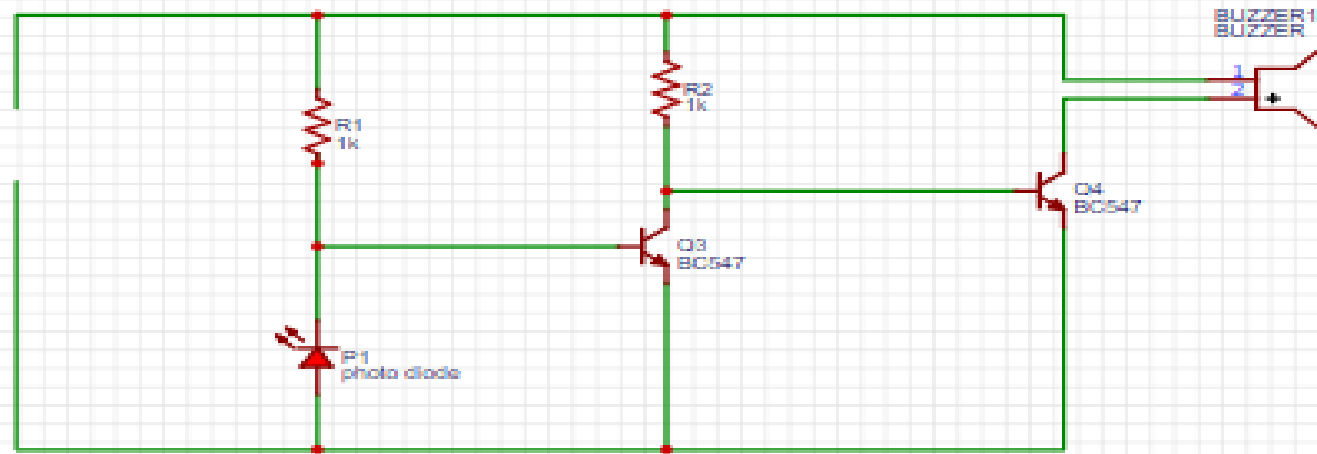


FIRE ALARM CIRCUIT

AIM OF THE PROJECT

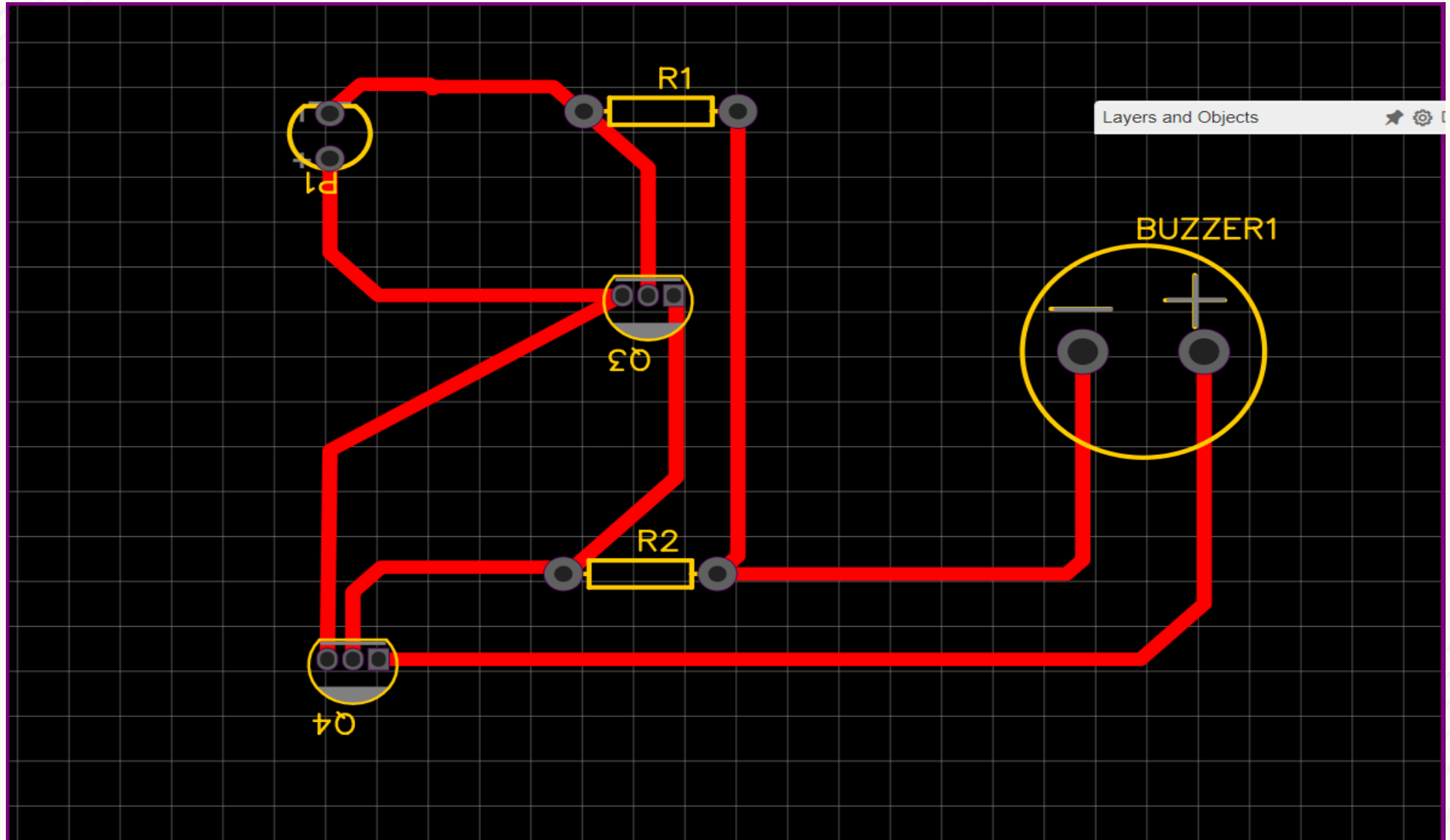
The aim of our project is to create a circuit which causes a buzzer to ring in presence of fire. Fire alarm circuits play a vital role in creating a safe and secure environment, protecting lives, and minimizing the devastating impact of fires.

