

# MINI PROJECT

## CONTACTLESS HAND SANITIZER DISPENSER USING IOT

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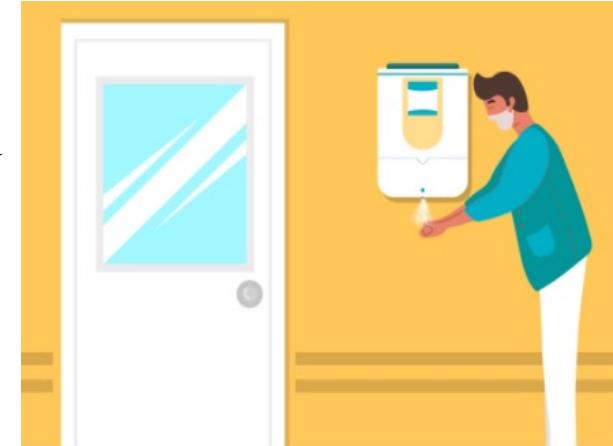


## PROBLEM STATEMENT :

Corona Virus disease has been spreading to more than **96.2M** million people and killing over **2.06M** till now.

Despite the vaccine, the second wave of the virus has came and affect almost all countries imposed **lockdown**.

So in such circumstances, **social distancing** and is the only way to tackle the deadly corona virus.



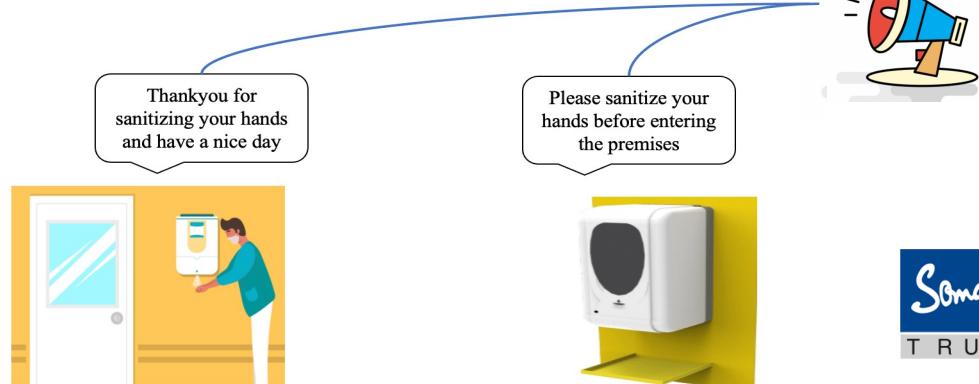
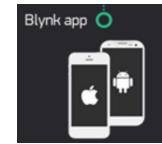
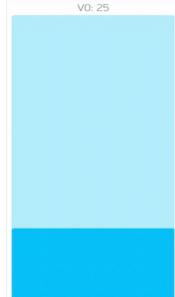
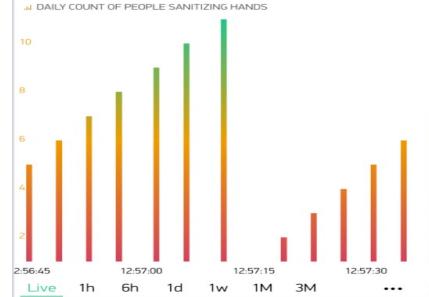
## AIM :

To Automate Hand Sanitizer bottle to avoid spread of corona virus.

## FEATURES:

- i. Automatic Hand triggered dispenser
- ii. Mobile and Email reminder for Bottle refilling.
- iii. Fluid Level Detection
- iv. Reminder for sanitizing Hands
- v. Log Record of People using Dispenser (Count people)

DAILY COUNT OF PEOPLE SANITIZING HANDS



## HARDWARE COMPONENTS:

- Arduino UNO.
- Water Pump dc 6-9V.
- IR Sensor.
- Ultrasonic Sensor.
- empty plastic container
- Node MCU Wifi module.
- Speakers
- 12 V DC Adapter
- Pipes
- cardboard box

# SOFTWARE COMPONENTS:

## 1. Blynk Server



**Blynk Server** platform enables you to monitor and control devices from anywhere in the world

responsible for all the communications between the **smartphone and hardware**. It's open-source, could easily used

## 2. Blynk App



IoT platform to connect your devices to the cloud, design apps to control them

analyse telemetry data, and manage your deployed products at scale and handle easily

## 3. Arduino IDE



The Arduino Integrated Development Environment is a **cross-platform** application that is written in functions from **C & C++**

