FIRE ALARM SYSTEM USING ARDIUNO UNO WITH GSM MODULE

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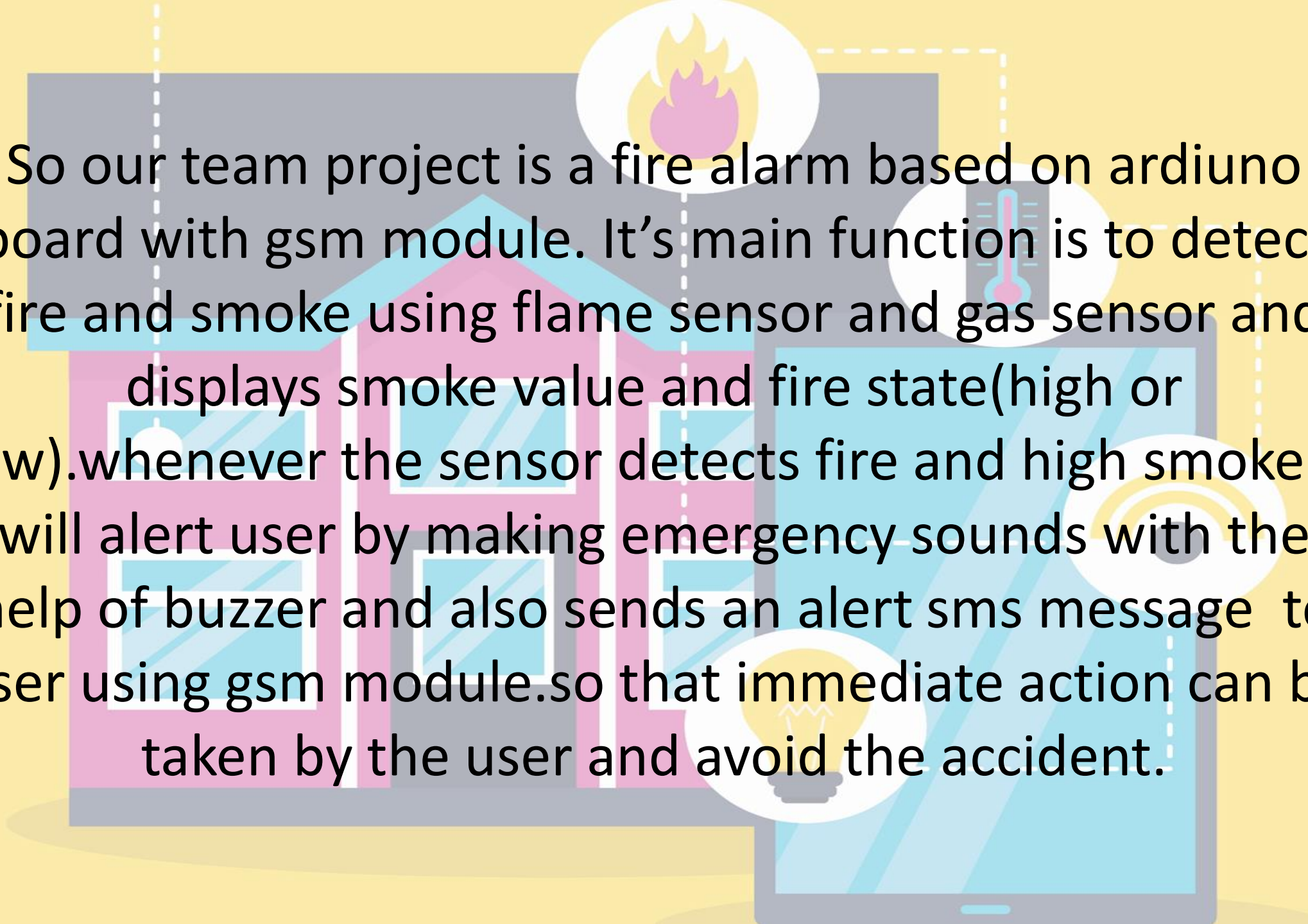
INTRODUCTION

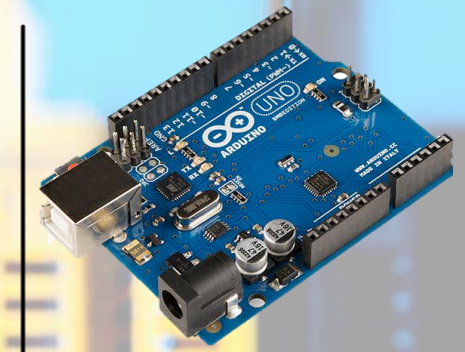
As we all know fire accidents are sudden and reflects major impact on our life style in short time because it causes large scale property loss and sevre injuries and sometimes deaths,and these fire accidents also leading to more global warming and rise in temperatures.most of the fire accidents are occurring In industries and forests and places where highly flammable products are stores and people don’t visit often.we can avoid these fire accidents by using fire alarms.



