

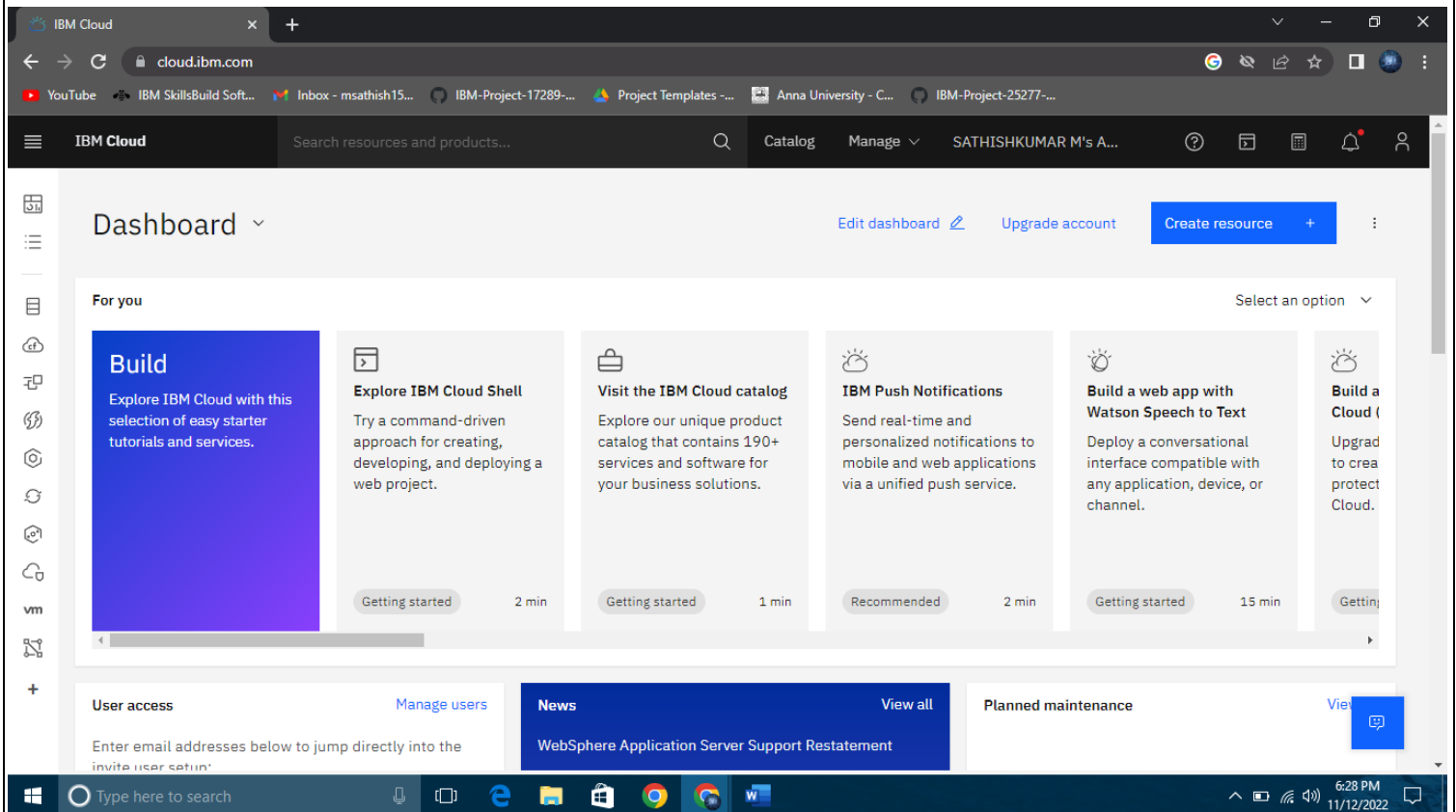
# **IOT Based Safety Gadget for Child Safety Monitoring and Notification**

