Hazardous gas detection system

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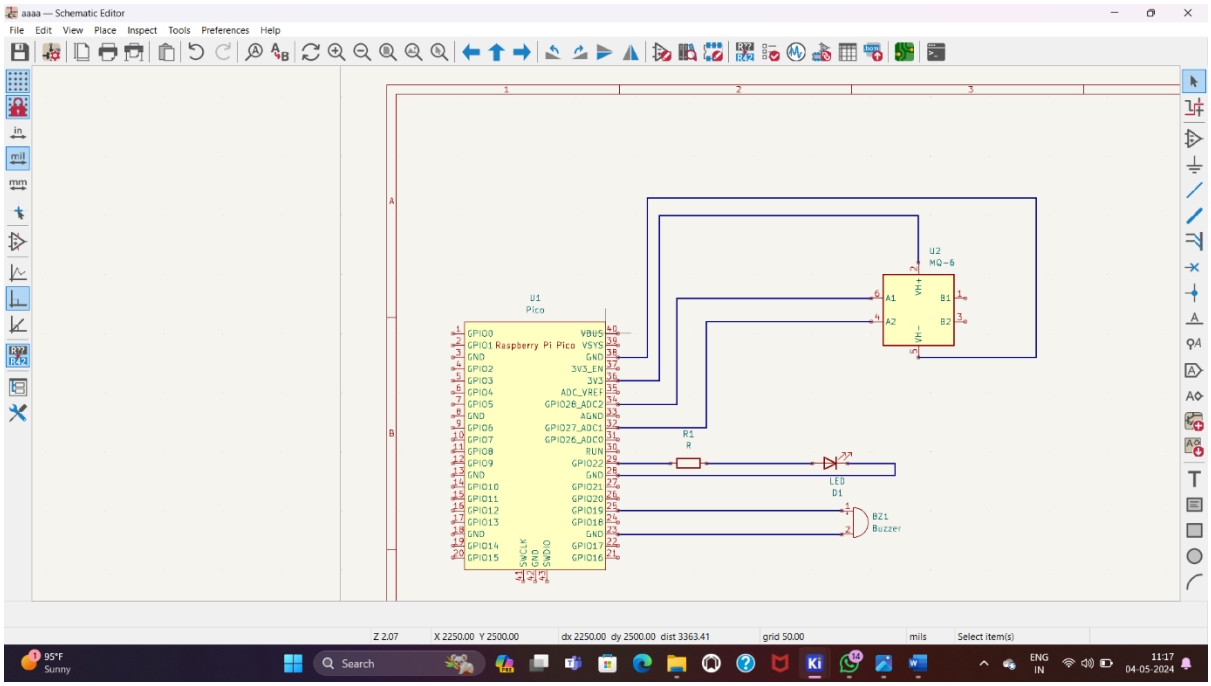
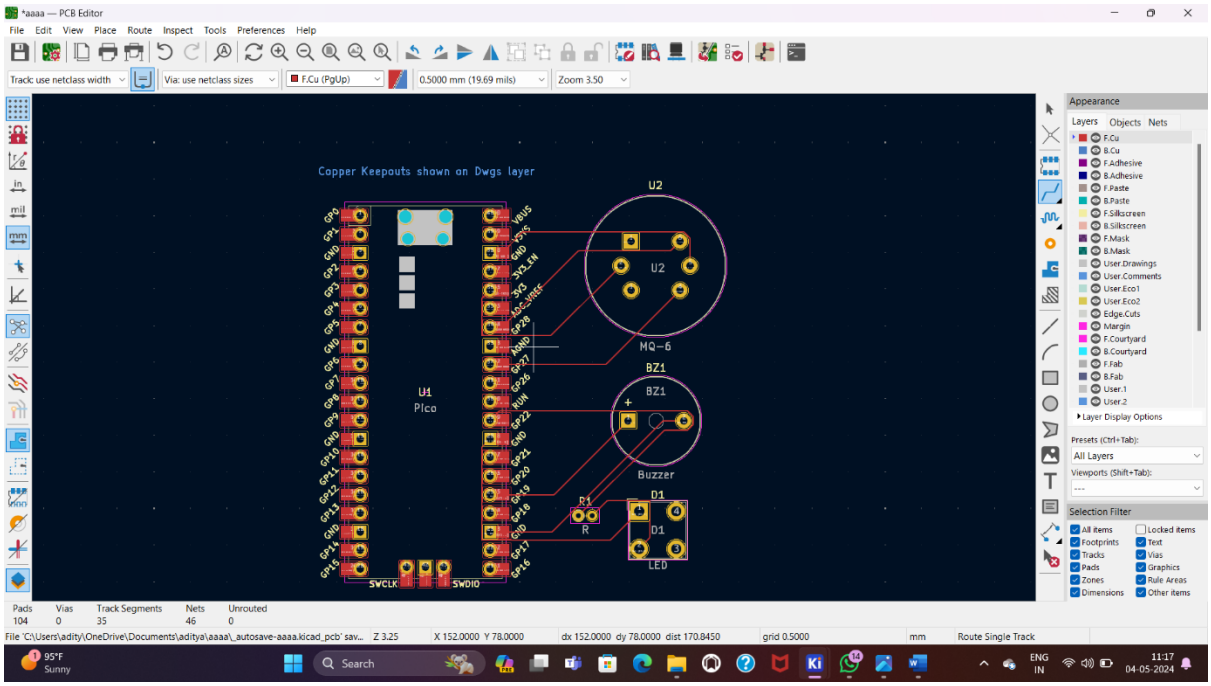
