

# **BUILDING MOBILE APP**

**Configure The Mobile App For Controlling Motor Using Buttons**

<b>DATE</b>	<b>15 Nov. 22</b>
<b>TEAM ID</b>	<b>PNT2022TMID40953</b>
<b>PROJECT NAME</b>	<b>REAL TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM</b>
<b>MAXIMM MARK</b>	<b>4 MARKS</b>

monitor and control system.ino

diagram.json

libraries.txt

Library Manager

Simulation

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```
1 #include <WiFi.h>
2 #include<WiFiClient.h>
3 #include<PubSubClient.h>
4
5 int pH;
6 int Turbidity;
7 String data = "";
8 String command;
9 void callback(char* topic, byte* payload, unsigned int payLoadLength);
10
11
12 const char* ssid = "Wokwi-GUEST";
13 const char* password = "";
14
15 #define ORG "vzye9j"
16 #define DEVICE_TYPE "ibm-final-esp32"
17 #define DEVICE_ID "789456123"
18 #define TOKEN "147258369"
19
20 char topic [] = "iot-2/evt/home/fmt/json";
21 char server [] = ORG ".messaging.Internetofthings.ibmcloud.com";
22 char pubTopic1 [] = "iot-2/evt/Data/fmt/json";
23 char authMethod [] = "use-token-auth";
24 char token [] = TOKEN;
25 char clientId [] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;
26
27 WiFiClient wifiClient;
28 PubSubClient client(server, 1883, callback, wifiClient);
29
30 int publishInterval = 1000;
```



Wokwi-GUEST...

WiFi connected, Ip Address: 10.10.0.2

Reconnecting client to vzye9j.messaging.Internetofthings.ibmcloud.com

Bluemix connected

Sending payload: {"data":

{"DEVICE\_ID":"789456123","pH":1,"Turbidity":425}}

Published

Sending payload: {"data":{"DEVICE\_ID":"789456123","pH":6,"Turbidity":46}}

Published

Sending payload: {"data":

{"DEVICE\_ID":"789456123","pH":12,"Turbidity":876}}

Published

Sending payload: {"data":

{"DEVICE\_ID":"789456123","pH":11,"Turbidity":367}}

Published



IBM Cloud

IBM Wats

IBM Wats

Node-RED

Cloudant

Node-RED

MIT App

IBM

https://iam.cloud.ibm.com/... [pi@raspberrypi: Node-... [pi@raspberrypi: ~/Des...

00:02

IBM Watson IoT Platform - Chromium

← → ↻ vzye9j.internetofthings.ibmcloud.com/dashboard/devices/browse

IBM Watson IoT Platform 611819106042@smartinternz.com ID: 66bbzq

Browse

Action

Device Types

Interfaces

Add Device +

Event	Value	Format	Last Received
data	{"pH_value":10,"Turbidity":395}	json	a few seconds ago
data	{"pH_value":4,"Turbidity":20}	json	a few seconds ago
data	{"pH_value":9,"Turbidity":123}	json	a few seconds ago
data	{"pH_value":13,"Turbidity":959}	json	a few seconds ago
data	{"pH_value":1,"Turbidity":655}	json	a few seconds ago

