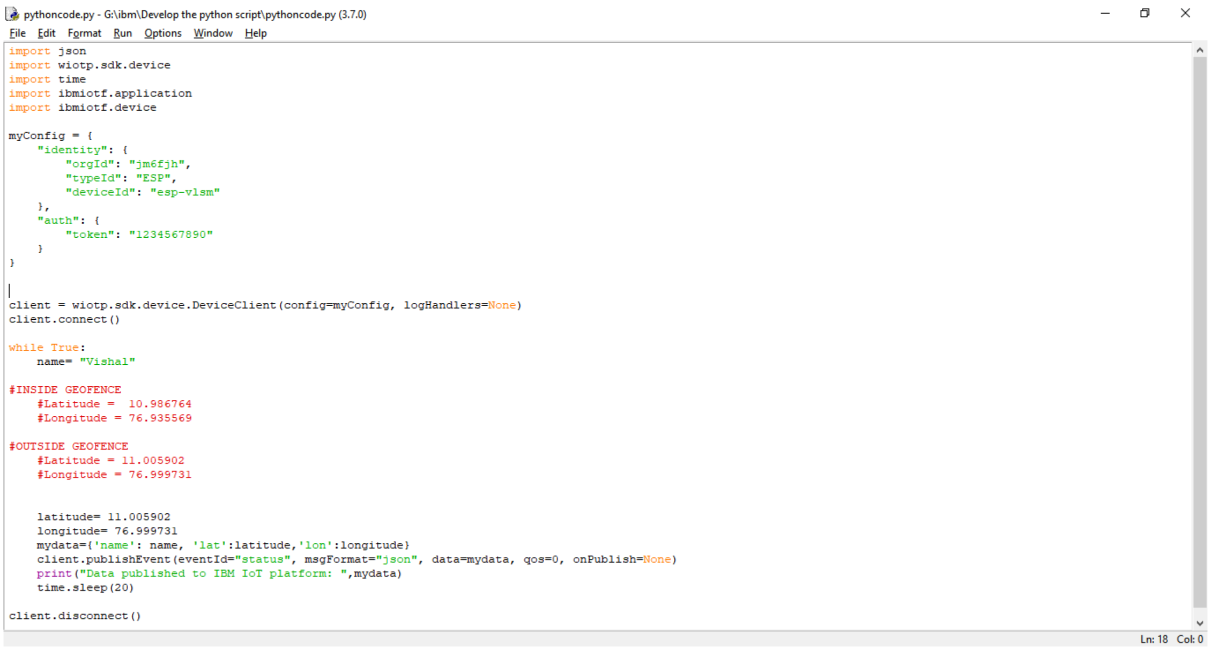
PROJECT CODE

Team ID	PNT2022TMID15198
Project Name	IoT Based Safety Gadget for Child Safety Monitoring & Notification