It is used to **write and upload programs** to Arduino compatible boards

## 4. Repl.it or VS code



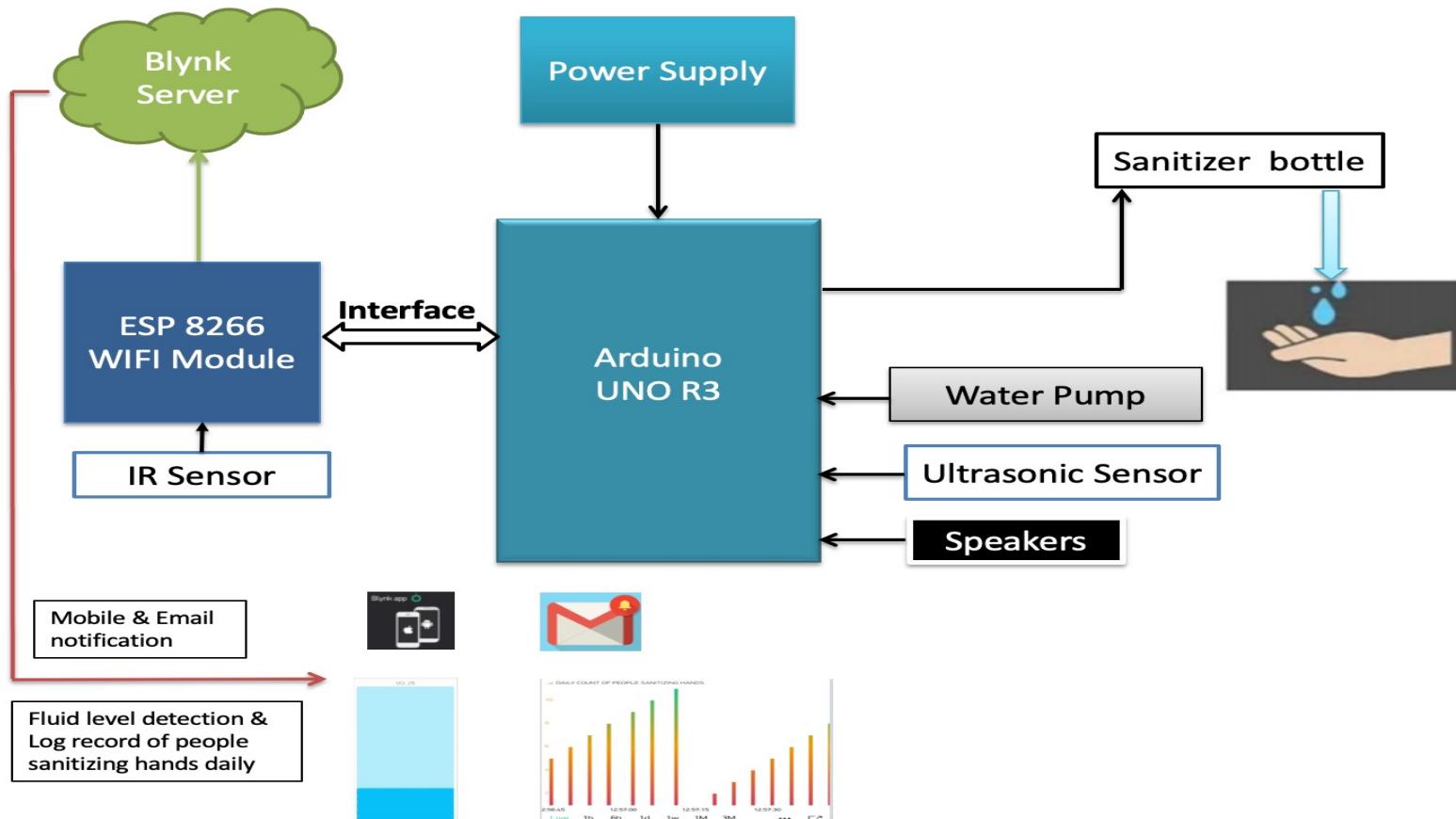
The name REPL stands for Read- Eval -Print-Loop – an **interactive**, typically console-based, programming environment

This workspace provides you with a container on a **virtual machine** where your code can run

