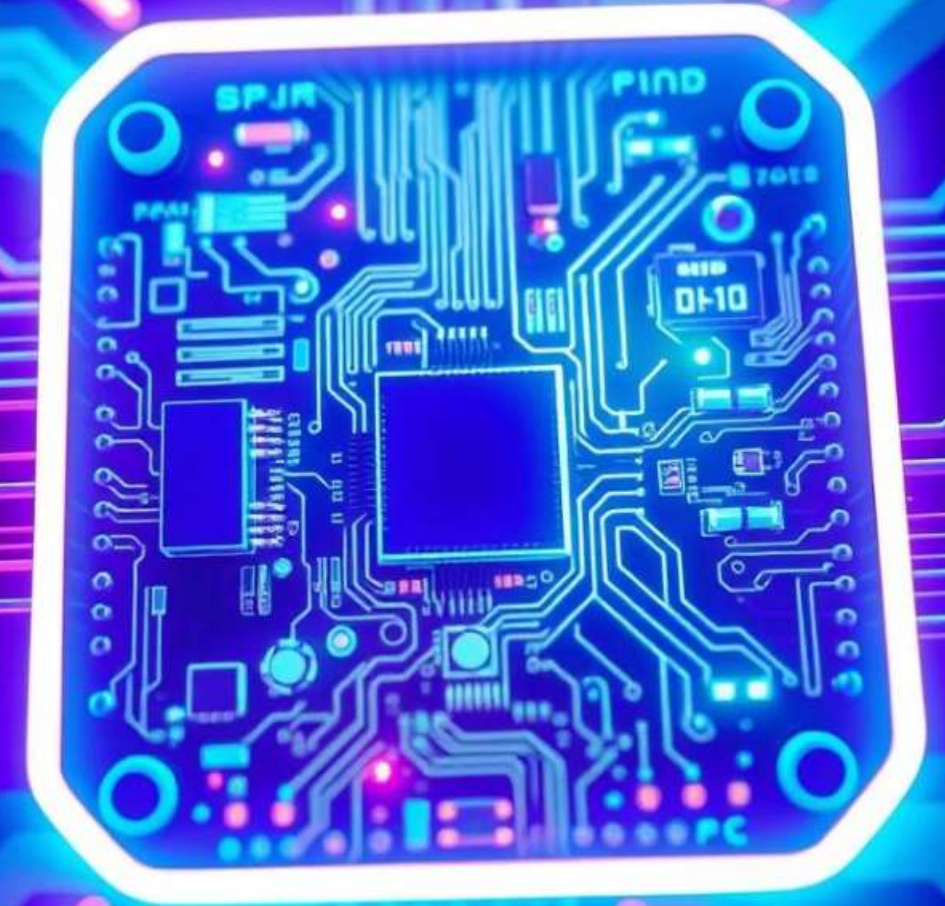


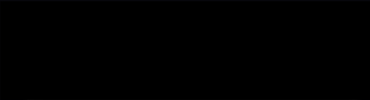
# THE SMART CITY SENTINELA MODULAR PCB FOR INTELLIGENT ENVIRONMENTAL

- TEAM SEVEN [CIT ,Tamil Nadu]

