Aslamu alykum, I am soykot.my id is 018----. I will continue after kamrul hasn. in the schematic diagram, we can see that there is an Arduino that is connected with left side 2 IR sensor and right side one LCD display, some resistor with a REALY, and a led bulb.

A **schematic**, or **schematic diagram**, is a representation of the elements how it works and how conponents are connected with each other.

**IR sensor(infared radiation):** The IR sensor continuously senses the presence of any obstacles (a person in our case ). × If sensor 1 senses a person, it informs the controller that a person has entered so that controller can increment the count. × At the same time it gives a delay of 1sec so that the person can cross the sensor 2 and the count is maintained correctly. × When a person exits, the sensor 2 informs the controller to decrement the count. Similarly it also provides a delay of 1 sec to maintain count properly. × The count is displayed on LCD by the controller. × If there is at least 1 person is inside the hall, an LED will glow otherwise it is off.

3 pins(out,gnd,vcc)

1. Black color: ir reciver/photodiat(it recive keeps tracking for the reflecting light.if the object Is present in font of ir sensor. The light get reflected back after heating the obj.and recive detact it.
2. Light color: ir transmitter(it emits ir light)
3. Distance: 10 to 80 cm

Blue node we can control how far it can read the object.

**Control Section:** Arduino UNO is used for controlling whole the process of this visitor counter project. Arduino read these signals and send commands to relay driver circuit to drive the relay for light bulb controlling.

Black color = brale jack. Gray=usb. Black with pin = main ic.

**Display section:**  Display section contains a 16x2 LCD. This section will display the counted number of people and light status when no one will in the room. We use resistor in lcd because if volt will 20mlv it will burn.

Vss:ground pin

Vdd: powers the lcd with 5v

Vee: decides the contrast level of display

Data-pin: d0 to to d7=8 ta.

Rs: resister select

Rw:read and write.

L+:led 5v pin

L-:gnd;

E:enable connectd to microcontroller pin and toggled between 1 and 0

**Relays** are switches that open and close circuits electromechanically or electronically. **Relays** control one electrical circuit by opening and closing contacts in another circuit.

**Relays** are **used** where it is necessary to control a circuit by an independent low-power signal, or where several circuits must be controlled by one signal.

**Relay Driver section:** Relay driver section consist a BC547 transistor and a 5 volt relay for controlling the light bulb. Transistor is used to drive the relay because arduino does not supply enough voltage and current to drive relay. So we added a relay driver circuit to get enough voltage and current for relay. Arduino sends commands to this relay driver transistor and then light bulb will turn on/off accordingly.

**Realy:** A relay is a programmable electrical switch, which can be controlled by Arduino or any micro-controller. It is used to programmatically control on/off the devices, which use the high voltage and/or high current.It is a bridge between Arduino and high voltage devices.

Overview. We can control high voltage electronic devices using relays. A Relay is actually a switch which is electrically operated by an electromagnet. The electromagnet is activated with a low voltage, for example 5 volts from a microcontroller and it pulls a contact to make or break a high voltage circuit.

**.Our next group member simual will continue form the next slide.**

This counter can count people in both directions. This circuit can be used to count the number of persons entering a hall/mall/home/office in the entrance gate and it can count the number of persons leaving the hall by decrementing the count at same gate or exit gate and it depends upon sensor placement in mall/hall. It can also be used at gates of parking areas and other public places.

If there Is at least one person in the room the light will be on otherwise it will be turn off. We can add anything else like fan, air-conditional etc. by using this system.