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**ABSTRACT**

Health is one of the most important aspects of human life. Advancements in technology has paved ways for various techniques in health monitoring. Health Monitoring refers to continuous examination of the person's health related aspects for the purpose of treatment. Traditionally, healthcare professionals were required to be present near the patients for examination. Patients were required to stay at hospitals besides large biomedical instruments. Such systems are found to be inefficient. The proposed system focusses on the elimination of such problems using Internet of Things (IoT). Internet of Things is basically a proposed development of the internet in which everyday objects have network connectivity, allowing them to send and receive data. In this approach the patients play a major role in their diagnosis whereas the system acquires, records, displays, and transmits the data from the patient's body to the application and if required to health professionals/relatives. Hence quick provisional medication can be easily done by this system. This system is efficient with low power consumption capability, easy setup, high performance and time to time response.

**KEYWORDS:** Internet of Things (IoT)

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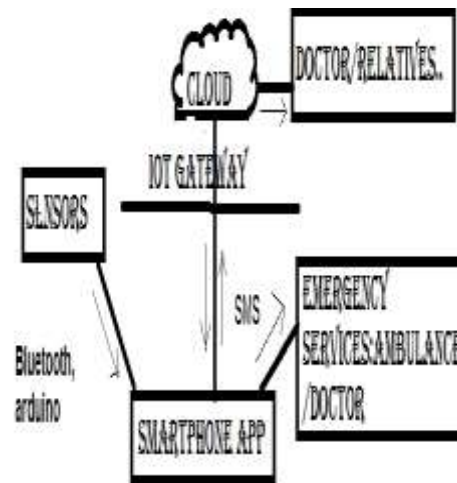
**INTRODUCTION**

IOT is all about some interconnected objects that is supposed to collect the data at regular intervals, analyze it and initiate required action, providing an intelligent network for analyzing, planning and decision making. This is the world of the **Internet of Things (IOT)**. In human health monitoring, there are many cases when it is required to take the readings of the patient's pulse rate, body temperature and count the number of steps he/she has walked in a day or so. Visiting healthcare professionals at all times is quite inefficient. Our main aim is to implement a health monitoring system which would allow patients to monitor their own health from anywhere and request for instant help as and when required. This health monitoring system comprises of an application which would manage health data which would be generated from an easy to use, portable health kit. The application would note the readings of the patient's health aspects irrelative of time and location. The system would even track the patient's location in case of an emergency and send a text message to his/her relative so that quick action would be taken and the patient's life would be saved. This system even reduces daily check-up costs.

**MATERIALS AND METHODS****System Overview**

The overall system comprises of a health kit which would be an assembly of hardware sensors and controller, an application installed on the smartphone and the user. User would initiate the procedure by starting the application. The process is as shown in the following figure:

Figure:



*Health Monitoring System Using IoT*

**Hardware Description**

The health kit required for reading the health of the patient, is implemented using the following hardware components.

**Table 1. Hardware Components used for designing the health kit**

Sr. No.	Component Name	Description
1	Arduino Uno	Controller for connecting sensors and data transfer.
2	HC-05 Bluetooth Module	Connects Arduino to the mobile application.
3	AMPED Pulse Rate Sensor	Detects the pulse rate of the human.
4	LM 35 temperature sensor	Gives body temperature in degree Celsius and degree Fahrenheit.
5	9V battery	To provide power supply to the Arduino and sensors.
6	Crimp Wires	Male female crimp wires for connections.





*Designed HealthCare Application for smartphones*



*Step Count Reading*



*Pulse Rate*



*Alarm System to notify the user*



*Location Tracking and Messaging*

## CONCLUSION

With the wide use of internet this work is focused to implement a system which would communicate through internet for better health of the human beings. Internet of things is expected to rule the world in various fields but more benefit would be in the field of healthcare. Hence present work is done to design an IOT based healthcare system using an Arduino Uno controller thereby saving time and money.

## ACKNOWLEDGEMENTS

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