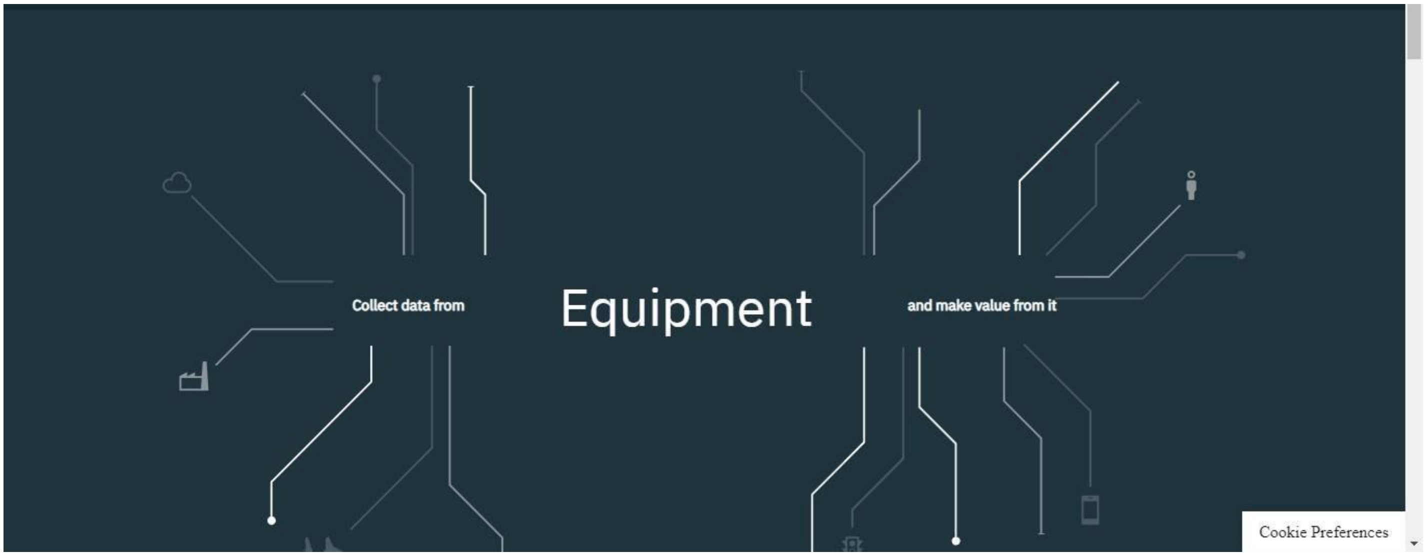
|  |  |
|---|---|
| **TITLE** | IOT based child safety gadget for child safety monitoring and notification |
| **TEAM ID** | PNT2022TMID08691 |
| **SUBMISSION DATE** | 11 November 2022 |

