

ABSTRACT

Patient monitoring systems in hospitals are carried out conventionally by visiting patients, the constraints if the number of personnel and medical facilities is limited by the large number of patients will endanger patients who need priority treatment. The purpose of this study is to design an IOT-based heart rate, body temperature, and respiration monitoring devices (heart rate parameters and body temperature) with a display on the thingspeak web and there is a gmail notification that can be accessed by medical personnel. The contribution of this study is to design a health monitoring devices based on IOT (Internet of Thing) so that remote monitoring can be done by utilizing the Thingspeak web as a display of research results and giving notifications when there are abnormal values. Retrieval of data can produce accurate results that require the relaxed position of the patient and the stability of the wi-fi network so that monitoring is not hampered. This study uses a DS18B20 temperature sensor which is a digital sensor with 1 data path which is placed on the axillary and pulse sensor (SEN11574) with 1 data path that is placed on the fingers. The results of the study have been able to do data collection on patient 1 with an average error of 0.6 for heart rate parameters and 0.05 for body temperature parameters. In this study has been able to display data on the Thingspeak website and send notifications as well as researchers expected. This research has also been implemented in a similar monitoring devices system to improve monitoring facilities.

Keyword: *Patient Monitoring, Heart Rate, Body Temperature, Pulse Sensor SEN-11574, Sensor DS18B20, Thingspeak Web*