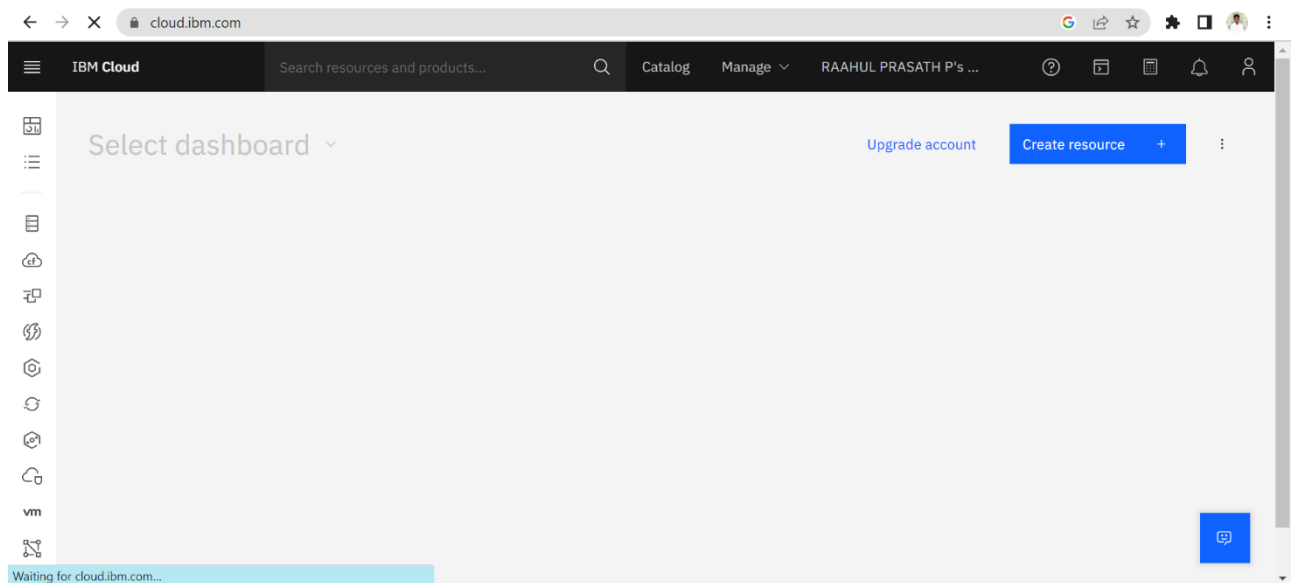


# SPRINT 1

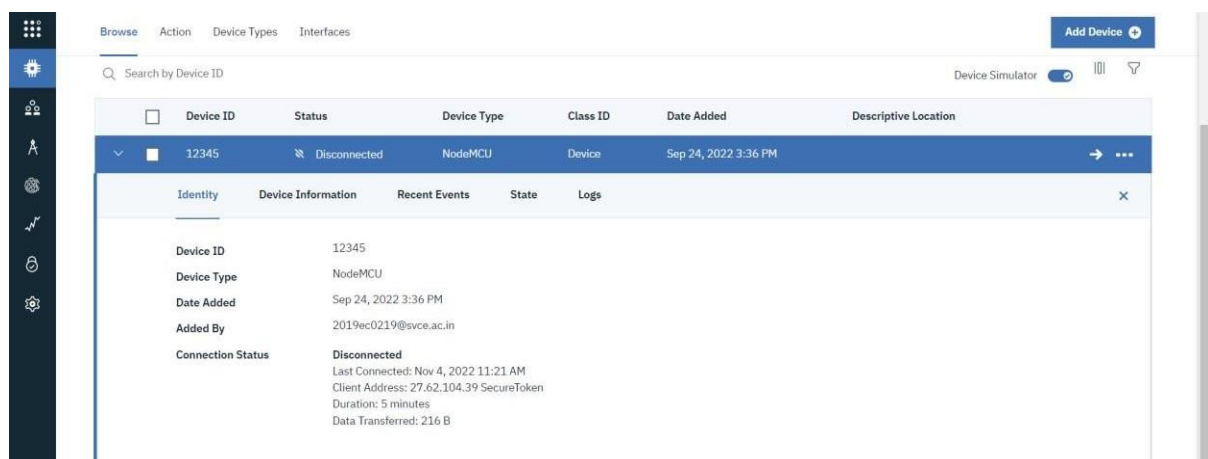
Date	29 October 2022
Team ID	PNT2022TMID01871
Project Name	Smart Farmer – IOT Enabled Smart Farming Application

