LTTS
GLOBAL
ENGINEERING
ACADEMY

L&T Technology Services

Version Number:
Team Members :
Team No:
Module: Model Based System Engineering

Table of Contents

Document History

Ver.Rel. No.	Release Date	Prepared. By	Reviewed By	Approved By	Remarks/Revision Details

1.0 Introduction :

In this project, we are going to create a fire alert system using ATMEGA8 microcontroller and fire sensor. Fire sensors can be of any type, here fire sensor play a vital role we have different types of fire alarms

we can use any one with respect to your project here i am using LM35 a temperature sensor when temperature level exceed the actual level fire sensor sent signal to

microcontroller then buzzer rings after that we reset the buzzer using and fire sensor using reset button, we can use this in real time environments like hospitals schools and shopping malls etc..

we are going to install the fire sensor on the servo motor. The survey will rotate the 180 degree pendulum. With the fire sensor mounted on it, we get 270+ degree fire sensing vision. The survey will continue to rotate, thus providing a complete room fire alert system. We can add smoke sensors to the system for more accuracy. With it we can achieve high accuracy.

2.0 REQUIREMENTS

2.1 SWOT ANALYSIS
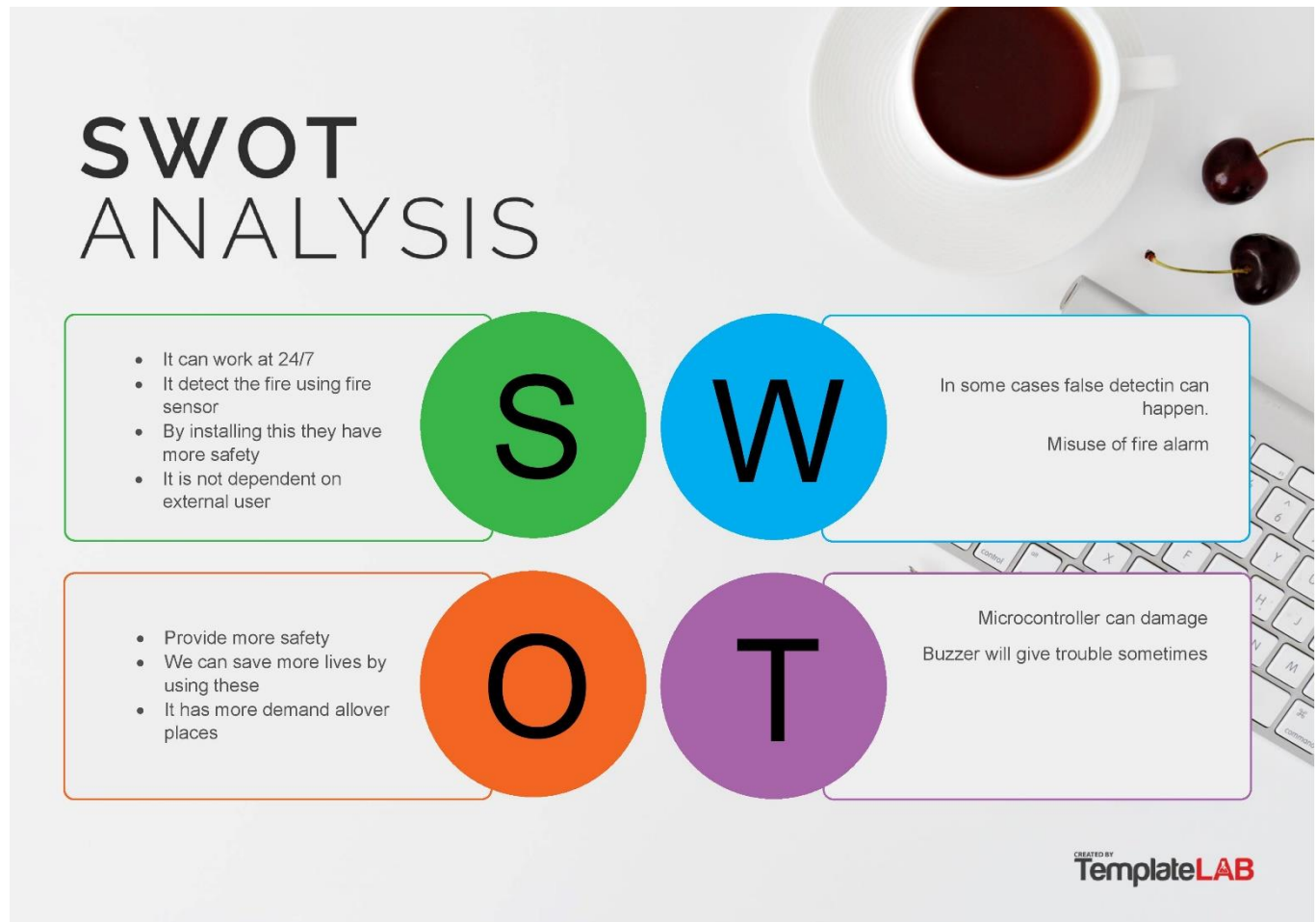
2.2 Components used in fire alarm

power supply

* it is used give power supply to circuit

 Servo motor (sg90)

