smart aquarium.py - C:\Users\lenovo\Desktop\Sugunasri\smart aquarium.py (3.9.5)

File Edit Format Run Options Window Help

```
import time
import random
import json
import ibmiotf.application
import ibmiotf.device
import sys

#Provide your IBM Watson Device Credentials
organization = "zkpdkt"
deviceType = "iotdevice"
deviceId = "1001"
authMethod = "token"
authToken = "1234567890"


# Initialize the device client.
Waterlevel=0
T=0
Fl=0
def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])


    if cmd.data['command']=='Servomotor ON':
                print("Servomotor ON is received")


    elif cmd.data['command']=='Servomotor OFF':
                print("Servomotor OFF is received")


    elif cmd.data['command']=='WaterPump ON':
                 print("Water Pump ON is received")


    elif cmd.data['command']=='WaterPump OFF':
                 print("Water Pump OFF is received")


    elif cmd.data['command']=='Light ON':
                 print("Light ON is received")
```

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```
    elif cmd.data['command']=='WaterPump OFF':
                 print("Water Pump OFF is received")


    elif cmd.data['command']=='Light ON':
                 print("Light ON is received")


    elif cmd.data['command']=='Light OFF':
                 print("Light OFF is recieved")


    if cmd.command == "setInterval":
                if 'interval' not in cmd.data:
                        print("Error - command is missing required information: 'interval'")
                else:
                        interval = cmd.data['interval']
    elif cmd.command == "print":
                if 'message' not in cmd.data:
                        print("Error - command is missing required information: 'message'")
                else:
                        print(cmd.data['message'])

try:
        deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method": authMethod, "auth-token": authToken}
        deviceCli = ibmiotf.device.Client(deviceOptions)
        #.....................................

except Exception as e:
        print("Caught exception connecting device: %s" % str(e))
        sys.exit()

# Connect and send a datapoint "hello" with value "world" into the cloud as an event of type "greeting" 10 times
deviceCli.connect()

while True:
    Waterlevel=random.randint(0,100)
    T=random.randint(0,100)
    Fl=random.randint(0,100)
```

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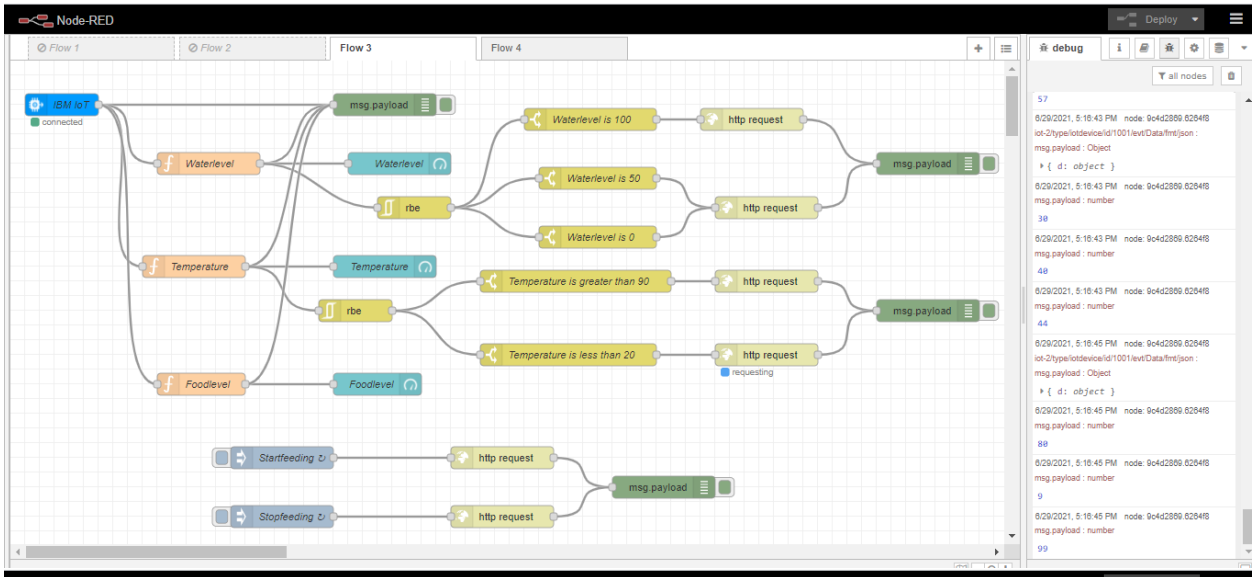
```
                if 'interval' not in cmd.data:
                        print("Error - command is missing required information: 'interval'")
                else:
                        interval = cmd.data['interval']
    elif cmd.command == "print":
                if 'message' not in cmd.data:
                        print("Error - command is missing required information: 'message'")
                else:
                        print(cmd.data['message'])

try:
        deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method": authMethod, "auth-token": authToken}
        deviceCli = ibmiotf.device.Client(deviceOptions)
        #.....................................