Python script

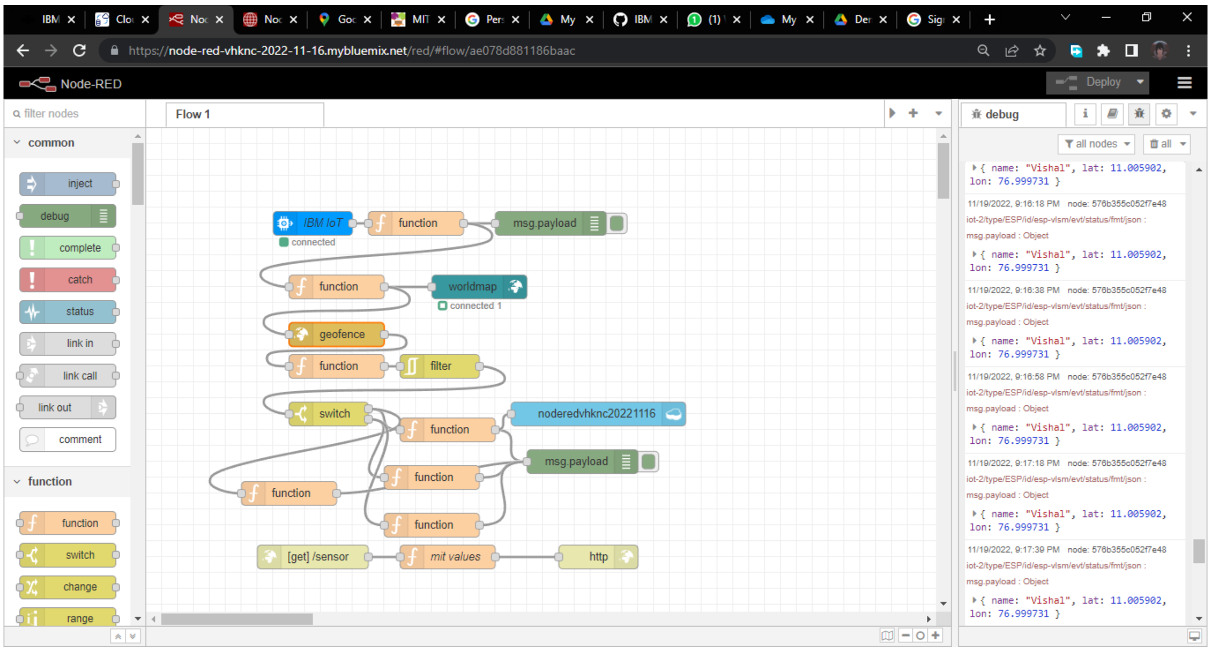


pythoncode.py - G:\ibm\Develop the python script\pythoncode.py (3.7.0)

```python
import json
import wiotp.sdk.device
import time
import ibmiotf.application
import ibmiotf.device

myConfig = {
    "identity": {
        "orgId": "jm6fjh",
        "typeId": "ESP",
        "deviceId": "esp-vlsm"
    },
    "auth": {
        "token": "1234567890"
    }
}

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

while True:
    name= "Vishal"

#INSIDE GEOFENCE
    #Latitude =  10.986764
    #Longitude = 76.935569

#OUTSIDE GEOFENCE
    #Latitude = 11.005902
    #Longitude = 76.999731


    latitude= 11.005902
    longitude= 76.999731
    mydata={'name': name, 'lat':latitude,'lon':longitude}
    client.publishEvent(eventId="status", msgFormat="json", data=mydata, qos=0, onPublish=None)
    print("Data published to IBM IoT platform: ",mydata)
    time.sleep(20)

client.disconnect()
```

Ln: 18 Col: 0

Node-Red Application



```
{ name: "Vishal", lat: 11.005902,
lon: 76.999731 }
11/19/2022, 9:16:18 PM  node: 576b355c052f7e48
iot-2/type/ESP/id/esp-vlsm/evt/status/fmt/json :
msg.payload : Object
{ name: "Vishal", lat: 11.005902,
lon: 76.999731 }
11/19/2022, 9:16:38 PM  node: 576b355c052f7e48
iot-2/type/ESP/id/esp-vlsm/evt/status/fmt/json :
msg.payload : Object
{ name: "Vishal", lat: 11.005902,
lon: 76.999731 }
11/19/2022, 9:16:58 PM  node: 576b355c052f7e48
iot-2/type/ESP/id/esp-vlsm/evt/status/fmt/json :
msg.payload : Object
{ name: "Vishal", lat: 11.005902,
lon: 76.999731 }
11/19/2022, 9:17:18 PM  node: 576b355c052f7e48
iot-2/type/ESP/id/esp-vlsm/evt/status/fmt/json :
msg.payload : Object
{ name: "Vishal", lat: 11.005902,
lon: 76.999731 }
11/19/2022, 9:17:39 PM  node: 576b355c052f7e48
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msg.payload : Object
{ name: "Vishal", lat: 11.005902,
lon: 76.999731 }
```