## Creating IBM Cloud  Service and creating the device:

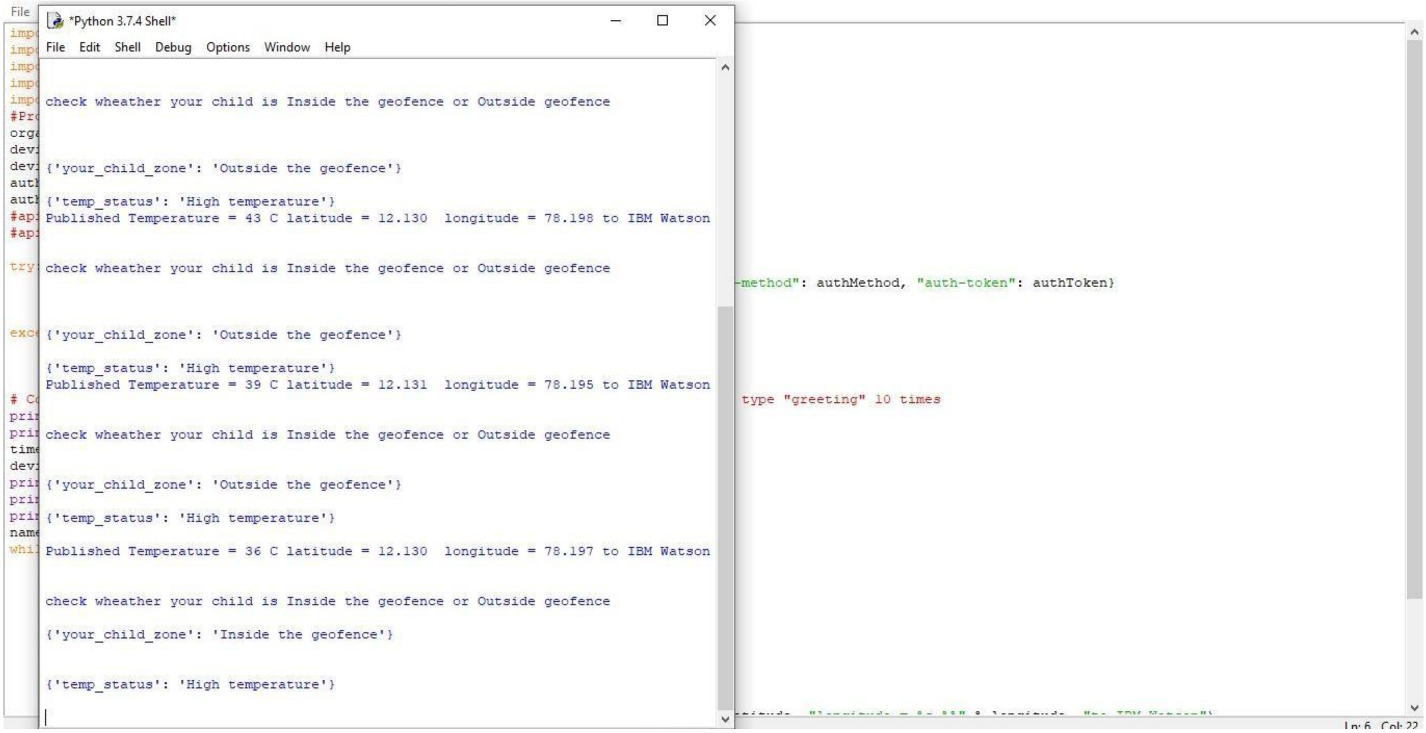


## Creating Python Code:

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

# Provide your IBM Watson DeviceCredentials
organization = "efj778"
deviceType = "node"
deviceId = "1234"
authMethod = "token"
authToken = "12345678"
# api key {a-illza1-mbdxqo6z0s}
# api token {zSYzISuAWF&F_x7GkT}
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
print("power on ")
print("checking connection to waston iot...")
time.sleep(2)
deviceCli.connect()
print("dear user ... welcome to IBM-IOT ")
print("i can provide your children live location and temperature ")
print()
name = str(input("enter your child name:"))
while True:
   temperature = random.randint(20, 50)  # random temperature for your child
latitude = random.uniform(10.781377, 10.78643)  # random latitude for your child
longitude = random.uniform(79.129113, 79.134014)  # random longitude for your child
a = "Child inside the geofence"
b = " Child outside the geofence"
c = "High temperature"
d = "Low temperature"
x = {'your_child_Zone': a}
y = {'your_child_Zone': b}
z = {'temp_condition': c}
```

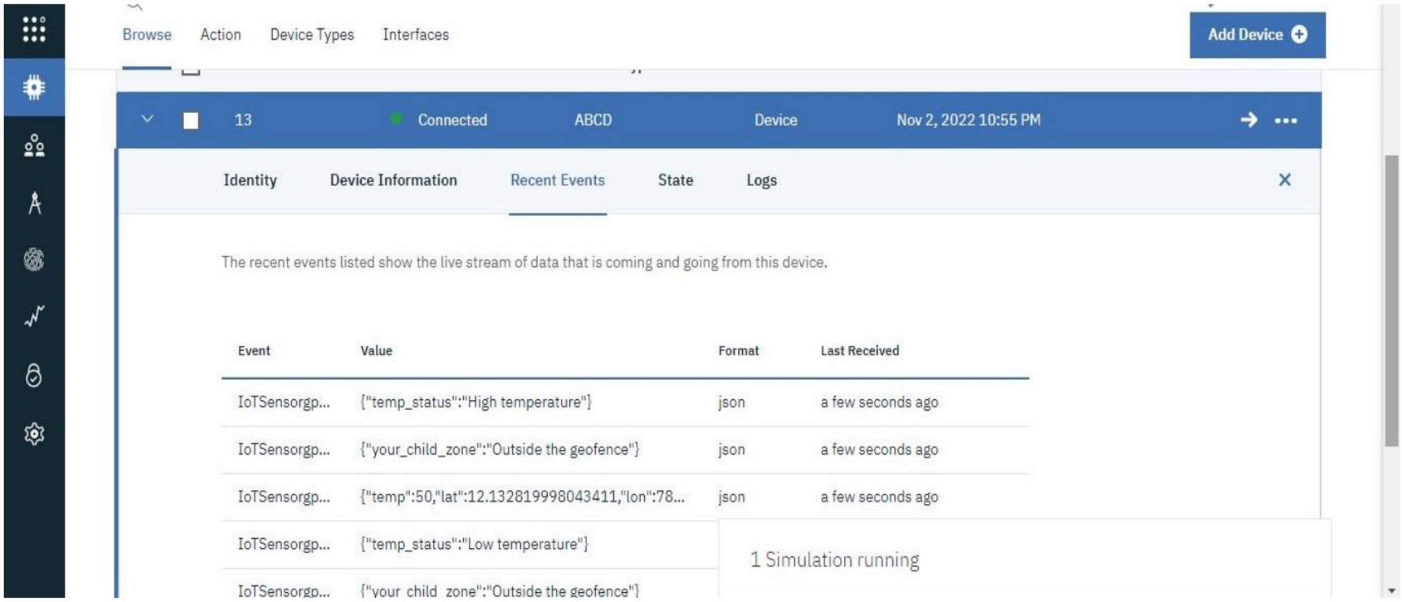
```
w = {'temp_condition': d}

