UV-C Disinfecting and Health Checkup System for Coronavirus

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***Abstract*— An automatic mobile sanitizer machine is automated, non-contact, a UV based mobile sanitizer disinfector along with body temperature, room temperature and Oxygen saturation (SpO_2) measures how much oxygen blood carries in comparison to its full capacity. This finds applications in hospitals, work places, offices, schools and much more. Ultraviolet-C Radiation, Disinfection, and also a very good disinfectant when compared to liquid soap or solid soap, also it does not need water to wash off. UV-C light is a**

subset of UV light with a wavelength of approximately 254 nanometers. UV-C lights don' t exist naturally and are germicidal since germs don' t have a natural resistance to it. Microcontrollers that can be used to take in data from sensors and process them into commands.

Keywords— UVA, disinfecting, UV-C light, Corona virus, MLX sensor

I. INTRODUCTION

The disinfecting box has an ability to autodetect of items in the box and disinfect them. In figure 1 it also shows has an additional safety features to minimize your chance of getting hurt by UV lights using appropriate switches and sensors. There are two types of power sources for Arduino as shown in the block diagram: 9V barrel plug or Arduino 5V USB plug. Either of them will work. A barrel plug can be plugged directly into the wall socket, whereas a 5V USB will require you to plug it into a phone charger adapter first, then to the wall. There are two 2-prong LED lights on the outside of the box. When you first start it, one LED should be on to indicate power and the other one should be off to indicate the UV light inside is off. Only proceed if this is the case. Put your personal device that you wish to disinfect in the box, close the lid of the container firmly until you see the indicator LED turns on. The indicator LED that we put on the side of the box shows that the switch sensors have detected closure, and is transitioning to the disinfecting mode Wait until the indicator LED turns off (after 15 minutes), This indicates that the box is done disinfecting your personal devices and you may take it out If you need your items during the 15 minutes, turn off the bulb from the outside first by either unplugging the bulbs or using the switch that comes with your LED, then open the box Note: The UV lights may turn on and remain on if the Arduino is not powered on depends on how you wired the relay module, so make sure Arduino has consistent power. The disinfecting box has an ability to autodetect of items in the box and disinfect them. In figure which is shown in block diagram it also shows has an additional safety features to minimize your chance of getting hurt by UV lights using appropriate switches and sensors.

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II. EASE OF USE

A. The use of touchless disinfection reduces the risk of human errors arising from traditional manual cleaning. UV disinfection is less effective in

shaded areas because it receives a lower dose of UV compared to directly exposed areas

B. UV radiation, in the form of lasers, lamps, or a combination of these devices and topical medications that increase UV sensitivity, are sometimes used to treat patients with certain diseases who have not responded to other methods of therapy. Also known as phototherapy, this method of UV exposure is performed by a trained measurement and others are deliberate, using specifications that anticipate your paper as one part of the entire proceedings, and not as an independent document. Please do not revise any of the current designations.

C. UVC is effective in shadowed areas, even when the equipment and furniture are moved around.
Author: Weber DJ, Rutala WA, Miller MB, Huslage K, Sickbert-Bennett E. Role of hospital surfaces in the transmission of emerging health care-associated pathogens: Norovirus, Clostridium difficile, and Acinetobacter species.

