

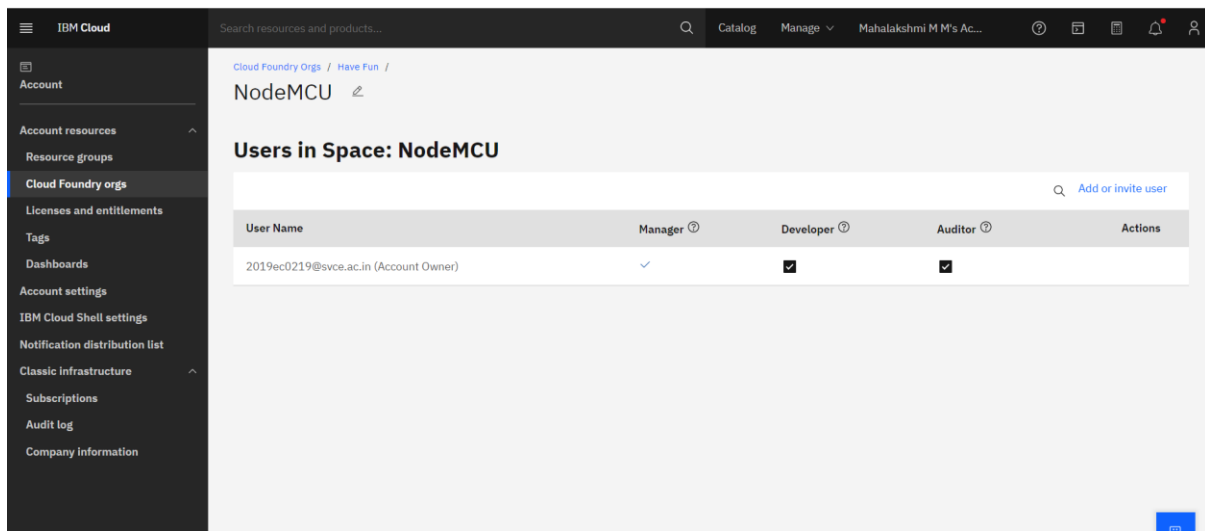
SPRINT 1

Date	29 October 2022
Team ID	PNT2022TMID53631
Project Name	Smart Farmer – IOT Enabled Smart Farming Application
Maximum Marks	8 Marks

Configuration:

An account has been created on the required platforms (IBM Cloud, IBM Watson, Node-Red, MIT App Inventor)

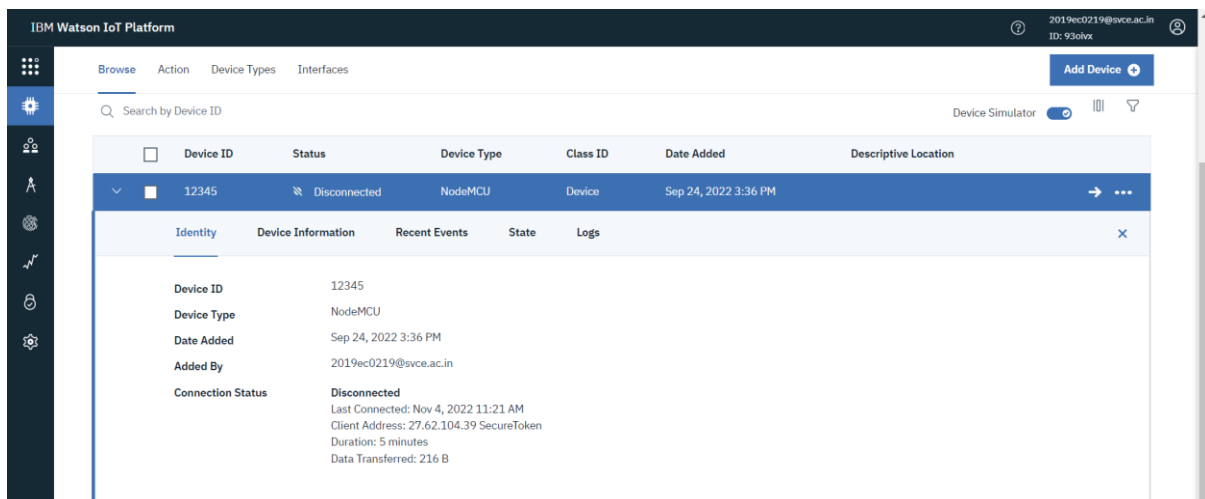
IBM Cloud:



The screenshot shows the IBM Cloud console interface. The left sidebar contains navigation links: Account, Account resources, Resource groups, Cloud Foundry orgs (selected), Licenses and entitlements, Tags, Dashboards, Account settings, IBM Cloud Shell settings, Notification distribution list, Classic infrastructure, Subscriptions, Audit log, and Company information. The main content area is titled 'NodeMCU' and shows 'Users in Space: NodeMCU'. A table lists users with columns: User Name, Manager, Developer, Auditor, and Actions. One user is listed: 2019ec0219@svce.ac.in (Account Owner), with checkmarks in the Manager, Developer, and Auditor columns.

