

CAD Lab

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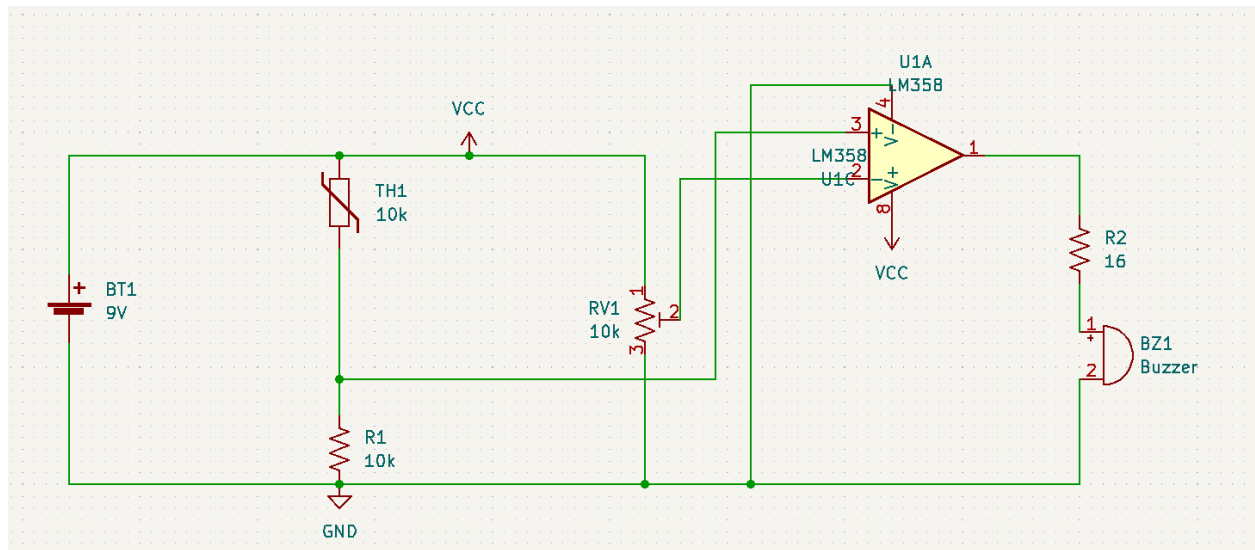
Roll number: 122101011

Name of the project: Fire alarm circuit

Components required:

1.	PCB		
2.	Thermistor	1	10k
3.	Trimmer Pot	1	10k
4.	Resistor	1	10k
5.	Resistor	1	16 ohms
6.	LM358 IC	1	
7.	Battery	1	9V
8.	Buzzer	1	
9.	DIP IC Base IC Socket Connector 8 Pin	1	

Circuit diagram using a software tool:



Work concept of the circuit:

For the working of fire alarm, the circuit has one 10k NTC Thermistor which detect the fire and an LM358 IC, operational amplifier in comparator mode. The thermistor decreases the resistance whenever the temperature of the area under observation increases. In the circuit, it is connected as voltage divider to non-inverting input so its value is more than the inverting input, hence, the output of comparator becomes high and it activates the buzzer.