Final Deliverables

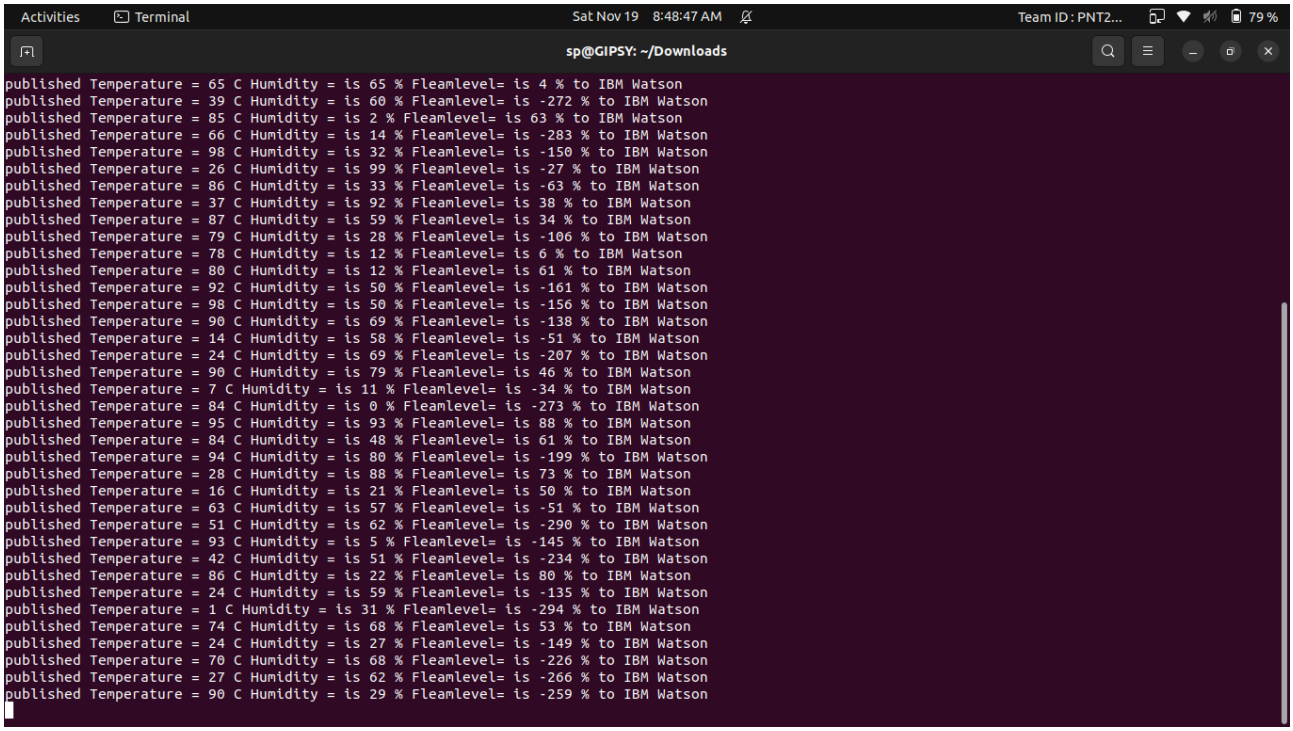
Team ID : PNT2022TMID29941
IBM ID : IBM-Project-31889-1660205917
GITHUB LINK : https://github.com/IBM-EPBL/IBM-Project-31889-1660205917

CODE:

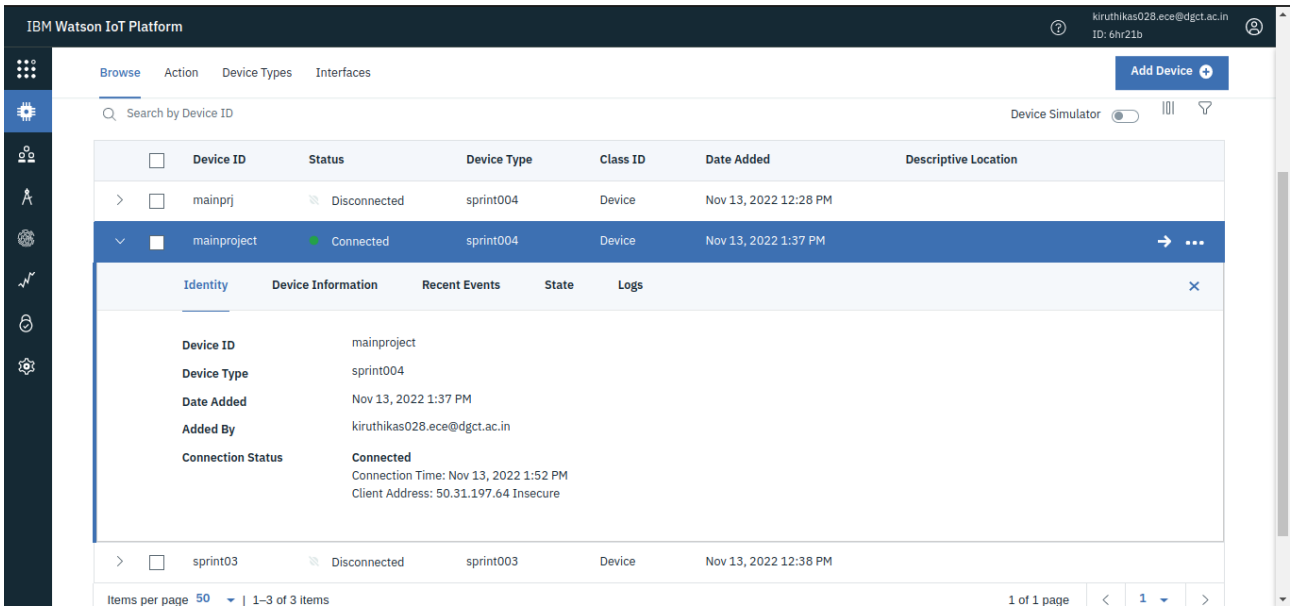
```
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random

#provide Your IBM Watson Device Credentials
organization = "6hr21b"
deviceType = "mainproject005"
deviceID = "finalproject"
authMethod = "token"
authToken = "1234567890"
#Initialize GPIO
def myCommandCallback(cmd):
    print ("command received: %s" %cmd.data['command'])
    status=cmd.data['command']
    if status=="lighton":
        print  ("led is on")
    elif status == "lightoff":
       print ("led is off")
    else:
      print ("please send proper command")
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" info the cloud as an event of
type"greetings"10 times
deviceCli.connect()

while True:
        #Get sensor Data from DHT11

        temp=random.randint(0,100)
        humid=random.randint(0,100)
        fleamlevel=random.randint(-296,97)

        data = { 'Temperature' : temp , 'Humidity': humid, 'Fleamlevel': fleamlevel }
```

```
        #print data
        def myOnPublishCallback():
            print ("published Temperature = %s C" %  temp, "Humidity = is %s %%" % humid,
"Fleamlevel= is %s %%" % fleamlevel,"to IBM Watson")


        success = deviceCli.publishEvent("IOTSensor",
"json",data,qos=0,on_publish=myOnPublishCallback)
        if not success:
            print("Not connected to IOTF")
        time.sleep(10)


        deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud
deviceCli.disconnect()
```

