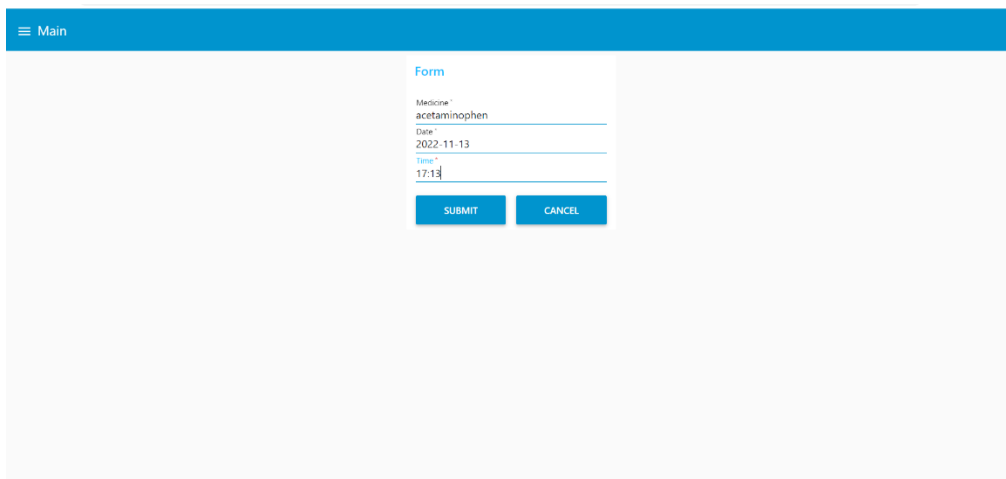


Final Deliverables

Team ID	PNT2022TMID16541
Project Name	Personal Assistance for Seniors Who Are SelfReliant

Web Application

1. Get Data From User:

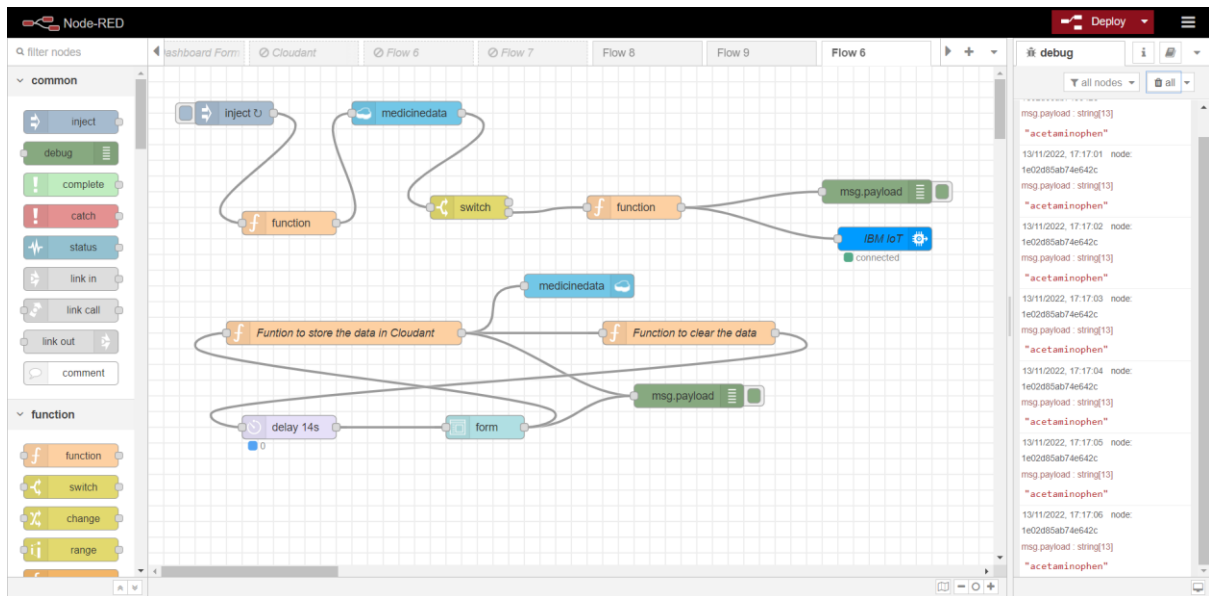


The screenshot shows a web application interface with a blue header bar containing a hamburger menu icon and the text 'Main'. Below the header, there is a light gray sidebar on the left. The main content area is white and contains a form titled 'Form'. The form has three input fields: 'Medicine' with 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. Stored in Cloudant