## **Project Development –Delivery of Sprint 1**

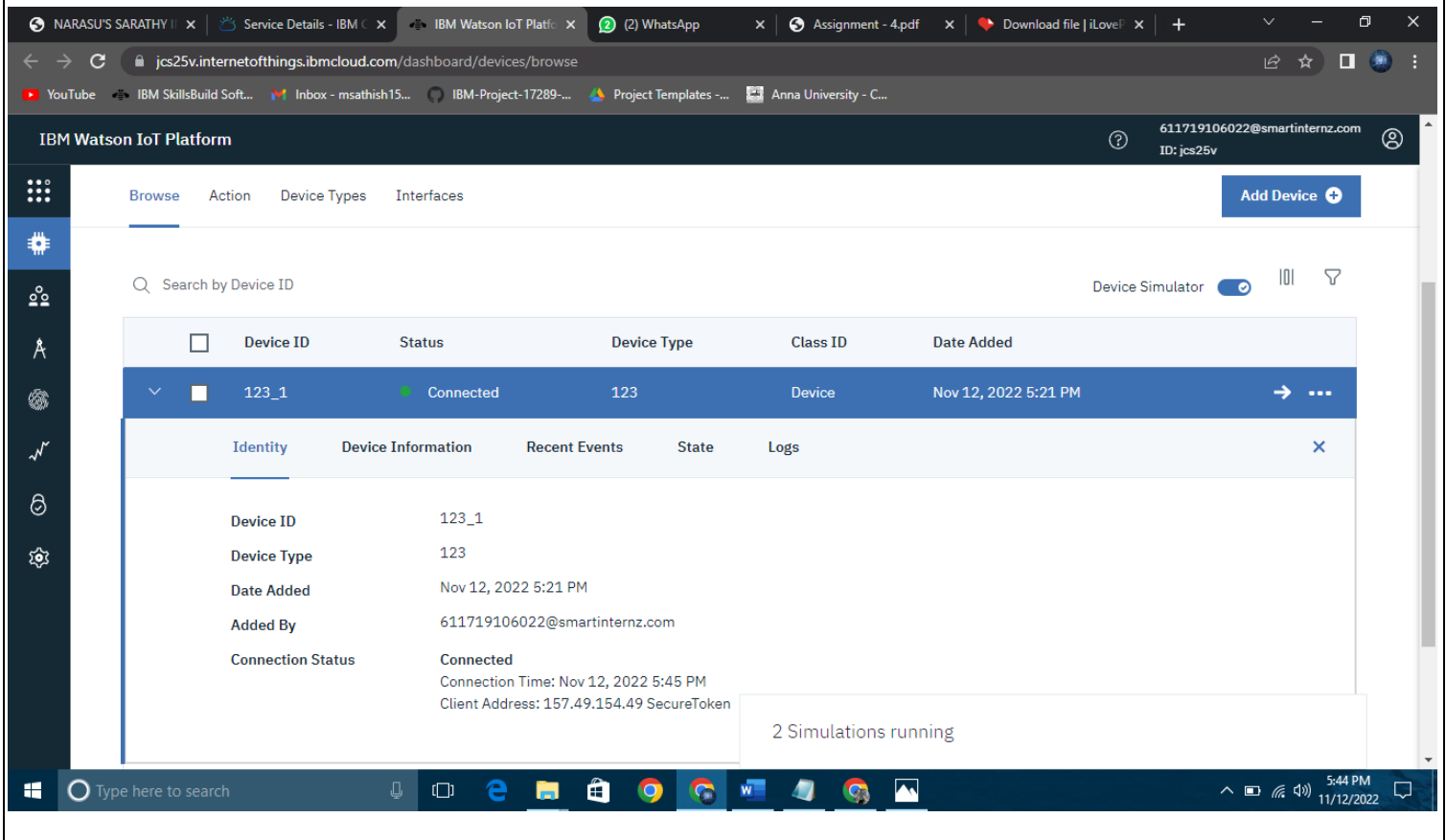
**Creating and Connecting IBM cloud for Project and Python Code**

