

Project Development Phase

Sprint-1

Python Code:

```
import time

import sys

import ibmiotf.application

import ibmiotf.device

import random

#Provide your IBM Watson Device Credentials

organization = "bx1po5"

deviceType = "abcd"

deviceId = "1234"

authMethod = "token"

authToken = "12345678"

# Initialize GPIO

def myCommandCallback(cmd):

    print("Command received: %s" % cmd.data['command'])

    status=cmd.data['command']

    if status=="motoron":

        print ("motor is on")

    else :

        print ("motor is off")

    #print(cmd)

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:

    #Get Sensor Data from DHT1

    temp=random.randint(0,100)

    Humid=random.randint(0,100)

    moisture=random.randint(0,100)

    data = { 'temp' : temp, 'Humid': Humid, 'moisture': moisture }

    #print data

    def myOnPublishCallback():

        print ("Published Temperature = %s C" % temp, "Humidity = %s %" % Humid, "moisture = %s
        %" % moisture,"to IBM Watson")

        success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
on_publish=myOnPublishCallback)

        if not success:

            print("Not connected to IoT")

            time.sleep(1)


        deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud

```

deviceCli.disconnect()

Output:

 *Python 3.7.0 Shell*

File Edit Shell Debug Options Window Help

Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Intel)] on win32

Type "copyright", "credits" or "license()" for more information.

>>>

===== RESTART: C:/Users/sobi/OneDrive/Desktop/Sprint1.py =====

2022-11-18 22:50:00,333 ibmiotf.device.Client INFO Connected successfully: d:bx1po5:abcd:1234

Published Temperature = 82 C Humidity = 63 % moisture = 73 % to IBM Watson
Published Temperature = 68 C Humidity = 99 % moisture = 75 % to IBM Watson
Published Temperature = 82 C Humidity = 52 % moisture = 18 % to IBM Watson
Published Temperature = 71 C Humidity = 14 % moisture = 50 % to IBM Watson
Published Temperature = 19 C Humidity = 74 % moisture = 55 % to IBM Watson
Published Temperature = 19 C Humidity = 37 % moisture = 47 % to IBM Watson
Published Temperature = 84 C Humidity = 61 % moisture = 16 % to IBM Watson
Published Temperature = 97 C Humidity = 40 % moisture = 98 % to IBM Watson
Published Temperature = 88 C Humidity = 59 % moisture = 46 % to IBM Watson
Published Temperature = 54 C Humidity = 33 % moisture = 30 % to IBM Watson
Published Temperature = 71 C Humidity = 26 % moisture = 33 % to IBM Watson
Published Temperature = 64 C Humidity = 51 % moisture = 78 % to IBM Watson
Published Temperature = 64 C Humidity = 17 % moisture = 32 % to IBM Watson
Published Temperature = 19 C Humidity = 82 % moisture = 69 % to IBM Watson
Published Temperature = 69 C Humidity = 49 % moisture = 94 % to IBM Watson
Published Temperature = 48 C Humidity = 54 % moisture = 42 % to IBM Watson
Published Temperature = 55 C Humidity = 100 % moisture = 67 % to IBM Watson
Published Temperature = 35 C Humidity = 55 % moisture = 32 % to IBM Watson
Published Temperature = 76 C Humidity = 47 % moisture = 55 % to IBM Watson
Published Temperature = 83 C Humidity = 3 % moisture = 8 % to IBM Watson
Published Temperature = 58 C Humidity = 12 % moisture = 56 % to IBM Watson
Published Temperature = 11 C Humidity = 52 % moisture = 53 % to IBM Watson
Published Temperature = 64 C Humidity = 97 % moisture = 62 % to IBM Watson
Published Temperature = 29 C Humidity = 46 % moisture = 3 % to IBM Watson