except Exception as e:
        print("Caught exception connecting device: %s" % str(e))
        sys.exit()

# Connect and send a datapoint "hello" with value "world" into the cloud as an event of type "greeting" 10 times
deviceCli.connect()

while True:
    Waterlevel=random.randint(0,100)
    T=random.randint(0,100)
    Fl=random.randint(0,100)
    data={"d":{'Waterlevel': Waterlevel,'Temperature':T,'Foodlevel':Fl}}
    def myOnPublishCallback():
        print("published Waterlevel = %s" %Waterlevel,"Temperature = %s C" %T ,"Foodlevel = %s" %Fl ,"to ibm iot platform")

    success = deviceCli.publishEvent("Data", "json", data, qos=0, on_publish=myOnPublishCallback)
    if not success:
       print("Not connected to IOTF")
    time.sleep(2)

    deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud
deviceCli.disconnect()
```

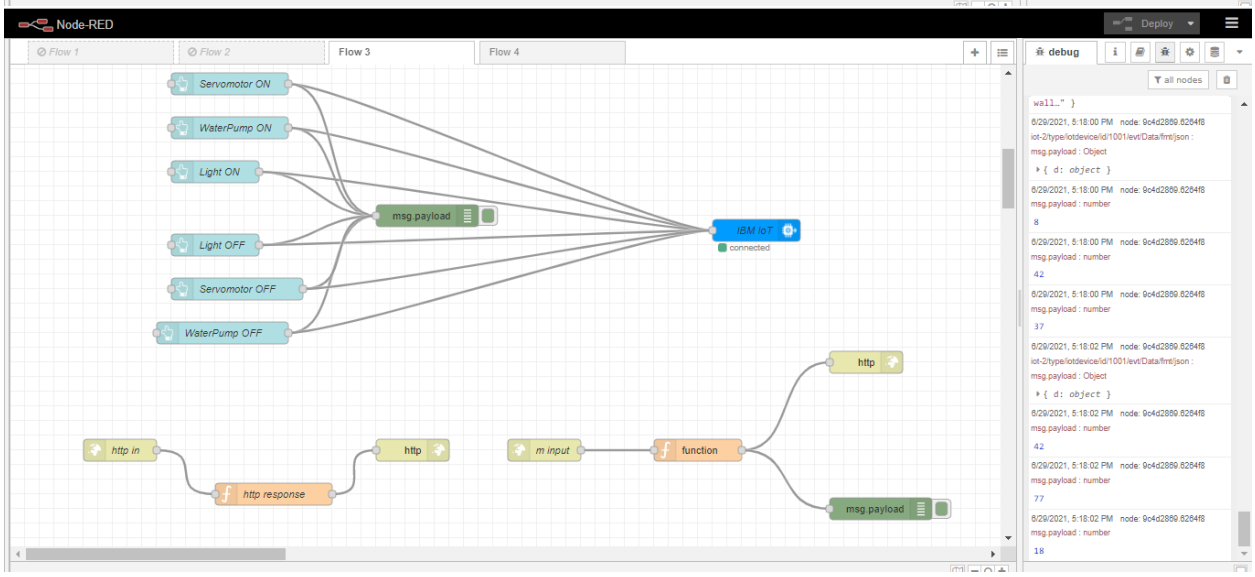
IDLE Shell 3.9.5

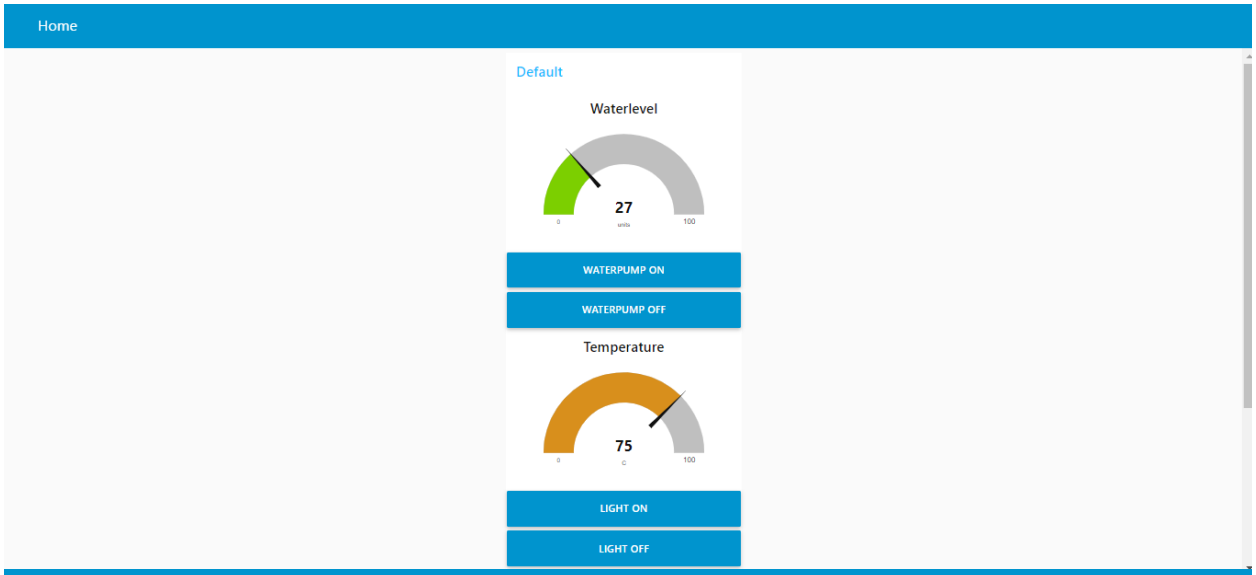
File Edit Shell Debug Options Window Help

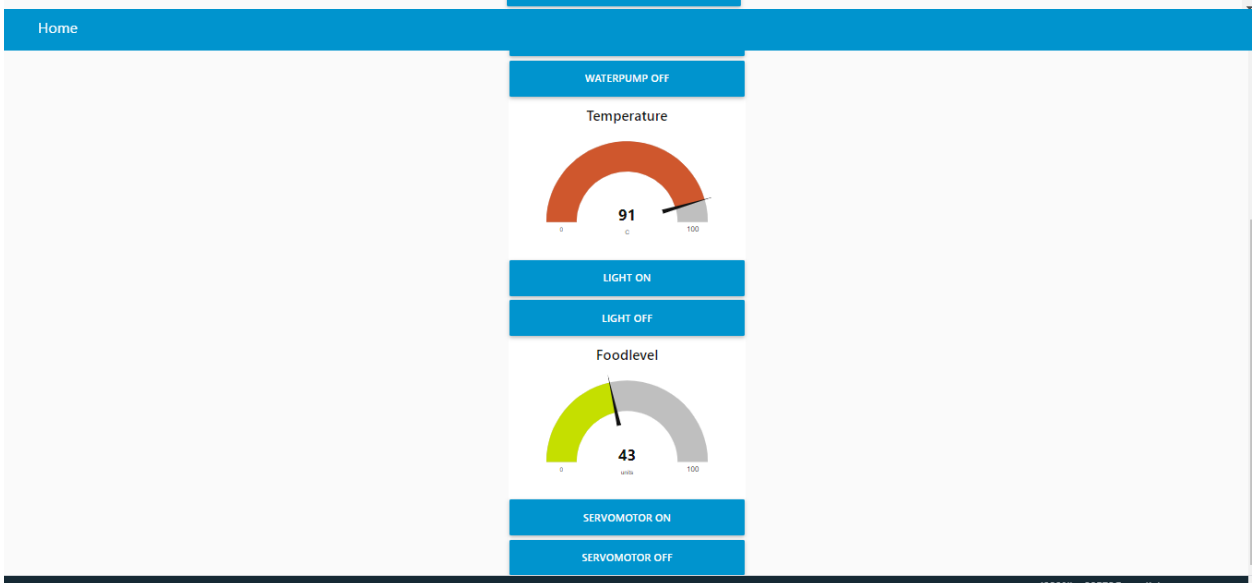
```
published Waterlevel = 80 Temperature = 34 C Foodlevel = 7 to ibm iot platform
published Waterlevel = 31 Temperature = 26 C Foodlevel = 6 to ibm iot platform
published Waterlevel = 66 Temperature = 38 C Foodlevel = 66 to ibm iot platform
published Waterlevel = 28 Temperature = 42 C Foodlevel = 24 to ibm iot platform
published Waterlevel = 75 Temperature = 88 C Foodlevel = 70 to ibm iot platform
published Waterlevel = 36 Temperature = 42 C Foodlevel = 4 to ibm iot platform
