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Health Centre Management System by Using QR Code Generation Number

Anupama Koul[1], Snehal Chavan[2], Shreya Kadole[3], Shriya[4], Pradnya Mane[5], Kavita Savant[6]

Student, Dept. of Computer Engineering, Bharati Vidyapeeth College of Engineering for Women, Pune,

Maharashtra, India[1,2,3,4,5]

Professor, Dept. of Computer Engineering, Bharati Vidyapeeth College of Engineering for Women, Pune,

Maharashtra, India[6]

ABSTRACT: our project offers an application with a specific end goal to facilitate simple and natural approach to discover the solution for the outwardly disabled individuals and to take it as indicated by their Doctors remedy. Outwardly debilitated individuals require not be needy and look for others help to observe the prescription to be taken. In this android application is utilized to beat the challenges they confront in this situation. In this application, an update is set which advises the client when to take the solutions, as voice yield. The QR code of the solution strip held in the hand are caught by the inbuilt camera of the portable. The QR code is handled and therefore message confinement and extraction is finished by which the name of the pharmaceutical is distinguished. A spotter area is additionally combined with this application which checks the remedy which has been as of now transferred in the clients portable, contrasts and the name of the pharmaceutical recognized and if the prescription must be taken around then, at that point it advises the amount of medication to be taken to the client as voice yield. On getting the voice yield from the versatile, the client admissions their pharmaceuticals as per their solution. It can likewise be valuable for uneducated individuals who endure to discover which solution must be taken. Particularly senior individuals who are not instructed for the most part endure to peruse their prescription names all alone.

KEYWORDS: QR code(s), Medical health records, Mobile phone, Patient, Medical health card

I. INTRODUCTION

To develop a Health Center Management system, we take care of patient registration, drug information and concerns such as drug enquiries and complaints. The current manual system is slow laborious and error prone to computerize the same for quicker efficient results and customer satisfaction.

Our system is useful in various ways as the information about the patients who are taking the free services from the health center all the details are already stored in the database, so the service is done in no time. All the information about the drugs are also maintained in the database. An allergy is an adverse drug reaction mediated by an immune response (e.g., rash, hives). A side effect is an expected and known effect of a drug that is not the intended therapeutic outcome. The term side effect tends to normalize the concept of injury from drugs. There has been a recommendation that this term should generally be avoided in favor of adverse drug reaction.

In this application, an update is set which advises the client when to take the solutions, as voice yield. The QR code of the solution strip held in the hand are caught by the inbuilt camera of the portable. The QR code is handled and therefore message confinement and extraction is finished by which the name of the pharmaceutical is distinguished. A spotter area is additionally combined with this application which checks the remedy which has been as of now transferred in the clients portable, contrasts and the name of the pharmaceutical recognized and if the prescription must be taken around then, at that point it advises the amount of medication to be taken to the client as voice yield. On getting the voice yield from the versatile, the client admissions their pharmaceuticals as per their solution. It can likewise be valuable for uneducated individuals who endure to discover which solution must be taken. Particularly senior individuals who are not instructed for the most part endure to peruse. Their prescription names all alone. To avoid any adverse drug reactions (ADRs), drug- drug interactions (DDIs), as well as patients' compliance with physician's advices for optimum drug administration and for lifestyle (i.e. food habits, alcohol consumption and smoking).

Our project offers an application with a specific end goal to facilitate simple and natural approach to discover the solution for the outwardly disabled individuals and to take it as indicated by their Doctors remedy [3].

1.1.Motivation

With every going day the need to be where the inflow of outpatient request exceeds that which can be handled manually. Our system offers an application in order to expedite easy and innate way to find the medicine for the visually impaired people and to take it according to their doctor's prescription. Visually impaired people need not be dependent and seek others help to find the medicine to be taken. This android application is used to overcome the difficulties they face in this scenario. User intakes their medicines according to their prescription. It can also be useful for uneducated people who suffer to find which medicine must be taken. Especially elder people who are not educated usually suffer to read their medicine names on their own. This system gives voice notification using QR code [9].

