

NFC ENABLE INTELLIGENT HOSPITAL APPOINTMENT AND MEDICAL SCHEDULLING

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ABSTARCT

Patient Appointment and drugs planning is critical to manage and keep economical trailing of day to day functionalities in health sector. it should be mentioned that a well-designed appointment planning System will facilitate to deliver timely and convenient access to medical services and enhance patient satisfaction and do potency. Normally we tend to see patients returning to the hospitals and health centers and filling out registration forms and sit up for the response for an united date. Some analysis has been exhausted the past towards developing on-line and mobile enabled appointment system.

Number of these embody prioritization additionally towards planning appointment. However still there exists the realm of waiting time and additionally delay in patient being served to be explored. therefore thereupon as basis a close to Field Communication (NFC) primarily based appointment system was developed that permits patient towards sound NFC appointment card at appointment booth in hospital/clinic for creating appointment. The system will possess prioritized planning for appointments and therefore the medication assortment created by NFC card that was strictly smitten by nurse rather being machine-driven by software package.

Keywords -Arm (Lpc2148), Zigbee, Bluetooth, LCD Display (16x2)

I. INTRODUCTION

The NFC based system puts a lot burden towards scheduling of patients based on priority by the nurse who obviously put lot of room for the waiting time and the consequent delay for patient as in the previous system. To obviate these problems we now have developed an intelligent NFC based appointment system towards prioritized appointment scheduling based on age and profile of the patient. In addition the system also enables automatic calling of patient based on priority for being served by the concerned nurse.

II. EXISTING SYSTEM

Today the medication and appointment system relies on initial return initial serve bases this approach the works of patients are less. However as a lot of patient have to be compelled to get and appointment per their convenient, the on top of methodology falls short and ends up in Improper drugs delivery to emergency patient's. Even just in

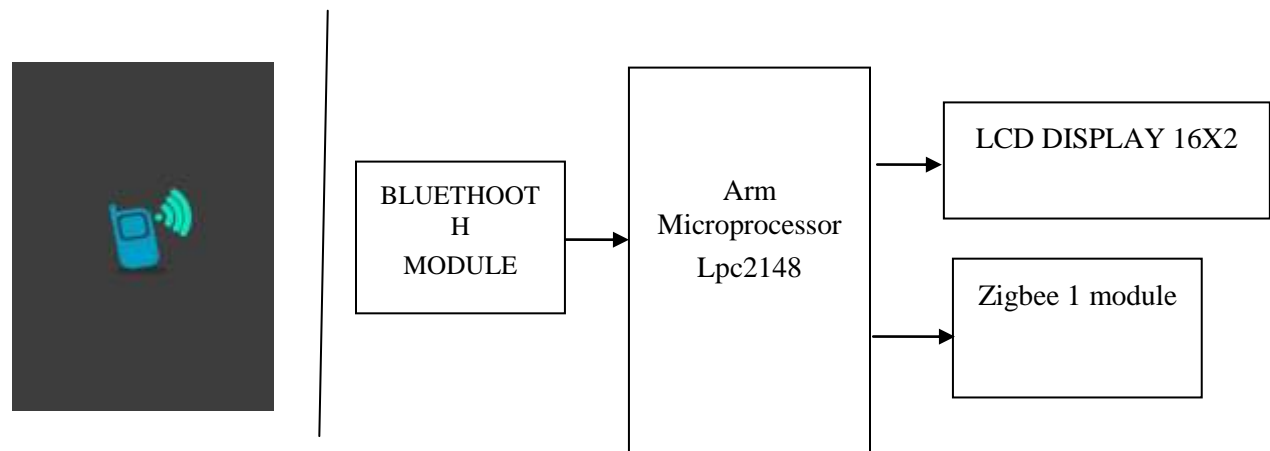
case of road accidents the patient has got to fill the registration type that is very inconvenient and painful for the patient.

