

SPRINT 4 – USER INTERACTION

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Project Name	Smart Former IOT Based smart Farming Application
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To make the user interact with software :

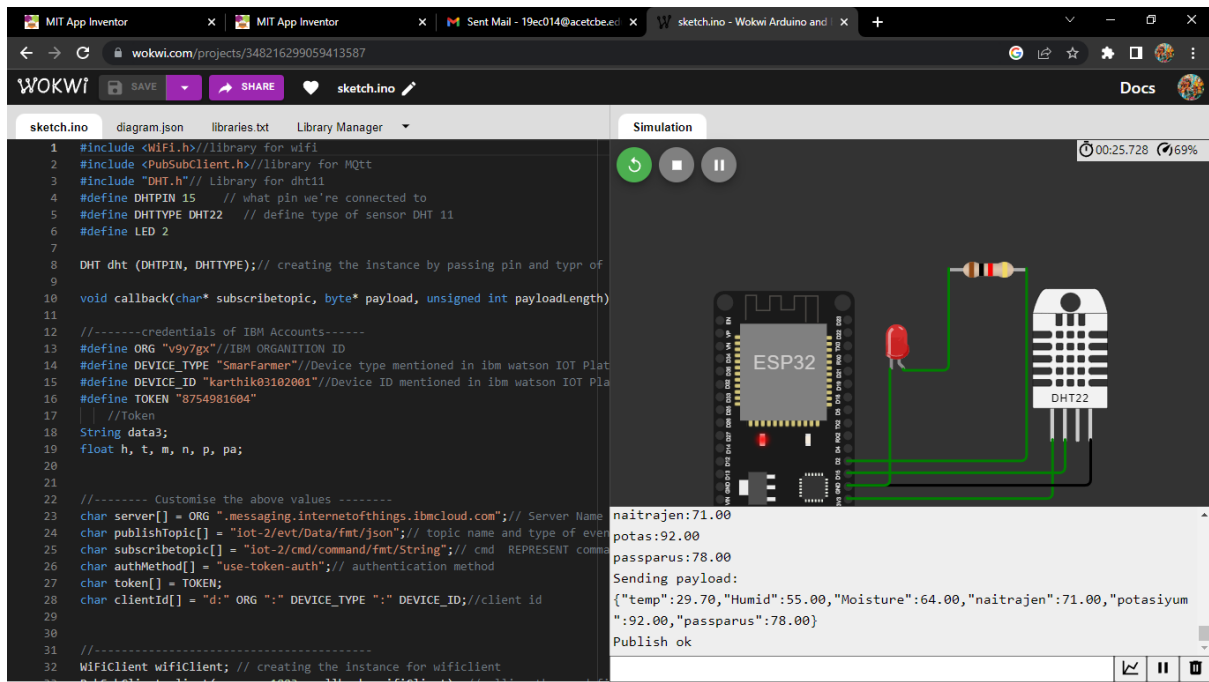
Link: <http://ai2.appinventor.mit.edu/#5873177709117440>

The screenshot displays the MIT App Inventor web interface with a Wokwi simulation running. The code editor on the left contains the following code:

```
1 #include <WiFi.h> //library for wifi
2 #include <PubSubClient.h> //library for MQTT
3 #include "DHT.h" // Library for dht11
4 #define DHTPIN 15 // what pin we're connected to
5 #define DHTTYPE DHT22 // define type of sensor DHT 11
6 #define LED 2
7
8 DHT dht (DHTPIN, DHTTYPE); // creating the instance by passing pin and type of
9
10 void callback(char* topic, byte* payload, unsigned int payloadLength)
11
12 //-----credentials of IBM Accounts-----
13 #define ORG "v9y7gx" //IBM ORGANIZATION ID
14 #define DEVICE_TYPE "SmarFarmer" //Device type mentioned in ibm watson IOT Plat
15 #define DEVICE_ID "karthik03102001" //Device ID mentioned in ibm watson IOT Pla
16 #define TOKEN "8754981604"
17 //Token
18 String data3;
19 float h, t, m, n, p, pa;
20
21
22 //----- Customise the above values -----
23 char server[] = ORG ".messaging.internetofthings.ibmcloud.com"; // Server Name
24 char publishTopic[] = "iot-2/evt/Data/fmt/json"; // topic name and type of even
25 char subscribTopic[] = "iot-2/cmd/command/fmt/String"; // cmd REPRESENT comm
26 char authMethod[] = "use-token-auth"; // authentication method
27 char token[] = TOKEN;
28 char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID; //client id
29
30
31 //-----
32 WiFiClient wificlient; // creating the instance for wificlient
```