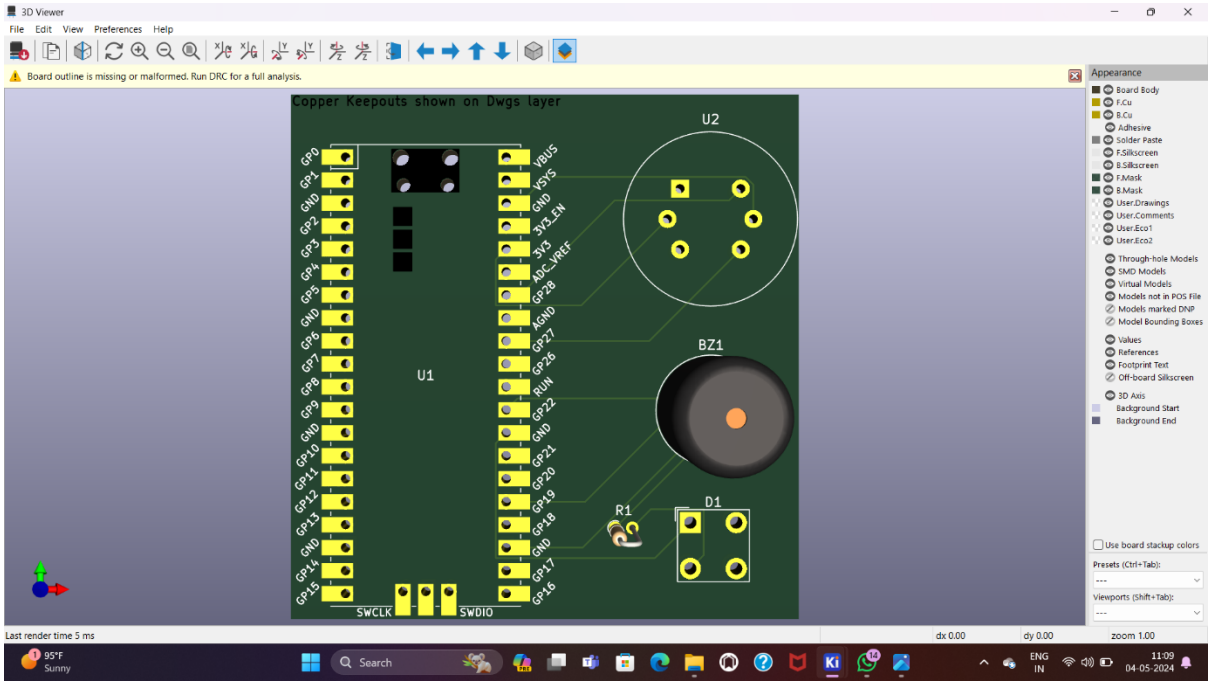
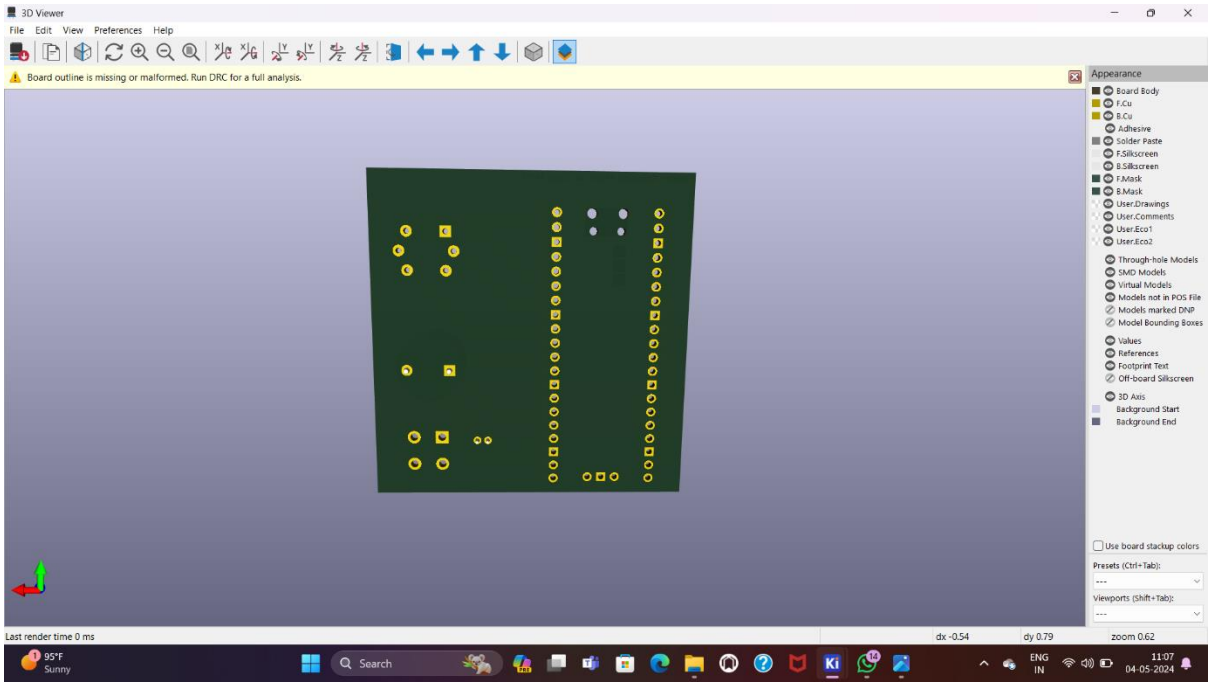
Git hub link:- https://github.com/aditya4L8/L-T-projects.git