## Configuration:

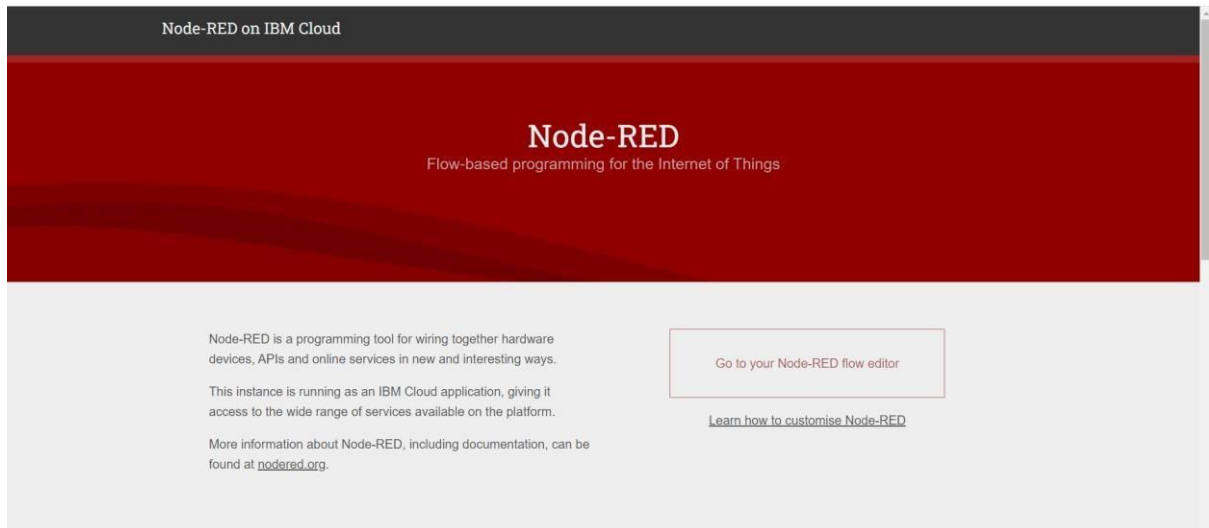
An account has been created on the required platforms ( IBM Cloud, IBM Watson, NodeRed, MIT App Inventor ) **IBM Cloud:**



