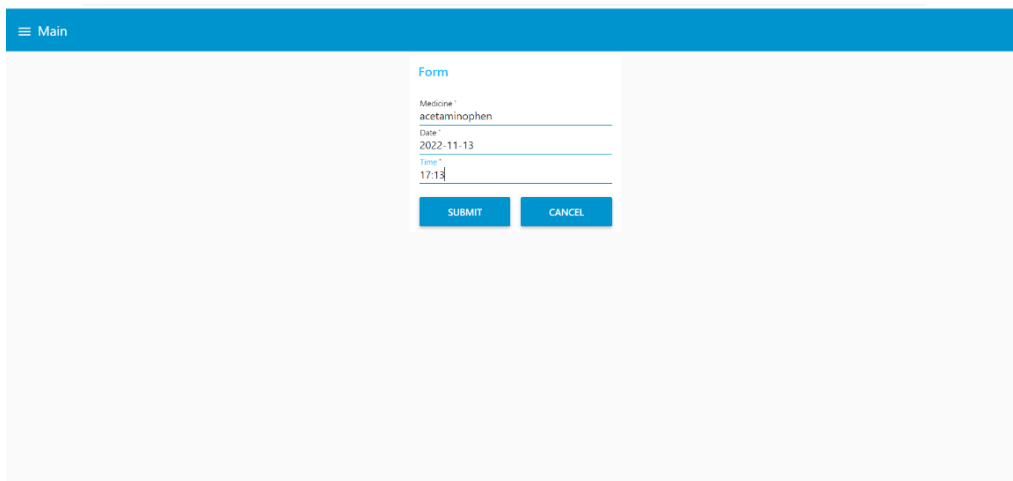


Final Deliverables

| | |
|---------------|--|
| Team ID: | PNT2022TMID30898 |
| Project Name: | Personal Assistance for Seniors Who Are Self Reliant |

