

A New Approach for Body Monitoring Machine Using LPC2148 & IOT

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Abstract:

The principal intention the challenge is to design a system that is used to display the affected person health condition using unique sensors. Temperature, ECG Sensors, Blood Pressure & Pulse Sensor, Arm7 Microcontroller Board, and Internet protocol server. In this proposed gadget, the sensors are related to microcontroller on this technique. The Blood strain sensor is set up through UART of the microcontroller imparting serial statistics to microcontroller. The BP sensor offers the Systolic, Diastolic and Pulse readings to the controller. These values are displayed on the LCD via the microcontroller.

Keywords — ECG Sensors, Blood Pressure, Pulse Sensor, Arm7 Microcontroller Board.

I. INTRODUCTION

In this proposed machine, the sensors are connected to microcontroller on this method. The Blood pressure sensor is mounted through UART of the microcontroller presenting serial facts to microcontroller. The BP sensor affords the Systolic, Diastolic and Pulse readings to the controller. These values are displayed on the LCD thru the microcontroller.

If the BP and PULSE values exceed their threshold values an alert is given. The records collected with the aid of controller is located on the cloud server by using the front stop software in tracking laptop. The statistics positioned inside the web page can be accessed everywhere via the use of the health practitioner and nurse.

II. LITERATURE SURVEY

This not handiest makes the world linked but also strong and comfortable. The Internet of matters in the area of healthcare additionally plays a main position in providing ease to sufferers and docs. In this proposed gadget, the sensors are related to microcontroller on this technique. The Blood pressure sensor is connected thru UART of the microcontroller providing serial statistics to micro controller. The BP sensor gives the Systolic, Diastolic and Pulse readings to the controller.

These values are displayed at the LCD with the aid of the microcontroller. If the BP and PULSE values exceed their threshold values an alert is given. The statistics gathered by way of controller is

located at the cloud server with the aid of the use of front give up software in tracking computer. The statistics positioned within the net web page may be accessed anywhere via the medical doctor and nurse.

III. BLOCK DIAGRAM

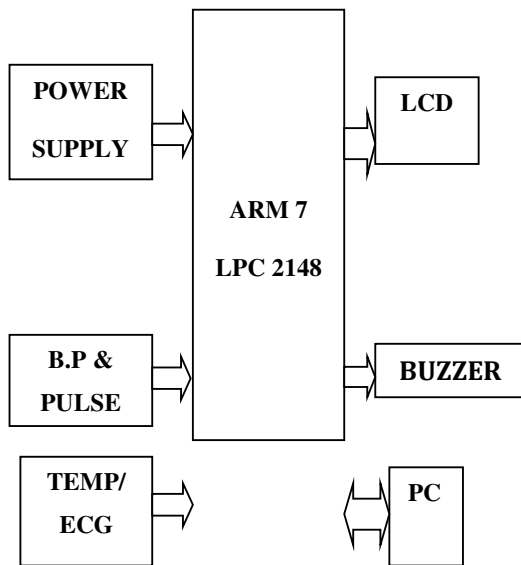


Figure 1 : Functional Block Diagram

IV. PROPOSED FRAME WORK

Capturing and sharing of critical records of the community connected gadgets via comfy service layer is what defines IOT.

In easy phrases, Internet of Things (IOT) may be described because the wireless network of devices which can be connected to every other to percentage information and information inorder to talk and convey new data with a purpose to document and analyze it for destiny use.

Internet of Things profits its full potential with the aid of using the key position playing objects i.e. “Smart gadgets which use numerous sensors and actuators that are capable of perceive their context, and through built in networking skills they could talk to each different, get admission to the open supply

Internet services and engages with the human global. This now not most effective makes the world linked but additionally strong and secure. The Internet of things within the subject of healthcare also performs a chief position in providing ease to sufferers and medical doctors.

V. COMPONENTS USED

LCD (liquid crystal display) :

A liquid-crystal display (LCD) is a flat-panel display or certainly one of a kind electronically modulated optical device that makes use of the moderate- colour or mono chrome.

Modulating houses of liquid crystals. Liquid crystals do now not emit moderate right away, as an alternative the use of a backlight or reflector to offer pictures.



Figure 2: A liquid-crystal display

BUZZER

A buzzer or beeper is an audio signaling tool, which can be mechanical, electromechanical, or piezoelectric. Typical uses of buzzers and beepers include alarm gadgets, timers, and confirmation of consumer input consisting of a mouse click or keystroke.



Figure 3: A buzzer

B.P & PULSE

Blood stress is the strain of the blood inside the arteries as it is pumped around the body by means of the heart. When your coronary heart beats, it contracts and pushes blood through the arteries to the relaxation of your body. This pressure creates stress on the arteries. Blood pressure is recorded as numbers—the systolic stress (as the coronary heart beats) over the diastolic stress (as the heart relaxes among beats). The unit which measures this is called Sphygmomanometer. Monitoring blood strain at domestic is important for many humans, specifically if you have excessive blood stress. Blood stress does no longer live the equal all of the time. It modifications to satisfy your frame's

desires. It is affected by different factors consisting of frame function, breathing or emotional nation, workout and sleep. It is exceptional to measure blood stress whilst you are cozy and sitting or mendacity down.

TEMPERATURE SENSOR:

Temperature sensor The LM35 collection are precision included-circuit temperature sensors, whose output voltage is linearly proportional to the Celsius (Centigrade) temperature. It is low cost and small size sensor. Its temperature range is -fifty five° to +one hundred and 50°C.



Figure 4: Temperature sensor

VI.WORKING PROCEDURE

Bp sensor will determine the blood pressure and gives the values to the controller .

Temperature sensor also used to detect the temperature and gives values to the controller.

VII. PICTURES OF PROJECT



Figure 5: RESULT

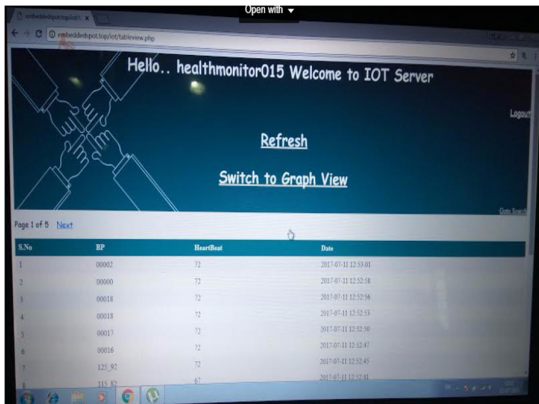


Figure 6: Displaying Message Snap

VIII. CONCLUSION

The proposed smart health monitoring device is being deployed and examined over a affected person whose private details are entered into the net portal. The patient is connected with health monitoring machine which consists of a heart fee sensor and a temperature sensor. The live graph of the affected person's heart rate and temperature is being monitored on a X amp based database server. The IOT device used right here is Intel Galileo board.

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