> ☐

192164156

Disconnected

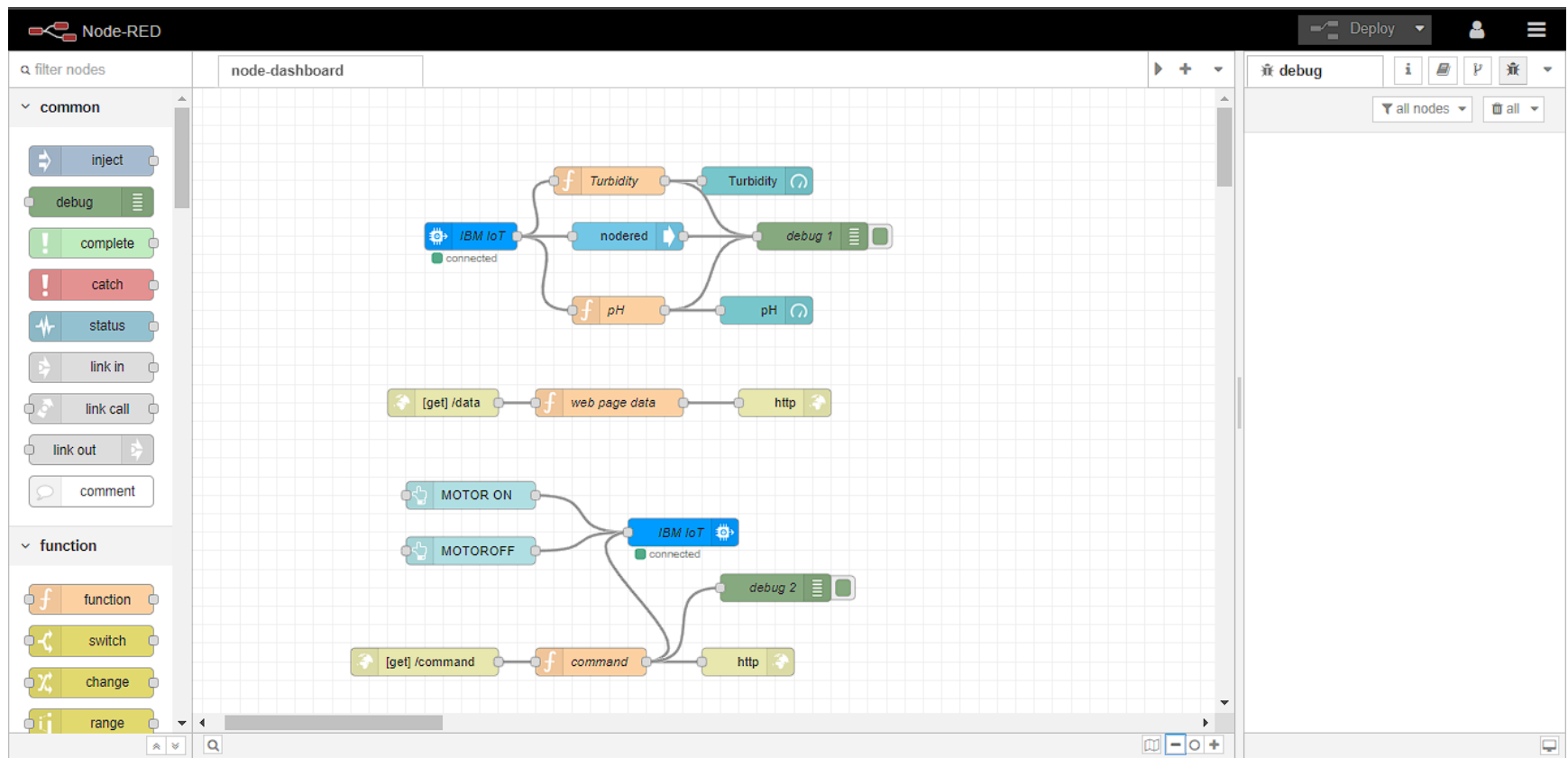
esp32

Device

Oct 28, 2022 8:25 PM

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MIT App Inventor - Chromium

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**Palette**

Search Components...

**User Interface**

Layout

Media

Drawing and Animation

Maps

Charts

**Sensors**

- AccelerometerSensor
- BarcodeScanner
- Barometer
- Clock**
- GyroscopeSensor
- Hygrometer
- LightSensor
- LocationSensor
- MagneticFieldSensor
- NearField
- OrientationSensor
- Pedometer
- ProximitySensor
- Thermometer

**Viewer**

☐ Display hidden components in Viewer

Phone size (505,320)

Screen1

Water Quality Monitor

pH\_value :

Turbidity :

**Non-visible components**

- Web1
- Clock1

**Components**

- Screen1
  - VerticalArrangement1
    - HorizontalArrangement1
      - Label1
    - HorizontalArrangement2
      - Label2
    - HorizontalArrangement3
      - TextBox1
    - HorizontalArrangement4
      - Label3
    - HorizontalArrangement5
      - TextBox2
  - Web1
  - Clock1

**Properties**

**TextBox1**

BackgroundColor: Default

Enabled: ☒

FontBold: ☐

FontItalic: ☐

FontSize: 16

FontTypeface: default

Height: Fill parent...

Width: Fill parent...

Hint:

MultiLine: ☐

NumbersOnly: ☒

ReadOnly: ☒

Text:

TextAlignment: left: 0

TextColor: Default

**Media**

Upload File ...

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MIT APP INVENTOR

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Water\_Quality\_Monitor

Screen1 ▾Add Screen ...Remove ScreenPublish to Gallery

DesignerBlocks

Blocks

Built-in

Control

Logic

Math

Text

Lists

Dictionaries

Colors

Variables

Procedures

Screen1

VerticalArrangement1

HorizontalArrangen

Label1

HorizontalArrangen

HorizontalArrangen

Label2

RenameDelete

Viewer

when Click1 Timer

do

set Web1 Url to http://1880/data

call Web1 .Get

when Web1 .GotText

url responseCode responseType responseContent

do

set TextBox1 Text to look up in pairs key pH

call Web1 .JsonTextDecode

jsonText get responseContent

notFound not found

set TextBox2 Text to look up in pairs key Turbidity

call Web1 .JsonTextDecode

jsonText get responseContent

notFound not found

when Button1 Click

do

set Web1 Url to http://1880/command

call Web1 .Get

when Button2 Click

do

set Web1 Url to http://1880/command

call Web1 .Get

00

Show Warnings

+

-

4:30

1.00 KB/s VoLTE

Screen1

# Water Quality Monitor

pH\_value :

13

Turbidity :

511

Motor ON

Motor OFF