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Android Application for Doctor Conceiver & Appointment Scheduler

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ABSTRACT: Java is simply the official language of Android app development, which means it is one of the most supported languages by Google and the one that most apps in the Play Store are built with. Java itself was developed by Sun Microsystems way back in 1995 and it is used for a wide range of programming applications. Java code is run by a virtual machine, which runs on Android devices and interprets the code. An android based application where the patients can consult with doctors, psychologists, psychiatrists, and other medical professionals regarding their problems through mobile application. User can fix appointments for consulting doctors through the app. Provides best suggestions for the users, based on user's inputs such as symptoms, gender, age.

Key Words: Java, Android, Appointment scheduling, Doctors.

1 Introduction

In this fast world it is a hectic task to visit hospitals. Due to the increased facilities in medical field it is often required to visit hospitals at a certain interval of time so people may waste time by going to hospitals for getting appointments and need to wait at hospitals for hours to meet the doctors. To avoid the practical difficulties in meeting the doctors/specialists by getting appointments an android application has been created, which can be used for booking appointments. Another issue faced by people is finding doctors in a new place. So, in the application doctors & specialists, good in their field are suggested.

2. Related Works

A recommender framework to find the best doctors in accordance with patients' requirements. In the proposed system, first it considers only those doctors whose profile match with patients' requirements. Second, the best doctors will be recommended out of previously obtained doctors based on patients' feedbacks. This system suggests a doctor recommendation system that uses data mining techniques, which can be used in those countries that have huge uneven distribution of medical resources. [1]

A web-based application for self-management of type 1 diabetes, suitable for use by patients, their care takers and physicians. Patients could enter the level of blood glucose, insulin and activities on a daily basis, and physicians were able to supervise a patient's health status from a distance. Physicians could use the system at any time convenient to them to support patients by giving medical advice. [2]

Virtuwell combines rigorous clinical protocols with a carefully designed online user experience and service guarantees. It offers treatment for about forty simple conditions such as urinary tract infections, sinus infections, and conjunctivitis. Provides patient and clinician-initiated telephonic interactions available around the clock and incorporates review by nurse practitioners or physician assistants, who then provide diagnoses, treatment plans and prescriptions.Connects the rural areas with the non-practicing lady doctors through any communication media whether it is internet, GSM, WiMAX, Satellite etc. For the sake, virtual clinics will be established in the remote sites, patients will visit these clinics a nursing staff would be available to take all necessary information that will be sent by a smart phone to a registered doctor through a central system. Doctor in return would prescribe and prescription will be

sent back by smart phone to virtual clinic via same central system. [3]

An online application that uses evidence-based diagnosis and provides recommendations using Grading of Recommendations Assessment, Development and Evaluation (GRADE) system. [4]

Patient Decision Aids (DAs) for antihyperglycemic agents and statins, designed for use during clinical consultations, are embedded into practice, examining how patients and clinicians understand and experience DAs in primary care visits. DAs used during consultations became flexible artifacts, incorporated into existing decision-making roles for clinicians (experts, authority figures, persuaders, advisors) and patients (drivers of healthcare, learners, partners). DAs were applied to different decision-making steps (deliberation, bargaining, convincing, case assessment), and introduced into an existing knowledge context (participants' literacy regarding shared decision-making (SDM) and DAs). [5]

Formulates practice guidelines on the management of hyperglycemia in hospitalized patients in the non-critical care setting. The evidence-based guideline was developed using the Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) system to describe both the strength of recommendations and the quality of evidence. The system provide recommendations for practical, achievable, and
safe glycemic targets and describe protocols, procedures, and system improvements required to facilitate the achievement of glycemic goals in patients with hyperglycemia and diabetes admitted in non-critical care settings.[6]

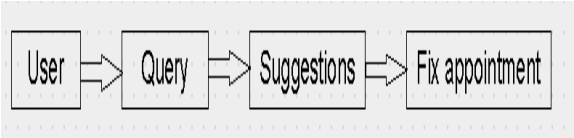
To build a secure software, with accurate and consistent security requirements. It needs assurance requirements on code. A way to achieve implementation assurance is to use effective methods and tools that solve or warn for known vulnerability types in code. It shows high rates of false positives for the tools building on lexical analysis and low rates of true positives for the tools building on syntactical and semantical analysis. A more effective and generic solution can be derived using dependence graphs, decorated with type and range information as a way of modeling and pattern matching security properties of code. [7]

3. PROPOSED WORK

The android application has a user sign-up & login. New users can fill the sign-up form and open their account. After signup, the details of the users are stored in the firebase database. Through a user login, only one appointment is possible in a day. User can cancel the booked appointment at any time. Each appointment has a duration of half an hour. The algorithm works in a way that no more than a user can book an appointment for a same time slot. Users can check and book appointment for that day and for the next six days. A user's time slot cannot be taken by any other user. Doctor can also be able to cancel the appointment booked by the user at any time.The list of doctors provided to the users are accurate because the data in database are stored in JSON format.

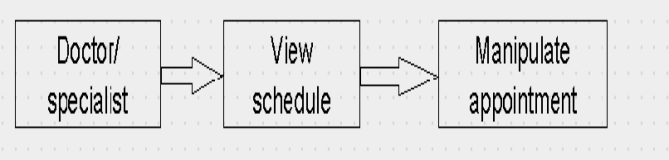
App user's work flow:

Through the app, users can find doctors based on the inputs such as type, symptoms, age, gender & location. Now the user can book an appointment for consultation with the doctor on the preferred date & time. A user cannot book another user's time slot for appointment. A user can make only one appointment in a day.



Doctor's work flow:

Each doctor can login through the login id provided. Each doctor is provided with unique login id. Doctors can know the appointments booked and the details of it. Cancellation of appointment at times of unavailability is possible by the doctors.



list of doctors according to the user's input. So here the list of doctors suggested to the users is strictly based on the user inputs.

4. Conclusion

There are thousands of applications available in play store regarding online doctor consultation but they lack in some features such as connecting all doctors under a common platform in the form of application and the doctor search in some apps does not provide accurate

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