

FINAL CODE

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PROJECT TITLE: IOT Based Smart crop protection for Agriculture

```
import time
```

```
import sys
```

```
import ibmiotf.application # to install pip install ibmiotf
```

```
import ibmiotf.device
```

```
#Provide your IBM Watson Device Credentials
```

```
organization = "hrodmj" #replace the ORG ID
```

```
deviceType = "NODEMCU1"#replace the Device type wi
```

```
deviceId = "12345"#replace Device ID
```

```
authMethod = "token"
```

```
authToken = "kp1234" #Replace the authtoken
```

```
def myCommandCallback(cmd): # function for Callback
```

```
    print("Command received: %s" % cmd.data)
```

```
    if cmd.data['command']=='motoron':
```

```
        print("Motor On IS RECEIVED")
```

```
    elif cmd.data['command']=='motoroff':
```

```
        print("Motor Off IS RECEIVED")
```

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

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

```

        print("Error - command is missing required information: 'interval'")

    else:

        interval = cmd.data['interval']

elif cmd.command == "print":

    if 'message' not in cmd.data:

        print("Error - command is missing required information: 'message'")

    else:

        output=cmd.data['message']

        print(output)

    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

deviceCli.connect()

while True:

    deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud

deviceCli.disconnect()

```