User Name	Manager	Developer	Auditor	Actions
2019ec0219@svce.ac.in (Account Owner)	✓	✓	✓	

IBM Watson:

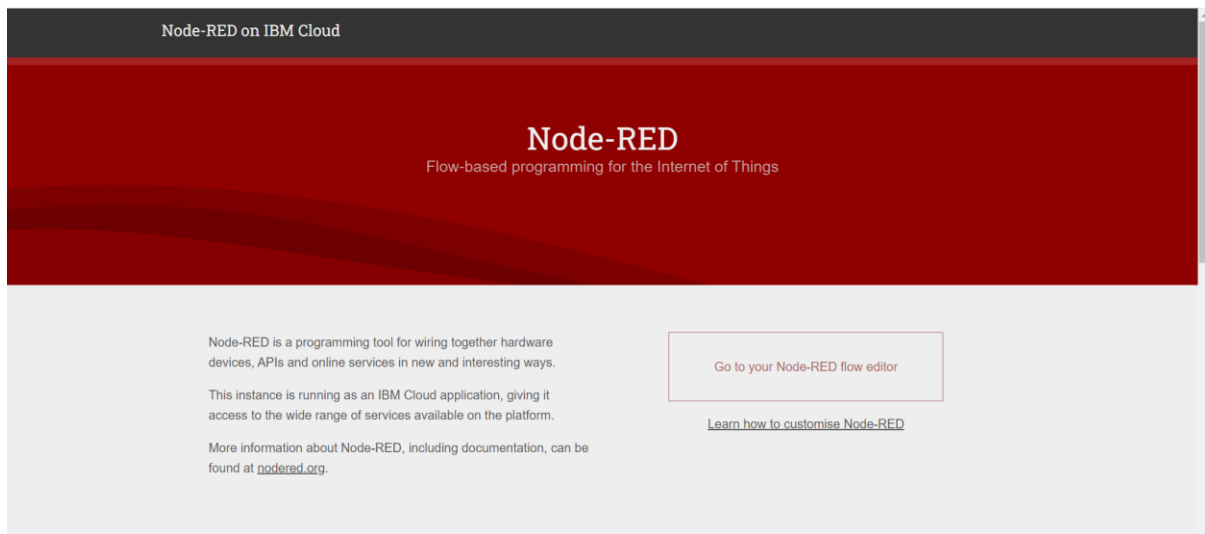


The screenshot shows the IBM Watson IoT Platform console. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar is present. The main content area displays a table of devices. One device is selected, showing its details in a sidebar. The device is a NodeMCU with ID 12345, added on Sep 24, 2022 3:36 PM, by user 2019ec0219@svce.ac.in. The connection status is 'Disconnected'.

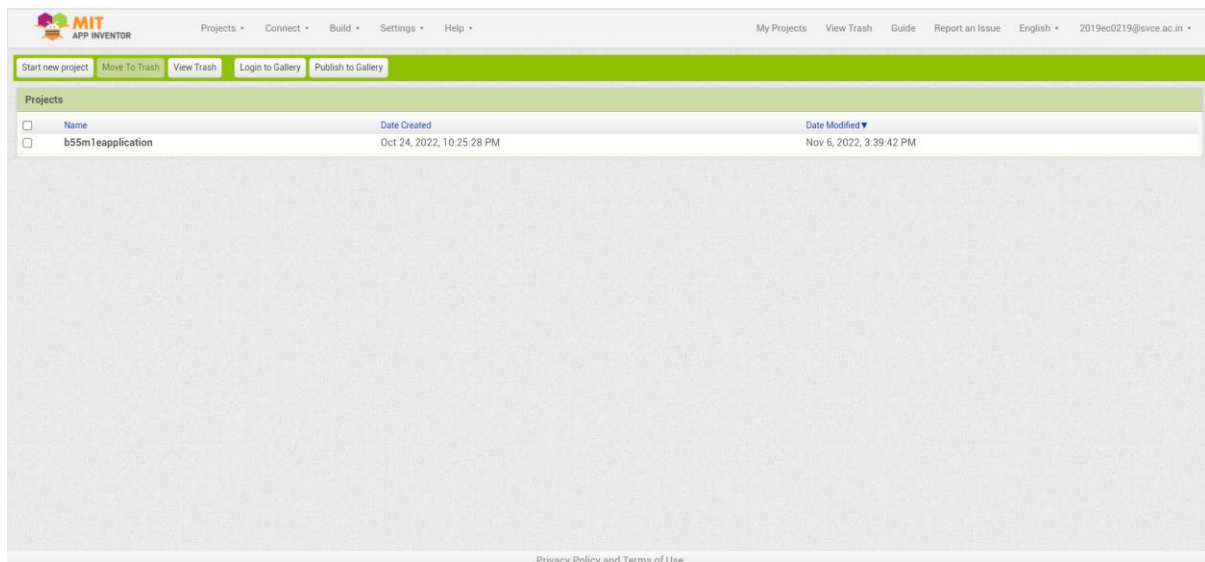
Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
12345	Disconnected	NodeMCU	Device	Sep 24, 2022 3:36 PM	

Identity	Device Information	Recent Events	State	Logs
Device ID	12345			
Device Type	NodeMCU			
Date Added	Sep 24, 2022 3:36 PM			
Added By	2019ec0219@svce.ac.in			
Connection Status	Disconnected			

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(9600);
    // 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:

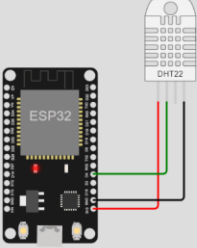
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sketch.ino • diagram.json • libraries.bd • Library Manager

```
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%



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