SCHEMATIC DIAGRAM OF PROJECT



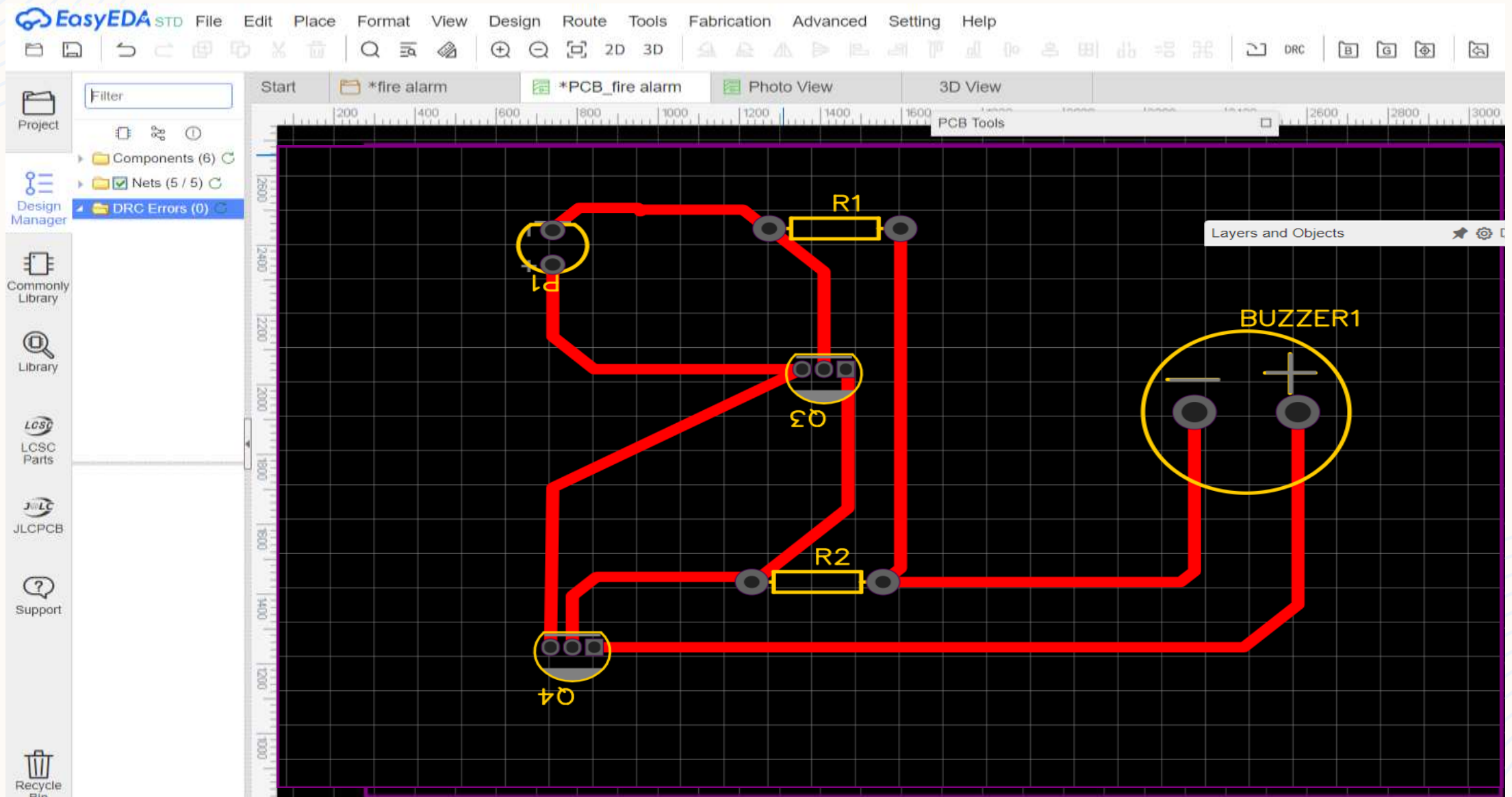
PCB DESIGN

4



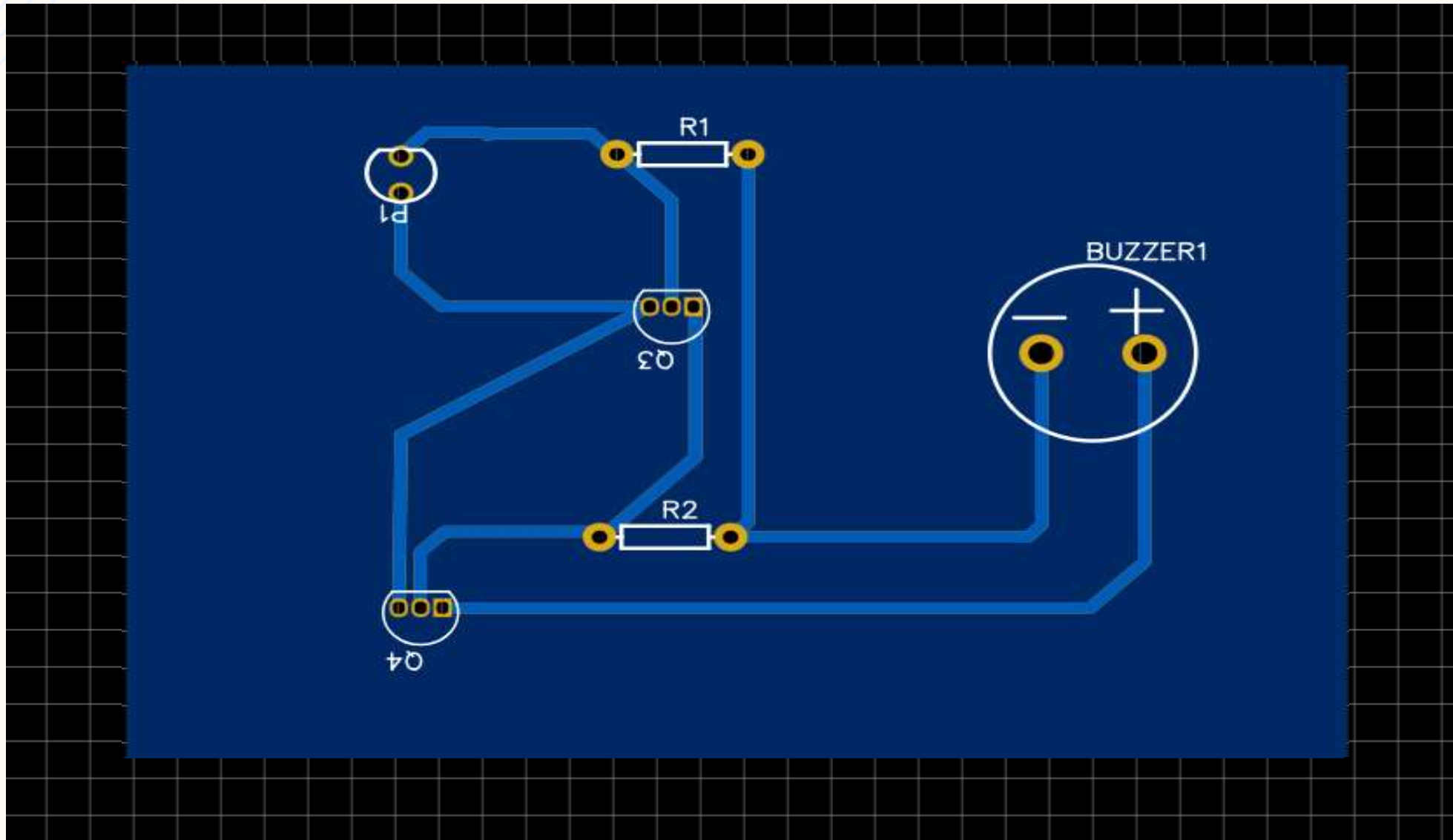
DRC ERROR OF PROJECT

5

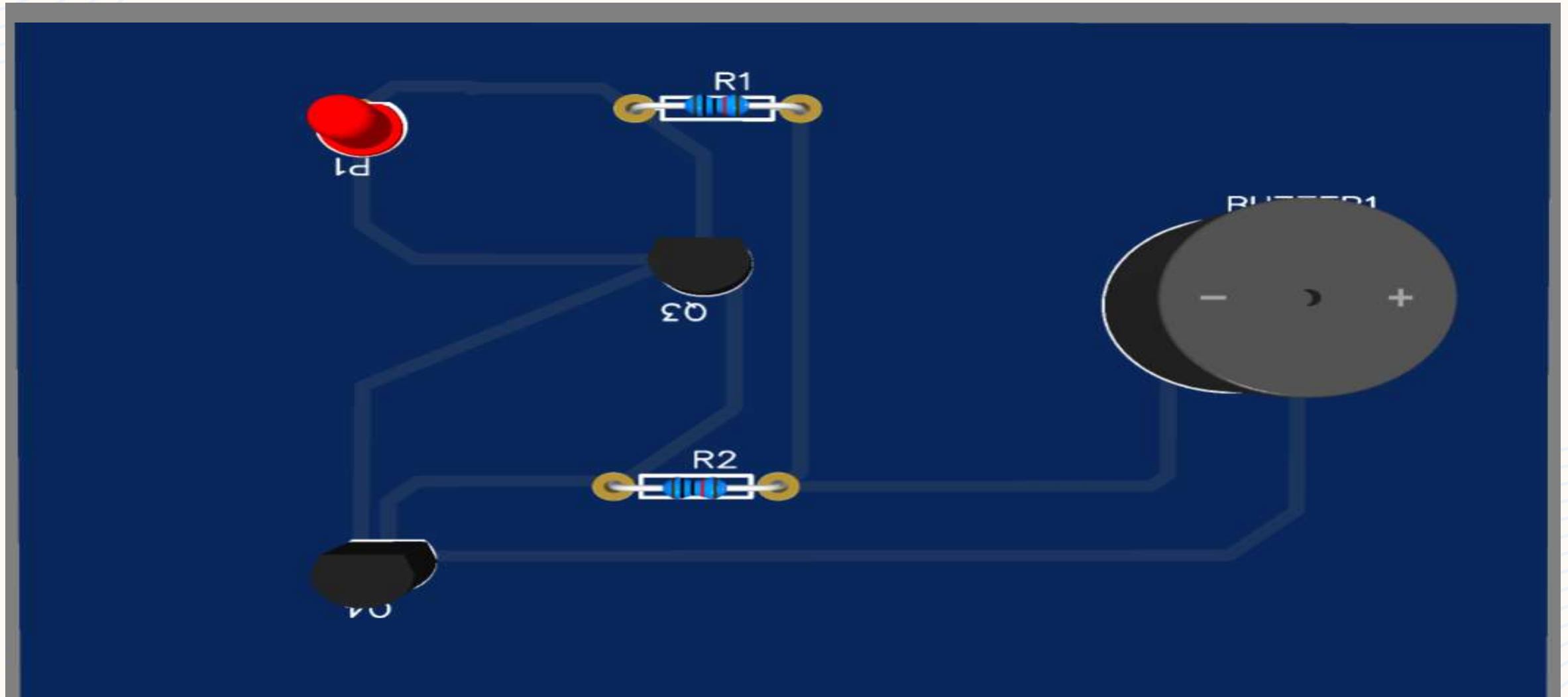


2D VIEW OF PROJECT

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3D VIEW OF PROJECT



BOM FILE : SPECIFICATION OF ALL FILE

ID	Name	Designator	Footprint	Qu...	Manufacturer Part	Manufactu...	Supplier	Supplier Part	Price
1	BUZZER	BUZZER1	BUZ-TH_BD1...	1	buzzer	null	LCSC	C9900014030 Assign LCSC Part#	
2	LED-TH-3...	LED1	LED-TH_BD3....	1	204-10SDRD/S530-A...	EVERLIG...	LCSC	C84774 Assign LCSC Part#	0.033
3	BC547	Q3,Q4	TO-92-3_L4.5-...	2	BC547	CJ(江苏长...	LCSC	C2910381 Assign LCSC Part#	0.026
4	1k	R1,R2	R_AXIAL-0.3	2				Assign LCSC Part#	

PRICE OF COMPONENTS

COMPONENT	QUANTITY	PRICE
• Resister	• 2	• 10 Rs
• Transister (BC547)	• 2	• 30 Rs
• Buzzer	• 1	• 40 Rs
• Voltage Source	• 1`	• 20 Rs
• Photo-diode(temp sensor)	• 1	• 112 Rs
	• 1	• 30 Rs

