INTRODUCTION:

The present scenario of the pandemic is surely terrorising the minds of people. In this situation where people are afraid of each other and are prioritizing sanitation over anything, it becomes important to keep each and every trivial thing sanitised. As we all are seeing and hearing in the current news that the Covid-19 Virus remains on the surfaces for a long period of time and any person who comes into contact with it might develop a chance to fall prey to the virus.

Many researchers have shown that paper currency can be a potential vehicle to transmit diseases amongst the people it comes in contact with. The daily transactions made using paper currency have many hands and pathogens on it before they are actually deposited in the bank. Even today there is a risk that the virus can spread through these notes if not taken care properly and not maintaining proper health hazards.

Hence this simulation project aims at developing a device where the traditional money counting device has been remodelled with the use of Ultraviolet C rays to sanitise the currency notes while counting them itself. This device will sanitise the currency notes making them free from any pathogens present on them and hence can ensure safe exchange of currency among people.

COMPONENT LIST:

Name	Quantity	Component
U1	1	Arduino Uno R3
PIEZO1	1	Piezo
R1 R3	2	1 kΩ Resistor
U3	1	LCD 16 x 2
M1 M2	2	DC Motor
U2	1	H-bridge Motor Driver
PIR1	1	-26.58 , -370.8959000442767 , -364.58308177003767 , -373.2800758448343 PIR Sensor
D1	1	Green LED
Rpot3	1	250 kΩ Potentiometer
S1	1	Slideswitch

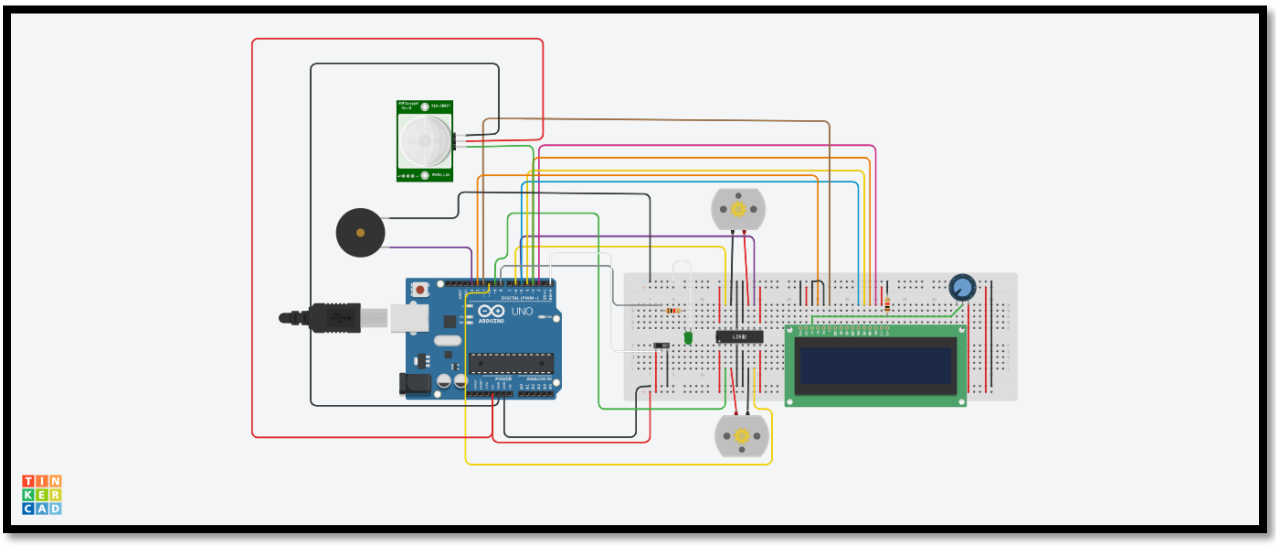
CIRCUIT OPERATIONS AND WORKING:

