ABSTRACT

Human body temperature has close relevance to a person's health condition. In the COVID-19 pandemic era, high human body temperature is one of the symptoms of the COVID-19 disease. However, the high mobility of the population and remaining active during the COVID-19 pandemic can trigger the spread of the coronavirus. In these challenging times, technological developments can be used to prevent the coronavirus. Infrared-based thermometer is a technology that can be used to detect one of the symptoms of COVID-19, one of which is a high human body temperature. Therefore, the author wants to build a system for measuring human body temperature using the MLX90614 sensor module as infrared thermometer based on microcontroller. This system is built by applying wearable device technology so that the design uses a small sized module so that the design results can be attached on various models of glasses. The main components used in the design of this system are the MLX90614 infrared temperature sensor module, Arduino Nano as a small microcontroller, OLED display 128x64 pixel as an output medium that uses the mirroring method to display measurement data on glasses, rechargeable 3,7 Volt Li-Po battery as a power source minimum on the system, and the TP4056 module as a charging module. This system is expected to prevent the spread of COVID-19.

Keywords: Wearable Device, Infrared-based Thermometer, MLX90614, Microcontroller, Eyeglass, COVID-19.