3. Display in Node-red



4. Streaming in Watson IoT Platform

The IBM Watson IoT Platform dashboard displays the following information:

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

The **Recent Events** tab shows the following data stream:

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

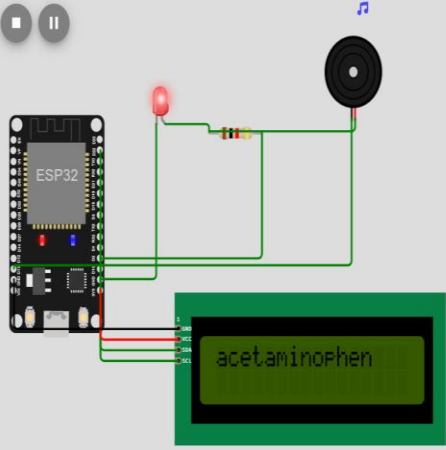
WOKWI SAVE SHARE Medicine Remainder Docs

PNT2022TMD50622.ino diagram.json libraries.txt Library Manager

```
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 dht
9 void callback(char* subscribetopic, byte* payload, unsigned int payloadLength);
10
11
12 //-----credentials of IBM Accounts-----
13
14 #define ORG "64yf7x" //IBM ORGANIZATION ID
15 #define DEVICE_TYPE "b11m3edevicetype" //Device type mentioned in ibm watson IOT
16 #define DEVICE_ID "b11m3edeviceid" //Device ID mentioned in ibm watson IOT Platform
17 #define TOKEN "-&ENtr7l-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 event
24 char subscribetopic[] = "iot-2/cmd/command/fmt/String"; // cmd REPRESENT command
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(0x27,16,2);
29
30 //-----
31 WiFiClient wifiClient; // creating the instance for wifiClient
32 PubSubClient client(server, 1883, callback, wifiClient); //calling the predefined
33
34 void setup() // configuring the ESP32
35 {
```

Simulation

00:21.421 89%



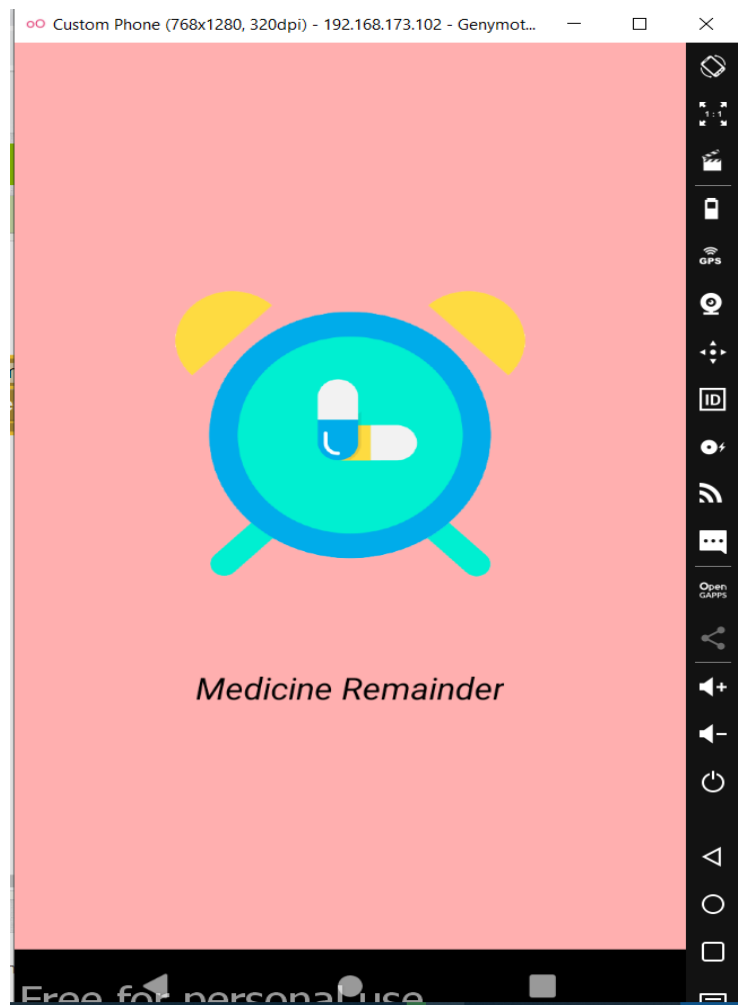
Medicine Name: acetaminophen
callback invoked for topic: iot-2/cmd/command/fmt/String
Medicine Name: acetaminophen
callback invoked for topic: iot-2/cmd/command/fmt/String
Medicine Name: acetaminophen
callback invoked for topic: iot-2/cmd/command/fmt/String
Medicine Name: acetaminophen