1.2.Problem Definition and Objectives

1 To designed application specifically for visually impaired people.

2 To provides Medicine service for Visually Impaired where they could scan QR code.

3 Service should be provided to patients in an efficient manner.

1.3.Project Scope and Limitation

To develop a Heath Center Management system as from manual system to computerized system, and to take care of records of the various departments in the health center. Our project proffers an application with a specific end goal to facilitate simple and natural approach to discover the solution for the outwardly disabled individuals and to take it as indicated by their Doctors remedy.

II. RELATED WORK

[1] Data Mining As A Tool for Detecting Adverse Effects of Drugs

Dipali UIET,et.all[1] proposed adverse drug reactions represent a major health problem all over the world. It defines any injury caused by taking a drug or over- dose of drug or due to combination of two or more drugs. Detection of adverse drug reactions is necessary because they affect a large number of people and can help in raising early warning against adverse effects of drugs and help medical practitioners in making treatment effective and timely. In todays digital era a huge amount of data related to adverse effects of drugs is being collected at hospitals, drug retail stores and by drug manufacturers. This data can be utilized for finding out the hidden relationships between drugs and their adverse reactions. But due to the vast amount of data it is not possible to analyze it manually.

Data mining is the process of extracting meaningful and useful patterns hidden in large amounts of data. Data mining techniques can be availed in the medical domain for extracting the relationships between drugs and adverse reactions. These techniques help in saving cost as opposed to experimental detection of drugs and adverse reaction relationships.

We have done a survey on determining how data mining techniques can be utilized in detection of adverse effects of drugs and represent it in a comprehensible way. The papers which we have reviewed focuses mainly on detecting the adverse effects of drugs after the drug has been launched in the market for use[1].

[2] Data Mining to Generate Adverse Drug Events Detection Rules

Emmanuel Chazard,et.all[2] proposed adverse drug events (ADEs) are a public health issue. Their detection usually relies on voluntary reporting or medical chart reviews. The objective of this paper is to automatically detect cases of ADEs by data mining. 115 447 complete past hospital stays are extracted from six French, Danish, and Bulgarian hospitals using a common data model including diagnoses, drug ad- ministrations, laboratory results, and free-text records. Different kinds of outcomes are traced, and supervised rule induction methods (decision trees and association rules) are used to discover ADE detection rules, with respect to time constraints. The rules are then ltered,validated,and reorganized by a committee of experts. The rules are described in a rule repository, and several statistics are automatically computed in every medical department, such as the condence , relative risk, and median delay of outcome appearance. 236 validated ADE-detection rules are discovered; they enable to detect 27 different kinds of

outcomes. The rules use a various number of conditions related to laboratory results, diseases, drug administration, and demographics. Some rules involve innovative conditions, such as drug discontinuations [2].

[3] Addressing drugdrug and drugfood interactions through personalized em- powerment services for healthcare

Marios Spanakis,et.all[3] proposed personalized healthcare systems support the provision of timely and appropriate information regarding healthcare options and treatment alternatives. Especially for patients that receive multi-drug treatments a key issue is the minimization of the risk of adverse effects due to drug-drug inter- actions (DDIs). DDIs may be the result of doctor prescribed drugs but also due to self-medication of conventional drugs, alternative medicines, food habits, alcohol or smoking. It is therefore crucial for personalized health systems, apart from assisting physicians for optimal prescription practices, to also provide appropriate information for individual users for drug-drug interactions or similar information regarding risks for modulation of the ensuing treatment. In this manuscript we describe a DDI service including drug food, drug herb and other lifestyle-related factors, developed in the context of a personalized patient empowerment platform. The solution enables guidance to patients for their medication on how to reduce the risk of unwanted drug interactions and side effects in a seamless and transparent way. We present and analyze the implemented services and provide examples on using an alerting service to identify potential DDIs in two different chronic diseases, congestive heart failure and osteoarthritis [3].

