PROJECT DEVELOPMENT DELIVERY
SPRINT-1

Date	29 OCTOBER 2022
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ProjectName	Project–Real-TimeRiverWaterQuality MonitoringandControlSystem

Connect sensors and Arduino with python code:

```
import time

import sys

import ibmiotf.application

import ibmiotf.device

import random

#Provide your IBM Watson Device Credentials

organization = "y6lllb"

deviceType = "node MC"

deviceId = "1105"

authMethod = "token"

authToken = "12345678"

def myCommandCallback (cmd):

print ("Command received: %s" % cmd.data['command'])

status=cmd.data['command']

if status== "motoron":

print ("motor is on")

elif status == "motoroff":
```

```python
print ("motor 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 evention connecting device: %s" % str(e))

 sys.exit()
deviceCli.connect()
while True:
temp=random.randint (90,110)
Humid=random.randint (60,100)
Ph=random.randint (0,14)
Water_turbidity=random.randint (15,60)
data = {'temp' : temp, 'Humid': Humid, 'Ph' : Ph, 'Water_turbidity' :
Water_turbidity}
def myonPublishCallback():
print ("Published Temperature = %s C" % temp, "Humidity = %s %%" %
Humid,"Ph = %s" % Ph,"Water Turbidity = %s NTU" % Water_turbidity,
"to
IBM Watson")
success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
```

```python
                on_publish = myonPublishCallback)

if not success:

print("Not connected to IOTF")

time.sleep (10)

deviceCli.commandCallback = myCommandCallback

 deviceCli.disconnect()
```