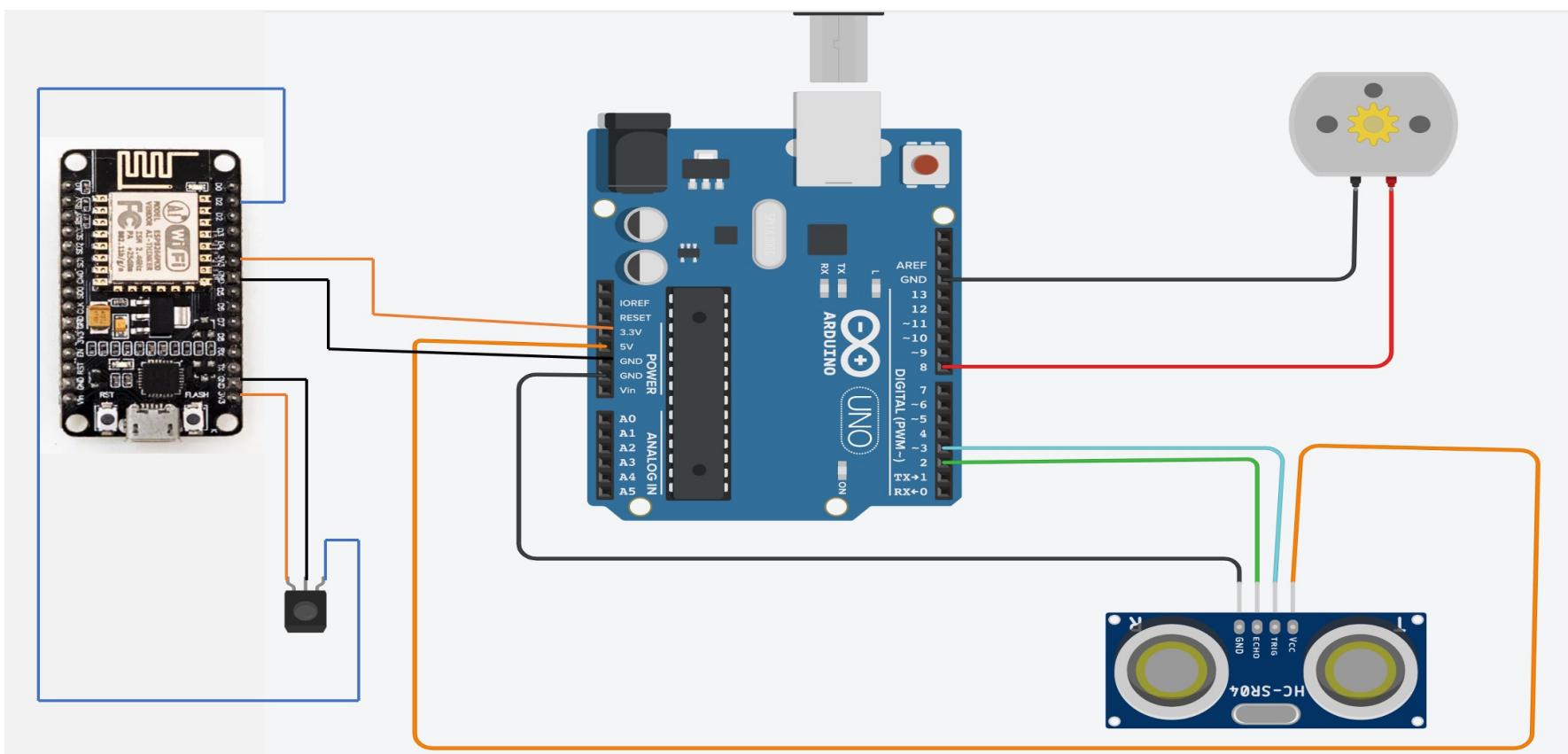
# COMPONENT LIST

Sr no	Components Required	Quantity
1	Water Pump 6-9V	1
2	Arduino UNO Board	1
3	Arduino UNO Cable	1
4	IR Sensor Module	1
5	Ultrasonic Sensor	1
6	12V adapter	1
7	Jumper Wire m/f	6 - 8
8	Jumper Wire m/m	6 - 8
9	Sanitizer Empty Bottle	1
10	Double sided Tapes	1
11	Node MCU CP2102	1
12	Water pipes	1m
13	Speakers *	2

