ABSTRACT

As is well known, the patient's body temperature checks are carried out in several hospitals, health centers, clinics, and so on by medical personnel using an electrocardiorgram and thermometer. This tool helps diagnose the disease suffered by the patient. Medical personnel checks the patient's body temperature. Usually, in the span of every 8 hours/day, each examination's results are different. Medical personnel, after reviewing the patient's body temperature within that time, any changes are still recorded in the patient's notebook.

In this final project, a human body temperature detector based on IoT (Internet of Things) is designed. This body temperature detector uses the NodeMCU and the LM35 sensor to detect body temperature in humans. The database is used as data storage and to update body temperature that has been previously checked using sensors. The updated body temperature is sent directly to the android application where this application contains the patient's name, ID number, body temperature, activity log, and diary. In the daily log, the results of the tests are displayed on the graph system and get notifications every 8 hours / day.

The results of this final project can monitor the temperature of the human body in real time or a lot and can be accessed on the android app. As well as easy for the nurse to determine the patient's body temperature every day with effective. Test result the measurement accuracy of the sensor the LM35 is compared with a thermometer done as much as 3times in a different time. There is an error of 2.04% of the morning, 1,96% of the afternoon, and 1.82 percent at night with the body temperature of a normal human, as well as the error of a 2.36% on the human body temperature is not normal or is experiencing an increase in body temperature.

Keywords: *Android, LM35 Temperature Sensor, NodeMCU ESP2866*