RASPBERRY-PI BASED E-PRESCRIBER USING Wi-Fi

C. Sathish Kumar, V. Divya Priya, S. Priyanka

Assistant Professor , Department of Biomedical Engineering , Adhiyamaan College of Engineering, Hosur

U.G. Student , Department of Biomedical Engineering, Adhiyamaan College of Engineering, Hosur

U.G. Student , Department of Biomedical Engineering, Adhiyamaan College of Engineering, Hosur

ABSTRACT: The proposed system of this project is to develop an mobile application, which help the patient and also normal person can analyze the health condition using their smart phone. Physician has to frequently visit the patient and asses his/her condition by analyzing the measured parameter. In case of emergencies, the person intimates the doctor through some means of communication like smart phone. The parametric signal value are received is directly passed through the raspberry pi ,the output can be obtained in mobile applications. In order to solve the purpose of mobile medical care ,so we can use this mobile application system. Using this new system, medical staff can track the patient essential sign from anytime and anyplace. This mobile application is simple and easy. By developing this mobile application ,we can say that, it can be compact and user friendly.

KEYWORDS: Raspberry pi , Smart phone

I. INTRODUCTION

While the Patient monitoring system has a process when the surgeon can continuously monitor the status of their problem. with that we have developed the mobile application of monitoring system with the computing the network technology and its develops in the medical field. Mobile application can not only receive the data collected by hardware device but also it can send these results to remote server in time. This method not only simplifies and speeds up the process and for acquisition , analysis and costs of equipment. Therefore, researcher have become more interested in health care. The wireless standards can used very important such as security, implementation and cost .The patient can monitoring involves handling of data. These data are transmitted securely without any permission. The web database is a system that store the data in table format and it can be plotted against the Blood Pressure and Heart Beat. The database here we have chosen SQL. It is widely used web applications. In this paper ,we proposed to development mobile application of monitoring system an android OS which is an open source, to display the reason such as Heart Beat and Pressure wave shape.

II. PROBLEM DEFINITION

The troubles found in most hospital is that continuous monitoring of essential parameter is done for ICU patients. Physician has to often visit the patient his/her status by analysis the measured parameter such as blood pressure ,Heart beat. In cases of emergencies ,the nurse intimates the Doctor through the communication like phones. A growing technology the mobile application can support the patient health care system. so the patient can take the decision easy. There has to be a some function by which the technician can measure the essential parameters himself/herself at any instant of time and update himself/herself of affected role wellness position and also take control action remotely if he/she if he desires.

III.SYSTEM DESCRIPTION

Our aim is to arise patient supervise system which has telemetry included in this system .The block diagram of proposed system is shown in figure.
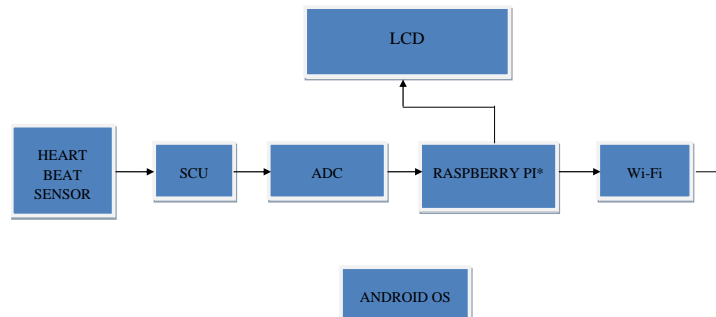
Fig.1: Block diagram

The block diagram consists of Hardware and software. This system helps the doctor to work from outside of hospital. The hardware consists of sensor , SCU , Raspberry pi and android and wireless network and display unit. Since its patient monitoring system we are two parameter for the proper acquisition. The signal can acquired from the patient body through the pulse oximeter the heart beat can be calculated, so the heart beat can be noticed by the heart beat sensing element. The indicated signal can send to raspberry pi where the digitization process can take place using A-D convertor. Raspberry pi can accept only the digital value and it can be process of single chip. It does the process of amplification, filtering. The output can be occurred in the LCD and waveform can obtained in smart phone by using Wi-Fi network.

IV. WORKING SYSTEM OF A E-PRESCRIBER IN SMART PHONES

The pressure cuff is placed on the patient and the pressure can be detected by the pressure sensor and the pulse oximeter also placed and the signal is given to the raspberry pi. To converts the analog signal into digital and the sends the digitized signal to a LCD displays and Shows the graph in mobile phones by the Wi-Fi network. Now where digital can stored in web database .The data can send to the doctor through the mobile devices. So the doctors can check the status of the patient conditions.

V. PROCEDURE TO ACCESS AN ANDROID APPLICATIONS

1. Unlock the keypad
2.Click on Wi-Fi and it will connect through the Wi-Fi module.
3. Drag towards the application
4. Click on application
5. Enter the IP Address
6. Enter the Port Number
7. Click on 'connect' and it get connected
8. Click on 'Graph' .A new window will opened and it will show the graph.
9. The graph plot against the Heart Beat VS Pressure .
10. Click on 'Suggestion'. A new window will opened and it will suggest to patient depending upon the health condition

VI. HARDWARE

VII. CONCLUSION

We have worked on a two parameter of patient monitoring system , our idea of proposal is designing the e-prescriber in health care where the patient can easily interact with the smarts phones. This system when compare to the hospital with the storing data in web database is possible. Android based patient monitoring system can give the finer solution for doctor to work from offline in the emergency. With this system we can detect two parameters of the patient body such as Heart Beat and Blood pressure .The reward of this system are portable, mobility , compact and low power consumption . The data can be storing in database and is very simple application .
In this study , we report the model for implementation of two parameters of patient. This system can be most powerful tool for doctor and nurse.

VIII. FUTURE WORK

The signal can be done by programming in SQL while storing the data in database .We can intimate to the doctor and nurse then and there once we taken the data and also we can set the different tones while receiving data to the doctor and nurse We can added more parameters to the android side

REFERENCES

[1]. Rubina A. Shaikh 2012, Real time Health Monitoring system Of Remote Patient using ARM7
[2]. Chiu-Chiao Chung ,Ching Yuan Hung, Shiau Wang, Cheng -Min Lin, 2011, Bluetooth - based Android Interactive Application for smart Living
[3]. Z. Shelby and C. Bormann. 6LoWPAN: The wireless Embedded Internet. Wiley Publishing, 2010.
[4]. M. Sathyanarayanan et al. The case for VM-Based Cloudlets in Mobile computing. IEEE Pervasive Computing , 8(4):14-23, 2009.