* it have connected with fire sensor it rotate according to temperature

Pressure

ATMEGA8

* it is used to control the all circuit and send commands and operate Buzzer

BUZZER

* Buzzer is used to make sound and it a output to the circuit Button

* it is used to set and reset buzzer

10KΩ resistor, 1KΩ resistor, 220Ω resistor, 100nF capacitor.

2.3 4W'S AND 1H

Where

* Fire alarm system is use this in real time environments like hospitals schools and shopping malls etc..

When

* Fire alarm is activated when it temperature level exceed to normal level it buzzer is activated

* buzzer is activated through micro controller atmega8

What

* fire alarm system using microcontroller Atmega8 and fire sensor, here fire sensor play a vital role

Who

* Fire alarm system is use this in real time environments like hospitals schools and shopping malls they are used this

How

* Fire alarm is independent device it not dependent on external user it work on micro controller
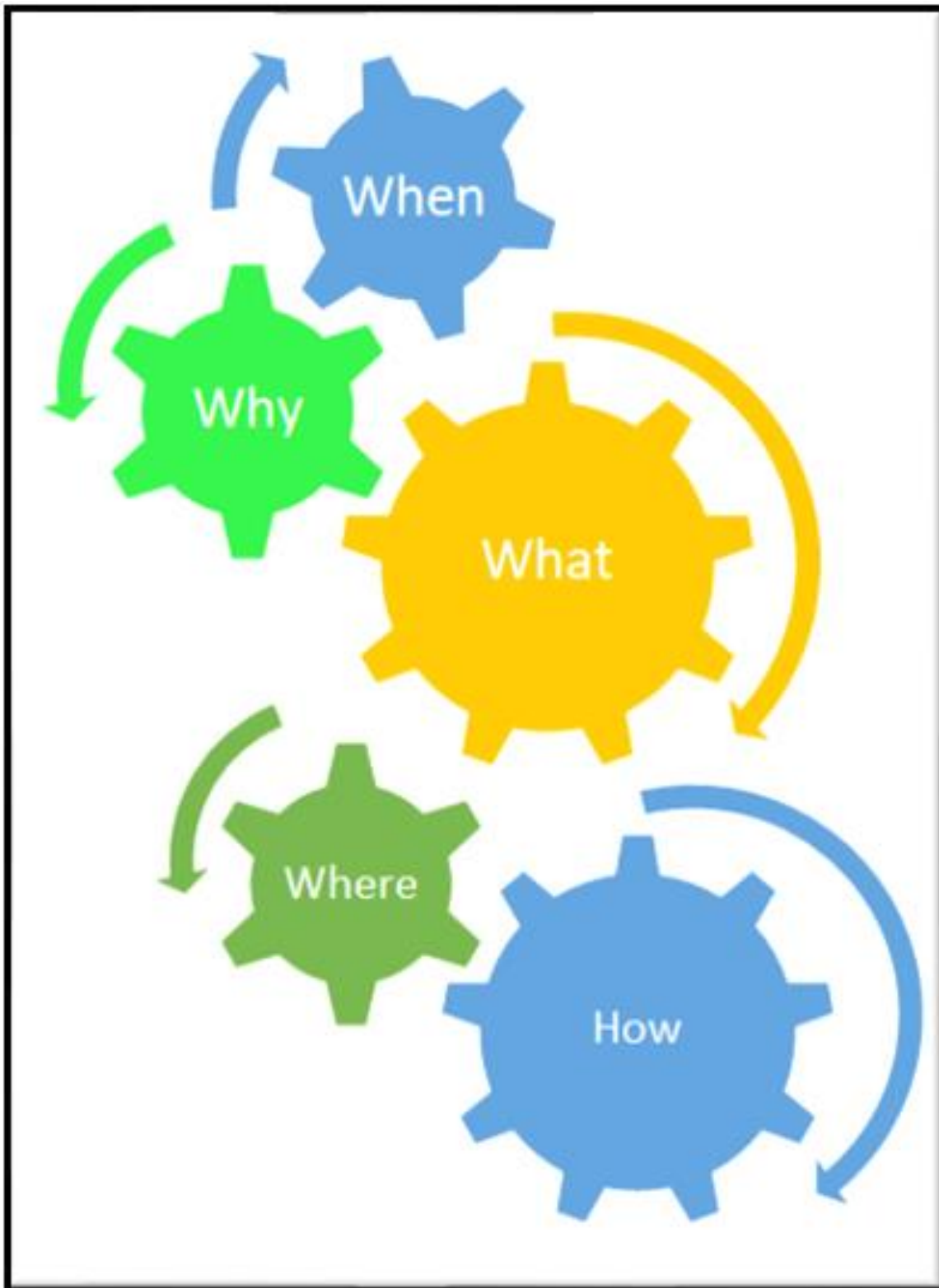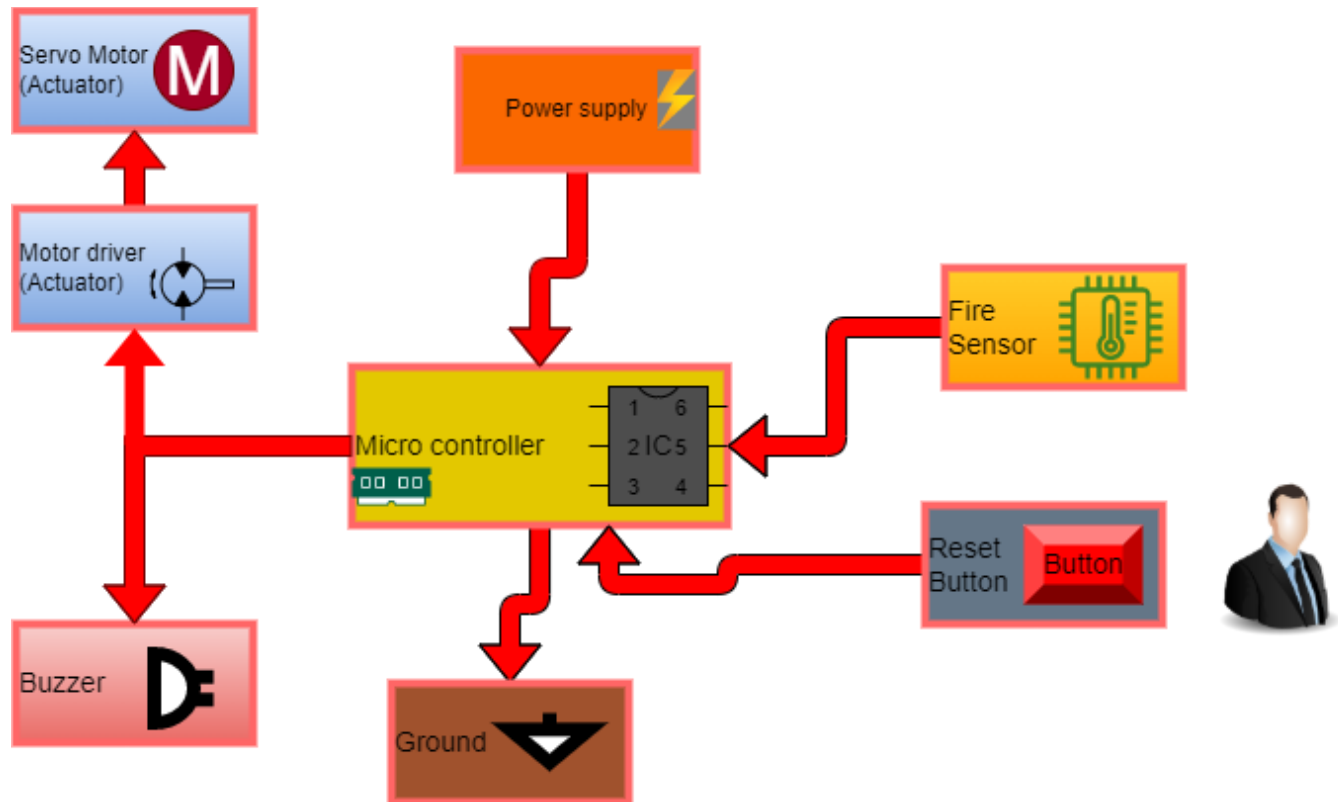
2.4 Table of Requirements

HLR ID	High level Requirements
HLR1	It shall be sense the fire
HLR2	It shall be make sound when fire senses
HLR3	It shall have reset button to reset buzzer
HLR4	It shall have ADC to sense analog signals

ID	Low Level Requirements for HLR1	ID	Low Level Requirements for HLR2
LLR1	It shall have Fire sensor	LLR1	It shall have a buzzer to connect
LLR2	It shall have ADC	LLR2	It shall have a sensor to connect

ID	Low Level Requirements for HLR3	ID	Low Level Requirements for HLR4
LLR1	It shall reset button manually	LLR1	It shall have interrupt
LLR2	Reset button is connect buzzer	LLR2	It have ADC to convert signals

3.0 Architecture

4.0 Simulation