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IOT BASED HEALTH TRACKING SYSTEM

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ABSTRACT

A healthy person can live a long related factors. Health monitoring systems and happy life. However, because people are made up of various sensors, gadgets, are so busy these days, they frequently and software that track and analyse various neglect their own health, which can lead to health-related parameters to provide many serious issues that are harmful to both accurate insights into an individual's them and those around them. Therefore, condition. These wearable, multi-use maintaining our health is just as important gadgets may be utilised in homes and as taking care of anything else in our hospitals and continuously monitor and lives. Improper Health care can also lead to save the data that the sensors collect. increase cost. Chronic illnesses, waste and Remote accessibility of data to individuals inefficiencies including over-treatment, as that makes the transfer easier is done by well as duplicated, unsafe, or needless tests Internet of Things(IoT).The scope and and treatments, are some of the factors focus of health monitoring systems includes driving up healthcare costs.(2). There are a wide range of components, applications, gadgets that track our health-related and functionalities aimed at tracking, characteristics, keep us safe, and provide us assessing, and managing various aspects of information so we won't disregard it and an individual's health. To define the scope become unwell. This evaluation examines and focus effectively, it is essential to the health monitoring system that employs consider the following key aspects like:

An Arduino, including its uses, applications, Physiological parameters such as features, strengths, limits, and more areas that can be updated and modified. the ECG, blood glucose level, vital signs, oxygen saturation, sleep patterns, etc.

I. INTRODUCTION

Monitoring Settings like wearable technology, remote health There have been several studies on tracking management, and clinical and maintaining health in recent years. In environments. the field of health monitoring systems, there Electronic components such as have been significant advancements and microcontrollers, sensors, significant developments that have made communication models, and user health monitoring simple. It is possible to interfaces. identify conditions in their early stages and Data Analytics and Insights like prevent them with appropriate medical care Real-time, long-term trend, and by keeping a tab on heart rate, temperature, predictive data analysis. oxygen supply, and many other health-Despite advancement in health monitoring systems, issues such as data privacy and accuracy continue to arise, potentially resulting in incorrect diagnoses. Careful consideration of interoperability standards, regulatory restrictions, and healthcare policies is necessary when using it in clinical practice.

II. SYSTEM CONCEPT

The system of health monitoring includes many hardware and software components that continuously monitors and tracks patients health. There are different microcontrollers that are used to build a health monitoring system the commonly used one is Arduino. Microcontroller or processors are the core of Heath monitoring systems. They are responsible for interfacing with different sensors in processing data and controlling peripheral devices. There are different sensors which are used in monitoring the patients health the most common used are heart rate, body temperature, blood pressure sensors and pulse oximeter they measure different parameter and they are in form of analog signals or digital signals they are passed to the processor and are further processed. To connect the data with the required platform different sensors are used for communication purpose the common used is ESP8266 WI-FI module. It is used to connect the sensors with the cloud based paltforms .There are many cloud based platforms which display the data, such as thingspeak and others or with the user created interfaces. These interfaces are used to display the data which has been

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analysed and processed according to the need of the patient. With the growing technology and advancement different feature are available which analyzes the set of data and can provide precautionary measures and can also connect the data with the guardians along with respective doctors.

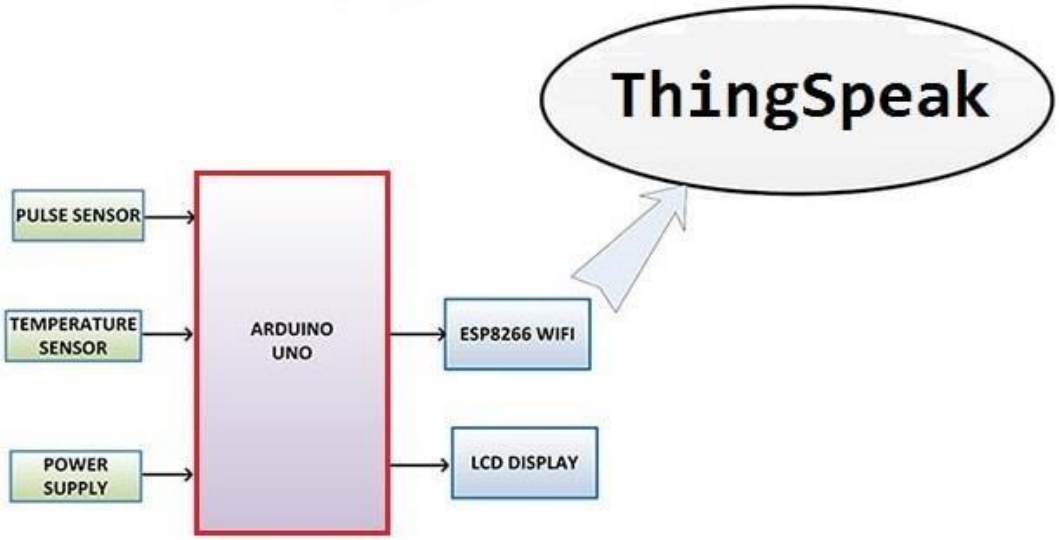

Fig 1: Block diagram of HMS (Health Monitoring System).

III. CONCLUSION

The implementation and development in the Health Monitoring System is beneficial in field of healthcare technology. Through the used of various hardware and software componenets this project addresses the need of monitoring and managing the health continuously. Health Monitoring System is essential and valuable tool in the pursuit of healthcare management. With it we can continuously manage , monitor and analyze health parameters. The system has an immense amount of potential for improving patient care, improve healthcare results, and advance overall health. Further system integration and improvement will undoubtedly improve the system's effectiveness and widespread use in healthcare settings as technology develops.

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