SMART FIRE ALARM SYSTEM

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Abstract: Fire alarm systems are very common nowadays and commonly installed in Banks, shops, offices, home etc. They detect the fire and trigger a loud alarm to aware everybody. But what if nobody is there to hear that alarm, like in night time or when nobody is at home. So to inform the authority about any fire incident today we are building a IoT based Fire Alarm system which not only trigger an alarm but also sends a Email alert to concern persons. This method can also be used to inform fire department automatically in case of fire occurs

Keywords: Thermistor, Variable Resistor(POT), Diode, Capacitor, Resistor, BC547 Transistor, Speaker.

I. INTRODUCTION

This project mainly aims for safety and alertness of public from emergencyfire and weather situation. This situation can land up anywhere in homes ,schoolsparking spot, commercial building, storage houses .so our project mainly concerned.how this accidental situation can be prevented and it is mainly based on IOT so we can get alert notification from any area of world on smartphones. This kind of system are most needed as every part of region is getting digital and. electrical. So its better to have this kind of system. Prevention of this emergency situations is must needed. This system can save many lives and property. This kind of system are getting easily available in markets nowadays and are getting advanced. Fire Detectors play a very important role in Industries, Shops, Malls, Residential

II. LITERATURE REVIEW

Wireless sensor network is a network which consists of nodes deployedfor gathering information and using it for processing .
• Wireless sensor network used for various application like security, monitoring and for many other purposes
• Fire detection can be done using NODEMCU . NODEMCU it is use for data transmission.
• Nodemcu It Is Use To Create A Personal Are Network Which is cheaper than Bluetooth , WIFI And Other Network.
• it is algorithm which is used for fire detection . the technique which uses this algorithm is known as safe form fire technique the safe form fire technique consists of two parts that are software module and hardware module

III. PROPOSED SYSTEM

• Our system is to be Smart Fire Alarm System Using Iot, App Notification And Email.
• This project mainly aims for safety and alertness of public from emergency fire and weather any situation.
• our project mainly concerned how this accidental situation can be prevented and it is mainly based on IOT so we can get alert notification from any area of world on smartphonesin a Fires cause serious damage daily life in a devastating manner.
• Hence preventing them or reducing their effects is a top priority.
• Though there are many systems that have been created to tackle this problem, false alarms is a challenge that is yet to be avoided.In our project, the place to be monitored is stablesurveillance by a closed circuit television.
• At tactical points, a number of sensors are placed.
• The sensor include pir sensor, temperature sensor, heat sensor and gas sensor.
• Each sensor plays a vital role in detecting a fire if it occurs.
• Onused to detect the fire through smoke processing.
• The main advantage of this system is that it has a very high accuracy. If the fire has been detected a mail is sent to the security and the nearest fire department

(a) BLOCK DIAGRAM OF SMART FIRE ALARM SYSTEM
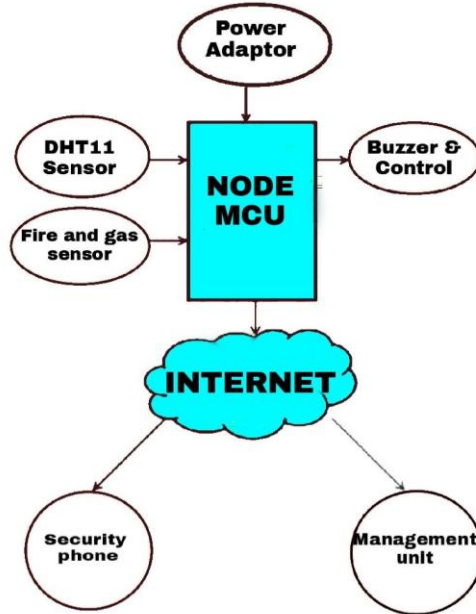
(b)   FLOW CHART OF SMART FIRE ALARM SYSTEM
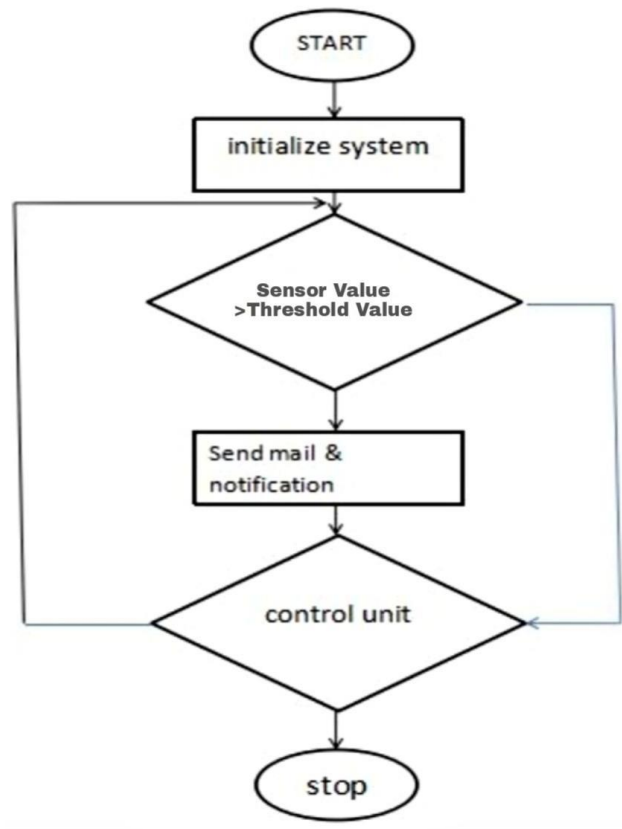
IV. CONCLUSION

The paper depicts the necessity and an efficient solution for fire safety. Internet of Things was the main concept used and the project mainly builds on the techniques which are already presents and also it has overcome obstacles present in the previous systems. But still there are few tweaks and remodelling required to get moefficien and working model. The time taken for process is to be reduced for practical used Directly call the emergencyservices and key contacts to minimise the time it's take for the fire brigade to attend site. Tells the crew exactly where the fire is so they can get to it quick action Minimise pesky false alarms caused by old fire alarm detectors And, in the unlikely event of fault, they can also tell you exactly where the problem is

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