

# Homework 4 - Laptop 2 Receiver

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Laptop 2 receives messages from Bluemix containing information on the decision made by the data analysis as to whether a Door Open or Door closed event occurred. This decision along with a timestamp is displayed to the user, via the terminal.

## Requirements

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### Necessary Operating System, Packages, and Libraries

This project requires an installed version of Python. The ibmiotf library was used as Bluemix specific provider of MQTT functionality. This library can be installed with the following command:

```
pip install ibmiotf
```

### Software Setup

Laptop 2 is running one program file:

listener.py

To execute listener.py, run following command in terminal:

```
python listener.py
```

## Software Functionality

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### Functions

**listener.py:**

```
def mcc(newEvent)
```

### Flow of Control

**listener.py:**

Establishes a client and connects the client to Bluemix cloud via ibmiotf MQTT protocols. A callback function is established to handle incoming device event messages. The client subscribes to device event messages. Upon receiving a device event message, the laptop displays a message containing the information about the device that triggered the event, the type of event, and the time the event occurred.

### Role in Overall System

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Laptop 2 displays the decisions made about the data collected and analyzed by the other portions of the system.