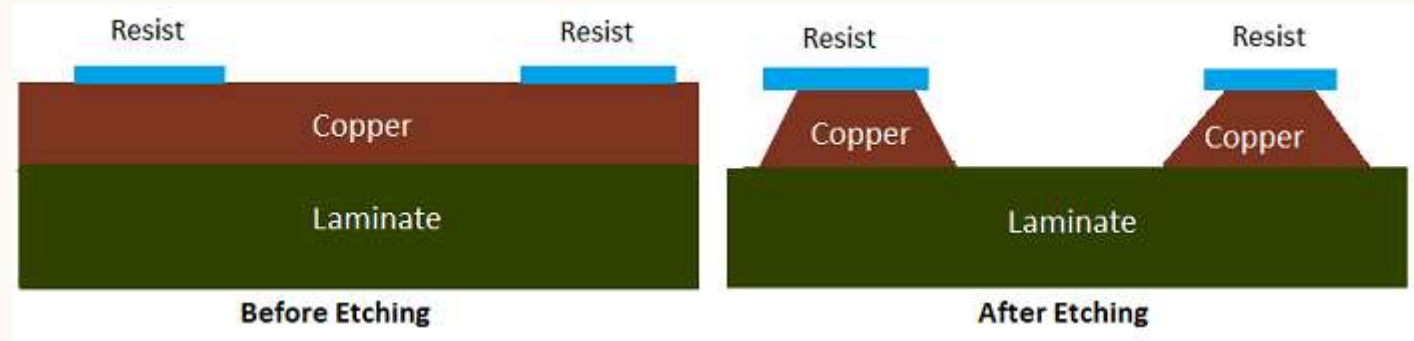
- Copper clad

Approx Total Cost of project upto 400 Rs to 500 Rs

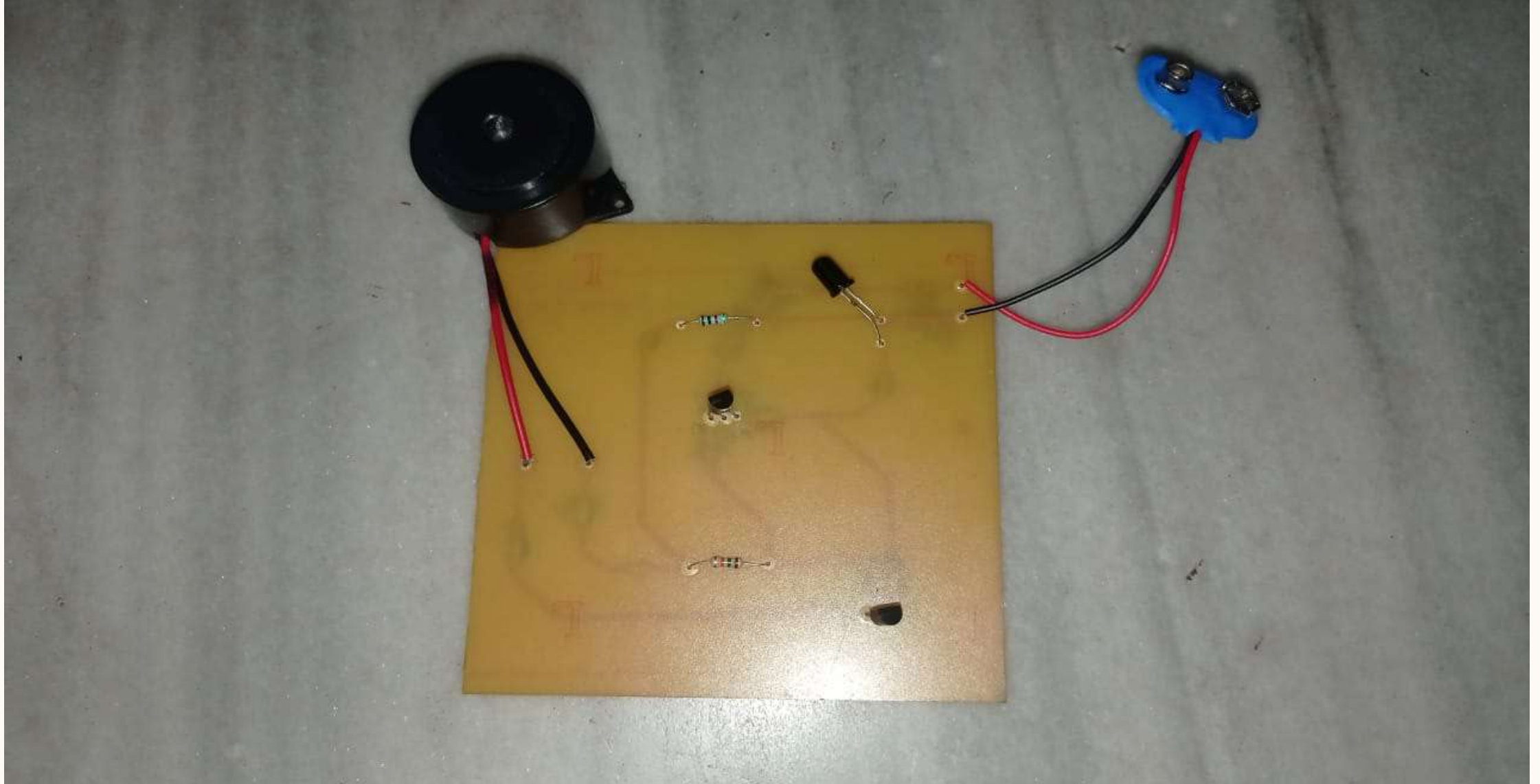
STEPS TO CREATE A PCB

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- 1.Design a Schematic Diagram
- 2.PCB Footprint Creation
- 3.PCB Layout
- 4.Routing
- 5.Design Rule Check
- 6.Print the PCB Design
- 7.Iron the printed design on the copper plate
- 8.Etch the plate to Remove Copper
- 9.Drilling
- 10.Assemble the components
- 11.Testing and Validation