*aaaa — PCB Editor
File Edit View Place Route Inspect Tools Preferences Help
Copper Keepouts shown on Dwgs layer
U2
MQ-6
BZ1
Buzzer
U1
Pico
R1
D1
LED
SWCLK
SWDIO
Appearance
Layers Objects Nets
Selection Filter
Pads 104
Vias 0
Track Segments 35
Nets 46
Unrouted 0
95°F Sunny
Search
ENG IN
11:17
04-05-2024


3D Viewer
File Edit View Preferences Help
Board outline is missing or malformed. Run DRC for a full analysis.
Copper Keepouts shown on Dwgs layer
U2
BZ1
U1
R1
D1
SWCLK
SWDIO
Appearance
Last render time 5 ms
95°F Sunny
Search
ENG IN
11:09
04-05-2024



PROGRAM

```
import machine
 import time
Define pin numbers
PIR PIN machine. Pin(27, machine. Pin.IN)
BUZZER PIN machine. Pin(6, machine. Pin.OUT)
# Function to activate the buzzer
def activate  buzzer():
BUZZER PIN.on() #Turn buzzer on
 time.sleep(0.5) #Keep buzzer on for 8.5 seconds
BUZZER PIN.off() #Turn buzzer off
# Main loop to detect motion
```

```
 while True:
if PIR PIN.value():  #PIR sensor detects motion
print("Motion detected!")
activate  buzzer() # Activate the buzzer
time.sleep(0.2) #Small delay to debounce and save CPU
```