<b>TITLE</b>	IOT based child safety gadget for child safety monitoring and notification
<b>DOMAIN NAME</b>	INTERNET OF THINGS
<b>TEAM ID</b>	<b>PNT2022TMID40851</b>
<b>TEAM LEADERNAME</b>	SATHISHKUMAR .M
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# Creating IBM Cloud Service and creating the device:



The screenshot shows the IBM Cloud Dashboard. The top navigation bar includes the IBM Cloud logo, a search bar, and links to Catalog, Manage, and a user profile. The main content area is titled "Dashboard" and features a "For you" section with several cards: "Build" (Explore IBM Cloud with this selection of easy starter tutorials and services), "Explore IBM Cloud Shell" (Try a command-driven approach for creating, developing, and deploying a web project), "Visit the IBM Cloud catalog" (Explore our unique product catalog that contains 190+ services and software for your business solutions), "IBM Push Notifications" (Send real-time and personalized notifications to mobile and web applications via a unified push service), "Build a web app with Watson Speech to Text" (Deploy a conversational interface compatible with any application, device, or channel), and "Build a Cloud" (Upgrade to create a protected Cloud). Below these cards, there are sections for "User access" (Manage users), "News" (WebSphere Application Server Support Restatement), and "Planned maintenance".



The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes the IBM Watson IoT Platform logo, a search bar, and links to Browse, Action, Device Types, and Interfaces. The main content area is titled "Browse" and features a "Search by Device ID" bar. Below this, there is a table listing devices. The table has columns for Device ID, Status, Device Type, Class ID, and Date Added. A device with ID "123\_1" is listed as "Connected" and is of type "123". A detailed view of this device is shown below the table, including its Identity, Device Information, Recent Events, State, and Logs. The device information section shows the Device ID as "123\_1", Device Type as "123", Date Added as "Nov 12, 2022 5:21 PM", Added By as "611719106022@smartinternz.com", and Connection Status as "Connected". The connection time is "Nov 12, 2022 5:45 PM" and the client address is "157.49.154.49". A notification at the bottom right indicates "2 Simulations running".

Device ID	Status	Device Type	Class ID	Date Added
123_1	Connected	123	Device	Nov 12, 2022 5:21 PM

Identity	Device Information	Recent Events	State	Logs
Device ID	123_1			
Device Type	123			
Date Added	Nov 12, 2022 5:21 PM			
Added By	611719106022@smartinternz.com			
Connection Status	Connected			
	Connection Time: Nov 12, 2022 5:45 PM			
	Client Address: 157.49.154.49			

## Creating Python Code:

```
import time

import sys

import ibmiotf.application

import ibmiotf.device

import random

#Provide your IBM Watson Device Credentials

organization = "zwx6lb"

deviceType = "ABCD"

deviceId = "13"

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=myOnPublishCallb
ack)
```

```
    print(x)
```

```
    print("\n")
```

```
else:
```

```
deviceCli.publishEvent("IoTSensorgpsdata","json",data=y,qos=0,on_publish=myOnPublishCallb
ack)
```

```
    print(y)
```

```
    print("\n")
```

```
if (temperature>35):
```

```
deviceCli.publishEvent("IoTSensorgpsdata","json",data=z,qos=0,on_publish=myOnPublishCallb
ack)
```

```
    print(c)
```

```
    print("\n")
```

```
else:
```

```
deviceCli.publishEvent("IoTSensorgpsdata","json",data=w,qos=0,on_publish=myOnPublishCall
back)
```

```
    print(d)
```

```
    print("\n")
```

```
if not success:
```

```
    print("Not connected to IoT")
```

