

Project Development Phase Performance Test

Date	13 May 2023
Team ID	NM2023TMID12625
Project Name	Smartcity Waste Management with Connected Trash cans

Model Performance Testing:

Project team shall fill the following information in the performance testing template.

Parameter	Values	Screenshot
Metrics	<p>Wowki Execution time and Output screenshot</p> <p>Or</p> <p>Python accuracy of prediction and output screenshot</p>	

The screenshot displays the Wokwi IDE interface. On the left, the 'sketch.ino' file contains the following code:

```

1 #include <Wifi.h> //library for wifi
2 #include <PubSubClient.h> //library for MQTT
3 #include "Ultrasonic.h"
4 Ultrasonic ultrasonic(2, 4);
5 float distance;
6
7
8 void callback(char* subscribetopic, byte* payload, unsigned int payloadLength) {
9
10 //-----credentials of IBM Accounts-----
11
12 #define ORG "xhx8c5" //IBM ORGANISATION ID
13 #define DEVICE_TYPE "dustbin" //Device type mentioned in ibm watson IoT Platform
14 #define DEVICE_ID "123321" //Device ID mentioned in ibm watson IoT Platform
15 #define TOKEN "12345677" //Token
16 String data3;
17 //float h, t;
18
19 //----- Customise the above values -----
20
21 char server[] = ORG ".messaging.internetofthings.ibmcloud.com"; // Server address
22 char publishTopic[] = "iot-2/evt/Data/fmt/json"; // topic name and type
23 char subscribetopic[] = "iot-2/cmd/test/fmt/String"; // cmd REPRESENTATION
24 char authMethod[] = "use-token-auth"; // authentication method
25 char token[] = TOKEN;
26 char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE ID://client id
  
```

The simulation window on the right shows the hardware components: an ESP32 microcontroller and an HC-SR04 ultrasonic sensor. The terminal output displays the following messages:

```

Publish ok
Distance in CM: 357.00
Sending payload: {"distance":357.00}
Publish ok
Distance in CM: 357.00
Sending payload: {"distance":357.00}
Publish ok
  
```