Homework 2 - MQTT Client

The MQTT client is a Mosquitto client running on Linux, connected via wifi port with Raspberry Pi A, Raspberry Pi B, and Raspberry Pi C.

Requirements

This project requires an installed version of Mosquitto MQTT service and Python.

On Fedora 27 OS, install MQTT with following commands:

```
sudo dnf install mqtt
```

```
sudo dnf install mosquitto
```

```
sudo dnf install mosquitto-clients
```

To enable the MQTT client, run the following commands:

```
systemctl enable mosquitto.service
```

```
systemctl start mosquitto.service
```

This also requires the Paho MQTT package for Python which can be installed with the following command:

```
pip install paho-mqtt
```

Execution

To execute file, run the following command in terminal:

```
python3 pc_2_client.py <Broker IP Address>
```

Software Functionality

Functions

def on_disconnect(client, userdata, rc):

def on_message(client, userdata, message):

Flow of Control

On execution, the program connects to the port provided in the command line and subscribes to the topics: "lightSensor", "threshold", "lightStatus", "status/raspberrypiA", "status/raspberrypiB", and "raspberrypiC". Upon receiving a message from any of those topics, a message is printed to a log containing the message payload and a timestamp.

Role in Overall System

The MQTT client tracks the movement of messages through the system and reports them in a log.

Licenses

Mosquitto is used under the EPL/EDL licenses from Eclipse

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