III. PROPOSED SYSTEM

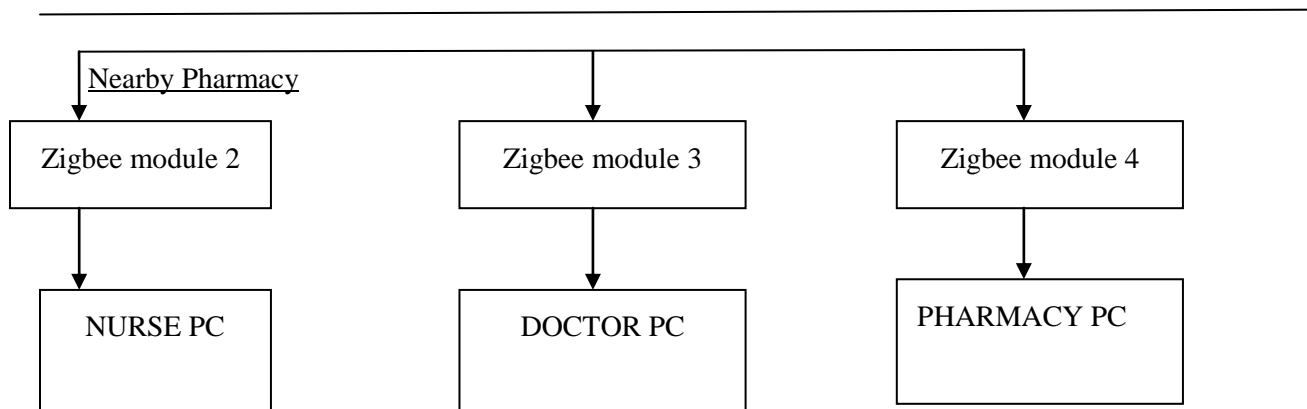
So to beat the prevailing system downside the (Near Field Communication System) NFCS Was developed during this system the info of the patient has got to be loaded and consistent with the priority of the patient, (priority depends on age and also the downside through that the patient suffer through) a system would decision to the involved patient so as to mend consequent appointment. during this system the patient will fix his /her appointment through web, conjointly the sensing element network that is connected to his complete body can provide the daily medical up report back to the close hospital

BLOCK DIAGRAM

Mobile Bluetooth Main Control System:-



Nearby doctor's clinic



The block diagram shown above is the flow diagram of the concerned project. In which the Bluetooth in the mobile communicates via Bluetooth module connected to the central system which constitute of Arm Processor (LPC2148).

ABOUT LPC2148 MICROPROCESSOR

The LPC2148 microchip belongs to ARM seven family. The LPC2148 board could be a thirty two bit ARM7TDMI-S microchip with period of time emulation. It comprises eight computer memory unit to forty computer memory unit of on chip static RAM and 32kb to 512kB of on chip non-volatile storage, the small processor works with twelve megacycle crystal frequency. The processor additionally support totally different protocols suite like ISP (In System Programming), 10 bit ADC affords variable analogue output, 32-bit timers with external event counter (with four capture and match channels). The processor additionally has RTC intrinsic therefore additional hardware for the timer isn't needed. lpc2148 has two serial terminals that is named as UART0 and UART1. The same controller additionally has SPI and I2C bus with a speed of (400kbit/s).

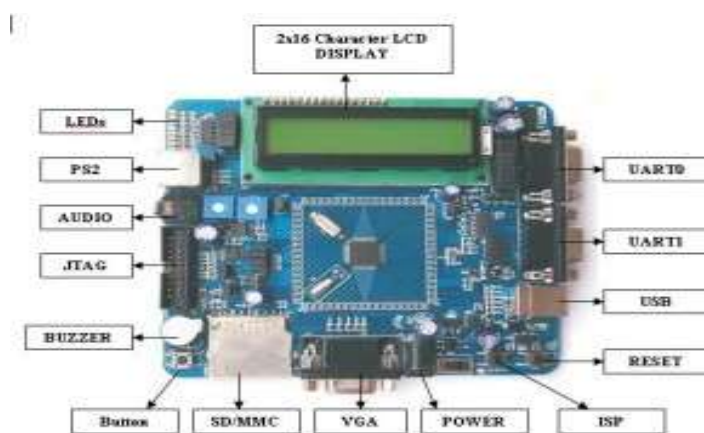


FIG .3 Arm Processor (lpc2148) Development Board.