published Waterlevel = 13 Temperature = 61 C Foodlevel = 57 to ibm iot platform
published Waterlevel = 61 Temperature = 45 C Foodlevel = 28 to ibm iot platform
published Waterlevel = 44 Temperature = 63 C Foodlevel = 33 to ibm iot platform
published Waterlevel = 43 Temperature = 47 C Foodlevel = 76 to ibm iot platform
published Waterlevel = 98 Temperature = 66 C Foodlevel = 21 to ibm iot platform
published Waterlevel = 31 Temperature = 94 C Foodlevel = 42 to ibm iot platform
published Waterlevel = 95 Temperature = 91 C Foodlevel = 30 to ibm iot platform
published Waterlevel = 20 Temperature = 53 C Foodlevel = 43 to ibm iot platform
published Waterlevel = 83 Temperature = 65 C Foodlevel = 54 to ibm iot platform
published Waterlevel = 42 Temperature = 40 C Foodlevel = 34 to ibm iot platform
published Waterlevel = 40 Temperature = 63 C Foodlevel = 85 to ibm iot platform
published Waterlevel = 35 Temperature = 33 C Foodlevel = 5 to ibm iot platform
published Waterlevel = 35 Temperature = 87 C Foodlevel = 53 to ibm iot platform
published Waterlevel = 70 Temperature = 16 C Foodlevel = 5 to ibm iot platform
Message received from IBM IoT Platform: Light OFF
Light OFF is recieved
published Waterlevel = 28 Temperature = 5 C Foodlevel = 51 to ibm iot platform
published Waterlevel = 49 Temperature = 21 C Foodlevel = 73 to ibm iot platform
Message received from IBM IoT Platform: Servomotor OFF
Servomotor OFF is received
published Waterlevel = 7 Temperature = 46 C Foodlevel = 90 to ibm iot platform