Link:

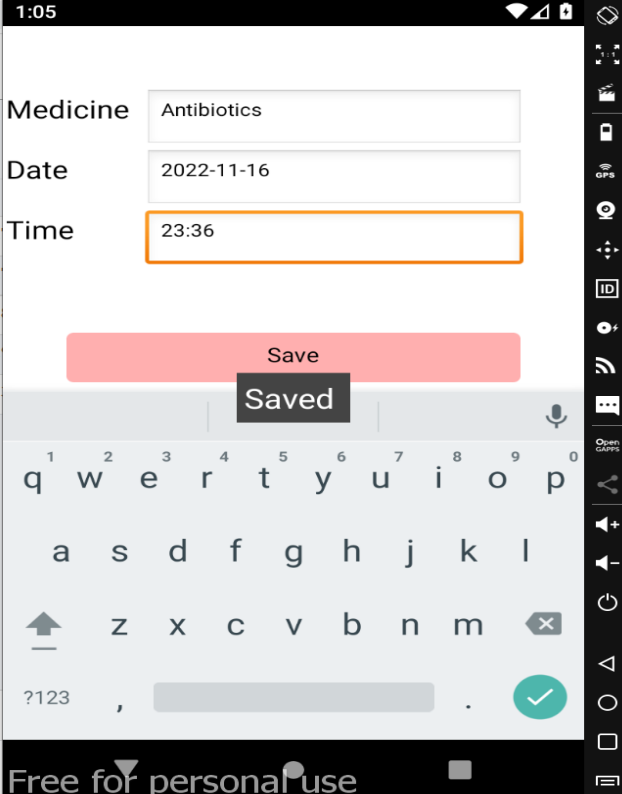
<https://wokwi.com/projects/348198638815543891>

Mobile Application

1. Splash Screen



2. Get Data From User



A screenshot of a mobile application interface. At the top, the status bar shows the time 1:05 and various icons. The app has a dark theme. The main content area contains three input fields: 'Medicine' with the value 'Antibiotics', 'Date' with the value '2022-11-16', and 'Time' with the value '23:36'. The 'Time' field is highlighted with an orange border. Below these fields is a red 'Save' button. A dark grey 'Saved' toast message is displayed over the keyboard. A virtual keyboard is visible at the bottom, and a 'Free for personal use' watermark is at the very bottom.