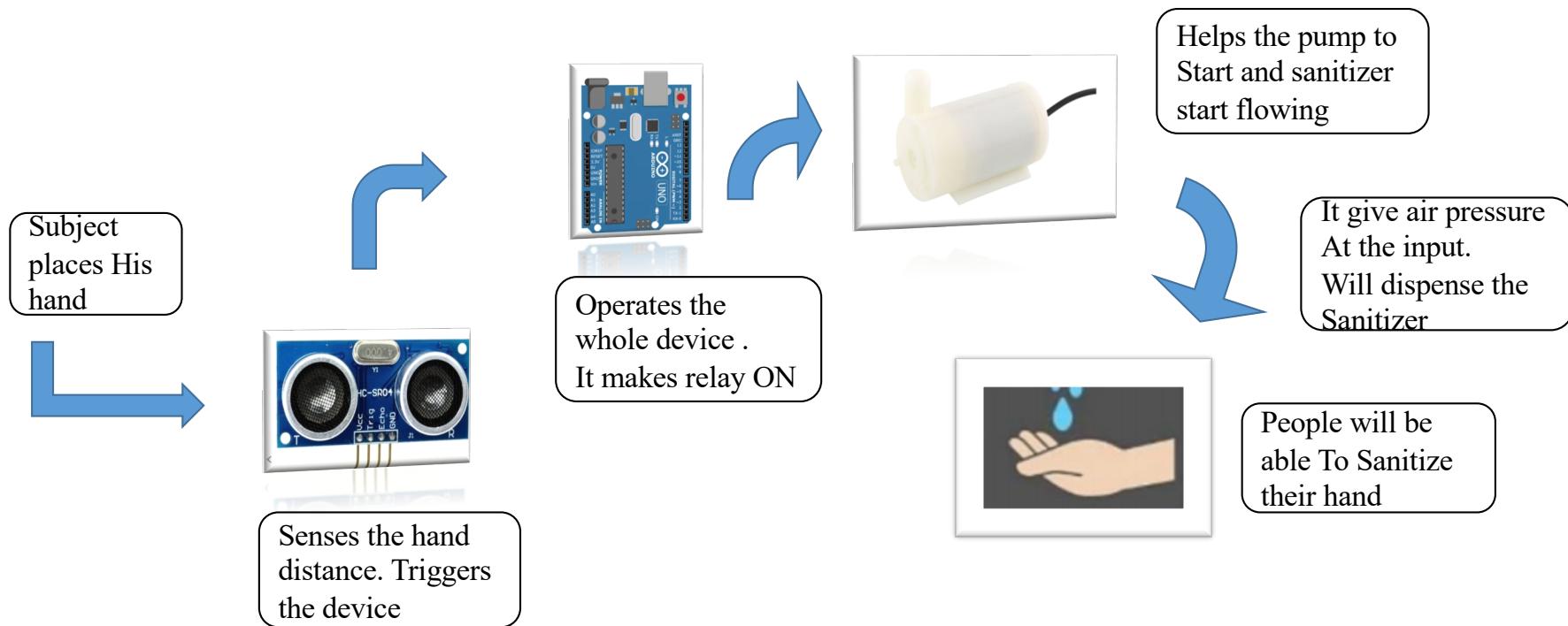
# BLOCK DIAGRAM



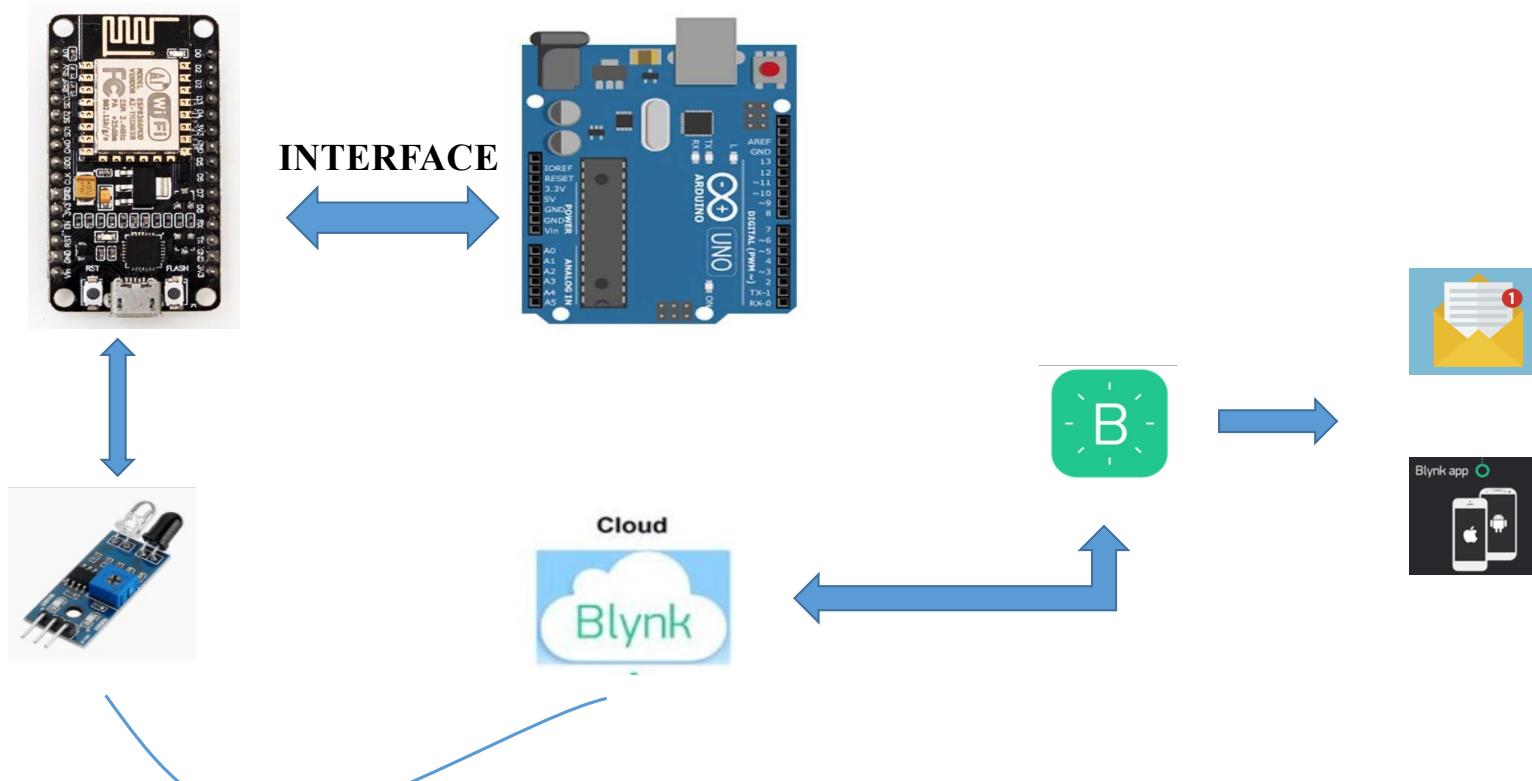
# CIRCUIT DIAGRAM



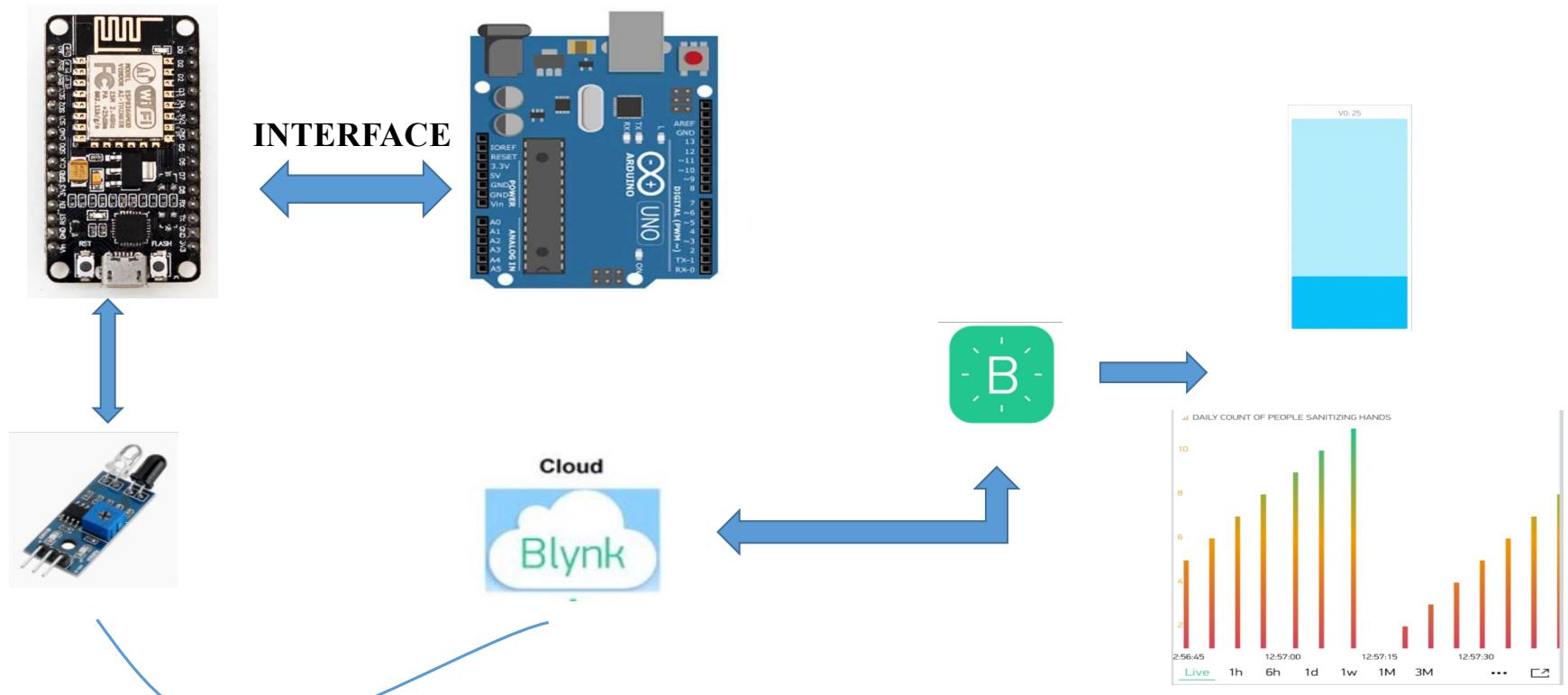
