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## SYNOPSIS FOR TOUCH LESS DOORBELL USING IC LM358

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## INTRODUCTION:

We all have a doorbell at our homes. When a guest comes to our house, they search for the doorbell switch and then ring it to let us know their presence. If who came to our house and unable to find doorbell, else person is so short then they cannot find the doorbell in this case we need a solution that can find the presence of a person and rings the doorbell automatically.

Here we are making an object sensing based “**Touch Less Doorbell**” using infrared transceiver pair and some locally available components.

It can detect the presence of a person and then if the person is detected, the doorbell is automatically turned ON when the person is in-front of the door.

The touchless doorbell project is designed to provide a contactless alternative for ringing doorbells, eliminating the need for physical buttons or switches. This project employs the LM358 IC, an IR receiver and transmitter pair, and a 10k preset. By utilizing infrared technology, the system detects hand gestures and triggers the doorbell, enhancing convenience and hygiene.

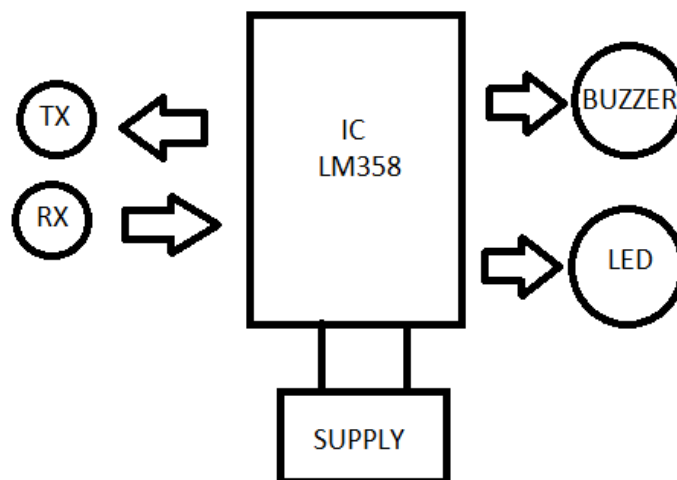
## AIM:

The aim of this project is to develop a touchless doorbell system that enables users to ring the doorbell without physical contact. By using hand gestures to activate the doorbell, this project promotes cleanliness, especially in public spaces where multiple people may use the doorbell.

## PRINCIPLE:

The touchless doorbell project operates on the principle of infrared sensing. Infrared light is emitted by the IR transmitter and detected by the IR receiver. When an object, such as a hand, interrupts the infrared beam between the transmitter and receiver, the system recognizes the gesture and activates the doorbell.

## BLOCK DIAGRAM:





### COMPONENTS LIST:

- IC LM358 With 8 Pin Base
- Buzzer
- 220 Ohm Resistor X 2
- 10K Ohm Resistor X 1
- 100 Ohm Resistor X 1
- Preset 10k
- 5mm LED RED
- 5mm LED GREEN
- Printed Circuit Board- 1
- DC Battery 9v
- Battery Cap
- Switch
- IR Transmitter
- IR Receiver Photo Diode Sensor

### ADVANTAGES:

- Touchless operation enhances hygiene and reduces the risk of spreading germs.
- Easy to use, as it only requires a hand gesture to activate the doorbell.
- Can be implemented in various settings such as homes, offices, hospitals, and public spaces.
- Low cost and simple circuit design using commonly available components.
- Can be integrated with existing doorbell systems without significant modifications.

### APPLICATIONS:

- Residential buildings: Houses, apartments, and condominiums.
- Offices and commercial spaces.
- Hospitals and healthcare facilities.
- Hotels and hospitality industry.
- Public places: Libraries, museums, restaurants, and shops.
- Any location where touchless operation is desired for improved hygiene.

### CONCLUSION:

The touchless doorbell project utilizing the LM358 IC, IR receiver and transmitter pair, and 10k preset offers a convenient and hygienic solution for ringing doorbells without physical contact. By using hand gestures to trigger the doorbell, it promotes cleanliness and reduces the risk of germ transmission. The simplicity of the circuit design and the availability of components make this project accessible for implementation in various settings. The touchless doorbell project demonstrates the potential of infrared technology in enhancing everyday interactions and improving hygiene practices.

### Branding Free Projects & Activity Kit-

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### Support –

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