**[Design and implementation of real time temperature monitoring and hand sanitizer dispensing system for quality health care using Arduino](https://ieeexplore.ieee.org/document/7808044/)**

**ABSTRACT**

Increased use of mobile technologies and smart devices in the field of health care exploits prolonged impact on the world. The main contribution of the work is to monitoring body temperature for differently abled persons efficiently through “Non Contact Thermometer and Hand Sanitizer Dispenser using Arduino Nano R3”. In this current scenario of global outbreak, it is advised by World Health Organization (WHO) to maintain healthy hand wash and sanitation habits. On the other hand, the main problem is the way we do it, that is by physical touch to the bottle, which in short doesn’t serve our purpose and the continuous body temperature monitoring is the one of the way to detect a corona patient. In general, distinct ranges of thermometers are available in research community. The ability of normal thermometer can measure the body temperature regularly but it also may spread the virus over the physical touch. Currently, infrared thermometers have been in use which is also known as temperature gun. The biggest manufacture of this temperature gun is china with maximum cost incurred. The impact of this lock down and Covid-19 threats make the production of this device more difficult. In this pandemic situation, the usage of Non Contact Thermometer and Hand Sanitizer Dispenser which is built using Arduino Nano R3 and sensors like MLX90614 for sensing non contact temperature and ultrasonic sensor to sense the hand for automatic disposal of sanitizer regularly. From this technique, differently abled person’s body temperature can also be found easily. This setup can be made in every house and can be used each time when housemates go out to buy essential items.This would ensure sound health for all. Through this research work, we learned real world applications of microcontrollers and embedded systems. In future, mobile application was developed on the Android platform with more intuitive in the field of health care.

**KEYWORDS**

Arduino Nano R3, MLX90614, Ultrasonic sensor, Temperature gun.