# TECHNIQUE TO AUTOMATE HAND SANITIZER DISPENSER



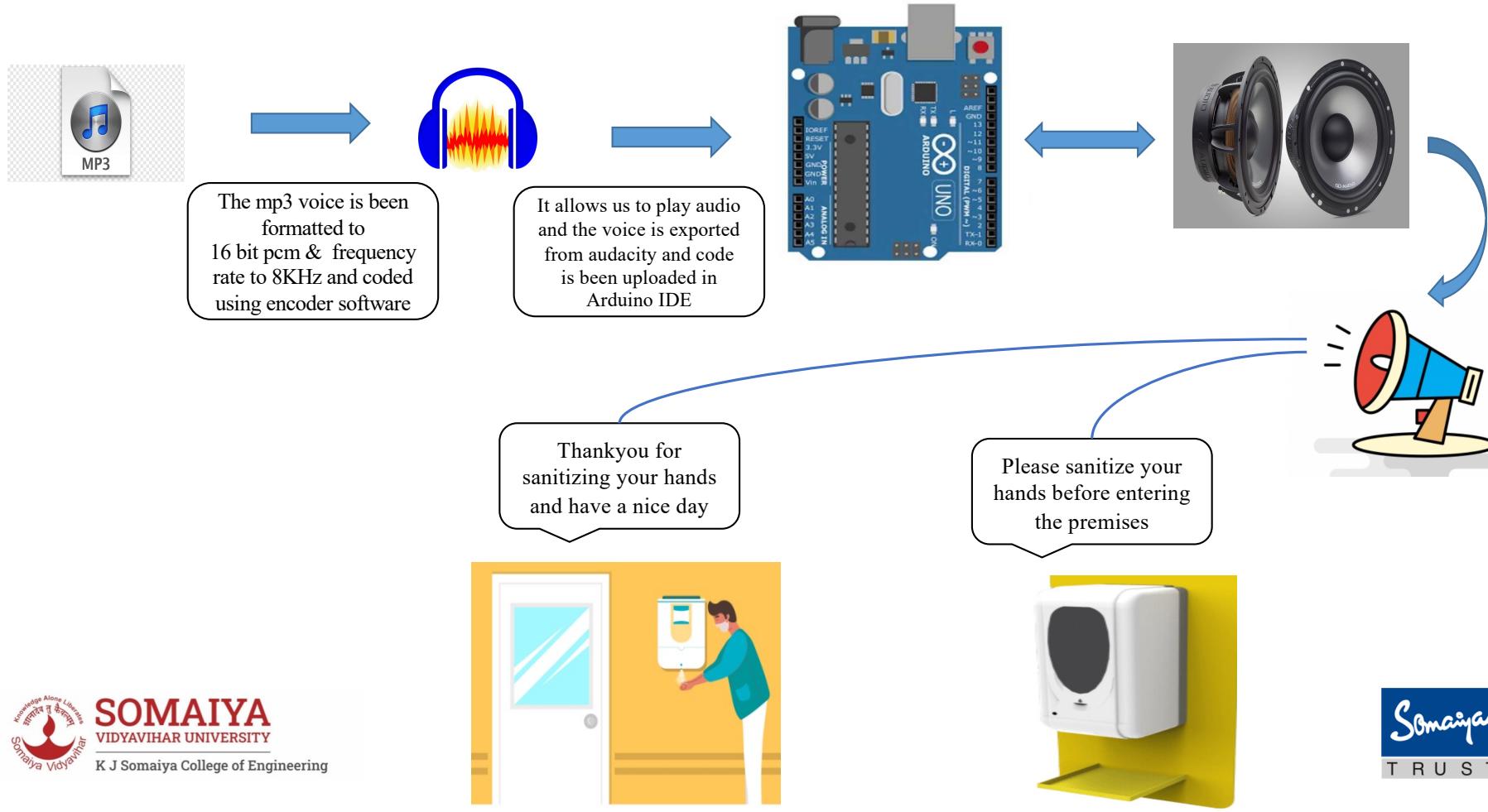
## TECHNIQUE TO GET EMAIL AND MOBILE REMINDER FOR