DESIGN AND DEVELOPMENT OF BODY TEMPERATURE MEASUREMENT DETECTION OF INITIAL ILLNESS SYMPTOMS BASED ON NODEMCU AND IOT

M. Rifaldi Satria Firdaus

*Electrical Engineering Study Program, Faculty of Science
and Technology*
University of Technology Yogyakarta
Jl. Ringroad Utara Jombor Sleman Yogyakarta
E-mail :
rifaldisatria11@gmail.com

ABSTRACT

During this Covid-19 pandemic, measuring body temperature is an important thing that must be considered, because the symptoms of Covid-19 are one of them fever or high body temperature from someone exposed to Covid-19. People who are sick usually have a body temperature range of more than 37.5 degrees Celsius, while healthy people have a temperature of less than 37.5 degrees Celsius. So that in this study a body temperature measuring device has been designed that can be used to determine the value of a person's body temperature in a short time and produce an accurate value, and can be done independently or without assistance from officers. In making this tool, the MLX90614 temperature sensor is used, the HC-SR04 ultrasonic sensor as a distance reading in the measurement and the buzzer as a sign or indicator combined with the ESP8266 NodeMCU and using the Blynk application as the user interface. The results in this study indicate a good success rate, namely the accuracy rate for healthy people reaches 99.79% and the precision level reaches 99.57%, while the accuracy rate for sick people reaches 99.76% and the precision level reaches 99.78%.

Keywords : Blynk, Covid-19, MLX90614, NodeMCU, Temperature