paper less work to save time of hospital management system and the hospital receptionist staff.

- Patient can book appointment at particular time and for particular duration

SOFTWARE AND HARDWARE FOR DEVELOPMENT IN DETAIL

For development of mobile applications, Android studio is suitable platform because of its Java Sdks and jdk tools and firebase connectivity. For this project, We have needed the powerful tool for executing multiple testing . This feature is available in android studio ,As it has a special emulator in it. So in our project we have used Android studio as a development platform , In this , Java is used as backend and Android Xml is as front end for better inter connectivity between java and xml . As the on of the feature of android studio .We have used firebase as a database with its assistant in android studio as a tool.

There are so many languages for android applications but java is worldwide language It is official platform-specific programming language for native Android apps. Android is mostly developed in Java, and its APIs are designed to be called from Java. Firebase is open source database management system with its flexible features like real-time database authentication. So it is the best for database system for this project.

2. SOFTWARE REQUIRED IN DEVELOPMENT

JAVA -

Java is a small, simple, safe, object oriented, interpreted or dynamically optimized, byte coded, architectural, garbage collected, multithreaded programming language with a strongly typed exception-handling for writing distributed and dynamicaly extensible programs. Java is an object oriented programming language. Java is a high-level, third generation language like C, FORTRAN, Small talk, Pearl and many others. You can use java to write computer applications that crunch numbers, process words, play games, store data or do any of the thousands of other things computer software can do. Special programs called applets that can be downloaded from the internet and played safely within a web browser. Java a supports this application and the follow features make it one of the best programming languages. It is simple and object oriented. It helps to create user friendly interfaces. It is very dynamic.It supports multithreading.It is platform independent

It is highly secure and robust .It supports internet programming. Java is a programming language originally developed by Sun Microsystems and released in 1995 as a core component of Sun's Java platform. The language derives much of its syntax from C and C++ but has a simpler object model and fewer low-level facilities. Java applications are typically compiled to byte code which can run on any Java virtual machine.(JVM) regardless of computer architecture.

FIREBASE-

Google Firebase is a Google-backed application development software that enables devel-opers to develop iOS, Android and Web apps. Firebase provides tools for tracking analytics, reporting and fixing app crashes, creating marketing and product experiment.

Dynamic Links Dynamic Links are smart URLs which dynamically change behavior for providing the best experience across different platforms, Cloud Messaging Firebase allows us to deliver and receive messages in a more

reliable way across platforms, Authentication Firebase has little friction with acclaimed authentication, Hosting Firebase delivers web content faster, Remote Configuration It allows us to customize our app on the go Crash Reporting It keeps our app stable, Real-time Database It can store and sync app data in real-time, Storage We can easily store the file in the database.

3. METHODOLOGY

Algorithm shows the flow of program that how it is being execution, It shows the succefull working of the system.They are used for problem solving in the programming due to their simplicity to understand .

Step 1   Start

Step 2   User(patient, doctor) create account by providing email id as user id, its own password and   other details

Step 3   Login with credential and if right user gets the access to application

Step 4   After getting access patient can choose a doctor according to need and book appointment as per time.

Step 5   Admin can create account, update account of doctors and check hospital status. Control activities of hospital.

Step 6   After creating account doctor is able to confirm appointment , join at time and make communication with patient.

Step 7   After appointment confirmation doctor can check history of patient.

Step 8   Patient is also able cancel appointment and notifications are received if canceled by doctor.

Step 9   After all patient data is stored in database for further use.

Step 10   User cans logout.

Step 11   Stop.

MODULES IN PROJECT

The Following are the modules use in the project.

- Module Login(SignUp): It is the module which creates account of the users and makes profile. User can be Patient, Doctor.

- Module authUser: In this module user gets authenticated using login credentials

- Module UserProfile: With this module users can access to their profiles.

- Module EditProfile: Users can change and update their profile information with this module.

- Module BookAppointmentProfile: Patient can make appointment with this module.

- Module updateAppointmentProfile: Patient can cancel or doctor can reschedule

- Appointment and notifications are received by this module.

4. RESULT

The project for Online OPD Management Hospital Management System was successfully tested on local machine.After the installation of application on android device, user has to create account with email and password by the user after the details are being filled account is created , After that Login Page opens and here user have to fill username and password and then after verification , Next page is Home page where the user can book appointments and review the appointment history and the details of doctors and hospitals . After book-ing appointment the doctor confirms the appointment according to the patient given date and time And after confirmation of appointment user get notification for confirmation of appointment. The doctor's dashboard contains list of patients visited on daily basis. The list shows the time, date on which the appointments are scheduled.In Doctor module ,Doctor can create profile of hospital and can reject ,confirm the appointments according to their choice. Also Doctor can view history of appointments by the patients and patients can do so records of appointments are managed very easily

5. CONCLUSION

The online OPD appointment system will improve interaction between patients and hospital management and save the lot of precious time of people. Hospital administrators would be able to significantly improve the operational control and thus streamline operations. This would enable to improve the response time to the demands of patient care because it automates the process of collecting, collating and

retrieving patient information. Accounting sometimes becomes awfully pathetic and complex.Since the online OPD appointment Application system is essential for maintaining detail about the Doctor, Patient, Hospital staff etc. we understand that by using of online OPD appointment Application System project the work became very easy and we save lot of time.

REFERENCE

[1] B. Glover and H. Bhatt, "RFID Essentials", O'Reilly Media, Inc. 1005 Gravenstein Highway North, Sebastopol, CA 95472, Jan. 2006, pp. 54-169

[2] Ayodele Cole Benson, Hospital Information Systems in Nigeria: Review of Literature Vol.1, No 3, 2011

[3] Mansi Chitkara, NamitaKhandelwal, and AvinashChaporkar, Project Report on Hospital Management System", (2010).

[4] Gunjan Yadav, Parth Lad, ParulPandey,TejaswiKolla, Advanced Hospital Database Management System,[Internet]April 2016;Available From:

[5] https://ijarcce.com/Upload/2016/April16/Ijarcce

[6] http://ijettjournal.org/volume-4/issue-4/IJETT-V4I4P225.pdf