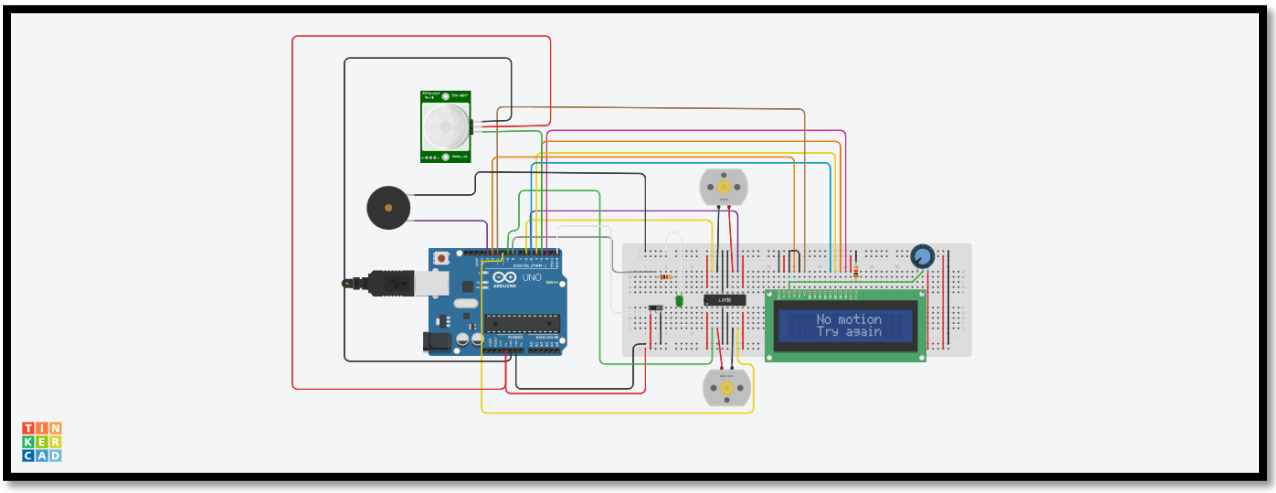
This Arduino simulated Covid-19 Cash sanitation system works in the following explained matter.

- The system contains a PIR sensor, Piezo Buzzer, LCD, DC Motor, Motor driver, Potentiometer and a slide switch.
- The circuit in the initial condition of switch off state detects no motion and asks to try again switching on the circuit.
- After switching on the circuit, using the slide switch the PIR sensor becomes active and checks for the motion of currency in the circuit. On detecting the presence of currency the led glows and lcd displays motion detected and device is active. After a time span of 5s the buzzer goes on

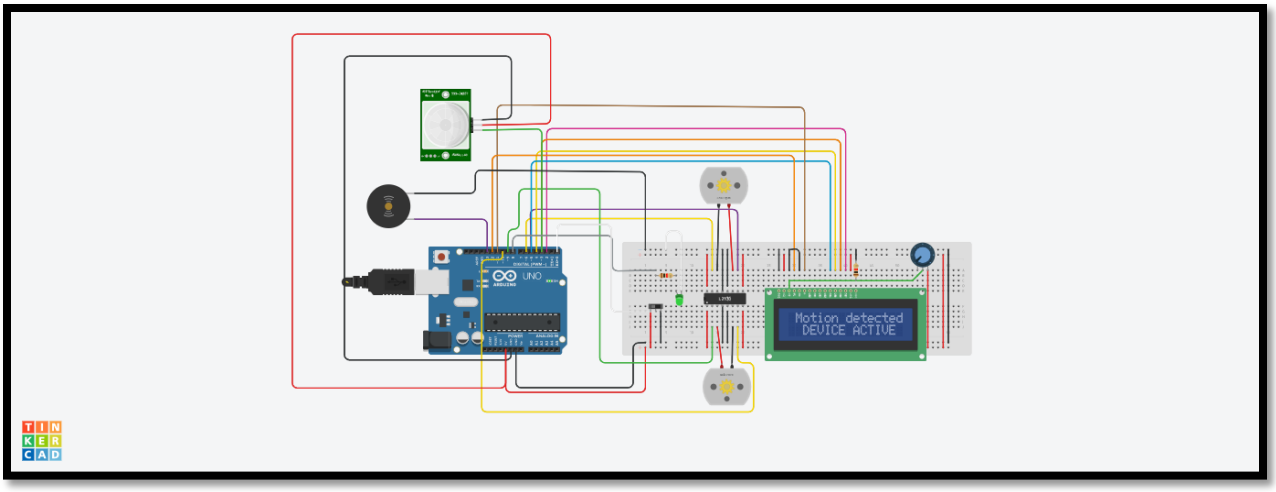
which displays the completion of the sanitation process. After the process of sanitation is over, the slide switch can be switched off and the device can be stored for further uses.

Since it is difficult to show the Ultraviolet C rays as a power supply in the simulation, in real time world UV LEDS or ultraviolet LED'S are used to sanitise the currency notes while they are being counted.





Covid-19 Cash Sanitation Model



APPLICATIONS OF THIS CIRCUIT:

- This can help in containing the spread of Covid-19 virus as well as other forms like bacteria, viruses and germs with the help of UVC sanitation.
- This can make hand to hand transactions safe and hygienic.
- In ATM'S, this module can be integrated with cash withdrawing as well as cash depositing machines.

CONCLUSION:

After working on this topic, we can conclude here that this project has a great potential in our country India where large amounts of transactions are still handled through means of cash.

Through this project I was able to learn about Arduino board and different components like PIR sensor, Buzzer, Motor driver and how different connections of these components are done with arduino. Through this I was also able to learn coding the components used in this circuit and how different codes work at different times.

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