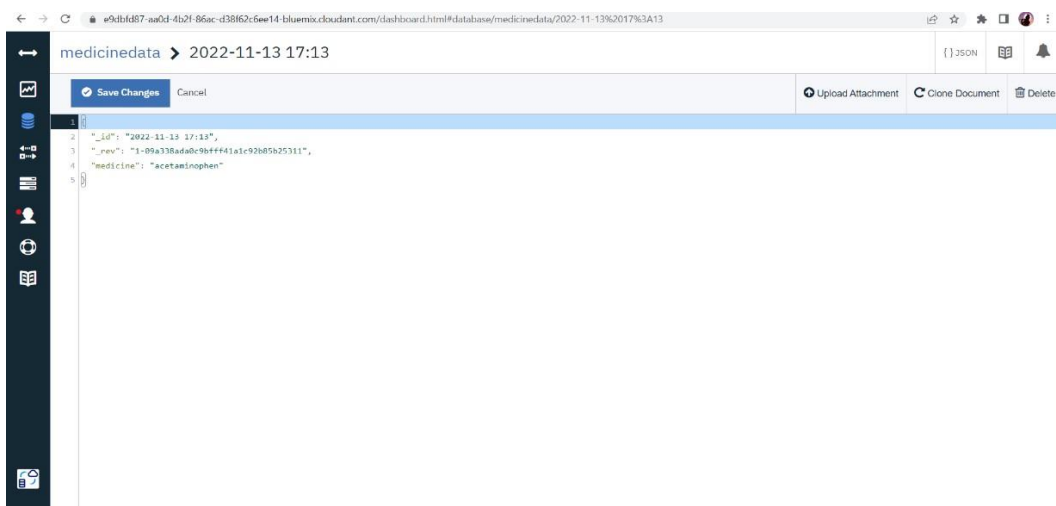
Web Application

1. Getting data from user:

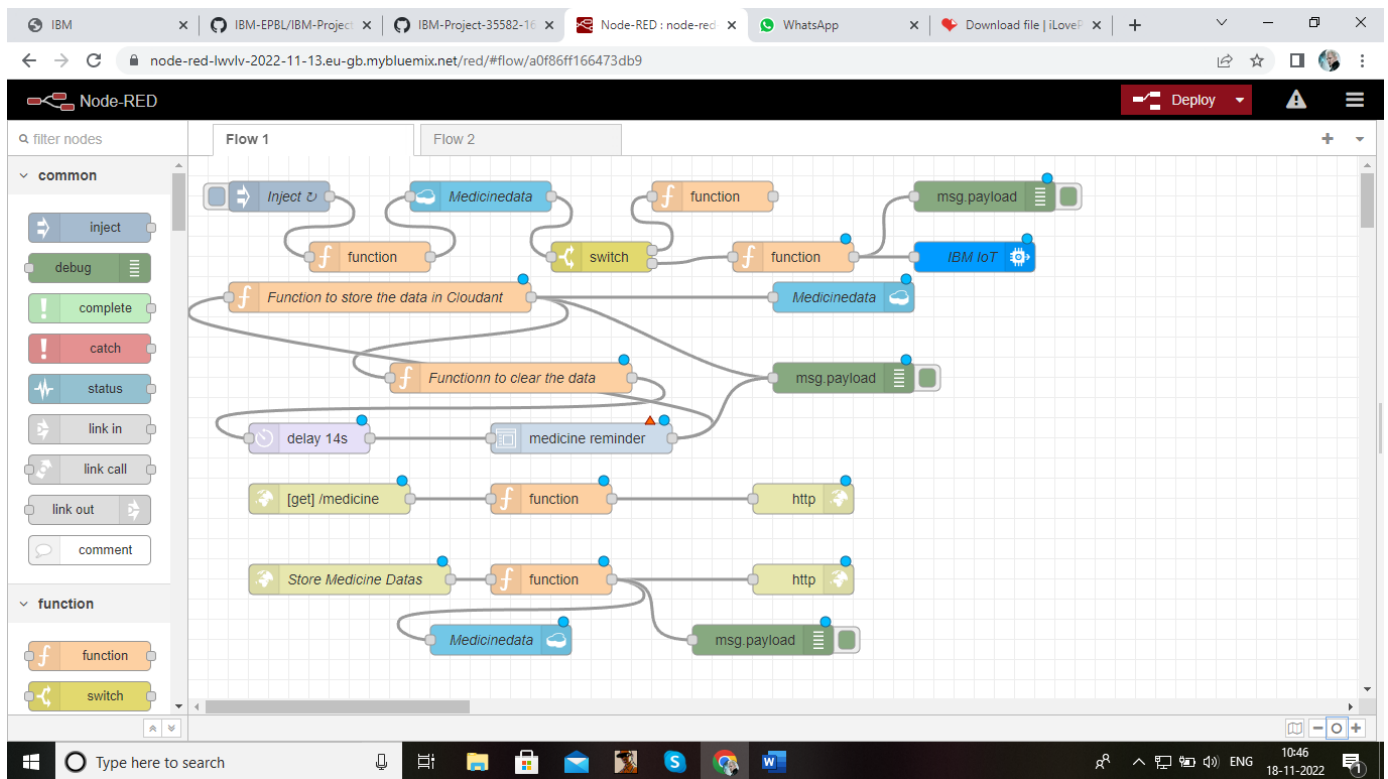


The screenshot shows a web application interface with a blue header bar labeled 'Main'. Below the header, there is a form titled 'Form'. The form contains three input fields: 'Medicine' with the value 'acetaminophen', 'Date' with the value '2022-11-13', and 'Time' with the value '17:13'. Below the input fields are two buttons: 'SUBMIT' and 'CANCEL'.

