

SPRINT-1

Team ID	PNT2022TMID06920
Project Name	Project - IoT Based Safety Gadget for Child Safety Monitoring and Notification

Goal:

To develop a python code.

Step-1

Install python software
python version 3.7.4

Step-2

Install Watson IoT Python SDK to connect to IBM Watson IoT Platform using python code.

Step-3

Develop a python script to publish the location details to the IBM IoT platform

Python code:

```
Import json
Import wiotp.sdk.device
Import time
Import ibmiotf.application
Import ibmiotf.device
Import random
```

```
myConfig = {
    "identity": {
        "orgId": "i7v036",
        "typeId": "NodeMCU",
        "deviceId": "12345"
```

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```
    },
    "auth": {
        "token": "1914111115116117"
    }
}
Def myCommandCallback(cmd):
    Print("Command received: %s" % cmd.data['command'])
    Status=cmd.data['command']
    If status=="locationon":
        Print ("location is on")
    Elif status == "locationoff":
        Print ("location is off")
    Else :
        Print ("please send proper command")

Client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
Client.connect()

While True:
    Name= "child"
    #in area location

    #out area location
    Latitude= random.randint(10,100)
    Longitude= random.randint(10,100)
    Temperature=random.randint(60,10)
    Geofence = 1
    Mydata={'name': name,
    'lat':latitude,'lon':longitude,'temp':temperature,'fence':geofence}
    Client.publishEvent(eventId="status", msgFormat="json", data=mydata, qos=0,
onPublish=None)
    Print("Data published to IBM IoT platform: ",mydata)
    Time.sleep(20)

    Client.commandCallback = myCommandCallback

Client.disconnect()
```

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```
IBM code final for submission.py - C:\Users\jayap\AppData\Local\Programs\Python\Python37\IBM code final for submission.py (3.7.4)
File Edit Format Run Options Window Help

import json
import wiotp.sdk.device
import time
import ibmiotf.application
import ibmiotf.device
import random

myconfig = {
    "identity": {
        "orgId": "i1v036",
        "typeId": "NodeMCU",
        "deviceId": "12345"
    },
    "auth": {
        "token": "1914111111111111"
    }
}

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="locationon":
        print ("location is on")
    elif status == "locationoff":
        print ("location is off")
    else:
        print ("please send proper command")

client = wiotp.sdk.device.DeviceClient(config=myconfig, loghandlers=None)
client.connect()

while True:
    name = "child"
    #in area location

    #out area location

    latitude= random.randint(10,100)
    longitude= random.randint(10,100)
    temperature=random.randint(60,100)
    geoence = 1
    mydata={'name': name, 'lat':latitude, 'lon':longitude, 'temp':temperature, 'fence':geoence}
    client.publishEvent(eventId="status", msgFormat="json", data=mydata, qos=0, onPublish=None)
    print ("Data published to IBM IoT platform: ",mydata)
    time.sleep(20)
```

Step-4

To run the program.

```
"Python 3.7.4 Shell"
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Data published to IBM IoT platform: {'name': 'child', 'lat': 16, 'lon': 17, 'fence': 1}
Data published to IBM IoT platform: {'name': 'child', 'lat': 90, 'lon': 49, 'fence': 1}
Data published to IBM IoT platform: {'name': 'child', 'lat': 85, 'lon': 42, 'fence': 1}
Data published to IBM IoT platform: {'name': 'child', 'lat': 30, 'lon': 44, 'fence': 1}
Data published to IBM IoT platform: {'name': 'child', 'lat': 67, 'lon': 27, 'fence': 1}
Data published to IBM IoT platform: {'name': 'child', 'lat': 79, 'lon': 79, 'fence': 1}
Data published to IBM IoT platform: {'name': 'child', 'lat': 72, 'lon': 50, 'fence': 1}
Data published to IBM IoT platform: {'name': 'child', 'lat': 48, 'lon': 47, 'fence': 1}
Data published to IBM IoT platform: {'name': 'child', 'lat': 85, 'lon': 87, 'fence': 1}
Data published to IBM IoT platform: {'name': 'child', 'lat': 91, 'lon': 73, 'fence': 1}
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Data published to IBM IoT platform: {'name': 'child', 'lat': 91, 'lon': 50, 'fence': 1}
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Data published to IBM IoT platform: {'name': 'child', 'lat': 62, 'lon': 30, 'fence': 1}
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Data published to IBM IoT platform: {'name': 'child', 'lat': 66, 'lon': 83, 'fence': 1}
Data published to IBM IoT platform: {'name': 'child', 'lat': 71, 'lon': 99, 'fence': 1}

RESTART: C:\Users\jayap\AppData\Local\Programs\Python\Python37\IBM code final for submission.py
2022-11-17 12:24:33.195 wiotp.sdk.device.client.DeviceClient INFO Connected successfully! d:i7v036:NodeMCU:12345
Data published to IBM IoT platform: {'name': 'child', 'lat': 17, 'lon': 94, 'temp': 106, 'fence': 1}
Data published to IBM IoT platform: {'name': 'child', 'lat': 18, 'lon': 45, 'temp': 85, 'fence': 1}
Data published to IBM IoT platform: {'name': 'child', 'lat': 16, 'lon': 94, 'temp': 99, 'fence': 1}
Data published to IBM IoT platform: {'name': 'child', 'lat': 34, 'lon': 27, 'temp': 75, 'fence': 1}
Data published to IBM IoT platform: {'name': 'child', 'lat': 34, 'lon': 41, 'temp': 83, 'fence': 1}
Data published to IBM IoT platform: {'name': 'child', 'lat': 26, 'lon': 14, 'temp': 93, 'fence': 1}
```