Message received from IBM IoT Platform: WaterPump OFF
Water Pump OFF is received
Message received from IBM IoT Platform: WaterPump ON
Water Pump ON is received
published Waterlevel = 98 Temperature = 74 C Foodlevel = 71 to ibm iot platform
published Waterlevel = 54 Temperature = 12 C Foodlevel = 42 to ibm iot platform
published Waterlevel = 10 Temperature = 100 C Foodlevel = 35 to ibm iot platform
published Waterlevel = 88 Temperature = 12 C Foodlevel = 95 to ibm iot platform
published Waterlevel = 53 Temperature = 55 C Foodlevel = 52 to ibm iot platform
published Waterlevel = 73 Temperature = 83 C Foodlevel = 29 to ibm iot platform
published Waterlevel = 77 Temperature = 13 C Foodlevel = 22 to ibm iot platform
published Waterlevel = 56 Temperature = 59 C Foodlevel = 95 to ibm iot platform
published Waterlevel = 99 Temperature = 54 C Foodlevel = 9 to ibm iot platform
```

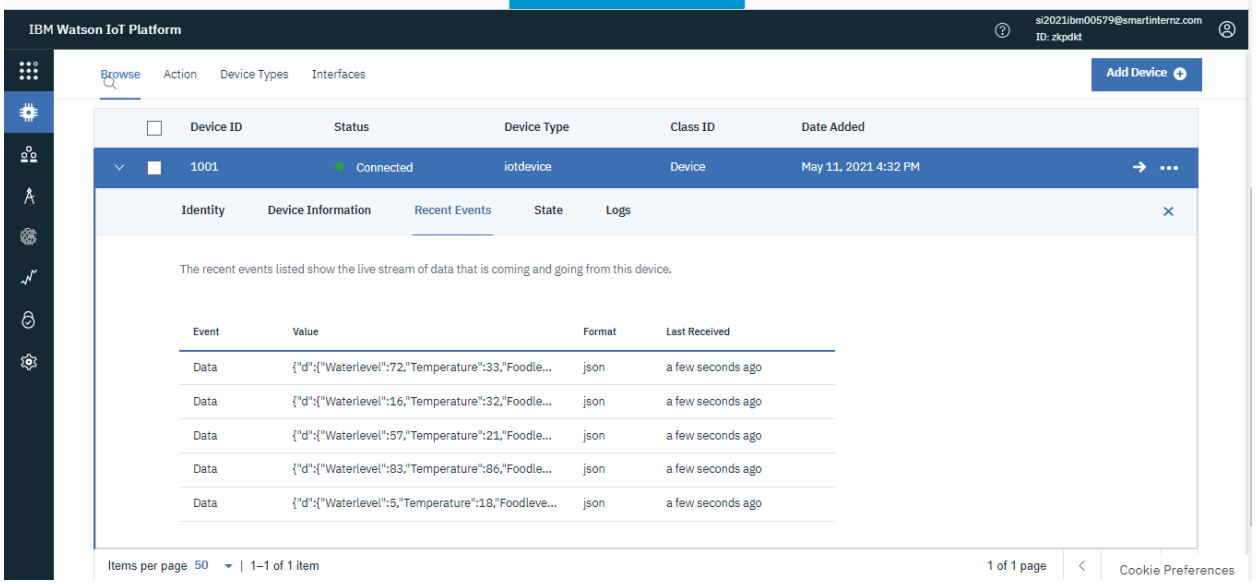
Ln: 5 Col: 0

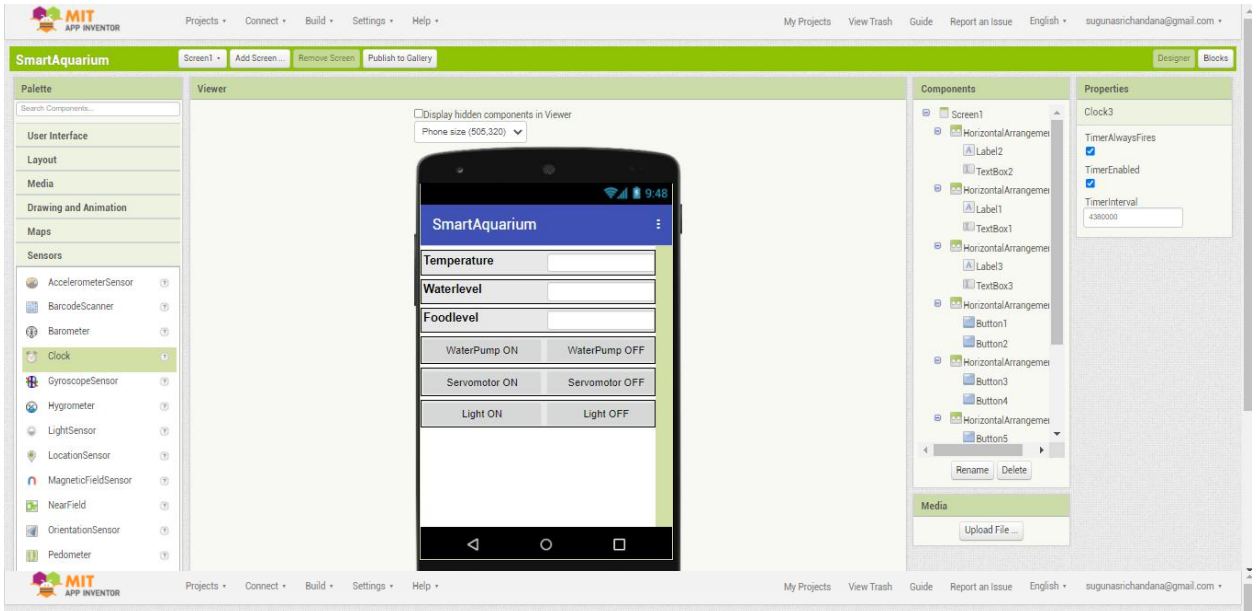

Node-RED
Deploy
Flow 1
Flow 2
Flow 3
Flow 4
debug
all nodes
IBM IoT
connected
msg.payload
Waterlevel
Waterlevel
rbe
Waterlevel is 100
Waterlevel is 50
Waterlevel is 0
http request
msg.payload
Temperature
Temperature
rbe
Temperature is greater than 90
Temperature is less than 20
http request
requesting
msg.payload
Foodlevel
Foodlevel
Startfeeding
Stopfeeding
http request
http request
msg.payload
57
6/29/2021, 5:16:43 PM node: 9c4d2869.6264f8
iot-2/type/iotdevice/id/1001/evt/Data/fmt/json : msg.payload : Object
{ d: object }