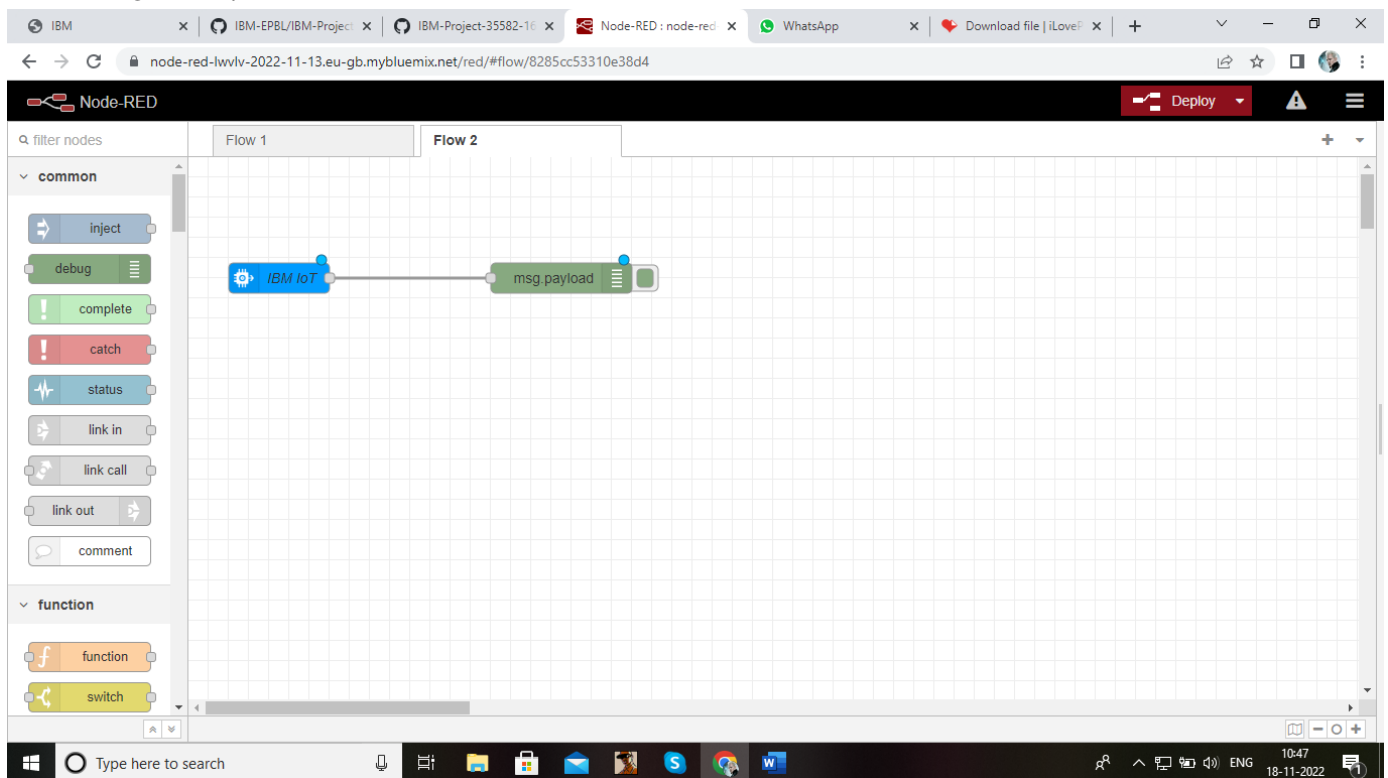
2. Saved on cloudant:



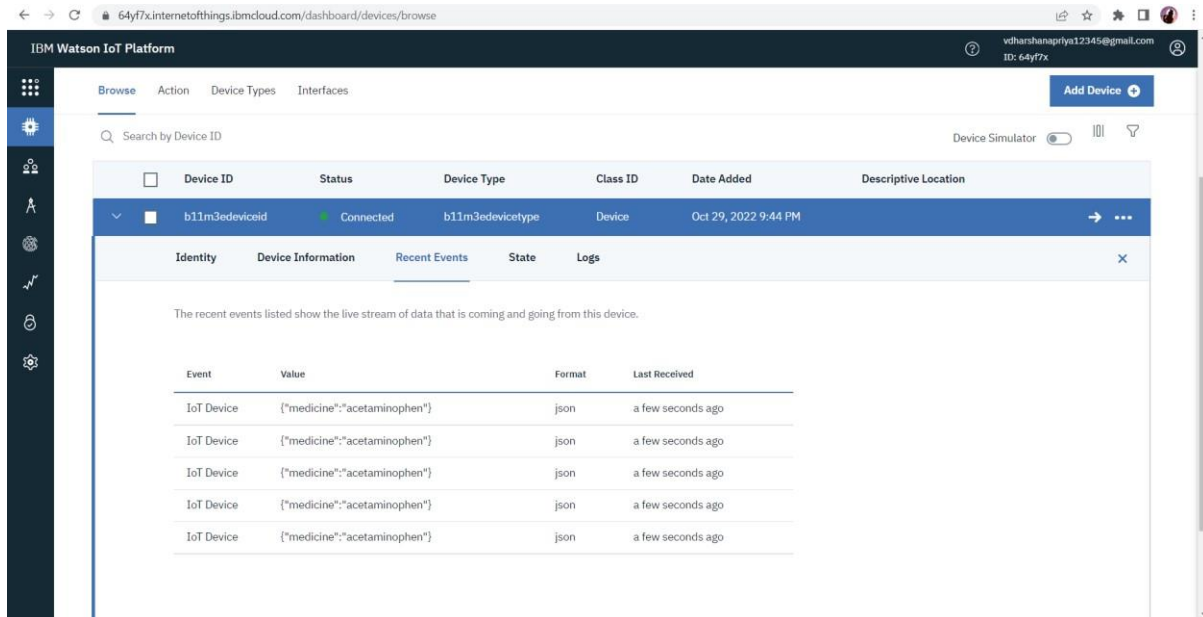
Form 1:



Form 2:



4. Executing in Watson IoT Platform:

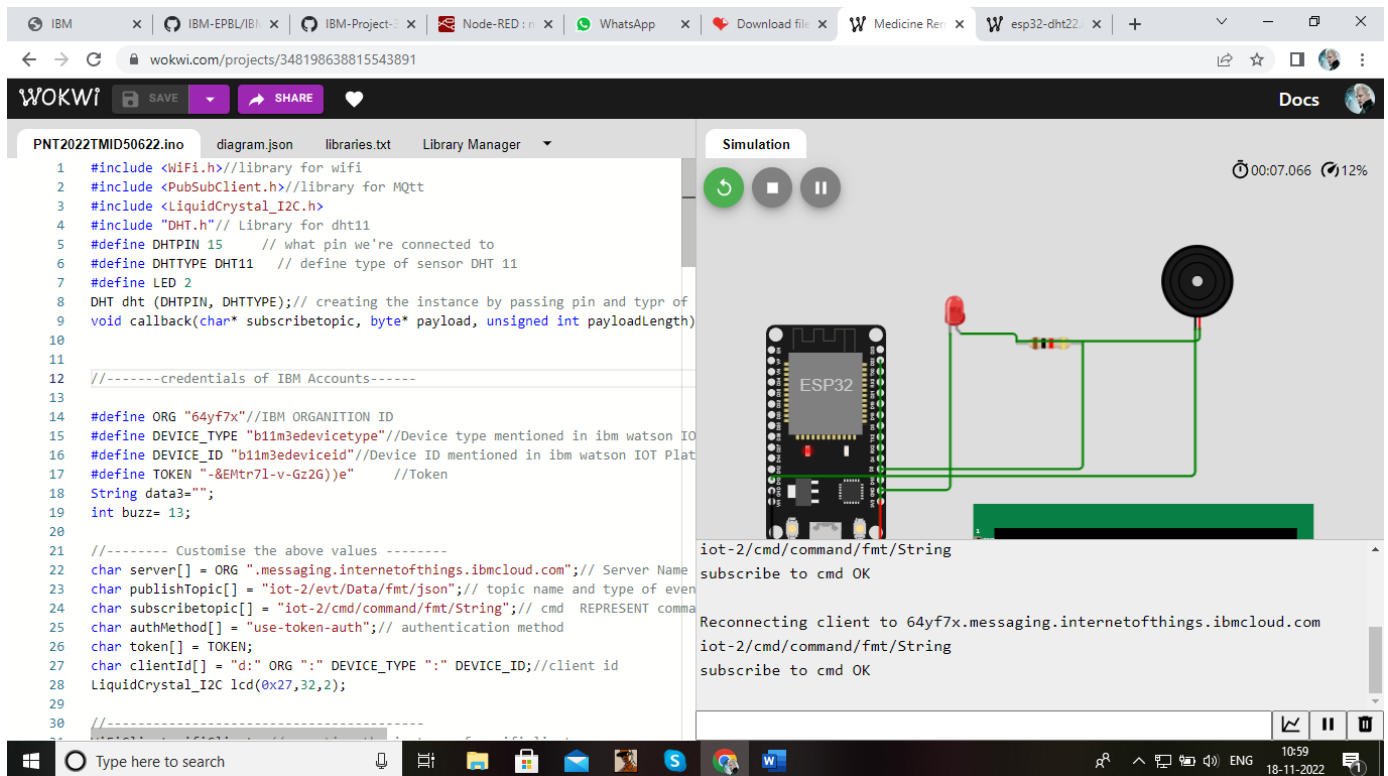


The screenshot displays the IBM Watson IoT Platform dashboard. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar labeled 'Search by Device ID' is present. The main content area shows a table of devices. The selected device, 'b11m3edeviceld', is in a 'Connected' state. Below the device list, a modal window titled 'Recent Events' is open, showing a stream of data events. The events are listed in a table with columns: Event, Value, Format, and Last Received. The events are all of type 'IoT Device' and contain the value '{"medicine": "acetaminophen"}' in JSON format, received 'a few seconds ago'.

| Device ID | Status | Device Type | Class ID | Date Added | Descriptive Location |
|----------------|-----------|------------------|----------|----------------------|----------------------|
| b11m3edeviceld | Connected | b11m3edevicetype | Device | Oct 29, 2022 9:44 PM | |

| Event | Value | Format | Last Received |
|------------|-------------------------------|--------|-------------------|
| IoT Device | {"medicine": "acetaminophen"} | json | a few seconds ago |
| IoT Device | {"medicine": "acetaminophen"} | json | a few seconds ago |
| IoT Device | {"medicine": "acetaminophen"} | json | a few seconds ago |
| IoT Device | {"medicine": "acetaminophen"} | json | a few seconds ago |
| IoT Device | {"medicine": "acetaminophen"} | json | a few seconds ago |

5. Simulation:



The screenshot shows the Wokwi web-based simulation environment. The left pane contains the Arduino IDE code for an ESP32. The code includes libraries for WiFi, PubSubClient, LiquidCrystal_I2C, and DHT. It defines pins for DHT (15) and LED (2), and sets up an MQTT client to connect to an IBM Watson IoT Platform. The right pane shows a 3D simulation of the ESP32 board connected to a DHT11 sensor and an LCD display. The console at the bottom shows the MQTT client successfully subscribing to the topic 'iot-2/cmd/command/fmt/String' and reconnecting to the IBM Watson IoT Platform.

