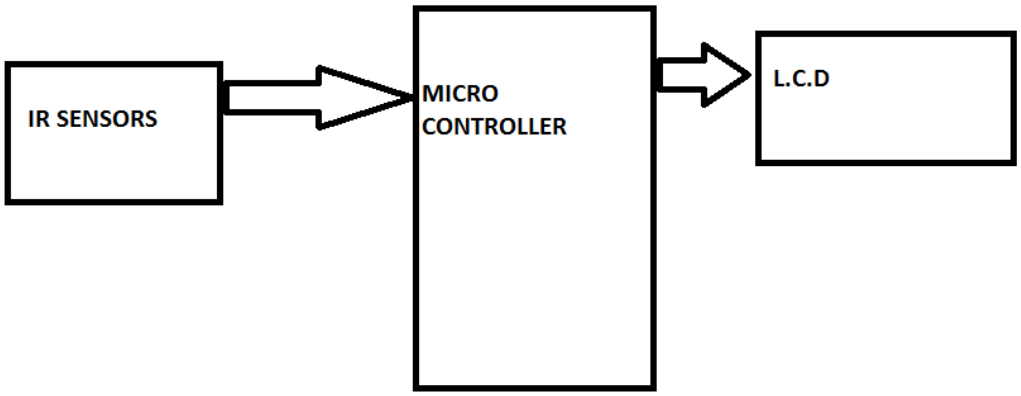
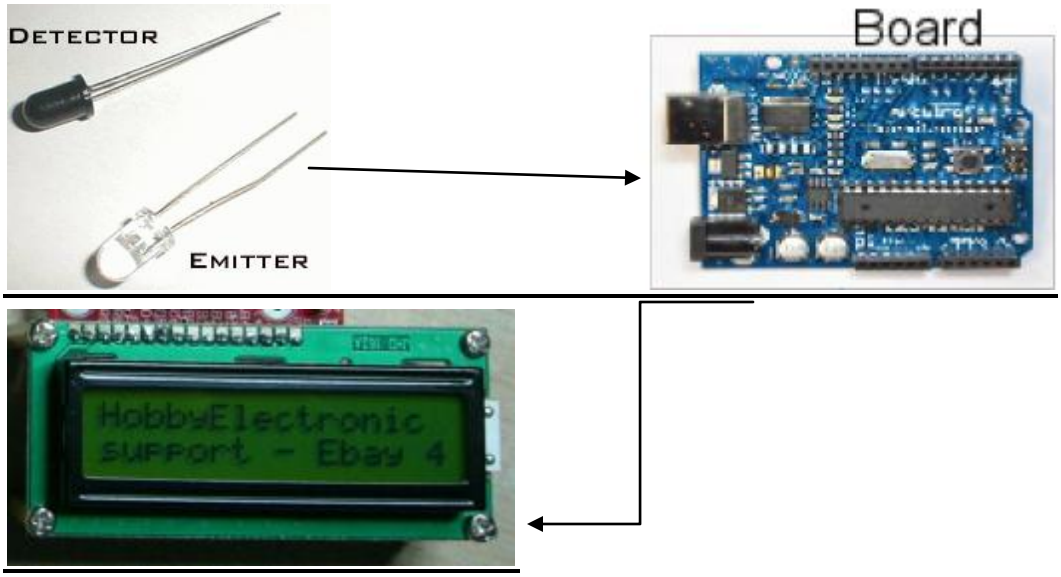
AUDIENCE COUNTER

SYNOPSIS

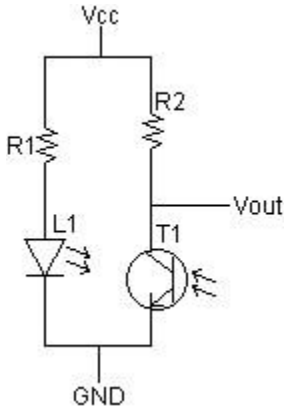
The objective of the project is to count the number of people inside a building, office or any other area with entry exit points. The setup basically consists of a IR sensor module used at the entry points to detect the people entering when the person passes from in between the IR pair. This generates an interrupt at the controller which then updates the count.

ARCHITECTURE





HARDWARE INVOLVED



The system is comprises of infrared transmitter and receiver pair along with the microcontroller and LCD. The infrared transmitter and receiver pair costs Rs20 each. The IR sensor connected to the ADC keeps on sending values to the ADC which in turn generates interrupts and the value is captured is evaluated and the count is increased accordingly .

SOFTWARE

The software is a simple one although is comes out after a long and strenuous amount of testing and experimenting with the devices.

The ADC value returned from the sensor is examined as it remains constant when the sensors are in place and not one passes but once someone passes from between the value at the ADC increases and if it increases above a certain threshold then the counter is updated.

LEARNINGS

- How to use multiple ADC values in the micro-controller.
- How to synchronize between the various values coming into the ADC and provide sufficient time for all.
- how to select the resistors so that the current generated gives you the desired results.

CHALLENGES

- finding the correct values for the resistors in the circuit as the range to the emitter and detector pair got effected or it would sometime not provide the correct value .

REFERENCES

none