AUTOMATIC SANITIZER CUM FINGERPRINT READER

RATION DISTRIBUTION SHOP

- At the ration distribution shop, there are four steps involved:
  1. people need to give their ration card
  2. give the fingerprints
  3. sign in the register
  4. then collect ration.

- Out of those, two are the possible spots for COVID transmission:
  - Fingerprint reader
  - Register sign in

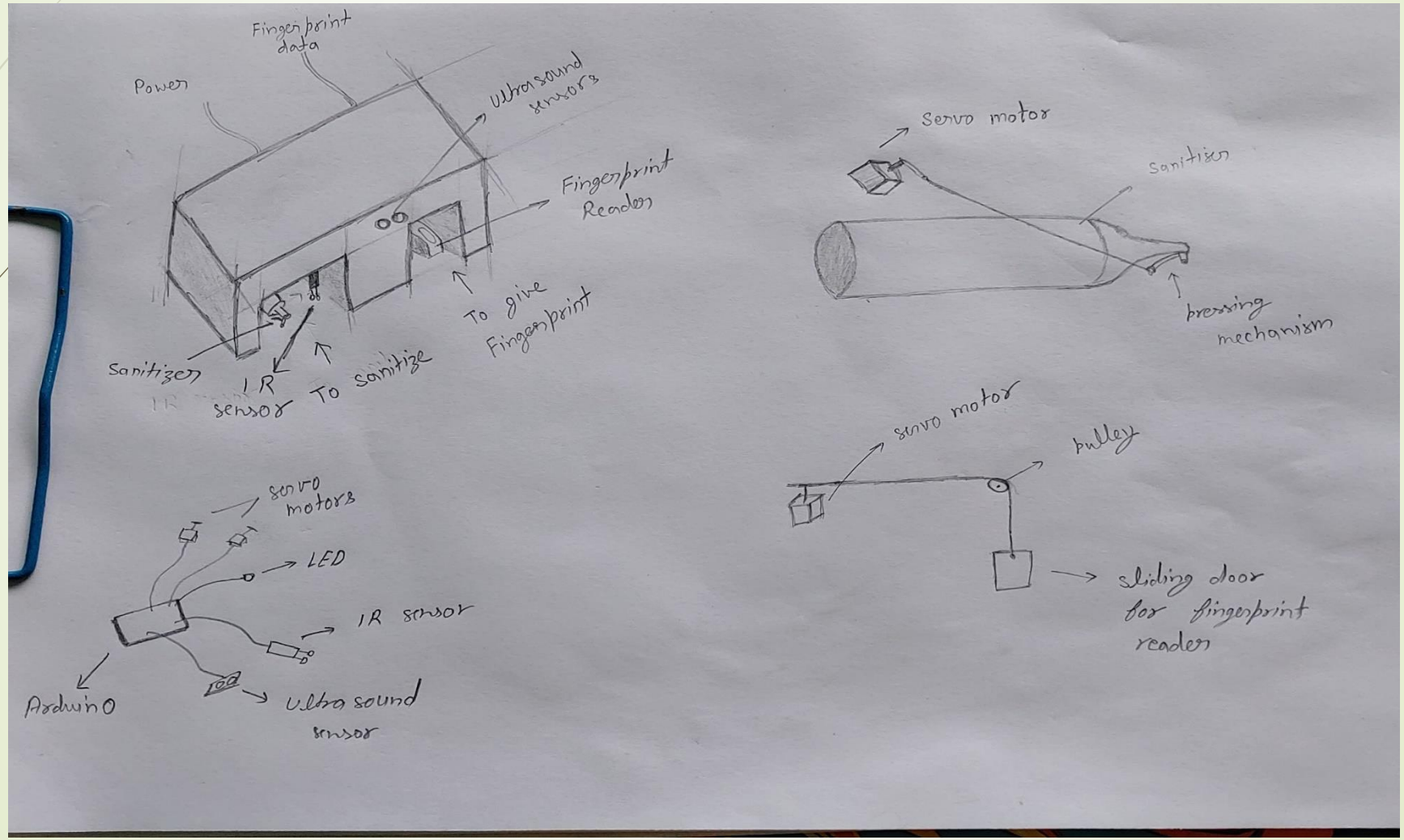
PROBLEM STATEMENT:

- People can use the sanitizer before giving fingerprint and signing in the register
- This has two problems associated with it
  - To sanitize every one has to touch the sanitizer bottle
  - Everyone will not follow it voluntarily
- Two way solution:
  - Make sanitization contactless
  - Make a mechanism, so that fingerprint cannot be given before sanitization

SOLUTION:

- A device to make sanitization automatic i.e. sensor based actuation;
  - Ultrasound sensor based
  - IR sensor based
- A chamber to place fingerprint reader which will open only after sanitization.
  - Arduino to check for the sanitizer actuation.
  - Once checked, chamber will be opened.

Sketches for the device:



COMPONENTS:

1. Card board box
2. Card board for gate
3. 1 sanitizer
4. 1 finger print reader
5. 2 servo motors
6. 1 ultrasound sensor
7. 1 IR sensor
8. 1 LED
9. Bread board
10. Jumper wire
11. Pulley
12. strings

WORKING AND LOGIC FOR CODE:

1. Person places hand below sanitizer.
2. IR signal disrupted, signals the Arduino to actuate sanitizing mechanism.
3. Arduino rotates the sanitizing servo to spray sanitizer on the hand
4. Now, the Arduino signals 2nd servo to open the gate, so that person can register their finger print.
5. Ultrasound sensor checks for the distance of the person.
6. As long as person is in 1m distance, gate remains open.
7. Once the fingerprint is registers, the person moves away and the ultrasound sensor closes the finger print gate.
8. Now, the new person comes and the whole process is recorded again.

VIDEO:

THANK YOU