6/29/2021, 5:16:43 PM node: 9c4d2869.6264f8
msg.payload : number
30
6/29/2021, 5:16:43 PM node: 9c4d2869.6264f8
msg.payload : number
40
6/29/2021, 5:16:43 PM node: 9c4d2869.6264f8
msg.payload : number
44
6/29/2021, 5:16:45 PM node: 9c4d2869.6264f8
iot-2/type/iotdevice/id/1001/evt/Data/fmt/json : msg.payload : Object
{ d: object }
6/29/2021, 5:16:45 PM node: 9c4d2869.6264f8
msg.payload : number
80
6/29/2021, 5:16:45 PM node: 9c4d2869.6264f8
msg.payload : number
9
6/29/2021, 5:16:45 PM node: 9c4d2869.6264f8
msg.payload : number
99

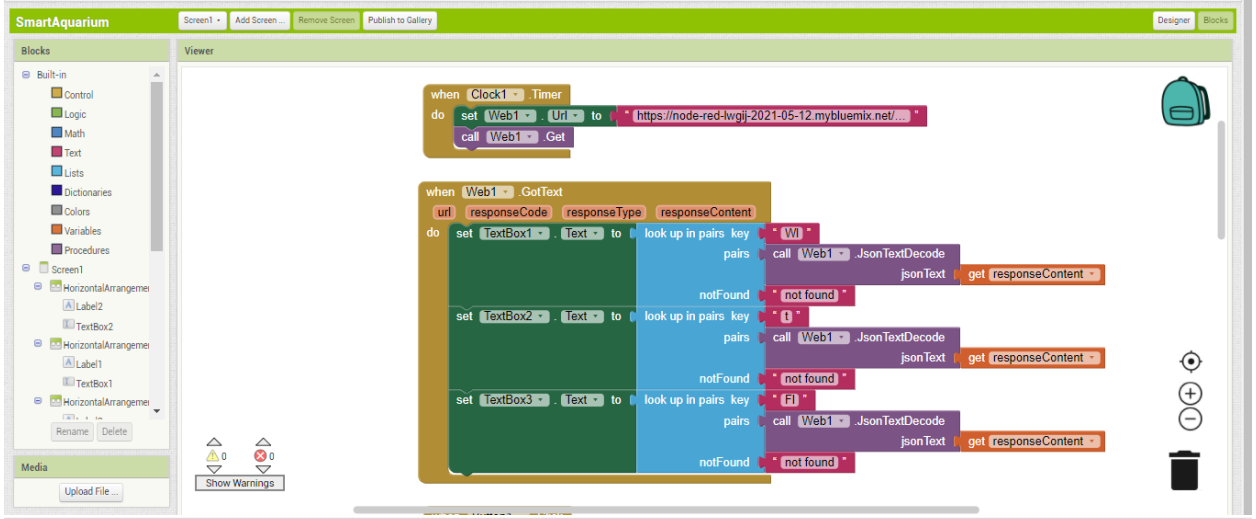

Node-RED
Deploy
Flow 1
Flow 2
Flow 3
Flow 4
debug
all nodes
Servomotor ON
WaterPump ON
Light ON
Light OFF
Servomotor OFF
WaterPump OFF
msg.payload
IBM IoT
connected
http
http in
http response
http
m input
function
msg.payload
wall…" }
6/29/2021, 5:18:00 PM node: 9c4d2869.6264f8
iot-2/type/iotdevice/id/1001/evt/Data/fmt/json : msg.payload : Object
{ d: object }
6/29/2021, 5:18:00 PM node: 9c4d2869.6264f8
msg.payload : number
8
6/29/2021, 5:18:00 PM node: 9c4d2869.6264f8
msg.payload : number
42
6/29/2021, 5:18:00 PM node: 9c4d2869.6264f8
msg.payload : number
37
6/29/2021, 5:18:02 PM node: 9c4d2869.6264f8
iot-2/type/iotdevice/id/1001/evt/Data/fmt/json : msg.payload : Object
{ d: object }
6/29/2021, 5:18:02 PM node: 9c4d2869.6264f8
msg.payload : number
42
6/29/2021, 5:18:02 PM node: 9c4d2869.6264f8
msg.payload : number
77
6/29/2021, 5:18:02 PM node: 9c4d2869.6264f8
msg.payload : number
18

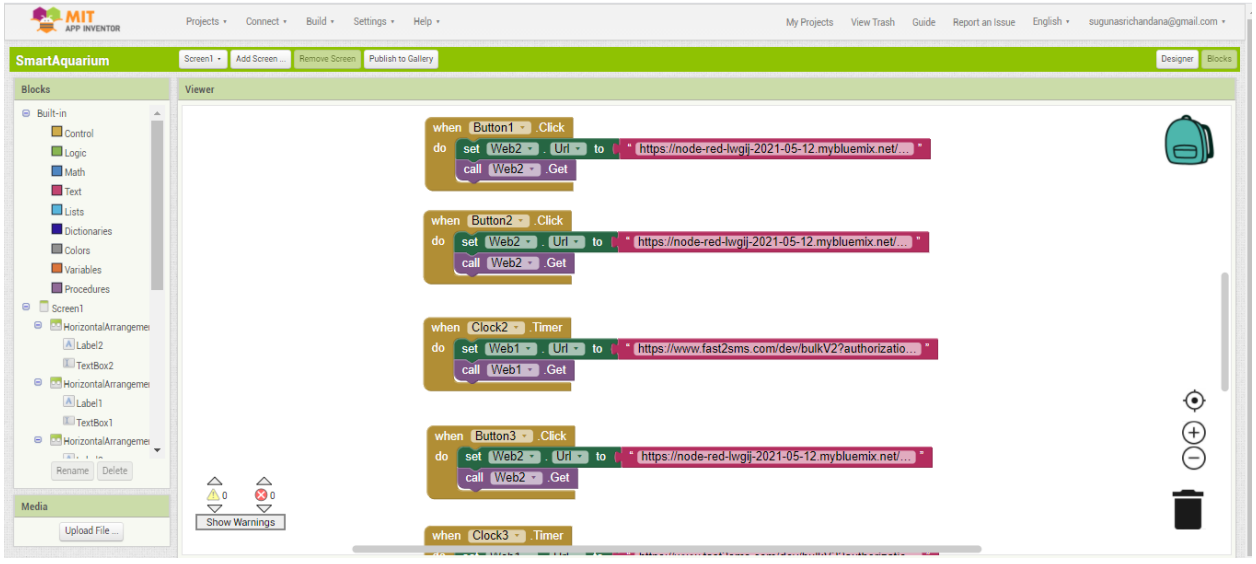

