ABSTRACT

The pandemic that hit almost the entire surface of the earth caused by the Corona Virus Disease 2019 (COVID-19) had a huge impact on human life, especially the people of Indonesia. Transmission of COVID-19 can occur through direct contact with an infected person and indirect contact with surfaces or objects used by an infected person (for example, a stethoscope or thermometer). This forces people to change their habits into new habits (new normal) and follow health protocols. The health protocols in question include maintaining hand hygiene, using masks when leaving the house, maintaining distance, and measuring temperature when entering the office in accordance with the Decree of the Minister of Health Number HK.01.07/MENKES/328/2020.

In this study, a facemask detection system and automatic body temperature measurement on a raspberry pi will be designed at the entrance of a building which will then be displayed on a monitor. Facemask detection is a term about detecting the use of masks on the face using image processing. In addition to detecting the use of masks, this system will also read body temperature with an infrared temperature sensor which aims to prevent direct contact. Then it will be processed by raspbesrry pi and then displayed on the monitor screen.

The results of the research and implementation of the device that has been made, it is found that the device that has been made is able to detect mask users with optimal results being in the daytime with sufficient lighting and the distance between the user and the device is less than 1 meter or only as far as the user's arm, which is less over 75cm. Measurement of body temperature on the device can also run well with a measurement accuracy of 0.36^{o}C and an accuracy of 99.01% with hand media at a distance of 3cm. then the results of detection and temperature readings can be displayed on the monitor screen properly. .

***Keywords**: Facemask detection, OpenCV. raspberry pi*