III. THEORY

The disinfecting box has an ability to autodetect of items in the box and disinfect them. In figure which is shown in block diagram it also shows has an additional safety features to minimize your chance of getting hurt by UV lights using appropriate switches and sensors. There are two types of power sources for Arduino as shown in the block diagram: 9V barrel plug or Arduino 5V USB plug. Either of them will work. A barrel plug can be plugged directly into the wall socket, whereas a 5V USB will require you to plug it into a phone charger adapter first, then to the wall. There are two 2-prong LED lights on the outside of the box. When you first start it, one LED should be on to indicate power and the other one should be off to indicate the UV light inside is off. Only proceed if this is the case. Put your personal device that you wish to disinfect in the box, close the lid of the container firmly until you see the indicator LED turns on. The indicator LED that we put on the side of the box shows that the switch sensors have detected closure, and is transitioning to the disinfecting mode Wait until the indicator LED turns off (after 15 minutes). This indicates that the box is done disinfecting your personal devices and you may take it out If you need your items during the 15 minutes, turn off the bulb from the outside first by either unplugging the bulbs or using the switch that comes with your LED, then open the box. By using the Arduino we have first tested both the sensor after testing it we have started implementation First thing we have used oled display which uses in 5v of supply to display the image and next we placed mlx sensor to indicate the temperature around us.

A. Figures

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This shows how the working is done according to the flow chart and block diagram.

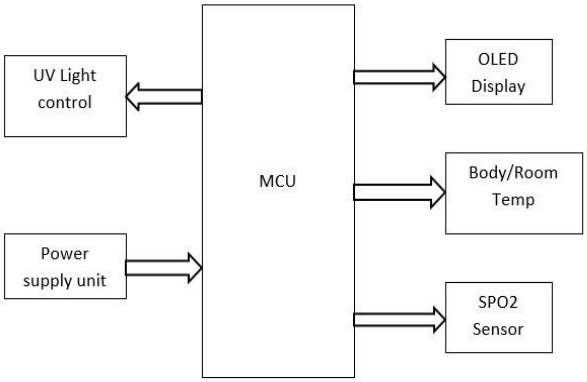

Fig.1. Block diagram of uvc disinfecting for coronavirus

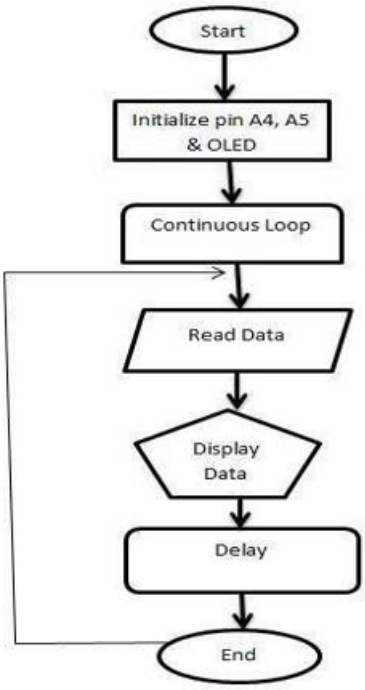

Fig.2. Flow diagram of uvc disinfecting for coronavirus

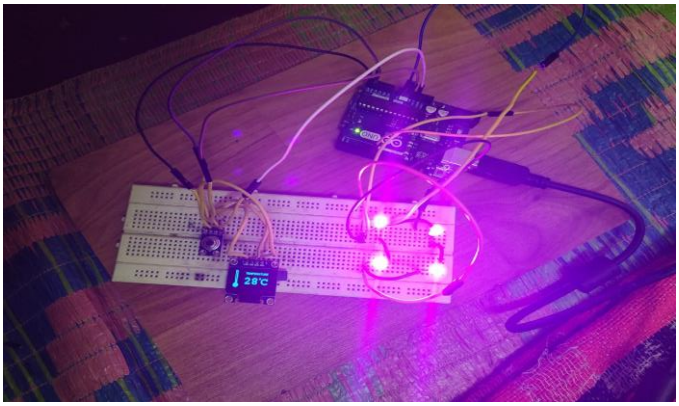

Fig.3. Flow diagram of uvc disinfecting for coronavirus

III. CONCLUSION

This paper Explains, Ultraviolet-C Radiation, is very good disinfectant when compared to liquid soap or solid soap.it is mainly used to eliminate the virus were the process is done for at least 15 minutes Measure of body and room temperature using MLX sensor At the same time spo2 sensor is used to measure oxygen saturation and the model is prepared using these components for. uv light is used for check up for corona virus.

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