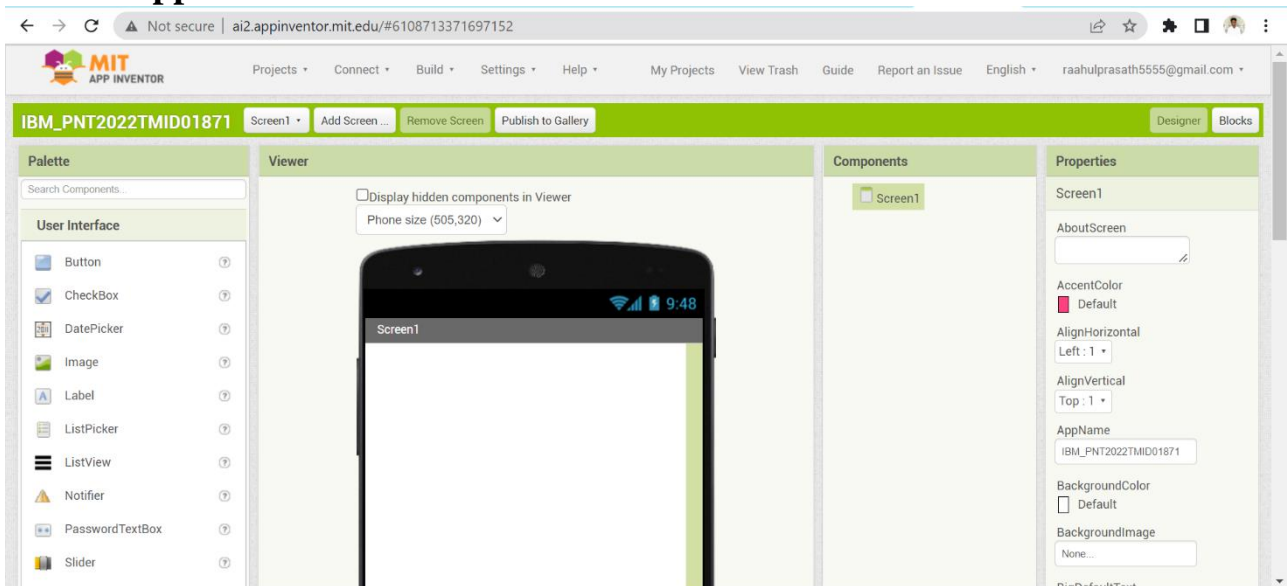
## **IBM Watson:**



## **Node-Red:**



## MIT App Inventor:



## Simulation:

### Program:

```
#include <Adafruit_Sensor.h>
#include <DHT.h>
#include <DHT_U.h>

#define DHTPIN 4
#define DHTTYPE DHT22

DHT_Unified dht(DHTPIN, DHTTYPE);
uint32_t
delayMS; void
setup() {
  Serial.begin(960
```

```

0); //
Initialize
device.
    dht.begin();
    Serial.println(F("DHTxx Unified Sensor Example"));
sensor_t sensor;
    dht.temperature().getSensor(&sensor);
    Serial.println(F("-----"));
    Serial.println(F("Temperature Sensor"));
    Serial.print(sensor.resolution);
    Serial.println(F("°C"));
    Serial.println(F("-----"));
dht.humidity().getSensor(&sensor);
Serial.println(F("Humidity Sensor"));
    Serial.print(sensor.resolution);
    Serial.println(F("%"));
    Serial.println(F("-----"));
delayMS = sensor.min_delay / 1000;
} void loop() {    delay(delayMS);
sensors_event_t event;
dht.temperature().getEvent(&event);
if (isnan(event.temperature)) {
    Serial.println(F("Error reading temperature!"));
}
else {
    Serial.print(F("Temperature: "));
    Serial.print(event.temperature);
    Serial.println(F("°C"));
}    dht.humidity().getEvent(&event);
if (isnan(event.relative_humidity)) {
    Serial.println(F("Error reading humidity!"));
}
else {
    Serial.print(F("Humidity: "));
    Serial.print(event.relative_humidity);
    Serial.println(F("%"));
}
}

```

**OUTPUT:**

WOKWI

SAVE

SHARE

Docs

M

sketch.ino

diagram.json

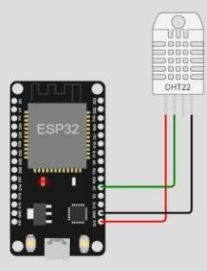
libraries.txt

Library Manager

```
1 #include <Adafruit_Sensor.h>
2 #include <DHT.h>
3 #include <DHT_U.h>
4
5 #define DHTPIN 4
6 #define DHTTYPE DHT22
7
8 DHT_Unified dht(DHTPIN, DHTTYPE);
9
10 uint32_t delayMS;
11
12 void setup() {
13   Serial.begin(9600);
14   // Initialize device.
15   dht.begin();
16   Serial.println(F("DHTxx Unified Sensor Example"));
17   sensor_t sensor;
18   dht.temperature().getSensor(&sensor);
19   Serial.println(F("-----"));
20   Serial.println(F("Temperature Sensor"));
21   Serial.print(sensor.resolution);
22   Serial.println(F("°C"));
23   Serial.println(F("-----"));
24   dht.humidity().getSensor(&sensor);
25   Serial.println(F("Humidity sensor"));
26   Serial.print(sensor.resolution);
27   Serial.println(F("%"));
28   Serial.println(F("-----"));
29   delayMS = sensor.min_delay / 1000;
30 }
31
32 void loop() {
33   ...
```

Simulation

00:26.883 65%



The diagram shows an ESP32 microcontroller board connected to a DHT22 digital temperature and humidity sensor. The sensor is connected to the ESP32 via three wires: a green wire to the VCC pin, a red wire to the GND pin, and a white wire to the data pin.

Humidity: 40.00%  
Temperature: 24.00°C  
Humidity: 40.00%  
Temperature: 24.00°C  
Humidity: 40.00%  
Temperature: 24.00°C  
Humidity: 40.00%