OUTPUT:-

Motion detected

Motion detected

Motion detected

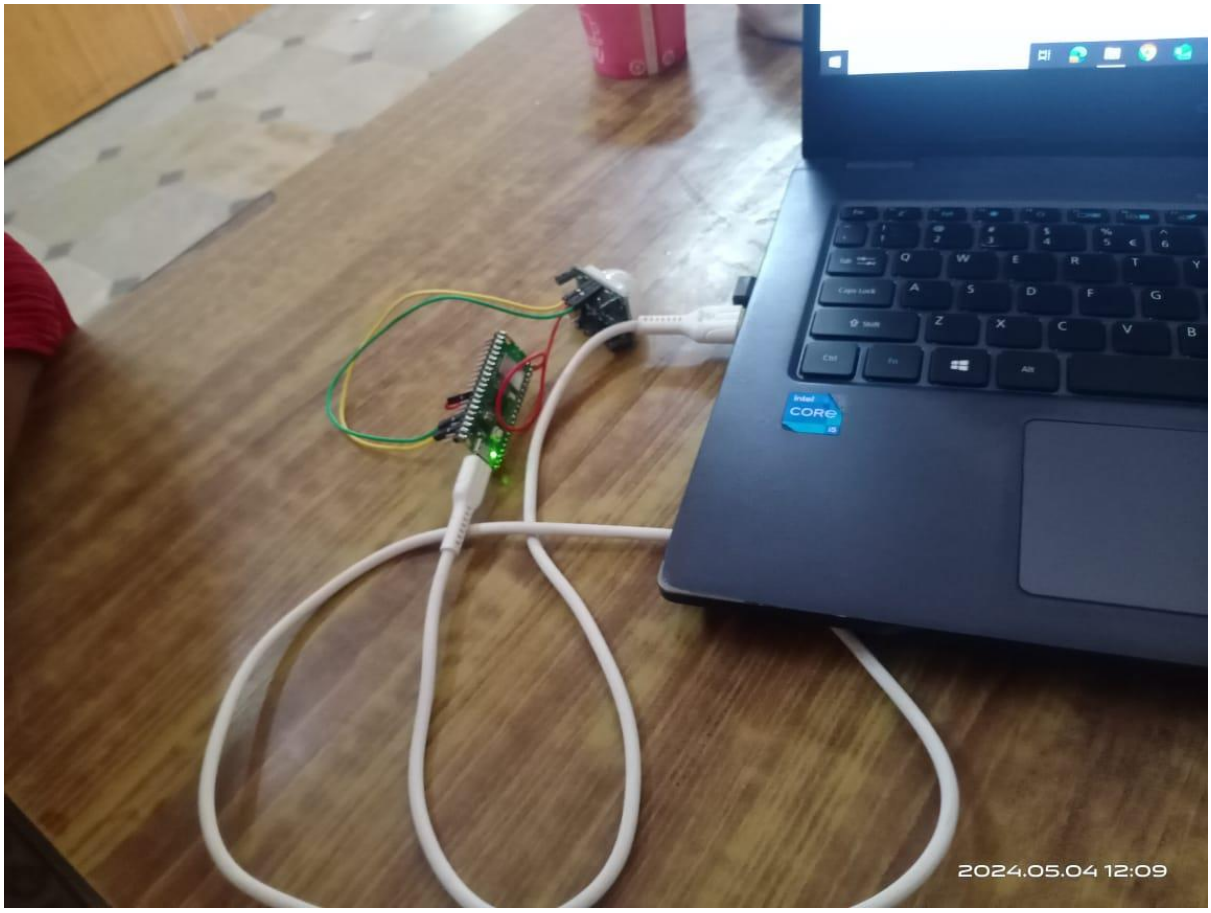
Motion detected

Motion detected

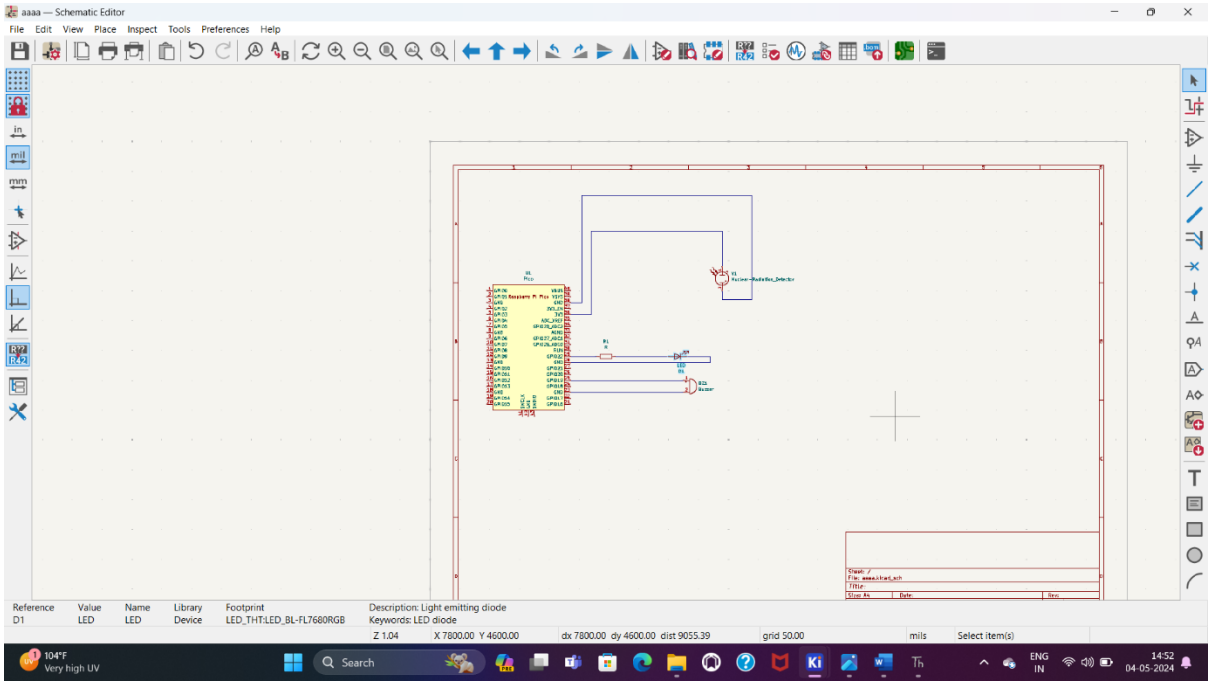