Medicine: Antibiotics

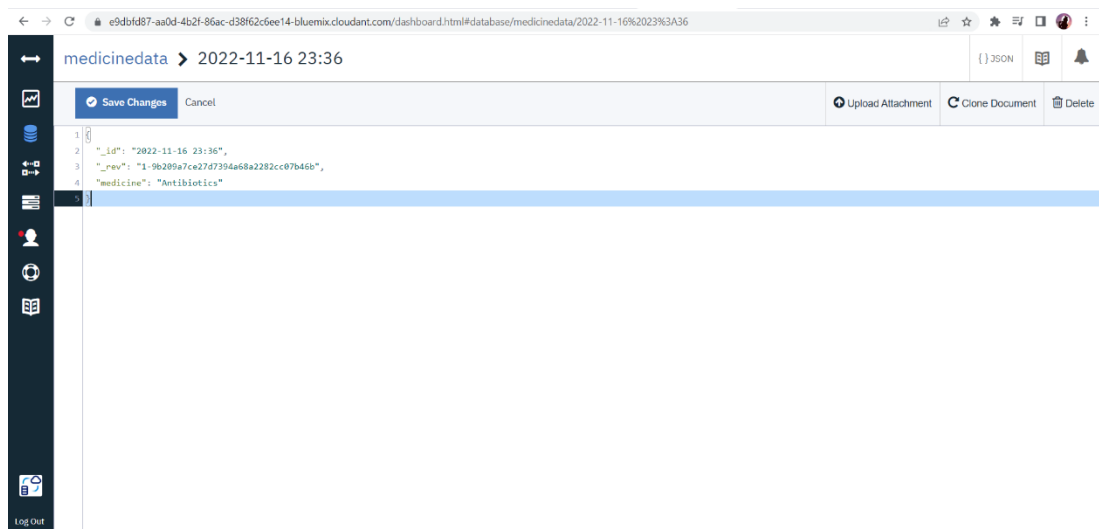
Date: 2022-11-16

Time: 23:36

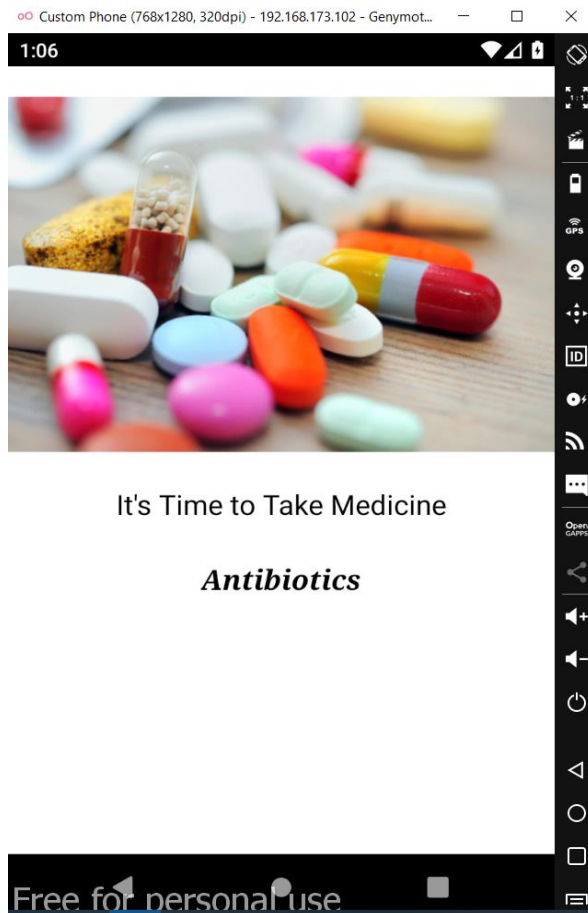
Save

Saved

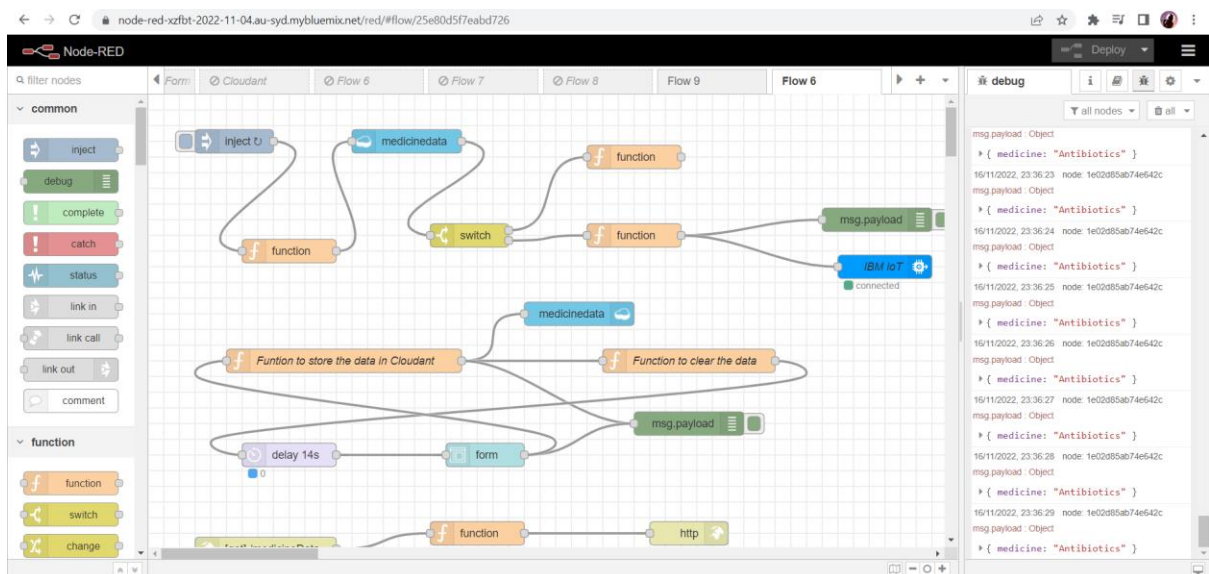
3. Store in Cloudant DB



4. Display Remainder with audio



5. Display in node-red



6. Remainder in Simulation

WOKWI

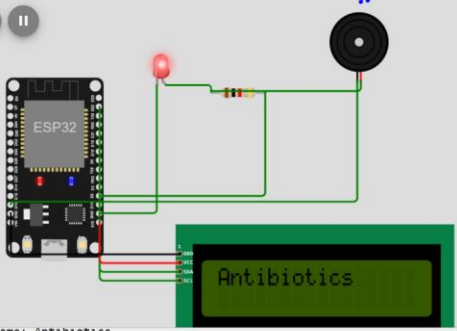
SAVE SHARE Medicine Remainder Docs

PNT2022TMD50622.ino diagram.json libraries.txt Library Manager

```
87 Serial.println("WiFi connected");
88 Serial.println("IP address: ");
89 Serial.println(WiFi.localIP());
90 }
91
92 void initManagedDevice() {
93   if (client.subscribe(subscribetopic)) {
94     Serial.println((subscribetopic));
95     Serial.println("subscribe to cmd OK");
96   } else {
97     Serial.println("subscribe to cmd FAILED");
98   }
99 }
100
101 void callback(char* subscribetopic, byte* payload, unsigned int length) {
102   Serial.print("callback invoked for topic: ");
103   Serial.println(subscribetopic);
104   for (int i = 0; i < payloadLength-2; i++) {
105     //Serial.print((char)payload[i]);
106     data3 += (char)payload[i];
107   }
108   Serial.println("Medicine Name: " + data3);
109   if (data3 != "") {
110     lcd.init();
111     lcd.print(data3);
112     digitalWrite(LED, HIGH);
113     tone(buzz, 100, 1000);
114   }
115 }
```

Simulation

00:33.232 90%



Medicine Name: Antibiotics
callback invoked for topic: iot-2/cmd/command/fmt/String
Medicine Name: Antibiotics
callback invoked for topic: iot-2/cmd/command/fmt/String
Medicine Name: Antibiotics
callback invoked for topic: iot-2/cmd/command/fmt/String
Medicine Name: Antibiotics