```
1 #include <WiFi.h> //library for wifi
2 #include <PubSubClient.h> //library for MQTT
3 #include <LiquidCrystal_I2C.h>
4 #include "DHT.h" // Library for dht11
5 #define DHTPIN 15 // what pin we're connected to
6 #define DHTTYPE DHT11 // define type of sensor DHT 11
7 #define LED 2
8 DHT dht (DHTPIN, DHTTYPE); // creating the instance by passing pin and type of
9 void callback(char* subscribetopic, byte* payload, unsigned int payloadLength)
10
11
12 //-----credentials of IBM Accounts-----
13
14 #define ORG "64yf7x" //IBM ORGANITION ID
15 #define DEVICE_TYPE "b11m3edevicetype" //Device type mentioned in ibm watson IoT
16 #define DEVICE_ID "b11m3edevicetype" //Device ID mentioned in ibm watson IoT Plat
17 #define TOKEN "-&EMtr71-v-Gz2G))e" //Token
18 String data3="";
19 int buzz= 13;
20
21 //----- Customise the above values -----
22 char server[] = ORG ".messaging.internetofthings.ibmcloud.com"; // Server Name
23 char publishTopic[] = "iot-2/evt/Data/fmt/json"; // topic name and type of even
24 char subscribetopic[] = "iot-2/cmd/command/fmt/String"; // cmd REPRESENT comma
25 char authMethod[] = "use-token-auth"; // authentication method
26 char token[] = TOKEN;
27 char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID; //client id
28 LiquidCrystal_I2C lcd(0x27,32,2);
29
30 //-----
```

Simulation window shows:

- iot-2/cmd/command/fmt/String
- subscribe to cmd OK
- Reconnecting client to 64yf7x.messaging.internetofthings.ibmcloud.com
- iot-2/cmd/command/fmt/String
- subscribe to cmd OK

SIMULATION URL:

<https://wokwi.com/projects/322410731508073042>

