# REPORT ON THE PIR SENSOR-

**PIR is a sensor that detects the infrared light radiated by a warm object. It consists of mainly pyro electric sensors which make changes in the temperature into electric signal. When infrared light strikes a crystal, it generates an electrical charge.**

## WORKING PRINCIPLE OF THE PIR SENSOR:

It is the one of the most complicated sensor among the other sensors like photocell etc. Mainly the PIR sensor consists two sensitive slots. When the sensor is kept idle for some time and when a person, animal or any other warm body passes by this sensor it traps the heat in one half of the slot of the PIR sensor which brings a positive differential change. And again when the body leaves the sensing area the same things happens in the reverse order and brings a negative differential change in the other half of the PIR sensor. After the process happens the pulse that what we have obtained is to be detected.

## ALTERNATIVE SENSORS OTHER THAN PIR:

There are no alternate sensors like PIR sensor.

## ADVANTAGES OF THE PIR SENSOR:

1. Used in military for laser range finding, night visions and heat seeking missiles etc.

2. They work very well even in daylight.

3. Security alarms and automatic lighting.

## DISADVANTAGES OF THE PIR SENSOR:

1. It works very well in the line of sight but not at the corner sights.

2. It is insensitive for the slow motion objects.

## APPLICATIONS OF THE PIR SENSOR:

1. Used for opening and closing the doors.
2. Security alarms
3. Human detection robot using PIR sensor.

## SCHEMATIC PICTURE OF THE PIR SENSOR-