Home
Default
Waterlevel
27
WATERPUMP ON
WATERPUMP OFF
Temperature
75
LIGHT ON
LIGHT OFF


Home
WATERPUMP OFF
Temperature
91
LIGHT ON
LIGHT OFF
Foodlevel
43
SERVOMOTOR ON
SERVOMOTOR OFF


IBM Watson IoT Platform
si2021ibm00579@smartinternz.com
ID: zkpdkt
Browse
Action
Device Types
Interfaces
Add Device
Device ID
Status
Device Type
Class ID
Date Added
1001
Connected
iotdevice
Device
May 11, 2021 4:32 PM
Identity
Device Information
Recent Events
State
Logs
The recent events listed show the live stream of data that is coming and going from this device.
Event
Value
Format
Last Received
Data
{"d":{"Waterlevel":72,"Temperature":33,"Foodle...
json
a few seconds ago
Data
{"d":{"Waterlevel":16,"Temperature":32,"Foodle...
json
a few seconds ago
Data
{"d":{"Waterlevel":57,"Temperature":21,"Foodle...
json
a few seconds ago
Data
{"d":{"Waterlevel":83,"Temperature":86,"Foodle...
json
a few seconds ago
Data
{"d":{"Waterlevel":5,"Temperature":18,"Foodleve...
json
a few seconds ago
Items per page 50
1–1 of 1 item
1 of 1 page
Cookie Preferences


MIT APP INVENTOR
Projects
Connect
Build
Settings
Help
My Projects
View Trash
Guide
Report an Issue
English
sugunasrichandana@gmail.com
SmartAquarium
Screen1
Add Screen ...
Remove Screen
Publish to Gallery
Designer
Blocks
Palette
Search Components...
User Interface
Layout
Media
Drawing and Animation
Maps
Sensors
AccelerometerSensor
BarcodeScanner
Barometer
Clock
GyroscopeSensor
Hygrometer
LightSensor
LocationSensor
MagneticFieldSensor
NearField