REFILLING SANITIZER BOTTLE



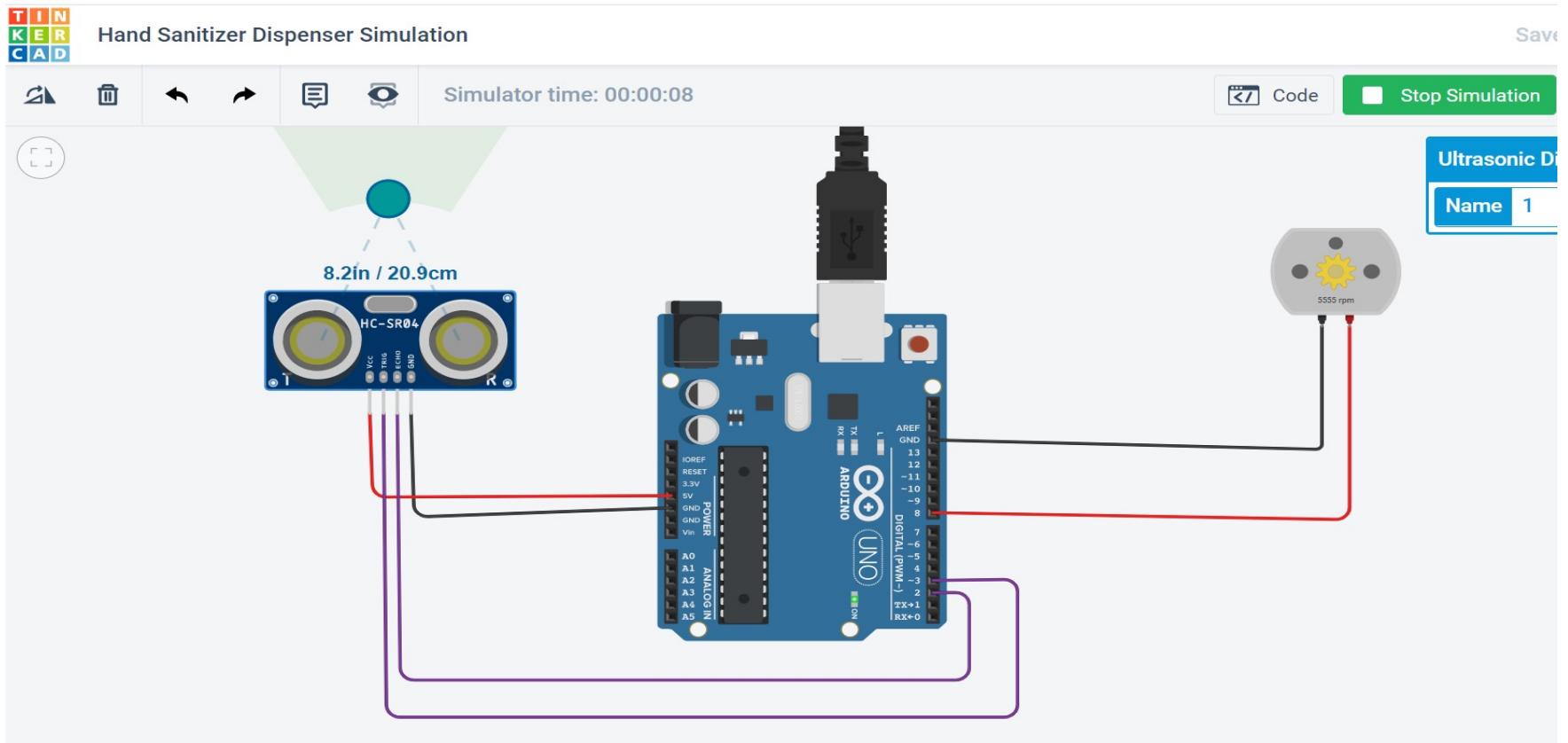
# TECHNIQUE FOR FLUID LEVEL DETECTION AND LOG RECORDS OF PEOPLE USING DISPENSER DAILY



