Building a REST Endpoint for Lights

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Overview

- Hello World with REST and Python
- Now, Turn on a Light with REST!
- Laying out a Route Map Structure for Lights
- Using REST Verbs and JSON to Add or Remove Lights
- Finalizing the Server
- Summary

Hello World with REST and Python

- **REST Resources:**
  - http://pluralsight.com/training/courses/TableOfContents?courseName=rest-fundamentals
  - http://www.looah.com/source/view/2284
- **REST:**
  - Representative State Transfer
  - For our broader purposes:
    - GET http://raspberrypi/lights should get me a list of lights.
    - GET http://raspberrypi/lights/officeDesk should get me the office desk light.
    - POST http://raspberrypi/lights with JSON for a light should add a light.
    - DELETE http://raspberrypi/lights/officeDesk should delete the office desk lamp.
    - PUT http://raspberrypi/lights/officeDesk/on should turn the desk lamp on.
  - For hello world:
    - Let's POST a message on the server, and then go GET it.

Now, Turn on a Light with REST!

- Let's…

1) Add a PUT method to indicate modification of state
2) Verify that we can hit the PUT method
3) Invoke the CM19a Driver from the PUT method for lights on

Laying out a Route Map Structure for Lights

- Let's…

1) Add a class with a name that makes sense
2) Add a URL route to map methods in that class
3) Catch a parameter in the route instead of hard-coding
4) Understand precedence in route specification

Using REST Verbs and JSON to Add/Remove Lights

- Let's…

1) Define JSON structure for representing lights and eliminate hard-coding.
2) Implement GET for all or individual lights.
3) Implement POST method for adding lights.
4) Implement DELETE method for removing lights.
5) Do a little housekeeping.

Finalizing the Server

- Let's…

- Prepare the service for file storage.
- Install and configure Apache.
- Tweak our service implementation to work with Apache.
- Configure the OS to let Apache access the USB.
- Make sure it all works!

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