PROJECT DEVELOPMENT DELIVERY
SPRINT-1

Date	29 OCTOBER 2022
Team ID	PNT2022TMID33098
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 = "84708c"
deviceType = "abcd"
deviceId = "12345"
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":
```

```
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,
```

```
on_publish = myonPublishCallback)
if not success:
print("Not connected to IOTF")
time.sleep (10)
deviceCli.commandCallback = myCommandCallback
 deviceCli.disconnect()
```