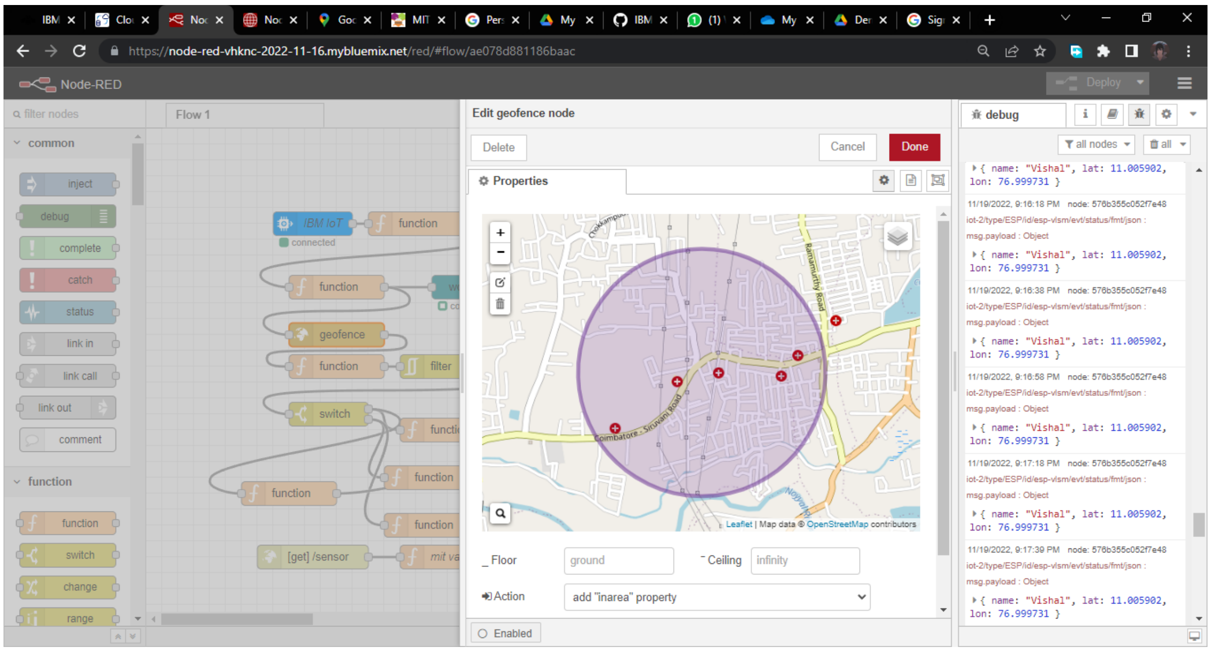

Floor: ground
Ceiling: infinity
Action: add "inarea" property

```
{ name: "Vishal", lat: 11.005902, lon: 76.999731 }
11/19/2022, 9:16:18 PM   node: 576b355c052f7e48
iot-2/type/ESP/id/esp-vlsm/evt/status/fmt/json :
msg.payload : Object