data = {'temp': temperature, 'lat': latitude, 'lon': longitude, 'name': name}


# print data
def myOnPublishCallback():
   print("Published Temperature = %s C" % temperature, "latitude = %s %%" % latitude, "longitude = %s %%" %
longitude,
         "to IBM Watson")
   print("\n")


success = deviceCli.publishEvent("IoTSensorgpsdata", "json", data, qos=0, on_publish=myOnPublishCallback)
if latitude >= 10.78200 and latitude <= 10.786000 and longitude >= 79.130000 and longitude <= 79.133000:
   deviceCli.publishEvent("IoTSensorgpsdata", "json", data=x, qos=0, on_publish=myOnPublishCallback)
   print(x)
   print("\n")
else:
   deviceCli.publishEvent("IoTSensorgpsdata", "json", data=y, qos=0, on_publish=myOnPublishCallback)
   print(y)
   print("\n")

if (temperature > 35):
   deviceCli.publishEvent("IoTSensorgpsdata", "json", data=z, qos=0, on_publish=myOnPublishCallback)
   print(c)
   print("\n")
else:
   deviceCli.publishEvent("IoTSensorgpsdata", "json", data=w, qos=0, on_publish=myOnPublishCallback)
   print(d)
   print("\n")

if not success:
   print("Not connected to IoTF")
   print("\n")
   time.sleep(3)
# Disconnect the device and application from the cloud
deviceCli.disconnect()
```

# Connecting IBM Watson and python Code:



```
check wheather your child is Inside the geofence or Outside geofence



{'your_child_zone': 'Outside the geofence'}

{'temp_status': 'High temperature'}
Published Temperature = 43 C latitude = 12.130  longitude = 78.198 to IBM Watson

check wheather your child is Inside the geofence or Outside geofence



{'your_child_zone': 'Outside the geofence'}

{'temp_status': 'High temperature'}
Published Temperature = 39 C latitude = 12.131  longitude = 78.195 to IBM Watson

check wheather your child is Inside the geofence or Outside geofence


{'your_child_zone': 'Outside the geofence'}

{'temp_status': 'High temperature'}

Published Temperature = 36 C latitude = 12.130  longitude = 78.197 to IBM Watson


check wheather your child is Inside the geofence or Outside geofence

{'your_child_zone': 'Inside the geofence'}


{'temp_status': 'High temperature'}
```

```
-method": authMethod, "auth-token": authToken}
type "greeting" 10 times
```



13 Connected ABCD Device Nov 2, 2022 10:55 PM

The recent events listed show the live stream of data that is coming and going from this device.

| Event | Value | Format | Last Received |
|---|---|---|---|
| IoTSensorgp... | {"temp_status":"High temperature"} | json | a few seconds ago |
| IoTSensorgp... | {"your_child_zone":"Outside the geofence"} | json | a few seconds ago |
| IoTSensorgp... | {"temp":50,"lat":12.132819998043411,"lon":78... | json | a few seconds ago |
| IoTSensorgp... | {"temp_status":"Low temperature"} | | |
| IoTSensorgp... | {"your_child_zone":"Outside the geofence"} | | |

1 Simulation running