Motion detected

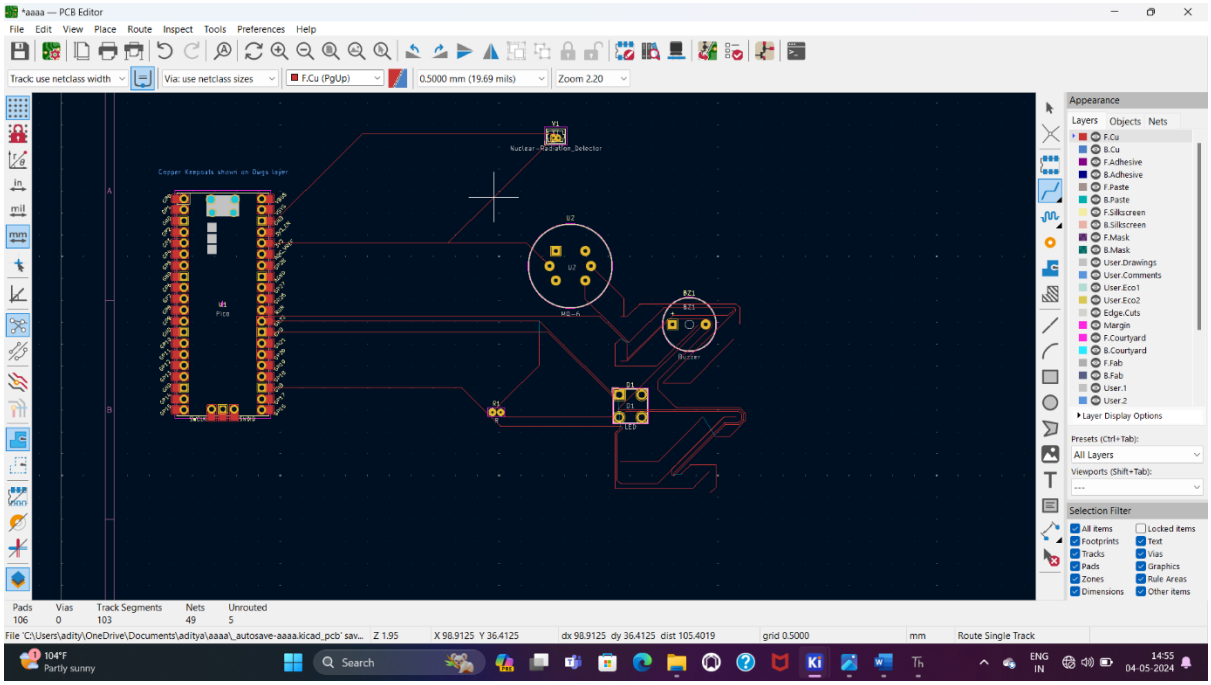
Motion detected

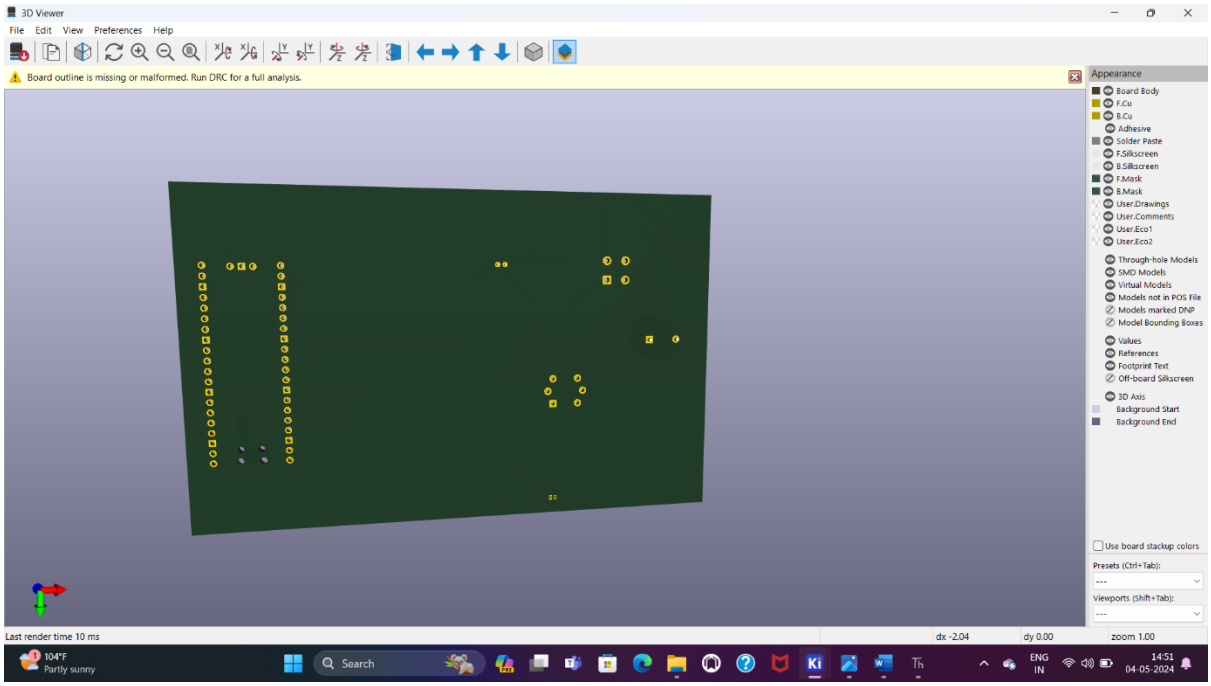
Motion detected

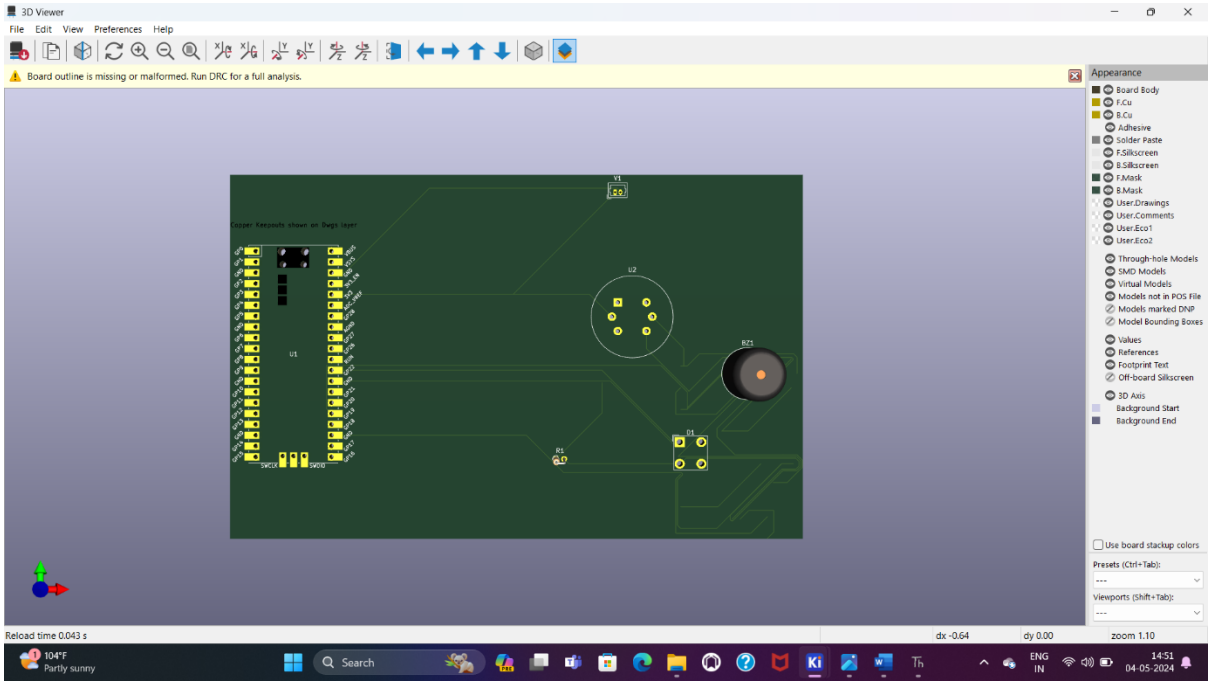


NUCLEAR RADITION DETECTION


aaaa — Schematic Editor
File Edit View Place Inspect Tools Preferences Help
Reference D1
Value LED
Name LED
Library Device
Footprint LED_THT:LED_BL-FL7680RGB
Description: Light emitting diode
Keywords: LED diode
Z 1.04 X 7800.00 Y 4600.00
dx 7800.00 dy 4600.00 dist 9055.39
grid 50.00
mils
Select item(s)
104°F
Very high UV
Search
ENG
IN
14:52
04-05-2024


