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# Patient Health Monitoring System

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**ABSTRACT:** Healthcare is given the extreme importance now a- days by each country with the advent of the novel corona virus. So in this aspect, an IoT based health monitoring system is the best solution for such an epidemic. Internet of Things (IoT) is the new revolution of internet which is the growi research area especially in the health care. With the increase in use of wearable sensors and the smart phones, these remote health care monitoring has evolved in such a pace. IoT monitoring of health helps in preventing the spread of disease as well as to get a proper diagnosis of the state of health, even if the doctor is at far distance. In this paper, a portable physiological checking framework is displayed, which can constantly screen the patient's heartbeat, temperature and other basic parameters of the room. We proposed a nonstop checking and control instrument to screen the patient condition and store the patient information's in server utilizing Wi-Fi Module based remote correspondence. A remote health monitoring system using IoT is proposed where the authorized personal can access these data stored using any IoT platform and based on these values received, the diseases are diagnosed by the doctors from a distance

**KEYWORDS:** Internet of Things, Health, Sensors

## I. INTRODUCTION

Health is always a major concern in every growth the human race is advancing in terms of technology. Like the recent corona virus attack that has ruined the economy of China to an extent is an example how health care has become of major importance. In such areas where the epidemic is spread, it is always a better idea to monitor these patients using remote health monitoring technology. So Internet of Things (IoT) based health monitoring system is the current solution for it [1]. Remote Patient Monitoring arrangement empowers observation of patients outside of customary clinical settings (e.g. at home), which expands access to human services offices at bring down expenses [2]. The core objective of this project is the design and implementation of a smart patient health tracking system that uses Sensors to track patient health and uses internet to inform their loved ones in case of any issues. The objective of developing monitoring systems is to reduce health care costs by reducing physician office visits, hospitalizations, and diagnostic testing procedure [3]. Each of our bodies utilizes temperature and also pulse acknowledging to peruse understanding wellbeing. The sensors are linked to a microcontroller to track the status which is thus interfaced to a LCD screen and additionally remote association with have the capacity to exchange alarms. If framework finds any sudden changes in understanding heart beat or body temperature, the framework consequently alarms the client about the patients status over IOT and furthermore indicates subtle elements of pulse and temperature of patient live in the web. In this manner IOT set up tolerant wellbeing following framework viably utilizes web to screen quiet wellbeing measurements and spare persists time.

## II. PROPOSED SYSTEM

The core objective of this project is the design and implementation of a smart patient health tracking system. Fig.1 shows the overview of the proposed system. The sensors are embedded on the patient body to sense the temperature and heartbeat of the patient. Two more sensors are place at home to sense the humidity and the temperature of the room where the patient is staying. These sensors are connected to a control unit, which calculates the values of all the four sensors. These calculated values are then transmitted through a IoT cloud to the base station. From the base station the values are then accessed by the doctor at any other location. Thus based on the temperature and heart beat values and the room sensor values, the doctor can decide the state of the patient and appropriate measures can be taken.

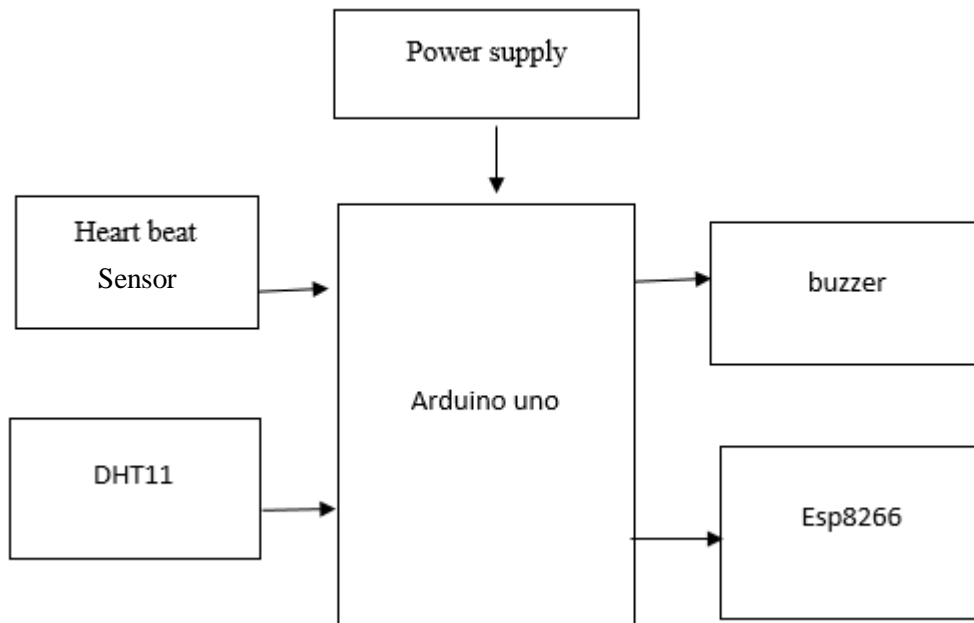


Fig.1:block diagram of IOT based patient health monitoring system.

### III. EXPERIMENTAL RESULTS

The body temperature sensor, pulse rate sensor, room temperature and humidity sensor values are calibrated using the microcontroller. The complete prototype of the health monitoring system with the sensors are shown in Fig. 5 and Fig.6,where it shows the output values of the sensors calculated and displayed in a LCD display, so that these values are visible even to the patient.

### IV. CONCLUSION

The Internet of Things is considered now as one of the feasible solutions for any remote value tracking especially in the field of health monitoring. It facilitates that the individual prosperity parameter data is secured inside the cloud, stays in the hospital are reduced for conventional routine examinations and most important that the health can be monitored and disease diagnosed by any doctor at any distance. In this paper, an IoT based health monitoring system was developed. The system monitored body temperature, pulse rate and room humidity and temperature using sensors, which are also displayed on a LCD. These sensor values are then sent to a medical server using wireless communication. These data are then received in an authorized personals smart phone with IoT platform. With the values received the doctor then diagnose the disease and the state of health of the patient. to a medical server using wireless communication These data are then received in an authorized personals smart phone with IoT platform. With the values received the doctor then diagnose the disease and the state of health of the patient.

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