# LITERATURE SURVEY

## SENSOR BASED HOME AUTOMATION AND SECURITY SYSTEM

* In this ,the users use a graphical user interface to communicate and control their house,it is facilitated by a web server and internet is necessary for the latter.
* Uses a field programmable gate array and implemented on a NIOS developmental board.
* Remote control of doors and home appliances is the MVP.
* The system notifies the user of security breaches through email and SMS messages
* This paper provided us the foundation and insights on what an access control system should have and how we can build a system which can communicate with both the user and other appliances.

## Room Temperature Control and Fire Alarm/Suppression IoT Service Using MQTT

* MQTT protocol is used as the primary communication protocol between the devices,server and the client machines.
* MQTT broker is set up and acts as a server to which the app interface is connected,the messages are stored and transferred via the mqtt broker
* The user can set his desired temperature then the system switches on the air conditioner and heater and sets it so as that the desired temperature is achieved,the air conditioner and heater communicate using the mqtt protocol.
* Fire detection and suppression is also implemented ,when the sensors detect the fire ,the user is notified of it through the android application,then it switches on the sprinklers and it stops it when the fire has been put out
* This paper helped us understand the hvac temperature control system and also helped us to work with the MQTT protocol.

## DEVELOPMENT OF WIRELESS SENSOR NETWORK FOR GAS LEAKAGE DETECCTION SYSTEM

* Detects for LPG gas detection using mq2 gas sensors and an Arduino Nano microcontroller and ZBee
* Data is displayed through LabVIEW
* MQ2 sensors are first calibrated and then calculate the concentration of gas is parts per million
* The concentration of the gases has a direct increasing relationship with the voltage .
* A threshold is set and when the concentration exceeds the threshod the user is notified of the leak.
* This paper uses a different communication protocol but it was referred to understand how gas can be detected ,how the mq2 sensor works and how it is calibrated.We also learnt about the relationship between voltage and concentration through this paper