"SMS BASED PAPERLESS PATIENT APPOINTMENT SYSTEM USING GSM & ARUDINO"

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Abstract-The project includes the appointment system in hospitals. Because in many hospitals the patient take appointment but it leads to waiting issue which is faced by patients adversely. And also because of that the receptionist gets more work load. So, to overcome this issue we developed an automated system that is used to allocate the appointment time of patients. This was with a view to eliminate the problem of queuing the patients , time wastage in storing, processing and retrieving information encountered by the traditional hospital system in order to improve the overall efficiency of the organization.

Keywords: Arduino Uno R3, GSM module, SMS

1. Introduction

Our project Advanced Hospital Reception System includes registration of patient's appointment through text SMS, storing their details into the system and also computerized billing in the pharmacy, and labs. Our software has the facility to give a unique id for every patient and stores the details of every patient and the staff automatically. It includes a search facility to know the current status of each room. User can search availability of a doctor and the details of a patient using the id. Our project Advanced Hospital Reception System includes registration of patients through Text, storing their details into the system and also computerized billing in the pharmacy, and labsOur software has the facility to give a unique id for every patient and stores the details of every patient and the staff automatically. It includes a search facility to know the current status of each room. User can search availability of a doctor and the details of a patient using the id. The Advanced Hospital Management System can be entered using a username and password. It is accessible either by an administrator or receptionist. Only they can add data into the database. The data can be retrieved easily. The interface is very user-friendly. The data are well protected for personal use and makes the data processing very fast.

2.Related Work

In todays world, in many hospitals there are some system like the patients have to take an appointment via online system. But, in some rural area many people have not uses smartphones or they even know about some online system or process. So, they could not take an appointment through online. Because of that they should come to the hospital and take an appointment which consume their time. So, to overcome this problem we make this system which is based on simple

text SMS technique who everyone knows.

1. *Smart queue management system using GSM technology, R.Arun, Priyesh, 2013.*

2. *Smart patient m-healthcare monitoring system with NFC and IOT, HodaRamin Hossein, 2015.*

3. *Smart healthcare monitoring system for rural area using IOT, Prabu Sevugan, 2017.*

4. *Smart card based integrated electronic health record system for clinical practice,U.Sunitha,B.Rama Murthy, 2012.*

[1] Nazia S. And Ekta Sarda6 "Online Appointment Scheduling System for Hospitals–An Analytical Study" International Journal of Innovations in Engineering and Technology (IJIET), vol.4issue1 August 2014, ISSN: 2319-1058.Outpatient services have become an important component or health care. In many times outpatients come from long distance which consume their time and also if there is doctor's unavailability then they should wait for long time. So, consume their time the hospital reception system is uses based on SMS system. [2]. Fatma PoniMardiah, Mursyid Hasan Basri, "The Analysis of Appointment System to Reduce Outpatient Waiting Time at Indonesia Public Hospital", Human Resource ManagementResearch, 3(1) (2013), 27-33.
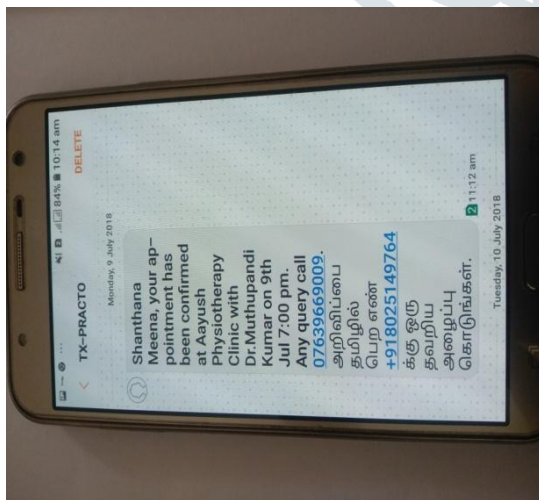
Analysis

In our project, the above figures show before and after sending an information to the patients. Here, the message sends to the patients through GSM module for giving them an appointment date and time respectively. Here, we consider one of example, the patient name is "Monika 6.0 software is used for taking an appointment details. In VB 6.0, firstly, the all patient's details save in server room. Then while sending message to the particular patient e.g. "Monika". Then firstly select the Monika and then automatically the mobile number of patients will show on display and their appointment date and time as shown in above figures. In this project "Advanced Hospital Reception System", the overall project belongs to the healthcare of the patients. And also, it is based on the saving the time of patients. In many hospitals, everywhere patients come and they are waiting for their respective appointments. But sometimes the environment of the hospital become hygienic because of lots of patients which is waiting for the appointments. So, to reduce this type of hygienic environment and to save the time of the patients "Advanced Hospital Reception System" is found. Here, the reception system which is in hospital will send the message to the patients through the GSM system. The message is containing with their respective appointments details e.g. patients name, their appointment date and time. In this project, reception system also sends multiple patients appointments through GSM. There is also the data of each patients saves in server room of Arduino system. In this project, the VB6.0 software is used for reception system to send the patients appointments.

Experimental Result

The project is related to the reception system of hospital. In this project, we are for reducing efforts of receptionist at counter of hospital were too much crowding takes place. Now in our project we have proposed that Patient will sent Text message to particular Number then he/she will get the unique id number .By using his/her unique id number they can fix up appointment

just again send his/her id number .The information collected by GSM module is given to VB.net application then its will be further passed to Arduino.The Arduino will check the required information and fix up the appointment of patient according availability of doctor. Further At the day of the appointment, the name of the patient "Monika "will display on the LCD display in the hospital. LCD display also shows the maximum 3 numbers of patient's details.

Conclusion

One of the biggest reason that appointment scheduling is getting popular day by day that it helps the patient to make the appointment to their doctor, clinic or hospital in an easier way. It makes it through the computer, access the software and makes an appointment, then to go to the hospital, wait in a line for a number of hours, just to make an appointment, with the doctor for the next week or next month. And through this, patients can also involve the health decision that they have to make It also takes care of the outdoor patient which travels from the long distance by sending them message that today's appointment is postponed because of unavailability of doctors and also gives them the next appointment date and time. So, which helps the patients to save the time. In this system, the all backup of each patient also stores in database

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