So our team project is a fire alarm based on ardiuno board with gsm module. It’s main function is to detect fire and smoke using flame sensor and gas sensor and displays smoke value and fire state(high or low).whenever the sensor detects fire and high smoke it will alert user by making emergency sounds with the help of buzzer and also sends an alert sms message to user using gsm module.so that immediate action can be taken by the user and avoid the accident.

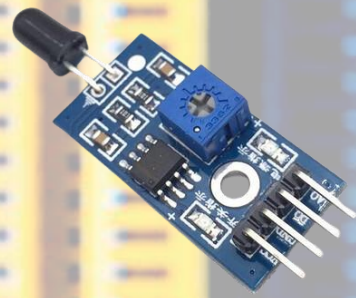
REQUIRED COMPONENTS FOR THIS PROJECT

ARDIUNO UNO BOARD

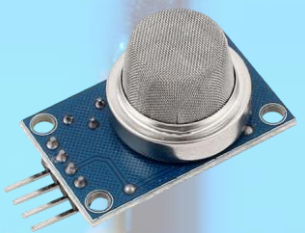


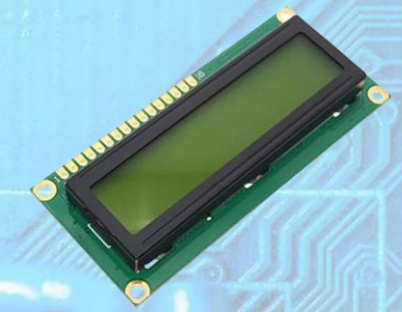
SIM900 GSM MODULE

FLAME SENSOR



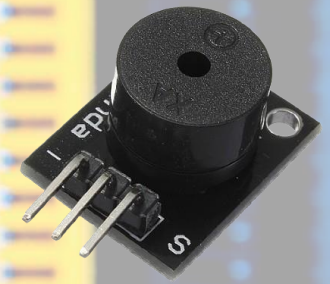
MQ2 GAS SENSOR

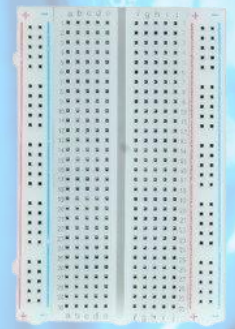




16*2 LCD DISPLAY

5V BUZZER





CDS BREADBOARD AND JUMPERWIRES

ADVANTAGES:-

- OCCUPIES LESS SPACE TO SETUP
- EASILY CUSTOMIZABLE AND FLEXIBLE
- LOW MAINTAINANCE AND RELIABILITY
- EASY TO PROGRAM AND LEARN

DISADVANTAGES:-

- ERROR MAY OCCUR IN SENSORS
- IT MAY COSTS HIGH DEPENDING UPON SENSORS
- SLOW DETECTION AND PROCCESSING
- HIGH POWER CONSUMPTION

CONCLUSION

FIRE ALARM BASED ON ARDIUNO WITH GSM MODULE IS LOSS COST AND A BETTER SOLUTION FOR MONITORING FIRE AND ALERTING THE USER.THIS IS THE BASIC MODEL OF THIS PROJECT AND WE CAN USE THIS IN OUR DAILY LIFE BY USING MORE ACCURATE SENSORS WHICH CAN SENSING RANGE IS HIGH AND SPPED AND HIGH-END COMPONENETS.WE CAN ALSO DEVELOP THIS PROJECT BY ADDING FEATURE OF SENDING LOCATION TO FIRE RESCUE SQUADS WITH THE HELP OF GPS MODULE WHEN A LARGE AMOUNT OF FIRE IS DETECTED AND REQUIRE ADVANCED EUIPMENTS TO CONTROL AND STOP IT.WE CAN ALSO DEVELOP BY ADDING A WEB CAM TO VERIFY IT IS NOT FALSE ALARM AND ALSO TO KNOW THE FIRE IS CAUGHT ACCIDENTLY OR SOMEONE SETTING FIRE INTENTIONALLY AND ALSO HELPS IN FINDING THE SUSPECT.


THANK
YOU!