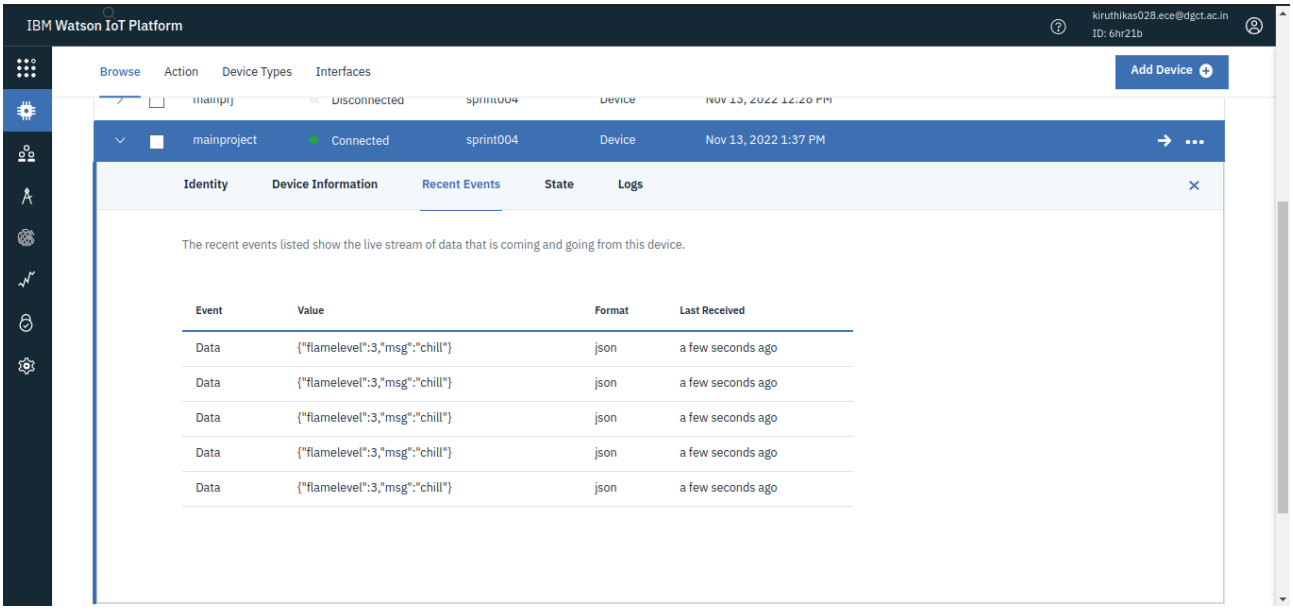
Program&Output: Simulation:



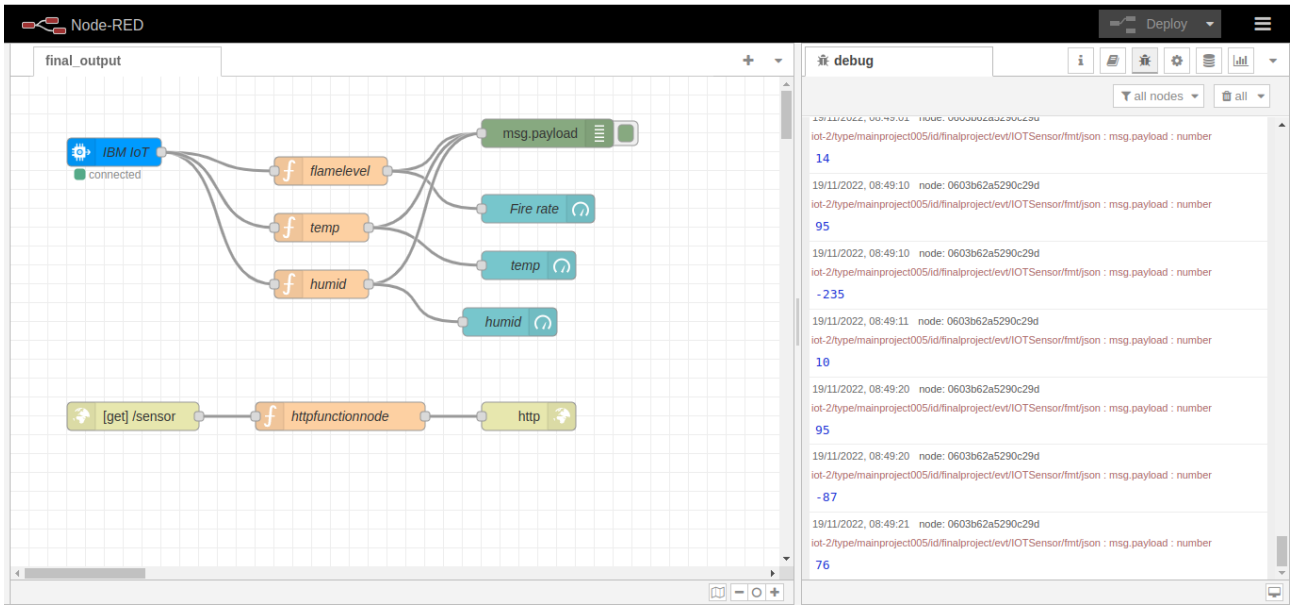
Ibm watson iot platform connection:



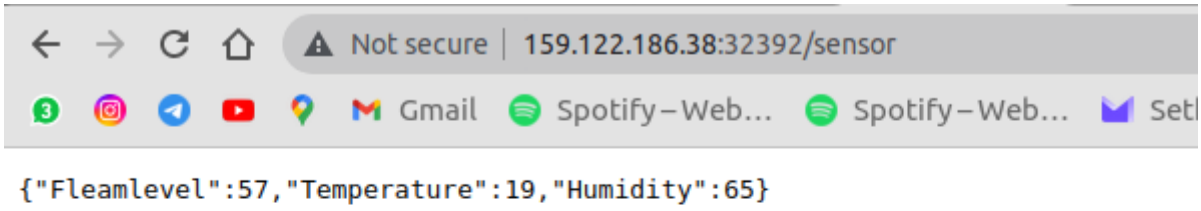
Watson output event:



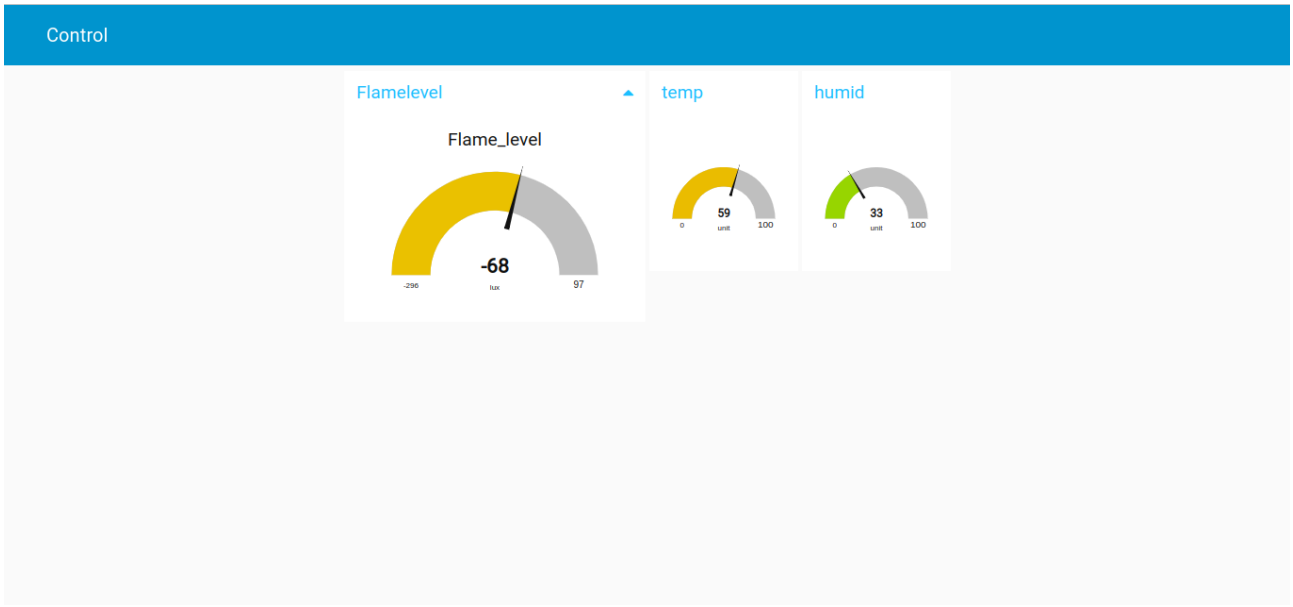
NODE-RED Connection :