[4] Portable Camera-Based Assistive Text and Product Label Reading From and Held Objects for Blind Persons

In modern technology, availability of high resolution camera has lead to new dimension in digital QR code. As the technology is being expanding, various technologies are being developed for mobile devices. The goal of our project is to recognize and extract the text from images captured by camera based mobile device, and once the text is recognized information about the text can be obtain via Dictionary or via Web [9].

[5] Detection of Adverse Drug Events through Data Mining Techniques

Amiya Kumar Tripathy,et.all [4] proposed Adverse Drug Reaction (ADR) is a major problem faced by medical practitioners with respect to drug safety. A number of Pre-marketing trials have fail to detect adverse drug reactions, instead, they are only observed after long term post-marketing surveillance of drug usage. The detection of Adverse Drug Reactions should be done as early as possible for the progress and safety of pharmaceutical industry. The increase in the number of adverse events and development of mining technology have motivated development of statistical and data mining methods for ADRs detection. These methods are inconvenient and tedious for users and exploration processes are time consuming. There are particular health units which provide access to electronic records of patients aggregating and integrating electronic health records from multiple sources is rather challenging. The manual addition of data about drugs, adverse drug reactions, disease reported in scientific literature has been used to create tables as data collection technique In this work, Proportional Reporting Ratio (PRR) have been used, in combination with an estimator of the precision of point estimate such as the Chi-square test, to mine the different associations between drugs and adverse reactions. This work proposes a system for the detection of ADRs allowing an interactive discovery of associations between drugs and symptoms, called a drug-ADR association which has been further developed using other factors of interest to the user, such as demographic information, the current analysis has been done on 5000 records[4].

III. PROPOSED SYSTEM

We propose QR code based android mobile application that provides top-to- bottom guidance and assistance to the visually impaired user for taking their medicines. Throughout the process the user is guided using the voice output rather than text. The Android platform has been used to build this app mainly because of its wide popularity and cost effectiveness in the smart phone market. Android platform has Comprehensive libraries for QR code, SQLite for facilitating data storage and good hardware features for video or image capture. There are 3 basic modules into which the application has been split up as reminder, identifying the medicine by label reading and voice output.

IV. MATHEMATICAL MODEL

A] Mapping Diagram
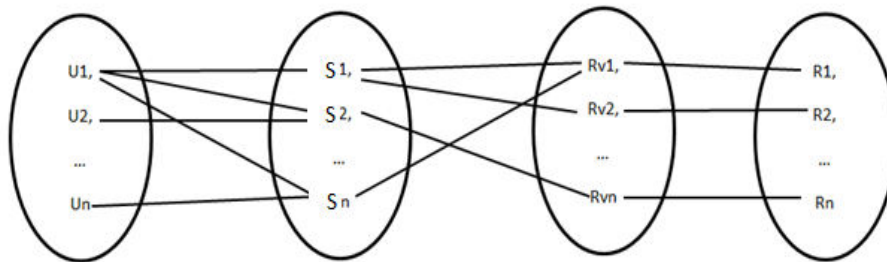
Where,

U1,…, Un = No. of Users
S1,…, Sn = List of patients
Rv1,…, Rvn = List of reviews per patients
R1,…, Rn = QR Code Generation result

B] Set Theory

Let us consider S as a set of intelligent data system
S= { }
INPUT:

- Identify the inputs as low resolution images

F= {$f_1, f_2, f_3, …, f_n$| 'F' as set of functions to execute to QR Code }
I= {$i_1, i_2, i_3…$|'I' sets of inputs to the function set}

O= $\{o_1, o_2, o_3….\}$'O' Set of outputs from the function sets}

S= {I, F, O}

I = {search query, patients name}

O = {decision making result}

F = {Prescription in Audio, QR Code }

Space Complexity:

The space complexity depends on Presentation and visualization of discovered patterns. More the storage of data more is the space complexity.

Time Complexity:

Check No. of patterns available in the datasets= n

If (n>1) then retrieving of information can be time consuming. So the time complexity of this algorithm is $O(n^n)$.

