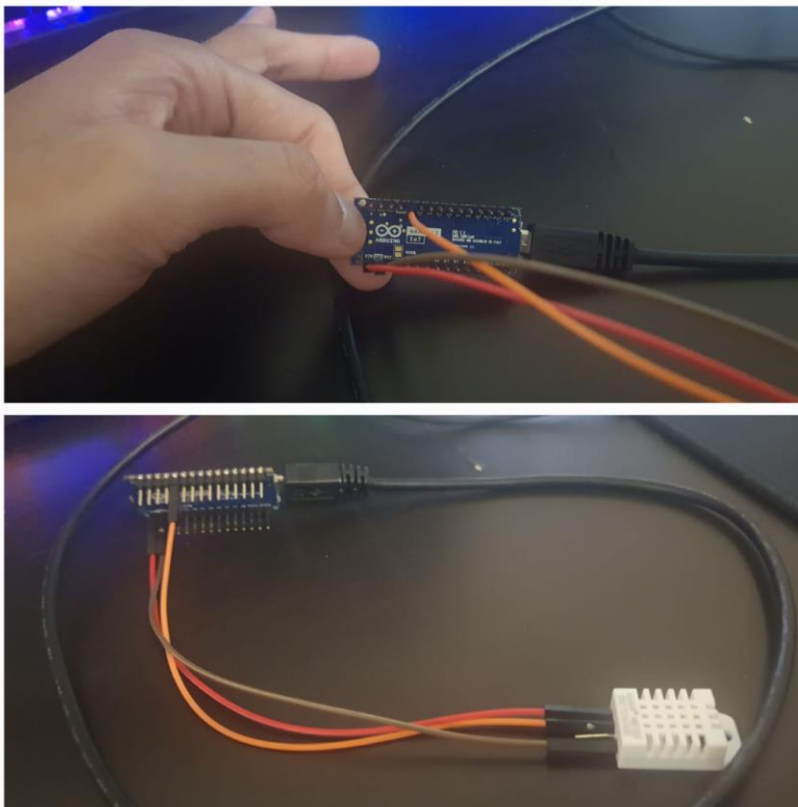


## Task 2.1P

1. Webhooks are automated messages sent from apps when something happens. They have a message/payload and are sent to a unique URL, essentially functioning as a simple way to extend and customize the functionality of applications without the need for custom software development. Unlike APIs, which require a poll mechanism to check for updates constantly, webhooks deliver data as it happens in real-time. This makes webhooks more efficient for both the provider and the consumer, as they reduce the need for constant polling and can significantly decrease the latency between the event occurrence and action.

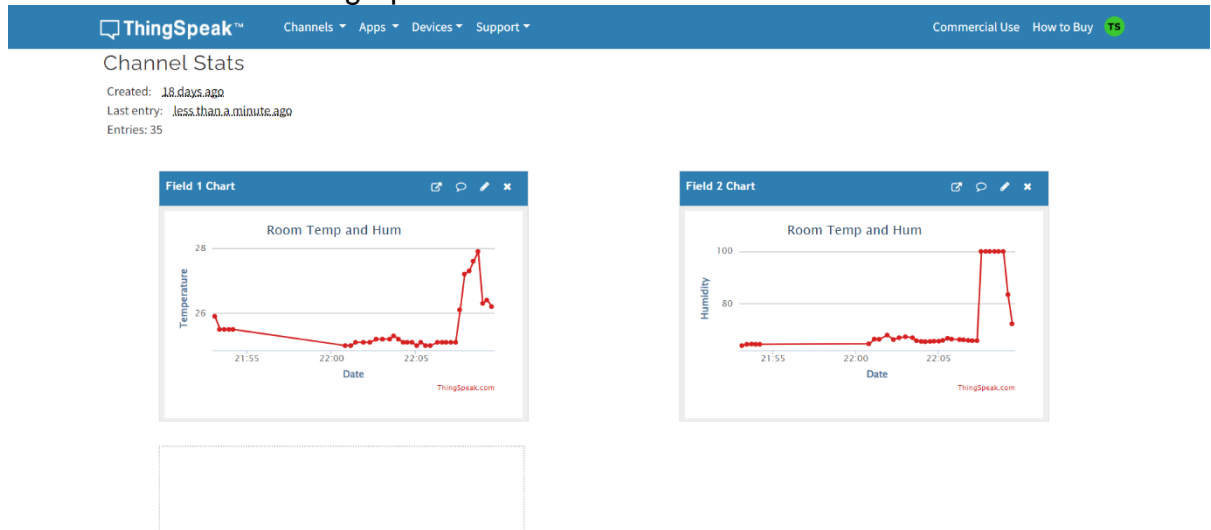
A real-life scenario of webhook use is in e-commerce platforms like Shopify, which use webhooks to notify other applications about various events, such as the creation of new orders, updates to a product's details, or changes in inventory levels. For example, when a new order is placed on Shopify, a webhook could be triggered to send the order details to a logistics provider's system, automatically initiating the shipping process without manual intervention. This automation speeds up operations, reduces the potential for human error, and improves customer satisfaction by ensuring that products are shipped more quickly.

2. Below is the circuit diagram used in this project. It clearly shows the pin connections between the components.



3. <https://github.com/Tushar-Sehgal/Task2.1WebHook>

4. The ThingSpeak chart below demonstrates the sensor's readings over a 15-minute period, during which I artificially changed the room's temperature and humidity by turning the heater on and off. This manipulation is reflected in the fluctuations seen in the graph.



## Miscellaneous

Below is the output from my serial monitor exhibiting a successful connection to the internet and uploading of the data input from DHT11 sensor to the ThinkSpeak Database as seen above.

```
22:06:07.274 -> Attempting to connect to SSID: MINEZ 2G
22:06:09.964 -> .
22:06:14.966 -> Connected.
22:06:14.966 ->
22:06:14.966 -> WiFi connected
22:06:14.966 -> Humidity: 66.20% Temperature: 25.10°C Channel update successful.
22:06:30.954 -> Humidity: 66.10% Temperature: 25.10°C Channel update successful.
22:06:46.965 -> Humidity: 65.90% Temperature: 25.10°C Channel update successful.
22:07:02.923 -> Humidity: 65.80% Temperature: 25.10°C Channel update successful.
22:07:19.021 -> Humidity: 65.80% Temperature: 25.10°C Channel update successful.
22:07:35.086 -> Humidity: 99.90% Temperature: 26.10°C Channel update successful.
22:07:51.034 -> Humidity: 99.90% Temperature: 27.20°C Channel update successful.
22:08:07.005 -> Humidity: 99.90% Temperature: 27.30°C Channel update successful.
22:08:23.084 -> Humidity: 99.90% Temperature: 27.60°C Channel update successful.
22:08:39.164 -> Humidity: 99.90% Temperature: 27.90°C Channel update successful.
```