OrientationSensor
Pedometer
Viewer
Display hidden components in Viewer
Phone size (505,320)
9:48
SmartAquarium
Temperature
Waterlevel
Foodlevel
WaterPump ON
WaterPump OFF
Servomotor ON
Servomotor OFF
Light ON
Light OFF
Components
Screen1
HorizontalArrangement
Label2
TextBox2
Label1
TextBox1
Label3
TextBox3
Button1
Button2
Button3
Button4
Button5
Rename
Delete
Media
Upload File ...
Properties
Clock3
TimerAlwaysFires
TimerEnabled
TimerInterval
4380000


SmartAquarium
Blocks
Built-in
Control
Logic
Math
Text
Lists
Dictionaries
Colors
Variables
Procedures
Screen1
Label2
TextBox2
Label1
TextBox1
Rename
Delete
Media
Upload File ...
Show Warnings
Viewer
when Clock1 .Timer
do set Web1 . Url to " https://node-red-lwgij-2021-05-12.mybluemix.net/... "
call Web1 .Get
when Web1 .GotText
url responseCode responseType responseContent
do set TextBox1 . Text to look up in pairs key " WI "
pairs call Web1 .JsonTextDecode
jsonText get responseContent
notFound " not found "
set TextBox2 . Text to look up in pairs key " t "
pairs call Web1 .JsonTextDecode
jsonText get responseContent
notFound " not found "
set TextBox3 . Text to look up in pairs key " FI "
pairs call Web1 .JsonTextDecode
jsonText get responseContent
notFound " not found "


SmartAquarium
Blocks
Built-in
Control
Logic
Math
Text
Lists
Dictionaries
Colors
Variables
Procedures
Screen1
Label2
TextBox2
Label1
TextBox1
Rename
Delete
Media
Upload File ...
Show Warnings
Viewer
when Button1 .Click
do set Web2 . Url to " https://node-red-lwgij-2021-05-12.mybluemix.net/... "