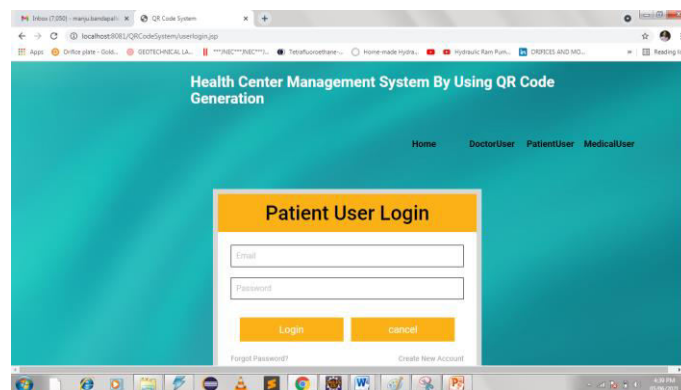Φ = Failures and Success conditions.

Failures:

1. Huge database can lead to more time consumption to get the information.
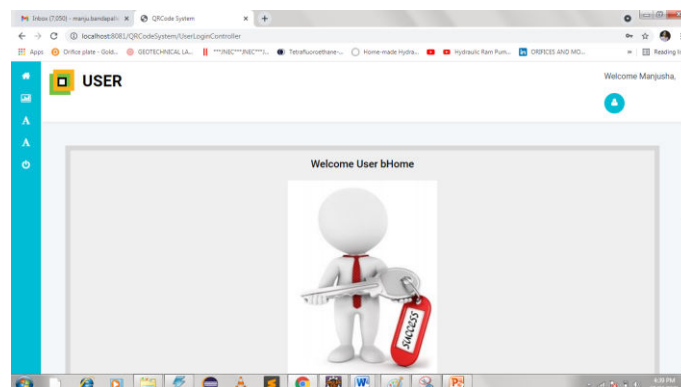2. Hardware failure.
3. Software failure.

Success:

1. Search the required information from available in Database.
2. User gets result very fast according to their needs.

V. RESULT

Login Page:

User Home page:

QR Code Analysis:

When the user enters the system, he or she can open the camera to scan the QR-Code. The app will decode the QR Code and Display the data. The User must first input some doctor appointment with these data the doctor can send prescription to the medical,then medical analyze the data to provide proper suggestions.

Modules

Patient:-

A patient first register and login then doctor appointment scheduled and QR code scan and read Subscription.

Doctor:

A doctor analyzes patient Appointment and then generate subscription and send to the medical.

Medical:-

A medical check subscription and generate QR code and Send to the Patient.

VI.CONCLUSION

We proposed health care system for hospital. We generate QR code for every patient. We proposed and analyzed the use of user driven visualization to improve security and user friendliness of authentication approaches. Our protocols utilize simple technologies available in most out-of-the box Smartphone devices

FUTURE WORK

In addition, we will study methods for improving the security and user experience by means of visualization in other contexts, but not limited to authentication such as visual decryption and visual signature verification.

APPLICATIONS

A novel QR code Strategy based on encryption technique which can challenge the existing QR code strategy. The system implementations in the form of Android applications which demonstrate the usability of our protocols in real-world deployment settings. To generate QR code for every patient as per there disease the system takes less time. Every

interaction between the user and an intermediate helping device is visualized using a Quick Response (QR) code. It Support reasonable Image security and usability and appears to fit well with some practical applications for improving online security. Patient no needs to visit personally to the physician or at medical store.

REFERENCES

[1] Data Mining As A Tool for Detecting Adverse Effects of Drugs, Dipali UIET,et.all[1]

[2] Data Mining to Generate Adverse Drug Events Detection Rules, Emmanuel Chazard,et.all[2]

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[4] Portable Camera-Based Assistive Text and Product Label Reading From and Held Objects for Blind Persons.

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📱 **9940 572 462** ⊕ **6381 907 438** ✉ **ijircce@gmail.com**