

TEAM ID	PNT2022TMID23634
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# Provide your IBM Watson Device Credentials organization = "VCEW" # replace the ORG ID  
deviceType = "Deepika" # replace the Device type deviceId = "Deepika86" # replace Device ID  
authMethod = "token" authToken = "12345678" # Replace the authtoken

```
def myCommandCallback(cmd): # function for Callback if cm.data['command'] == 'motoron':
```

```
print("MOTOR ON IS RECEIVED")
```

```
elif cmd.data['command'] == 'motoroff': print("MOTOR OFF IS RECEIVED")
```

```
if cmd.command == "setInterval":
```

```
else:
```

```
if 'interval' not in cmd.data:
```

```
print("Error - command is missing requiredinformation: 'interval'")
```

```
interval = cmd.data['interval']
```

```
elif cmd.command == "print":
```

```
if 'message' not in cmd.data:
```

```
print("Error - commandis missing requiredinformation: 'message'")
```

```
else:output = cmd.data['message']
```

```
print(output)
```

```
try:
```

```
deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "authmethod":  
authMethod,
```

```
"auth-token": authToken}          deviceCli
```

```
= ibmiotf.device.Client(deviceOptions) # .....
```

```
exceptException 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
```

```
deviceCli.connect()
```

```
while True:
```

```
deviceCli.commandCallback = myCommandCallback
```

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

SENSOR.PY

```
import time import sysimport ibmiotf.application importibmiotf.device
```

```
import random
```

```
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authMethod = "token" authToken = "12345678" # Replace the authtoken
```

```
def myCommandCallback(cmd):
```

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

```
try:
```

```
deviceOptions = {"org": organization, "type": deviceType, "id": deviceId,
```

```
"auth-method": authMethod, "auth-token": authToken} deviceCli =  
ibmiotf.device.Client(deviceOptions)
```

```
#.....
```

```
exceptException 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
```

```
deviceCli.connect()
```

```
while True:
```

```
temp=random.randint(0,100) pulse=random.randint(0,100)
```

```
soil=random.randint(0,100)
```

```
data = { 'temp' : temp, 'pulse': pulse , 'soil':soil} #print data          def
```

```
myOnPublishCallback():
```

```
print ("Published Temperature = %s C" % temp, "Humidity = %s %" % pulse, "Soil Moisture = %s  
%" % soil, "to IBM Watson")
```

```
success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0, on_publish=myOnPublishCallback)
```

```
if not success:
```

```
print("Not connected to IoT") time.sleep(1)
```

```
deviceCli.commandCallback = myCommandCallback
```

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