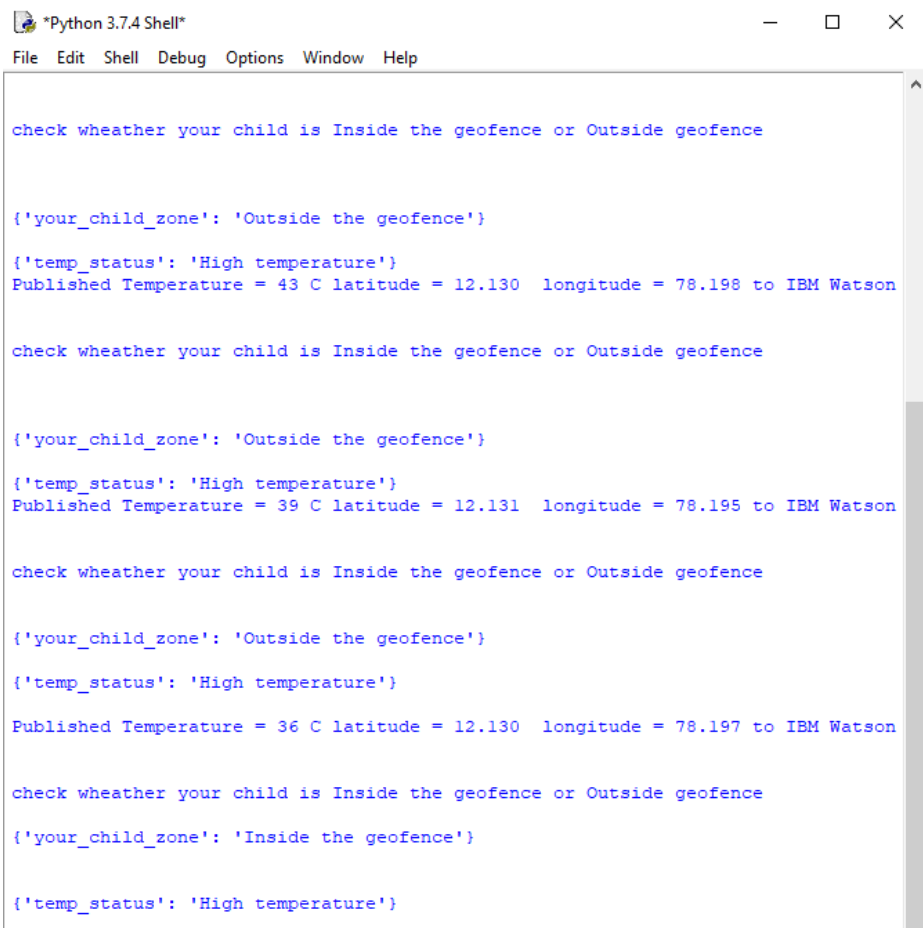
```
    print("\n")
```

```
time.sleep(3)
```

```
# Disconnect the device and application from the cloud
```

```
deviceCli.disconnect()
```

## Connecting IBM Watson and python Code:



```
*Python 3.7.4 Shell*
File Edit Shell Debug Options Window Help

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'}
```

IBM

Service Details - IBM

IBM Watson IoT Platform

sketch.ino - Wokwi Ar

(2) WhatsApp

Assignment - 4.pdf

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jcs25v.internetofthings.ibmcloud.com/dashboard/devices/browse

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▶ YouTube

▶ IBM SkillsBuild Soft...

▶ Inbox - msathish15...

▶ IBM-Project-17289-...

▶ Project Templates - ...

▶ Anna University - C...

IBM Watson IoT Platform

611719106022@smartinternz.com  
ID: jcs25v

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Browse

Action

Device Types

Interfaces

Add Device +

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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
event_1	{"distance":102}	json	a few seconds ago
event_1	{"distance":221}	json	a few seconds ago
event_1	{"distance":133}	json	a few seconds ago
event_1	{"distance":257}	json	a few seconds ago
event_1	{"distance":185}	json	a few seconds ago

2 Simulations running

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5:32 PM  
11/12/2022

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