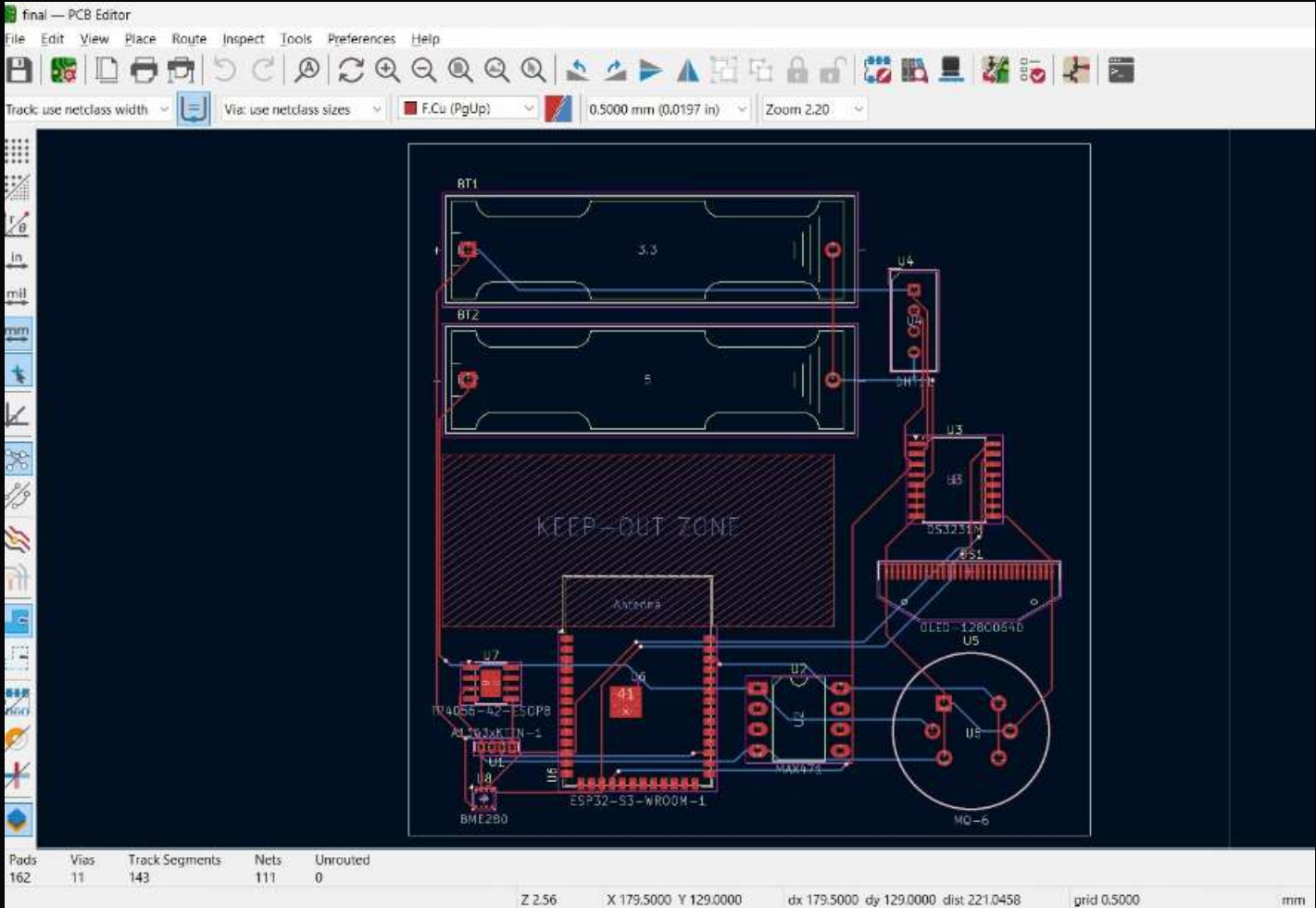


# Bill of materials

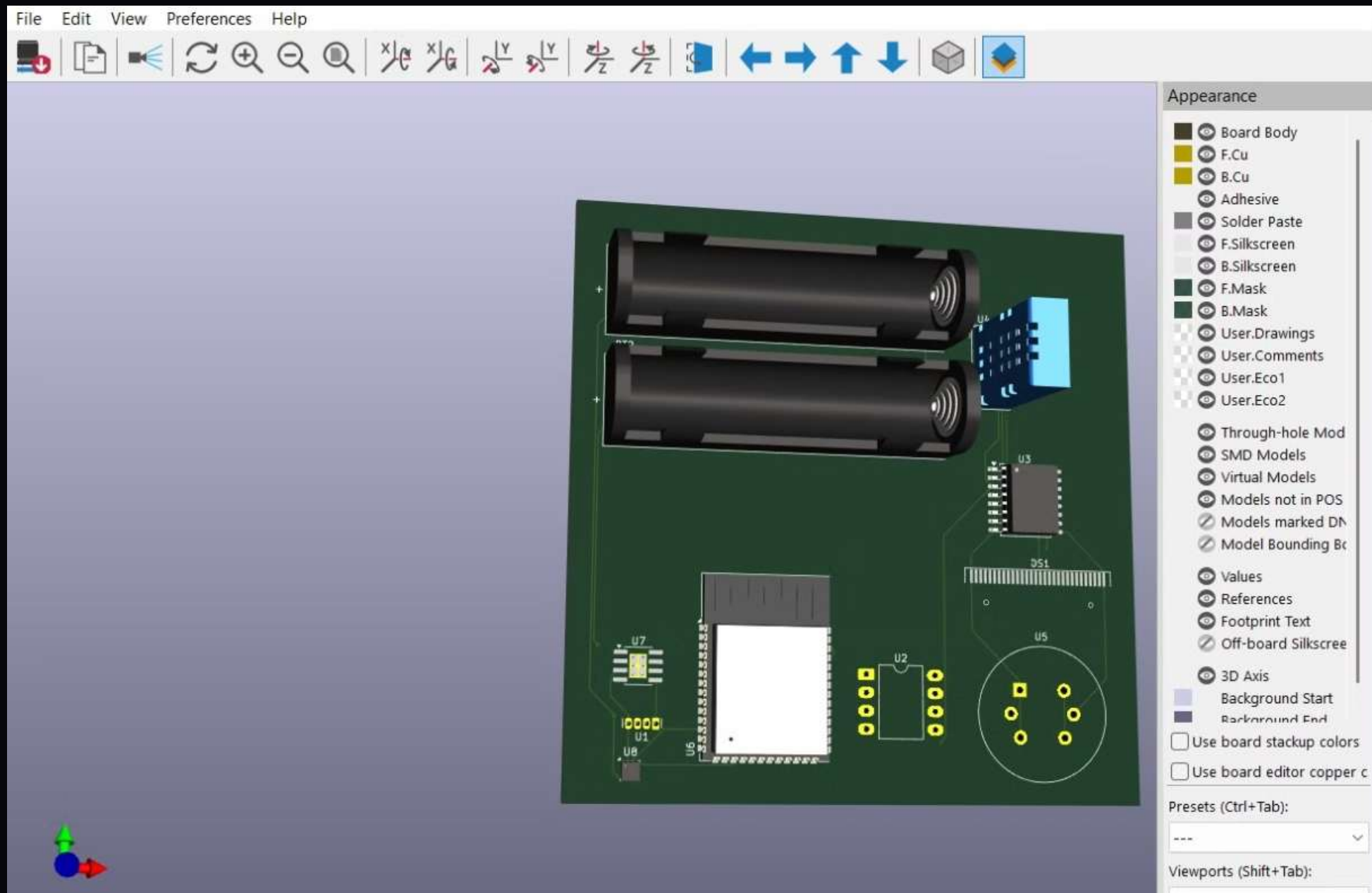
Component	Specification	KiCad Source
ESP32-S3 Dev Module	Wi-Fi & BT MCU, 240MHz, USB-C	Import from SnapEDA/Ultra Librarian
MQ-135 Gas Sensor	Detects CO2, NH3, smoke, etc.	<code>Sensor.lib</code> or import
Sound Sensor Module	Analog & digital sound detection	Generic <code>Microphone</code> or import
OLED Display	0.96" / 1.3", 128x64, I2C/SPI	<code>Display_OLED.lib</code> or import
BME280 Sensor	Temp, humidity, pressure (I2C/SPI)	<code>Sensor.lib</code> or import
Solar Panel	5V/6V, 1W-3W output	Use <b>Power Source</b> symbol
TP4056 Charging Module	3.7V Li-Ion charging	Import from SnapEDA
Flame Sensor	Infrared flame detection	<code>Sensor.lib</code> or import
Battery (3.7V 2500mAh)	Lithium-ion, rechargeable	<code>Battery.lib</code> or custom
Voltage Booster	3.7V to 5V, DC-DC converter	<code>Regulator_Switching.lib</code>
Dust Sensor	PM2.5, PM10 detection	Import from SnapEDA
Hall Effect Sensor	Magnetic field detection	<code>Sensor.lib</code> or import
MAX471 Sensor	Voltage & current measurement	Import from SnapEDA
Water Flow Sensor	Hall-effect water flow meter	<code>Sensor.lib</code> or import
DHT11 Sensor	Temp ( $\pm 2^{\circ}\text{C}$ ) & Humidity ( $\pm 5\%$ )	<code>Sensor.lib</code> or import
Soil Moisture Sensor	Measures soil moisture	<code>Sensor.lib</code> or custom symbol
Relay Module	5V/12V relay	<code>Relay.lib</code>
Rain Sensor	Detects rainwater	Import from external sources
RTC DS3231 Module	Real-time clock, I2C, battery backup	<code>RTC.lib</code> or import