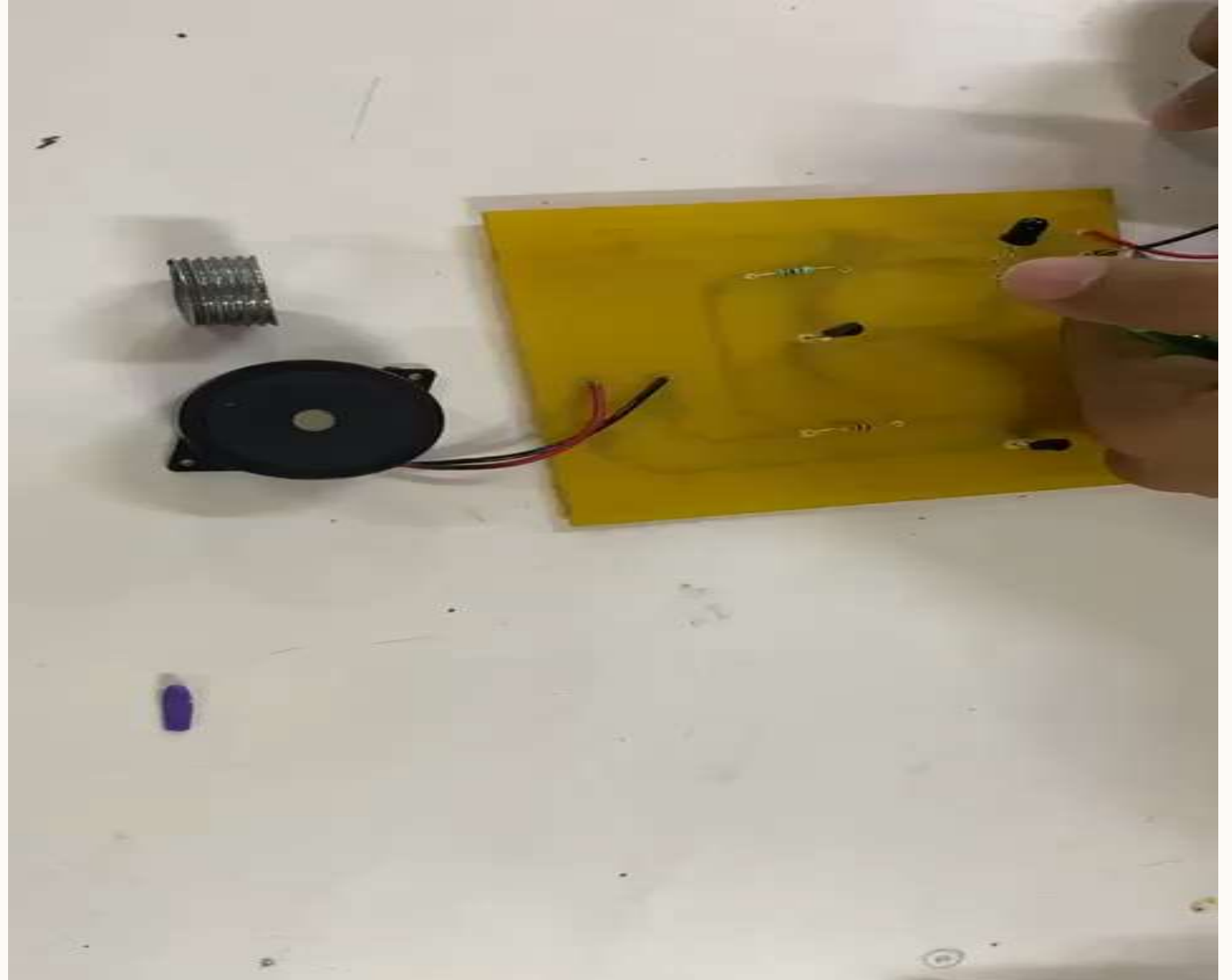
COMPLETED PCB HARDWARE OF FIRE ALARM



VIDEO OF WORKING OF THE CIRCUIT

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- The buzzer ring when the photo-diode LED senses the heating near it .
- The whole connection has been established by the PCB Chemical Etching process.





THANK YOU