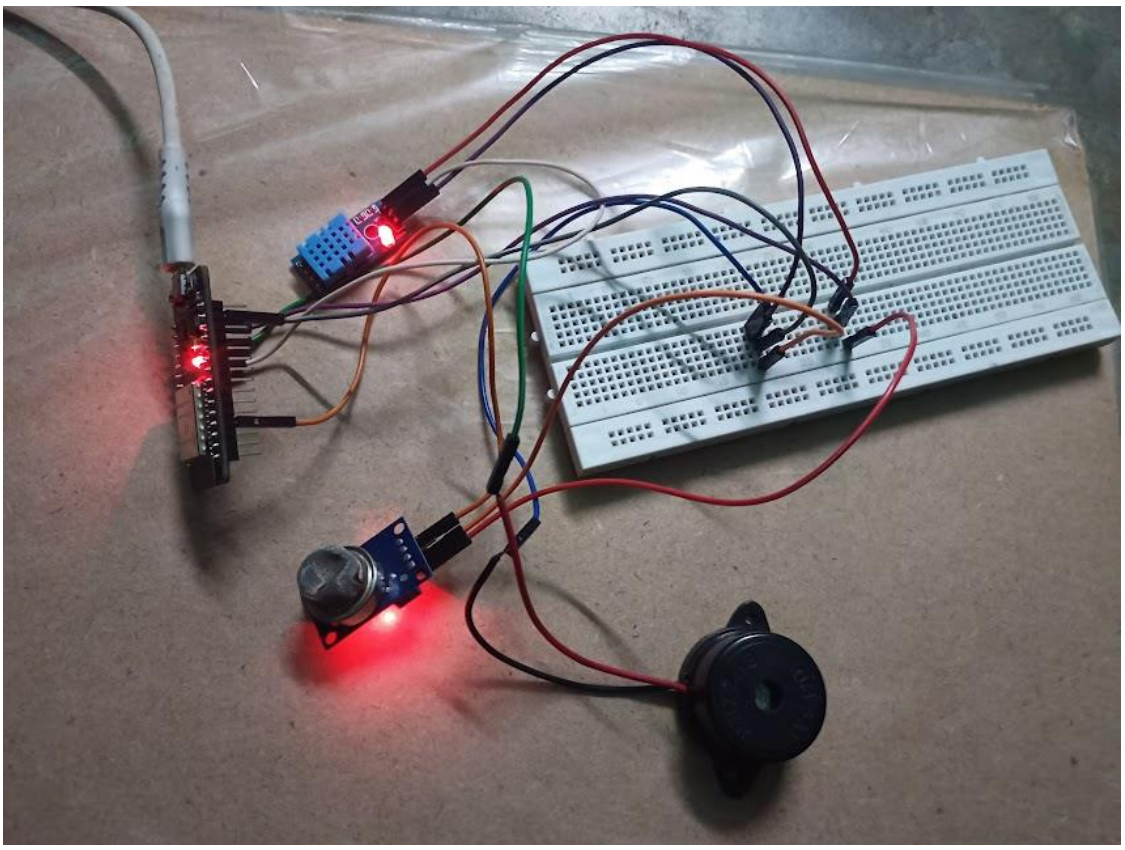
Indoor Air Quality

The project involves the evaluation of indoor air quality (IAQ) in residential, commercial, and institutional settings. The main goals of such a campaign will be to pinpoint the most common indoor pollutants (e.g., CO_2) and relative humidity, characterize sources and assess impact on occupants in terms of health and comfort.