The simulation window on the right shows a circuit diagram with an ESP32 microcontroller, a red LED, and a DHT22 sensor. A terminal window at the bottom right displays the following output:

```
naitrajen:41.00
potas:84.00
passparus:47.00
Sending payload:
{"temp":29.70,"Humid":55.00,"Moisture":43.00,"naitrajen":41.00,"potasium
":84.00,"passparus":47.00}
Publish ok
```



(Note : Here we can use LED light instead of motor because there is no motor component in the simulation app)

MOBILE APP USER INTERFACE :

1. Log in screen
2. Output screen

11:46 AM

14.9KB/s   4G   64

Screen1

Smart Farm

Log in

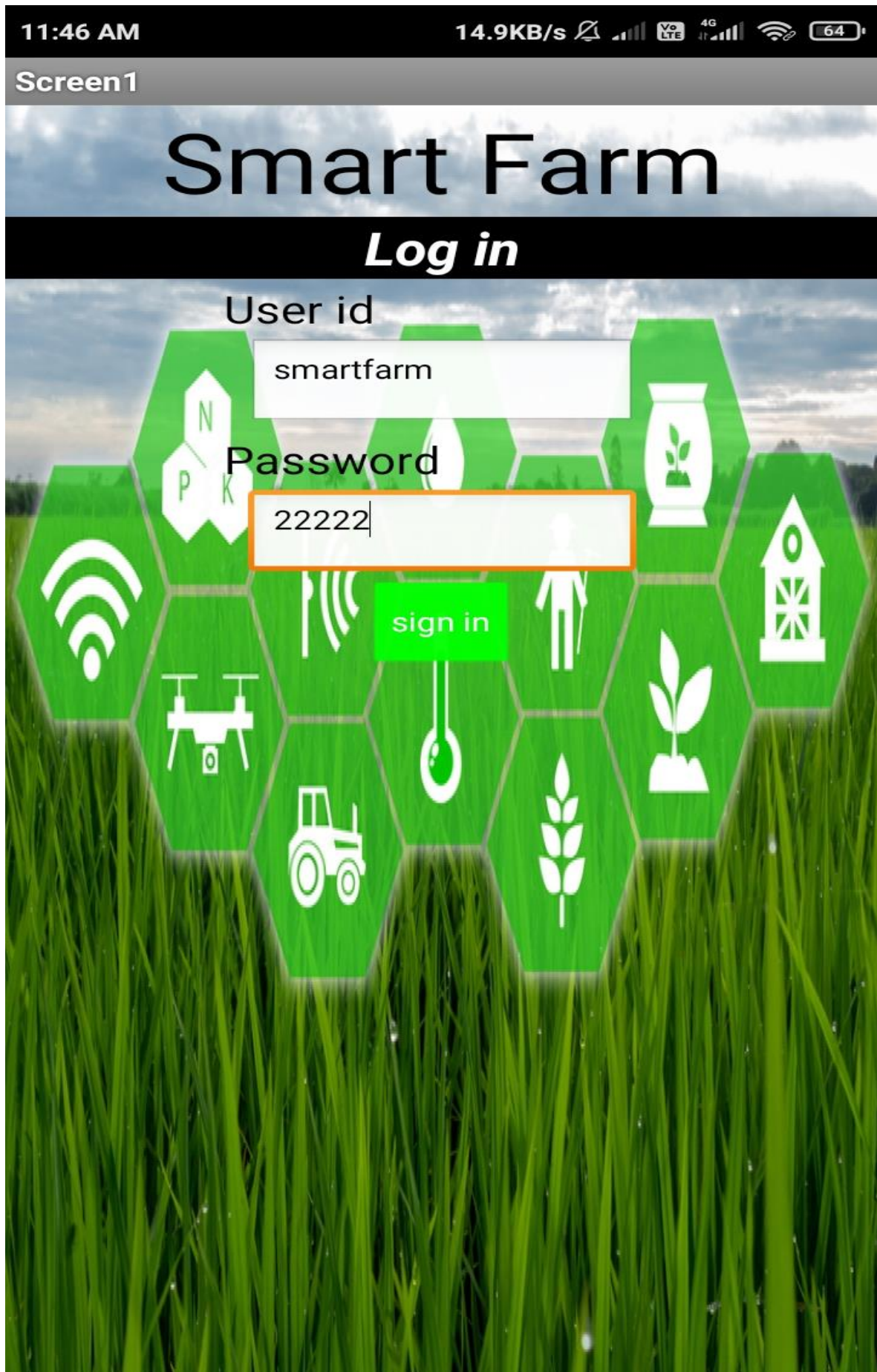
User id

smartfarm

Password

22222

sign in



10:29 AM

11.6KB/s



83

Smart farming

tempreture

29.7

humidity

55

moisture

69

nitrogen

70

potassium

91

phosphorus

63

Motor ON

Motor OFF