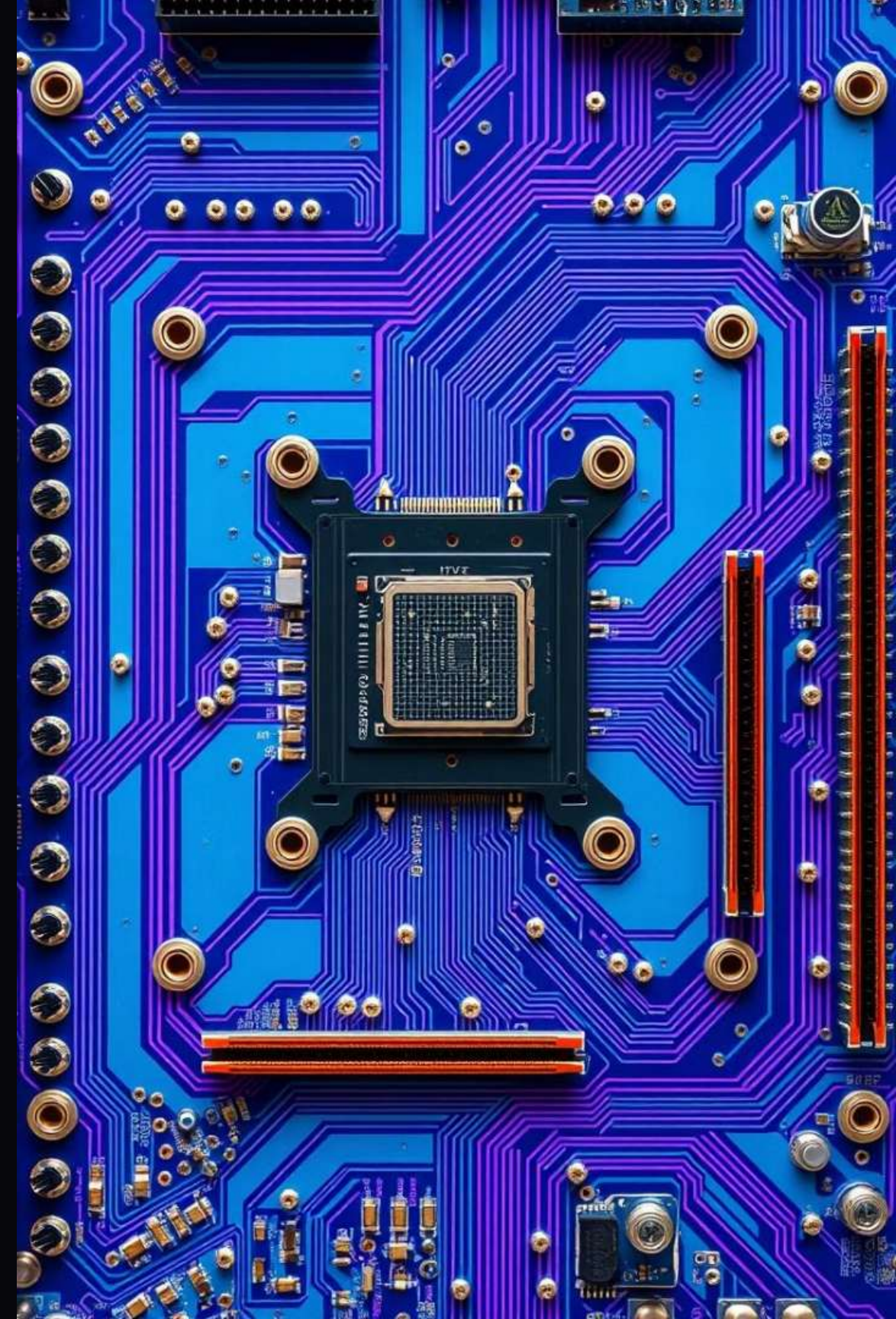
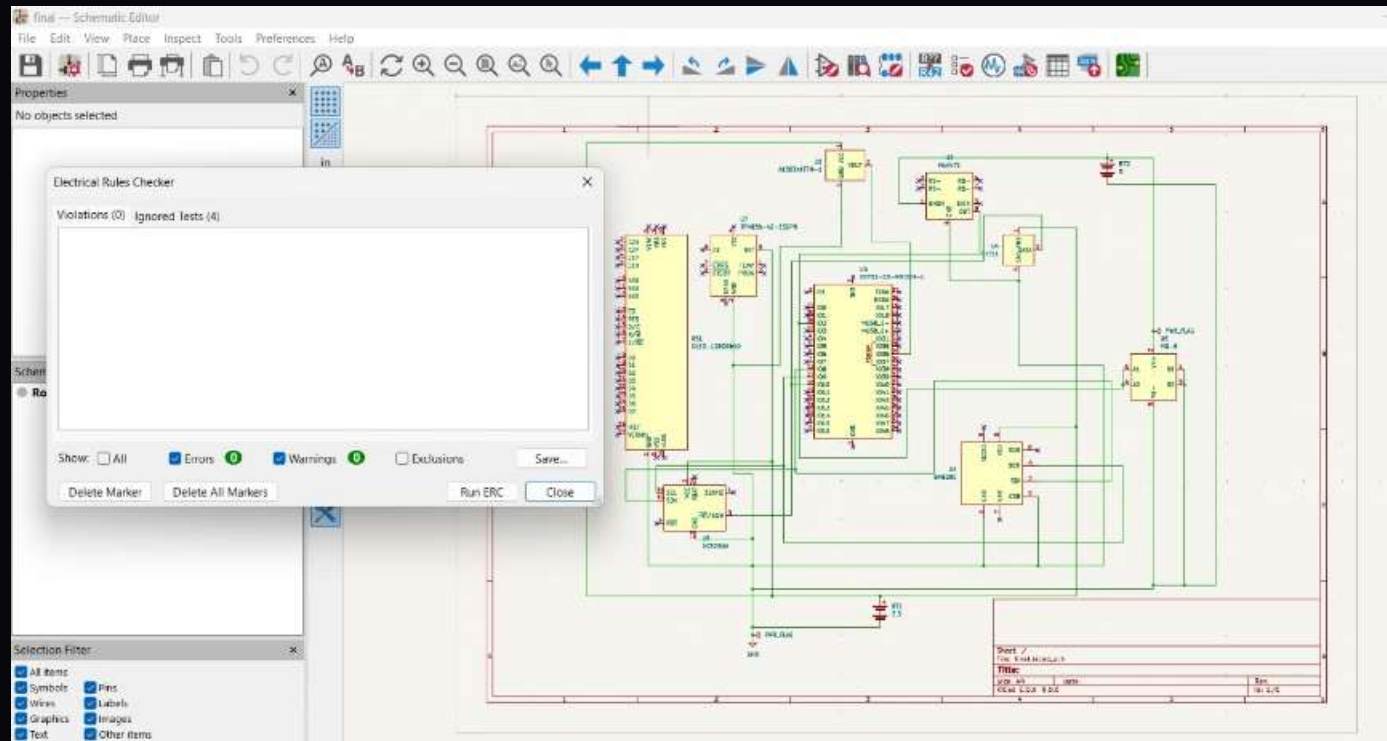
# PCB DESIGN







# Verification Checks







# GIT HUB:

...xn/**UNPLUGGED-PROJECT-**

0 Issues 0 Stars 0 Forks

GitHub

**GitHub - sxfiyxxn/UNPLUGGED-2.0-PR...**

Contribute to sxfiyxxn/UNPLUGGED-2.0-PROJECT- development by creating an accoun...

Submitted by:

TEAM SEVEN

[Chennai institute of technology, Tamil Nadu]

1.Sufiyaan i

2.Yeshwanth

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4.Nokia M M

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