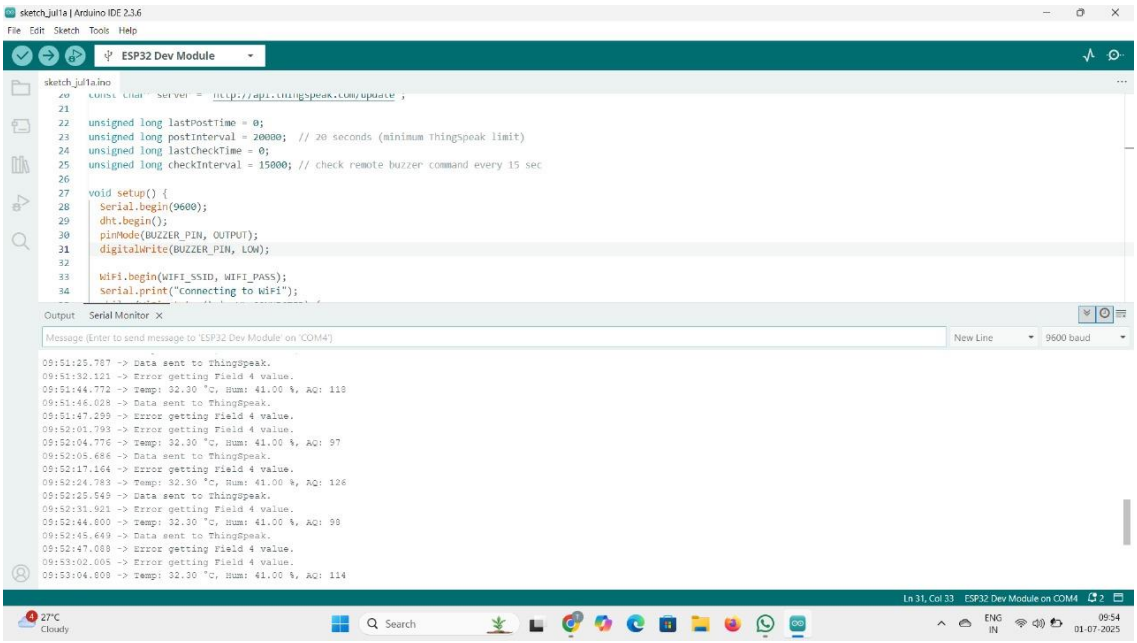
The project seeks to offer timely actionable insights for better air quality management by taking advantage of sensor-based monitoring, data analytics and risk analysis methodologies. Negative health effects of poor IAQ are broad and include instant short-term symptoms such as headaches and eye irritation, lethargy and sick building syndrome through chronic conditions. Household cleaning products and heating systems, as well as poor ventilation, are common contributors to indoor air pollution.

Ensuring harmonious IAQ includes strategies for continuous ventilation, management of contaminant sources, air cleaning or filtration, and adjustment of the overall humidity. Good IAQ management promotes health, productivity, and quality of life, and is a key consideration in the design, construction, operation and maintenance of both new and existing buildings. Results from this project will assist in the creation of healthier homes by helping informed -decisions and practical intervention.

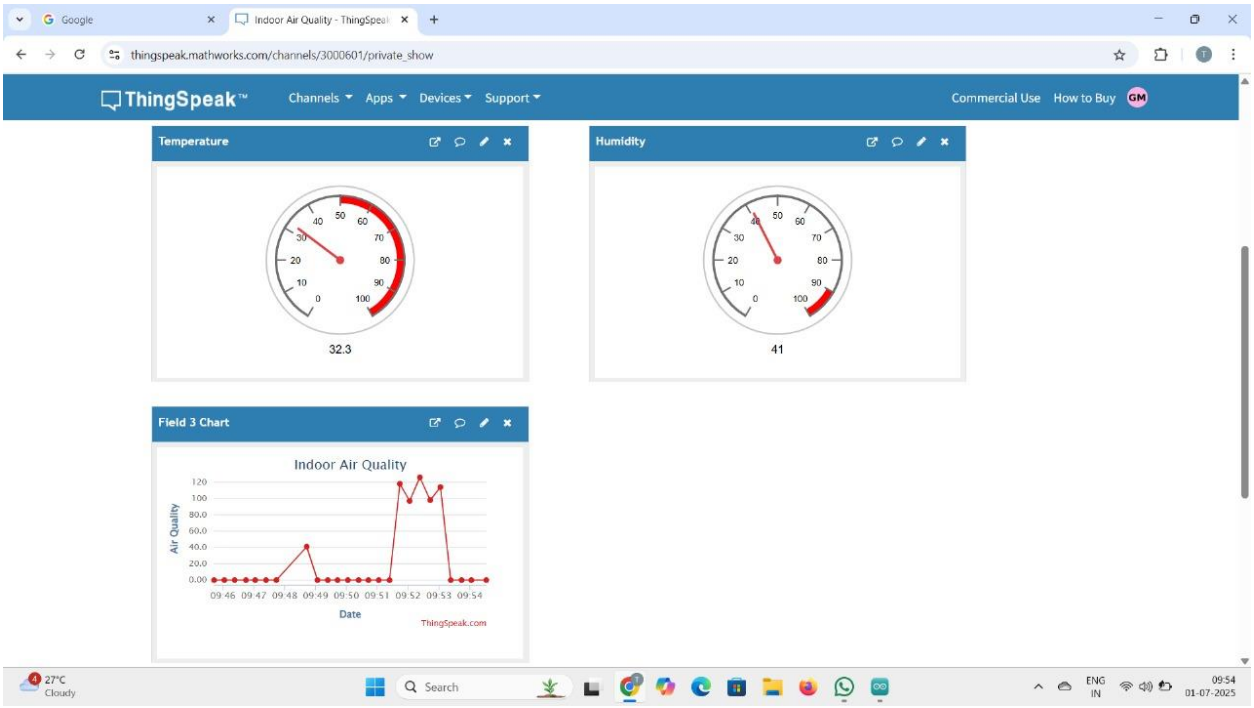
Hardware Implementation:



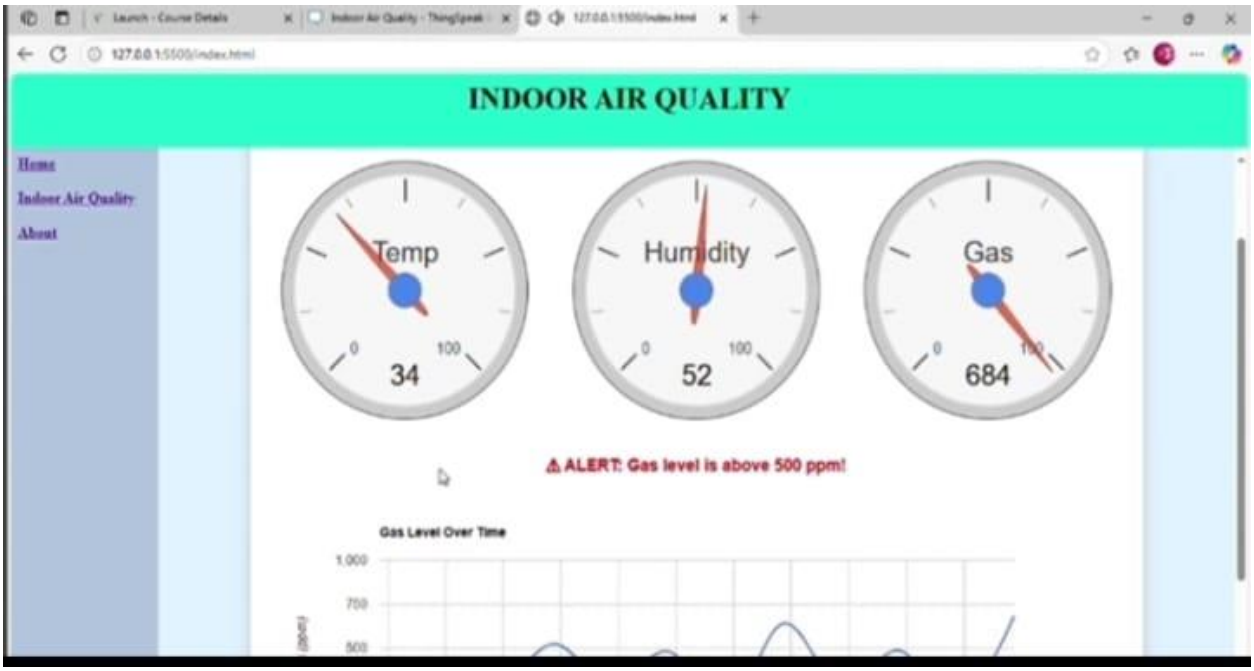
Output:



Cloud Integration and Data Visualization:



Web Application:


INDOOR AIR QUALITY
Home
Indoor Air Quality
About
Temp
0
100
34
Humidity
0
100
52
Gas
0
684
⚠ ALERT: Gas level is above 500 ppm!
Gas Level Over Time
1,000
750
500