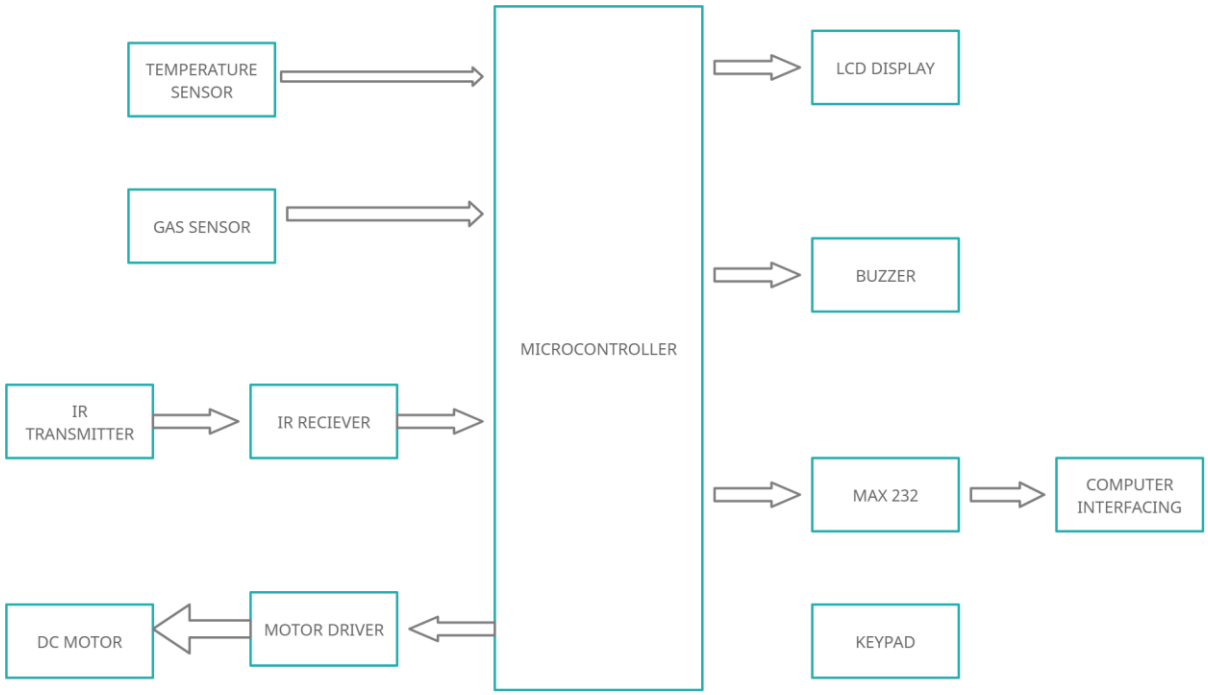
HOME SECURITY SYSTEM



Infrared Transmitter: We are going to implement the theft detection module using 1 transmitter and 1 receiver. We are going to use Infra-Red transmitters because infrared beams are not visible to human eyes. Transmitter used is IR LEDs

Infrared Receiver: We are going to use an Infrared receiver. It is an active low device which means it gives low output when it receives the Infrared rays.

Gas sensor: We are going to use an LPG Gas sensor to detect the gas leakage.

Microcontroller: This is the CPU (central processing unit) of our project. We are going to use a microcontroller of 8051 family. The various functions of microcontroller are like:

Reading the digital input from infrared receiver II. Reading the LPG Gas sensor output to turn on the buzzer. III. Sensing the password using keypad and to check whether it is a correct password or a wrong password and rotate the stepper motor if the password entered is a correct password. IV. Sending the data to LCD and to the computer using serial port.

LCD: We are going to use 16×2 alphanumeric Liquid Crystal Display (LCD) which means it can display alphabets along with numbers on 2 lines each containing 16 characters.

PC Interfacing: We are going to use max 232 IC for pc interfacing, the values of number of persons inside the room and the status of entered password (Correct/wrong) will be sent to pc.

Keypad: User will enter the password using the keypad. Various keys of keypad are as following, I. 0 to 9 II. Enter III. Escape

EEPROM: External E2PROM memory is used to store the password. I2C bus protocol is used for communication of EEPROM with 8051.