*aaaa — PCB Editor
File Edit View Place Route Inspect Tools Preferences Help
Track: use netclass width
Via: use netclass sizes
F.Cu (PgUp)
0.5000 mm (19.69 mils)
Zoom 2.20
Copper Keepouts shown on Dwgs layer
Nuclear-Radiation_Detector
Appearance
Layers Objects Nets
F.Cu
B.Cu
F.Adhesive
B.Adhesive
F.Paste
B.Paste
F.Silkscreen
B.Silkscreen
F.Mask
B.Mask
User.Drawings
User.Comments
User.Eco1
User.Eco2
Edge.Cuts
Margin
F.Courtyard
B.Courtyard
F.Fab
B.Fab
User.1
User.2
Layer Display Options
Presets (Ctrl+Tab):
All Layers
Viewports (Shift+Tab):
Selection Filter
All items
Locked items
Footprints
Text
Tracks
Vias
Pads
Graphics
Zones
Rule Areas
Dimensions
Other items
Pads 106
Vias 0
Track Segments 103
Nets 49
Unrouted 5
File 'C:\Users\adity\OneDrive\Documents\aditya\aaaa_autosave-aaaa.kicad_pcb' sav...
Z 1.95
X 98.9125 Y 36.4125
dx 98.9125 dy 36.4125 dist 105.4019
grid 0.5000
mm
Route Single Track
104°F
Partly sunny
Search
ENG
IN
14:55
04-05-2024


3D Viewer
File Edit View Preferences Help
Board outline is missing or malformed. Run DRC for a full analysis.
Appearance
Board Body
F.Cu
B.Cu
Adhesive
Solder Paste
F.Silkscreen
B.Silkscreen
F.Mask
B.Mask
User.Drawings
User.Comments
User.Eco1
User.Eco2
Through-hole Models
SMD Models
Virtual Models
Models not in POS File
Models marked DNP
Model Bounding Boxes
Values
References
Footprint Text
Off-board Silkscreen
3D Axis
Background Start
Background End
Use board stackup colors
Presets (Ctrl+Tab):
Viewports (Shift+Tab):
Last render time 10 ms
dx -2.04
dy 0.00
zoom 1.00
104°F
Partly sunny
Search
ENG
IN
14:51
04-05-2024


3D Viewer
File Edit View Preferences Help
Board outline is missing or malformed. Run DRC for a full analysis.
Appearance
Board Body
F.Cu
B.Cu
Adhesive
Solder Paste
F.Silkscreen
B.Silkscreen
F.Mask
B.Mask
User.Drawings
User.Comments
User.Eco1
User.Eco2
Through-hole Models
SMD Models
Virtual Models
Models not in POS File
Models marked DNP
Model Bounding Boxes
Values
References
Footprint Text
Off-board Silkscreen
3D Axis
Background Start
Background End
Use board stackup colors
Presets (Ctrl+Tab):
Viewports (Shift+Tab):
Reload time 0.043 s
dx -0.64
dy 0.00
zoom 1.10
104°F
Partly sunny
Search
ENG
IN
14:51
04-05-2024

CONCLUSION:-

For a conclusion on a hazards gas detector, you could summarize its importance in safeguarding against dangerous gas leaks, emphasizing its role in protecting lives, property, and the environment. Highlight its ability to provide early warnings, allowing for timely response and mitigation measures. Additionally, you might mention the importance of regular maintenance and calibration to ensure accurate and reliable performance. Overall, a hazards gas detector is a critical tool in industrial, commercial, and residential settings for maintaining safety and preventing accidents related to gas leaks.

Git hub link:-

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