MINI PROJECT-4 (QUARANTINE EDITION)

AUTOMATED SMART DUSTBIN COVER (TOUCH-FREE)

INTRODUCTION:

- During the time of Corona, it has become extremely important that we do not come in contact of anything that might contain harmful and disease-causing germs.
- In this project I have created a smart dustbin lid using Arduino, a servo motor and an ultrasonic sensor.
- Placing this particular lid on any open dustbin, removes the process of multiple people touching it with their bare hands, thus reducing the chance of any contact-spread disease.
- This also solves one more problem. According to me, open air garbage areas are still a major issue. Such areas then become breeding grounds for pests, mosquitos and flies. Hey also release excessive carbon-di-oxide, thus causing even more damage.
- My automated, portable lid can be easily placed and installed on any open garbage can, thus making it safer and secure, making the overall environment and ambience healthy and beautiful.

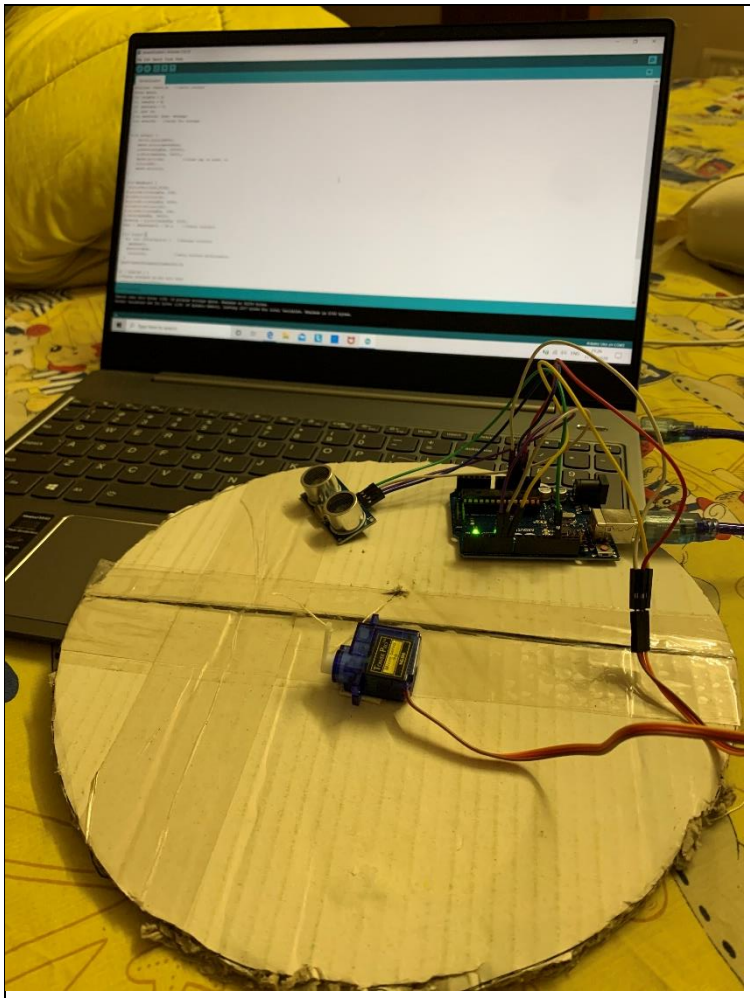
MATERIALS REQUIRED:

- Arduino Uno
- Breadboard
- Jumper Wires
- SG 90 Micro Servo Motor
- Ultrasonic Sensor
- Carboard
- A ring
- Tape, Glue
- Thread

PROCEDURE:

- The first connection was made between the Arduino Uno and the Ultrasonic Sensor. The code was uploaded to the Arduino after including the libraries required. After this, the servo motor was also connected to the board.
- After resolving few issues in the code and carefully deciding the pin numbers of the respective components, the hardware part was good to go.
- Since the shops are closed, I then used a makeshift cardboard box at home to cut out my lid shape. The lid was cut in half and then connected using tape to make sure the other half is still movable.
- The motor driver was stuck using double tape and a thread was attached using a ring to maintain a fixed position. The whole assembly was once again and checked and secured and the project was complete!

IMAGES RELATED TO THE PROJECT:



The image showing the entire project including the lid and the motor trying to pull the lid in the upward direction.