Safe Untouched Doorbell

Aim

The aim of this project is to make a touch-free doorbell,such that the bell rings when someone either places their hand close to the bell or flashes a light on the LDR.

How does this system help us to keep everyone safe and to know if someone is standing at the door?

- The people visiting our house are asked to put their hand close to the LDR sensor or flashlight on it. So, the doorbell will remain untouched and we can assure that the spread of Covid is prevented.
- By any chance, if the owner is not present at home then a text notification is sent.

Interface Used

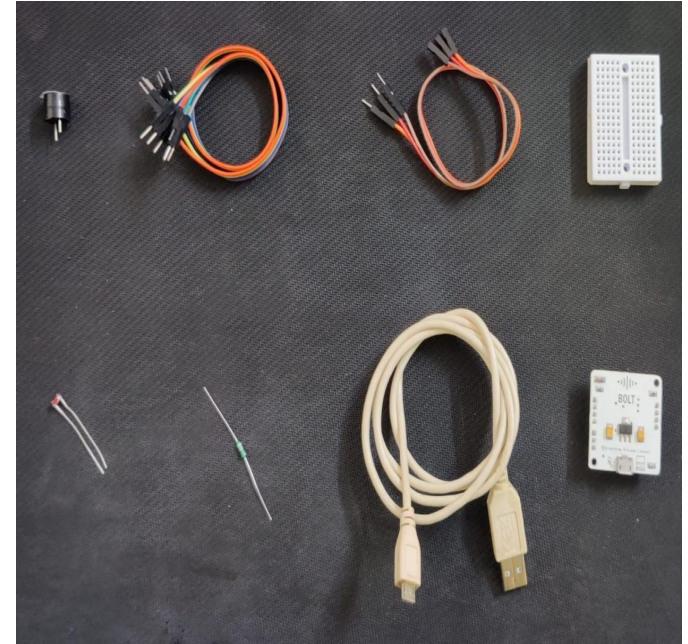Bolt IoT is the main interface.

Main Advantage of using Bolt Iot.

- It's a fully integrated IoT platform with Bolt WiFi module, cloud.
- Analytics and Machine Learning.
- Configuration using Bolt IoT is very easy.

Hardware Tools

- Buzzer   -   1
- Jumper wires(generic)   -   4
- Male/female jumper wires   -   2
- Breadboard(generic)   -   1
- LDR, 5Mohm   -   1
- Resistor 10k ohm   -   1
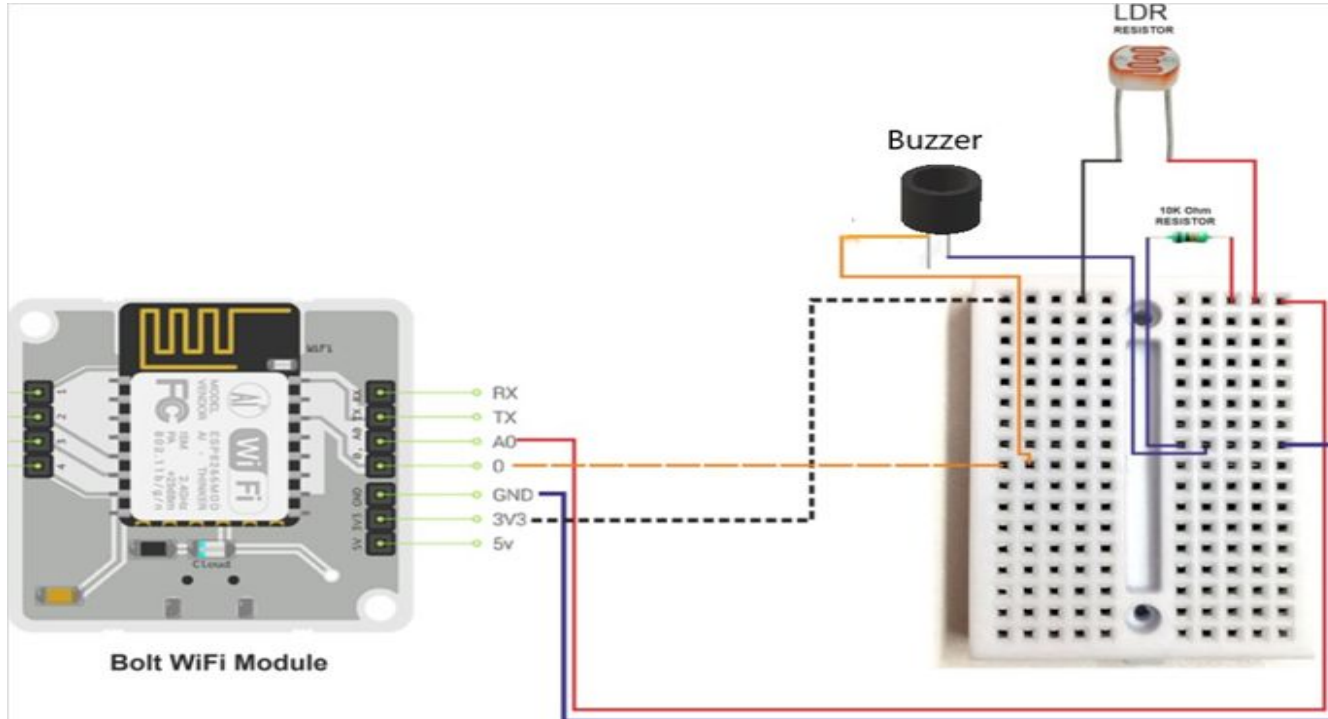- USB-A to mini-USB   -   1
- Bolt Wifi Module   -   1

Applications Required

- Bolt Cloud.
- Bolt IoT app.
- Messaging app.

Circuit Diagram

Hardware Setup

Connect breadboard with WiFi Module pins using Jumper Wires. The pins used here are:

- 3v3 pin
- A0 pin
- GND pin
- 0 pin.

Construction

- Insert one leg of the LDR into the Bolt Module's 3v3 pin (connected row of breadboard) and other leg into A0 pin(connected row).
- Insert one leg of 10k Ohm resistor into the GND pin(connected row) and the other leg into the A0 pin(connected row).
- Now, connect the negative leg of buzzer(smaller leg) into the GND pin(connected row of the breadboard) and the positive leg of buzzer (larger leg) in the digital pin 0(connected row of the breadboard).

Software Setup

- Buzzer Control Setup

  Create a new product in the Bolt IoT Cloud. Select the interface type as GPIO. After creation click on the configure icon. Select A0 in the hardware tab and write the code for it.

- Configure the hardware module with Bolt Cloud.

Messaging

- Twilio account setup

  Twilio is a third-party SMS functionality provider. It is a cloud communications platform as a service(PaaS) company. Twilio allows software developers to programmatically make and receive phone calls and also send and receive text messages using its web service APIs.

- Fill the requirements and configure it with our module.

Cost of manufacture

Bolt iot starter kit

Price -   3500/-