call Web2 .Get
when Button2 .Click
do set Web2 . Url to " https://node-red-lwgij-2021-05-12.mybluemix.net/... "
call Web2 .Get
when Clock2 .Timer
do set Web1 . Url to " https://www.fast2sms.com/dev/bulkV2?authorizatio... "
call Web1 .Get
when Button3 .Click
do set Web2 . Url to " https://node-red-lwgij-2021-05-12.mybluemix.net/... "
call Web2 .Get
when Clock3 .Timer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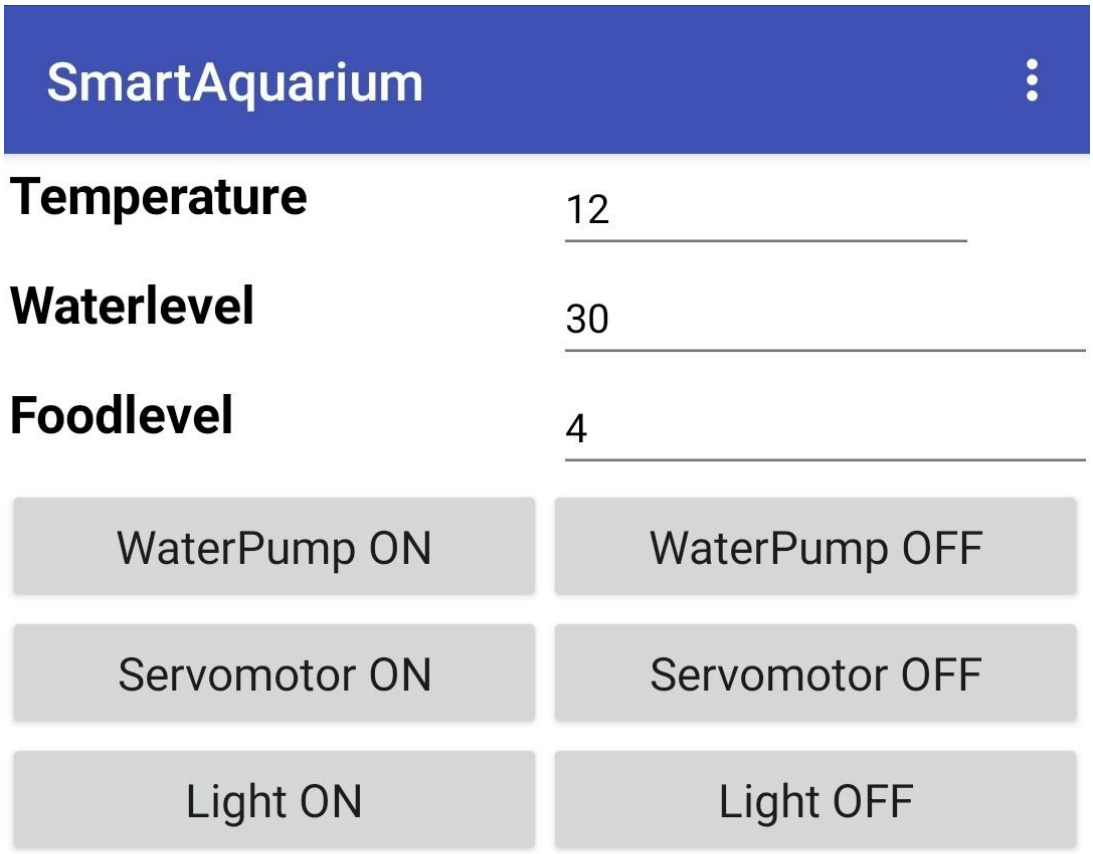
Projects
Connect
Build
Settings
Help
My Projects
View Trash
Guide
Report an Issue
English
sugunasrichandana@gmail.com
SmartAquarium
Screen1
Add Screen ...
Remove Screen
Publish to Gallery
Designer
Blocks
Blocks
Built-in
Control
Logic
Math
Text
Lists
Dictionaries
Colors
Variables
Procedures
Screen1
HorizontalArrangeme
Label2
TextBox2
HorizontalArrangeme
Label1
TextBox1
HorizontalArrangeme
Rename
Delete
Media
Upload File ...
Viewer
when Clock3 .Timer
do set Web1 . Url to " https://www.fast2sms.com/dev/bulkV2?authorizatio... "
call Web1 .Get
when Button4 .Click
do set Web2 . Url to " https://node-red-lwgij-2021-05-12.mybluemix.net/... "
call Web2 .Get
when Button5 .Click
do set Web2 . Url to " https://node-red-lwgij-2021-05-12.mybluemix.net/... "
call Web2 .Get
when Button6 .Click
do set Web2 . Url to " https://node-red-lwgij-2021-05-12.mybluemix.net/... "
call Web2 .Get
0
0
Show Warnings


SmartAquarium
Temperature
12
Waterlevel
30
Foodlevel
4
WaterPump ON
WaterPump OFF
Servomotor ON
Servomotor OFF
Light ON
Light OFF