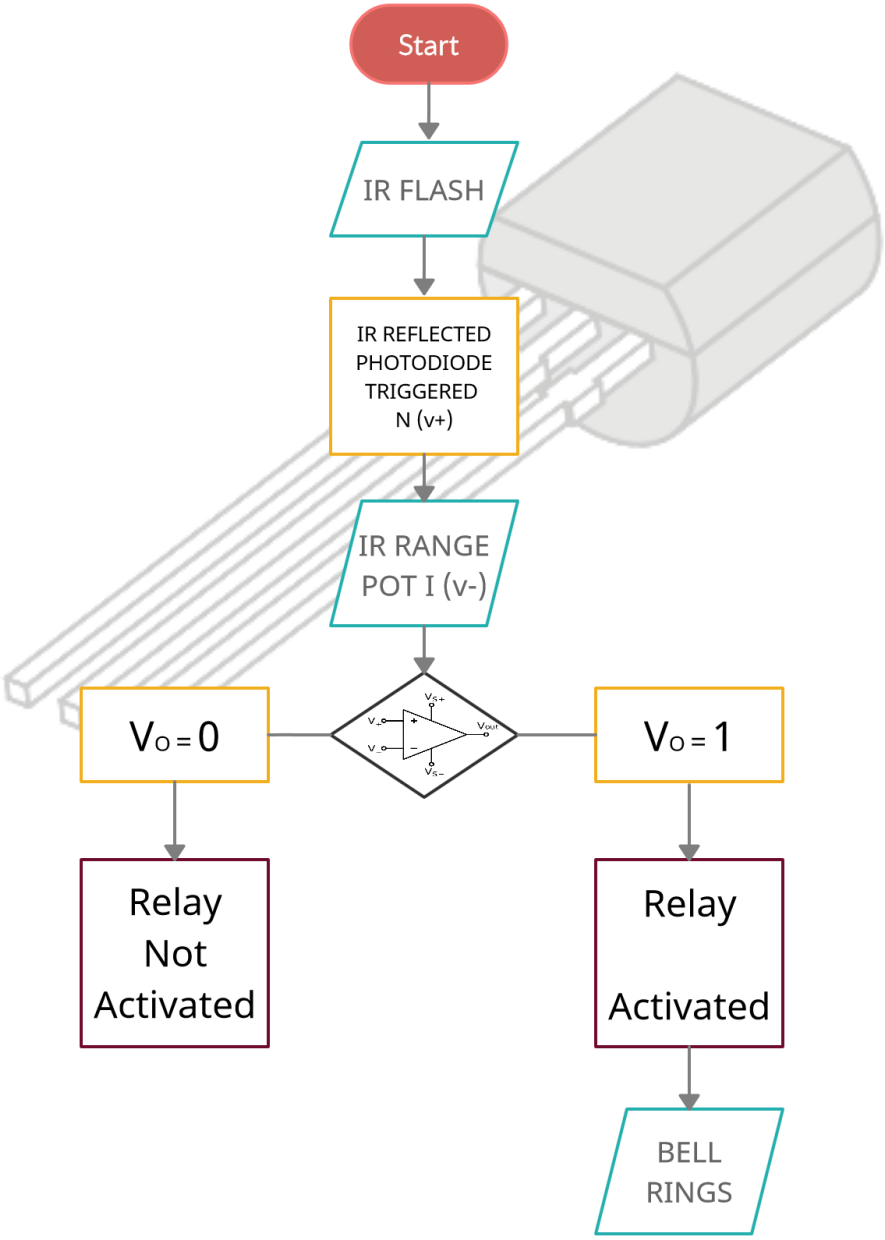
FLOW CHART EXPLANATION

Initially the circuit needs to be power by a help of an external source like battery or direct rectified outputs. And some minor adjustments in the circuit needs to be done so that the range of the sensor gets adjusted.

FLOW CHART OF THE CIRCUIT



1. When the circuit is powered, IR LED gets turned on till the circuit gets disconnected from the supply. So that whenever the obstacle (hand) gets near to the sensor, infrared rays from IR LED gets reflected.

2. The reflected rays directly fall on to the photodiode, then the resistance of photodiode gets altered with respect to the intensity of infrared rays falls on it. So, it produces a potential difference and the same is fed into non-inverting input of the Op-Amp.

3. Inverting input of the Op-Amp is connected to a potentiometer which is used to adjust the voltage across the pin and range of the sensor.

4. If voltage across the inverting input is greater than the voltage across non-inverting input of the Op-Amp, then the potential across Output of the Op-Amp will be LOW.

5. If voltage across the non-inverting input is greater than the voltage across inverting input of the Op-Amp, then the potential across Output of the Op-Amp will be HIGH.

6. If the voltage across output terminal of the Op-Amp is HIGH, then the circuit gets activated and the same is indicated by a Red Diffused LED. And the Relay gets triggered, bell circuit turns on.

7. When the obstacle (hand) is not detected, voltage of the non-inverting input should be lower than the inverting input of the Op-Amp. So that the circuit gets not activated.

8. When the obstacle (hand) is detected, voltage of the non-inverting input should be higher than the inverting input of the Op-Amp. So that the circuit gets activated, bell rings.