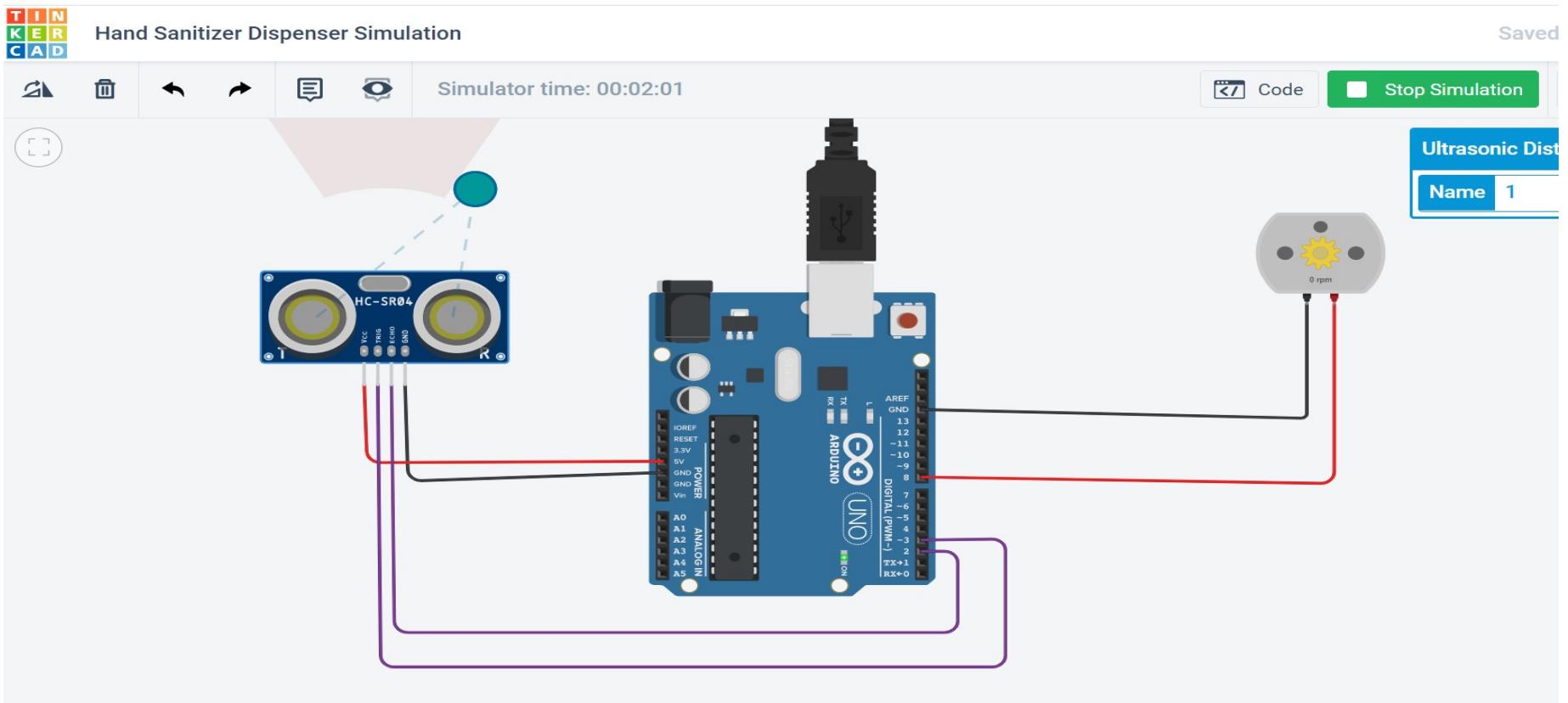
## TECHNIQUE TO GET REMINDER FOR PEOPLE TO SANITIZE THEIR HANDS



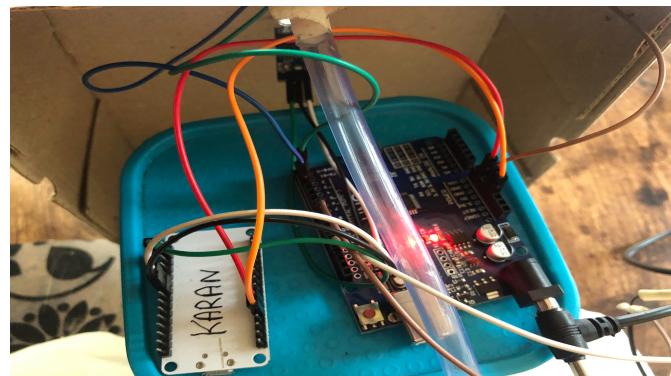
# SIMULATION RESULTS



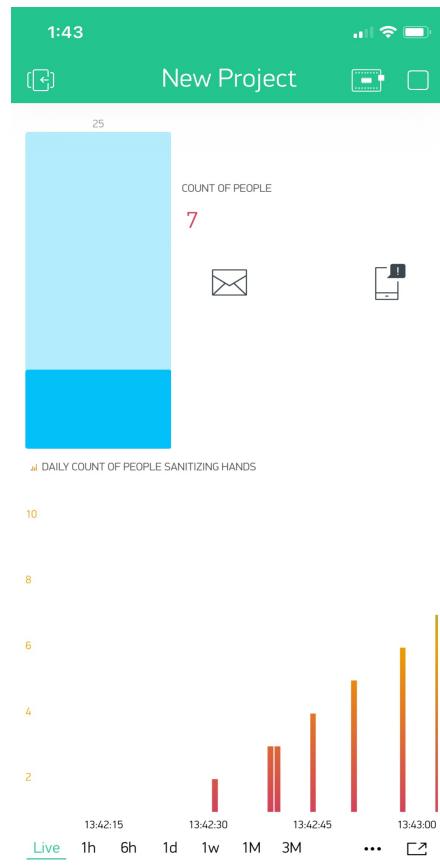
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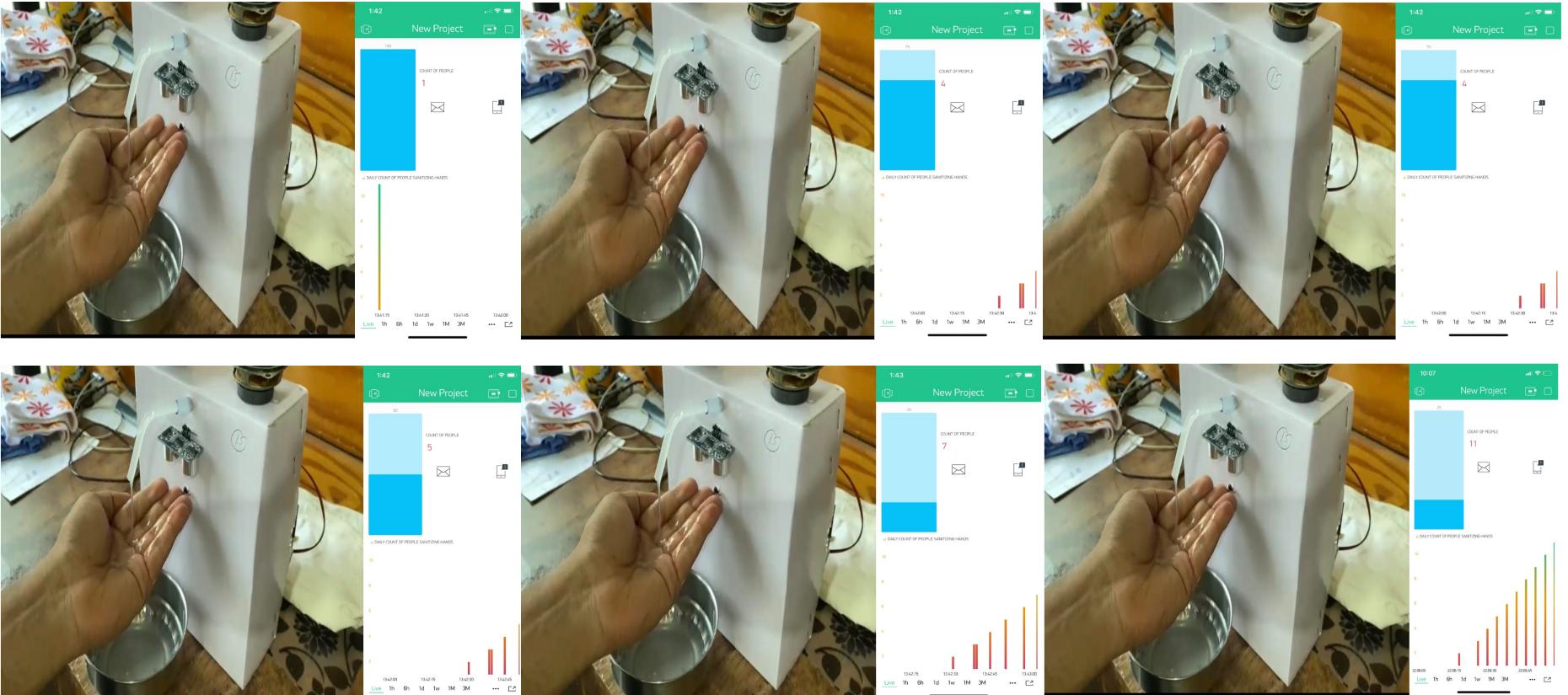
# HARDWARE DESIGN



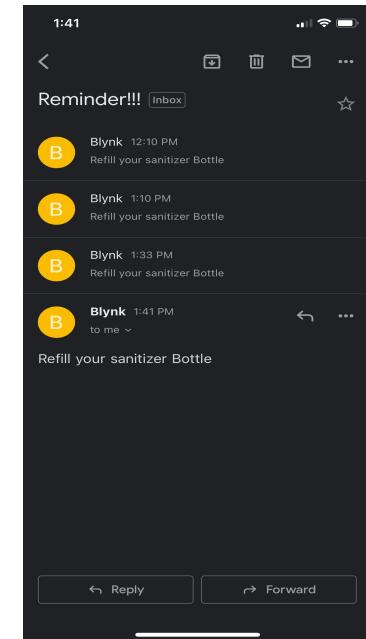
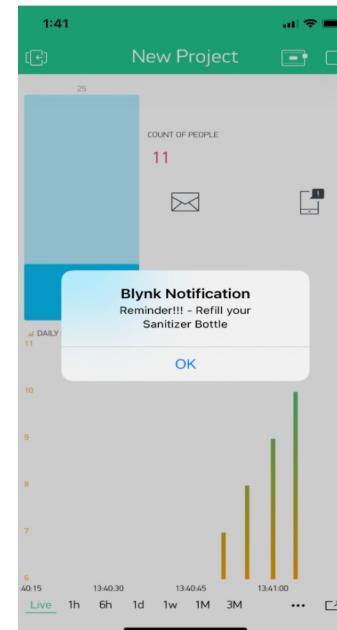
# USER INTERFACE ON BLYNK APPLICATION



# EXPERIMENTAL RESULT



# RESULTS



# COMPARISION OF PRODUCTS

## ONLINE PRODUCT



Runwet  
Aarambh...  
₹1,499  
Amazon.in

- High Price
- Limited features
- Capacity 700ml only

## OUR PRODUCT



- Cost Friendly
- Many Features
- Capacity of 1Litre

## REFERENCES

- <https://robu.in/automatic-hand-sanitizer-dispenser-using-arduino/>
- <https://www.boltiot.com/projects/sanitize-to-fight-covid-19-using-bolt-iot>
- <https://www.youtube.com/watch?v=F28Znry0qcw>
- <https://www.youtube.com/watch?v=D5oB9GbCf0I>

Thank  
you