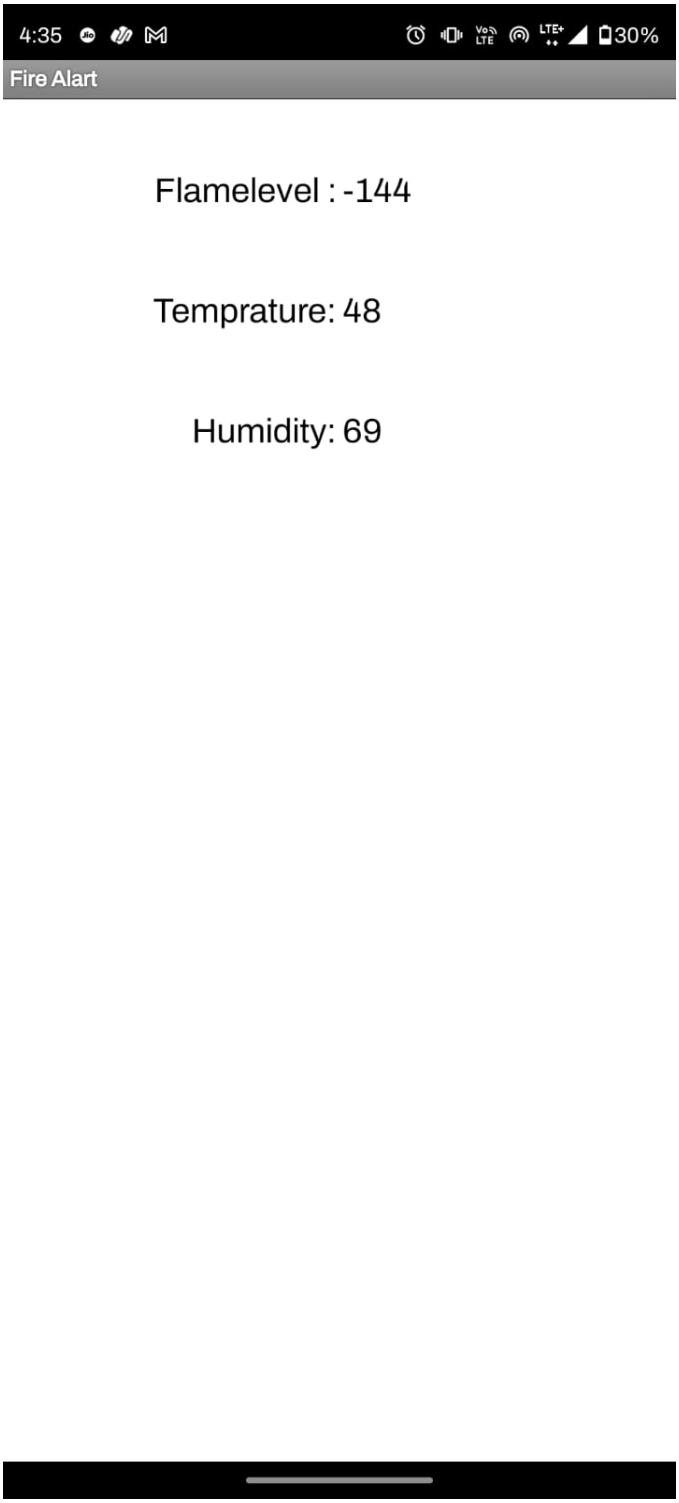
NODE-RED /sensor output:



NODE-RED UI output :



MIT APP OUTPUT :



NODE_RED Link :
https://t.me/movems_storeBOT?start=Z2V0LTQ2NTgwNTg0MTIxMDY2NDQy