

IoT Patient Health Monitoring System

Contributions

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(We all verily fostered in all the technical aspects to our best. This Project is an outcome of ICIR11 course outcome 1)

Abstract

This paper presents an IoT system for monitoring the patient's body at any time via the internet.

1 Executive Summary

The system uses temperature as well as heart-beat sensing to keep track of patient health. The temperature and pulse sensors are connected to a microcontroller to track the status which is in turn interfaced to an LCD. All information about the patient's health will also be stored on the internet. If the system detects any abrupt changes in the patient's heartbeat or body temperature, the system automatically alerts the user about the patient's status and also shows details of the heartbeat and temperature of the patient live over the internet.

2 Technical Specifications

2.1 Hardware Specification

| Component Name | Description |
|--------------------|--------------------|
| Arduino Board | Arduino UNO |
| ESP8266-01 | ESP8266-01 Module |
| OLED Display | JHD162A Display |
| Passive Buzzer | - |
| Pulse Sensor | - |
| Temperature Sensor | LM35 Sensor |
| Resistors | 2k, 1k |
| LED | 5mm LED any Colour |
| Connecting Wires | Jumper Wires |
| Breadboard | - |
| Push Button | - |

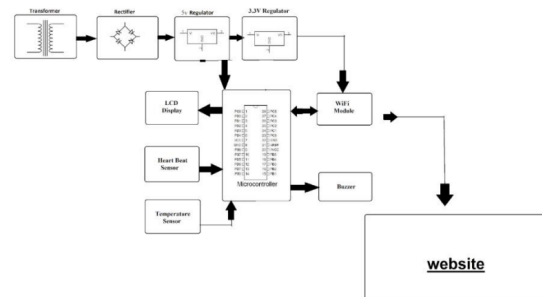
2.2 Software Specifications

- Arduino Compiler
- MC Programming Language: C
- IoT Server- ThingSpeak

3 Circuitry

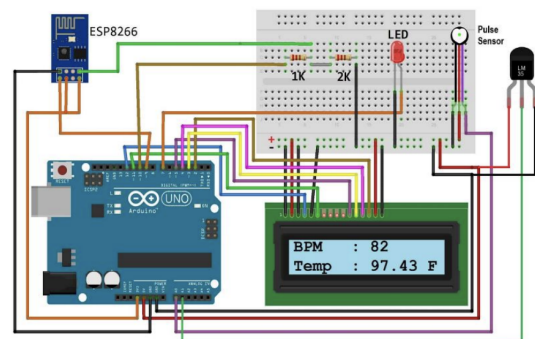
3.1 Block Diagram

This is a simple block diagram that explains the whole project. Heartbeat and LM35 Temperature sensors measure BPM temperature respectively. The Arduino processes the code and displays it to a 16*2 LCD Display. ESP8266 Wi-Fi module connects to Wi-Fi and sends the data to the IoT device server. The IoT server used in the project is ThingSpeak.



3.2 Circuit Diagram

The system consists of an Arduino, temperature and pulse sensors, an LCD display, and internet connectivity to store and transmit data.



References

- <https://ieeexplore.ieee.org/abstract/document/8441708>
- <https://www.ijert.org/an-iot-based-health-monitoring-system-using-arduino-uno>