The Arm LPC2148 Board conjointly supports VGA, and SD/MMC card's these modules' square measure integral in arm processor. The board conjointly supports AUDIO –MP3 format, conjointly a PS2 affiliations also are potential through that we will connect PS2 keyboard. so the utilization of arm thirty two bit processor will handle additional application than standard 8051 8 bit controller.

ABOUT BLUETOOTH MODULE

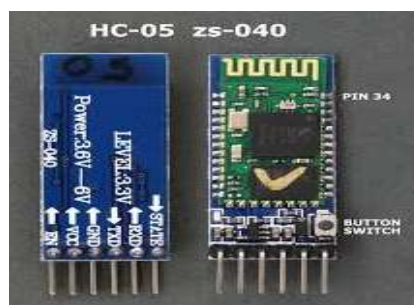


FIG .4 Bluetooth (nRF51822) Development Module.

The module shown within the fig four is of Bluetooth that has own GPIO'S port. Identical module is predicated on Nrf51822 –the multiprotocol Bluetooth four.0 low energy two.4 gig cycle per second wireless application. Through this module the most system get connected to the question that comes from the patient directly.

ABOUT ZIGBEE MODULE



FIG .5XbeeS2 Development Modules.

The module shown within the fig five is Xbee S2 Development module during which the module will get interface with lpc2148 microchip. within the complete project four Xbee modules area unit used the opposite three modules area unit connected to computer for various department in associate hospital like Nurse will get the appointment list of the patient's on that date the patient needs to come back . And same data may be deliver to the doctor. Within the same project there area unit priorities assign. Wherever nurse would get the sole the data that's needed, doctor will broadcast the message to his patient

IV. SOFTWARE DESIGN

In this proposed project, we are using LPC2148 microprocessor and need to use the following software equipment to program for it.

1. KeilVision 5.
- 2 Flash Programmer.

The Keil micro Vision is an IDE Embedded c Programming Language. In this IDE, we need to import all the utilities and libraries according of the controller. This IDE is very less difficult and is user friendly way to apply. It consists of all the C/C++ compilers, assemblers and debuggers in it. Here we need to generate a hex file to run the processor. The hex file consists of only binary numbers which is dumped in to the microprocessor. The flash magic is the programming software. The C/C++ software is written in IDE may be processed into Hex documented i.e. Hex file. By using the same hex file into the microcontroller and perform the task with application .

V. COMPLETE WORKING DESCRIPTION

In this project AN mobile app has developed during which the person will fix the date for the appointment and obtain drugs consulting from the doctor .The complete question list is send to the most system through Bluetooth. At the most system finish the question list is updated and relying upon the privileged priority of the message the message is send to the involved person. The privileged priority list is updated by the patient through

some possibility within the mobile app by simply choosing to whom he desires to send the message, as an example message may be send to nurse so as to repair appointment and to stay appointment record. Conjointly the patient will directly get connected to his involved doctor for consulting purpose. Even he will have drugs consulting kind the doctor wherever the prescription may be directly transfer to the pharmacy search.

VI. RESULT

Thus the complete project is a prototype for the product based system. In this system an attempted is made to make the system complete automatic and most trying to minimize the communication gap between doctor, clinic and pharmacy. The user should feel complete friendly system and easy to use with less interconnection in the mobile app



VII. CONCLUSION



The any development will be wiped out the project is that the whole project will be uploaded on web wherever in emergency conditions the patient will directly involved with the close doctor not solely the doctor he involved frequently. Therefore rising this project additional exactly the person will have back support once he goes out

on massive tours. as a result of from his mobile he's connected to his doctor and take doctor advise in harsh conditions.

VIII. REFERENCES

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