{ name: "Vishal", lat: 11.005902, lon: 76.999731 }
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msg.payload : Object
{ name: "Vishal", lat: 11.005902, lon: 76.999731 }
```
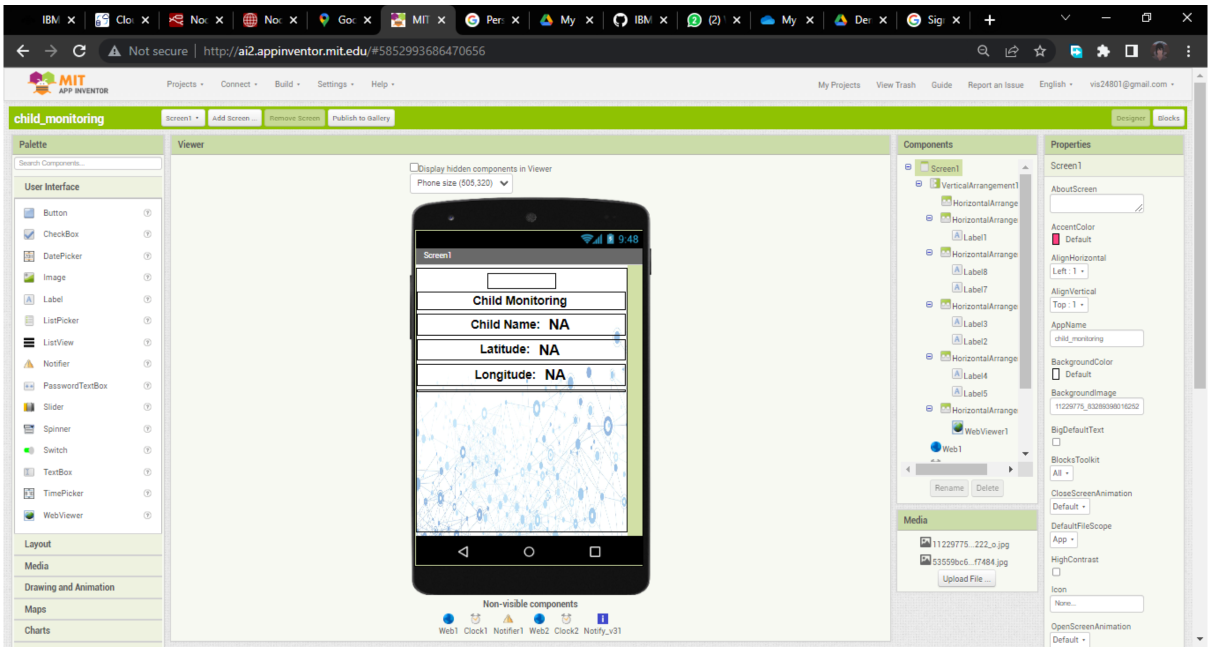
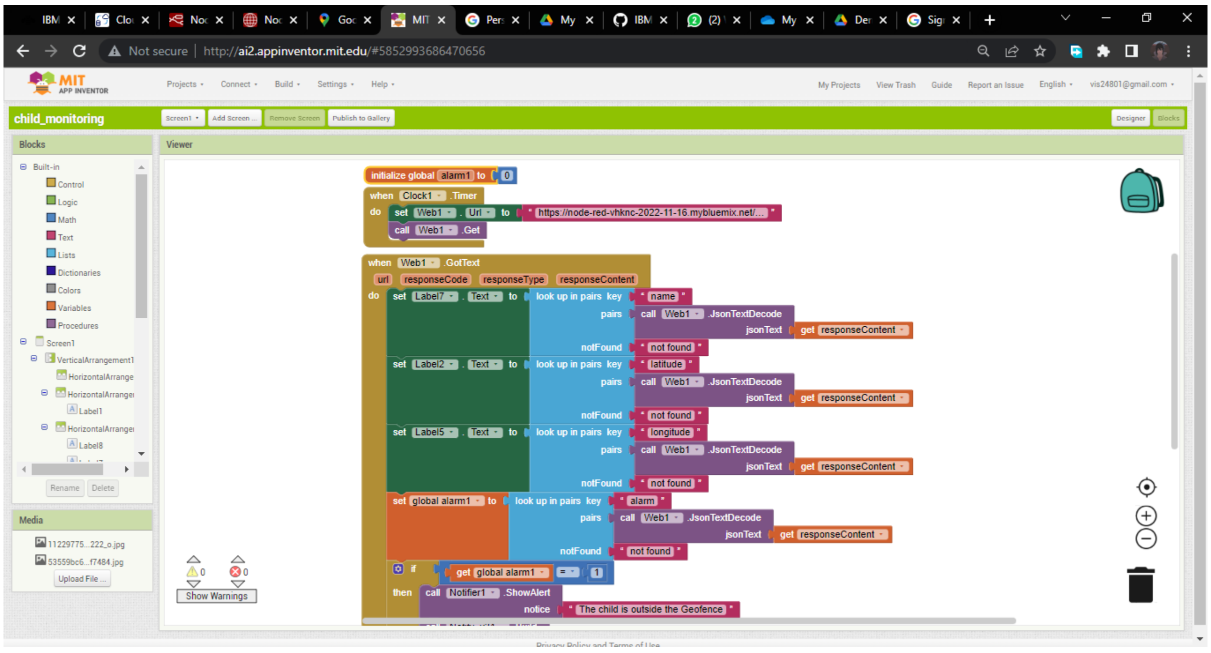

