NO-TOUCH AUTOMATIC HAND SANITIZER DISPENSER

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PROJECT IDEA

OVERALL OBJECTIVE:-

The COVID-19 pandemic has made everyone more careful of their interactions with humans and objects, a lot of public places have hand sanitizers for visitors, but they need to be manually pressed. To avoid any contact at all, some no-touch hand sanitizer dispensers are commercially available, but they are expensive and most commercial sanitizers cannot be automated.

In this project, we create a contactless hand sanitizer dispenser that can be used for any press-to-release hand sanitizer available in the market.

WHAT ARE THE INPUTS/PHYSICAL QUANTITIES MEASURED?

1. The dispenser automatically detects our hand by using the ultrasonic sensor.
2. Sanitizer level inside the dispenser is measured using water level sensor.

HOW ARE YOU GOING TO USE THE INPUT?

1. The ultrasonic sensor is used for detecting our hand and if it finds any signal , the servo motor starts automatic spraying of the sanitizer.
2. Sanitizer level inside the dispenser is measured using water level sensor, the water level sensor is used to check if the dispenser is about to run off the sanitizer.

DESCRIPTION OF THE OUTPUT:-

We have LEDs glowing as the output, indicating the level of liquid inside the container. Also, the buzzer goes on if the sanitizer is about to run off i.e the sanitizer level is below a certain level.

COMPONENTS REQUIRED:-

1. ESP32 Development Board – 1
2. B-10 Buzzer – 1
3. Breadboard – 1
4. Arduino Due Cable – 1
5. Jumper Wire (Male to Male) – 20
6. Jumper Wire (Male to Female) – 20

7. Jumper Wire (Female to Female) – 20
8. Red LED – 2
9. Green LED – 2
10. Blue LED – 2
11. Water Level Sensor – 1
12. SG90 Servo Motor – 2
13. HC-SR04 Ultrasonic Sensor – 2
14. Battery/ Battery Cell - 4