ABSTRACT

The emergence of the COVID-19 virus makes people around the world have to live a new lifestyle to avoid being exposed to the virus by implementing health protocols such as wearing a mask, checking body temperature, and spraying disinfectant. However after doing it all COVID-19 transmission is still big in crowded locations so it is necessary to limit visitors to avoid crowds in order to reduce the number of virus spread. In this research designing a visitor management system with an automatic hand sanitizer based on the Internet of Things using Arduino. The advantage of this system is that the automatic hand sanitizer will be installed on two doors entry and exit which can simultaneously limit the number of visitors who will be monitored through the IoT platform application. This system is designed with Arduino Uno R3 components as microcontrollers, ultrasonic sensors that will be installed in two door locations in and out with an automatic hand sanitizer. For remote monitoring using the IoT platform application with the ESP8266 ESP-01 wifi module as a link. From the test results the proper hand distance when using the hand sanitizer is from 3 cm to 9 cm and the proper volume of hand sanitizer is approximately 1 ml for a duration of 250 milliseconds. The process of uploading data from the system to the webserver takes about 9.7 seconds to 16.17 seconds.

Key Words**:** *Visitor Management, Hand Sanitizer Arduino, ultrasonic sensors, IoT*