Android Application – MIT APP Inventor

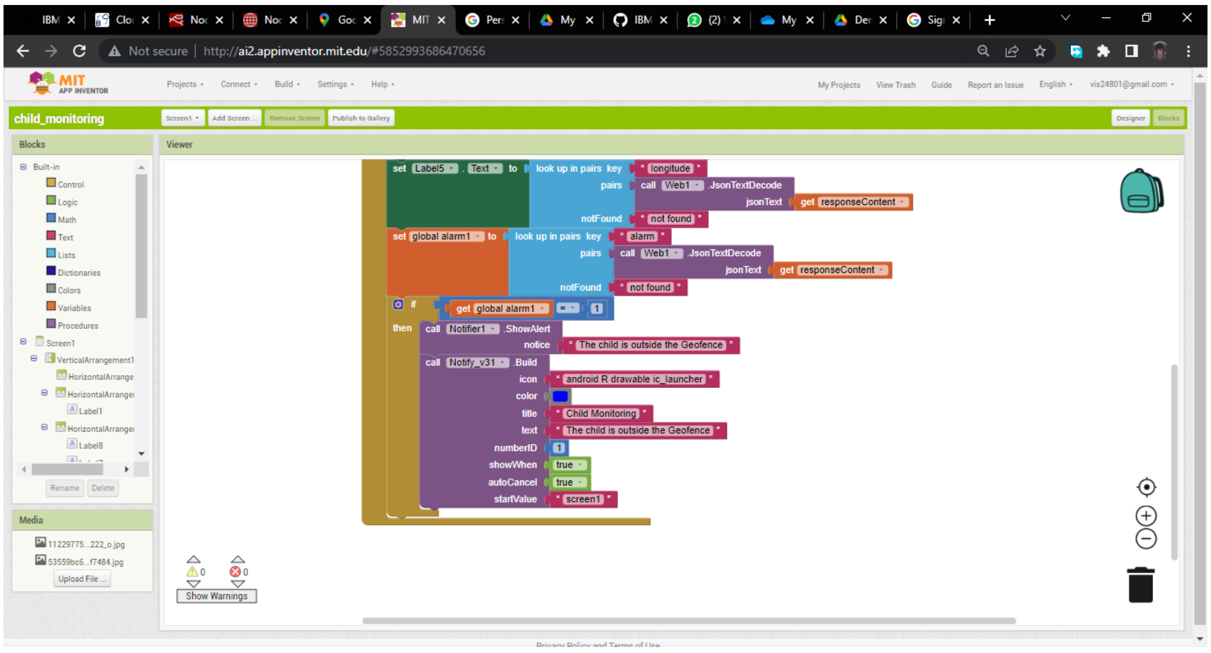
Front-End



Back-End



```
initialize global alarm1 to 0

when Clock1 .Timer
do  set Web1 . Url to "https://node-red-vhknc-2022-11-16.mybluemix.net/..."
    call Web1 .Get

when Web1 .GotText
  url  responseCode  responseType  responseContent
do  set Label7 . Text to look up in pairs key "name"
                                   pairs call Web1 .JsonTextDecode
                                                    jsonText get responseContent
                                   notFound "not found"
    set Label2 . Text to look up in pairs key "latitude"
                                   pairs call Web1 .JsonTextDecode
                                                    jsonText get responseContent
                                   notFound "not found"
    set Label5 . Text to look up in pairs key "longitude"
                                   pairs call Web1 .JsonTextDecode
                                                    jsonText get responseContent
                                   notFound "not found"
    set global alarm1 to look up in pairs key "alarm"
                                pairs call Web1 .JsonTextDecode
                                                 jsonText get responseContent
                                notFound "not found"
    if get global alarm1 = 1
    then call Notifier1 .ShowAlert
                        notice "The child is outside the Geofence"
```



```
    set Label5 . Text to look up in pairs key "longitude"
                                   pairs call Web1 .JsonTextDecode
                                                    jsonText get responseContent
                                   notFound "not found"
    set global alarm1 to look up in pairs key "alarm"
                                pairs call Web1 .JsonTextDecode
                                                 jsonText get responseContent
                                notFound "not found"
    if get global alarm1 = 1
    then call Notifier1 .ShowAlert
                        notice "The child is outside the Geofence"
         call Notify_v31 .Build
                   icon "android R drawable ic_launcher"
                  color ■
                  title "Child Monitoring"
                   text "The child is outside the Geofence"
               numberID 1
               showWhen true
             autoCancel true
             startValue "screen1"
```