Unit 5 Lab 10
Learning Targets

Essential Questions

- How do we use HTTP POST and GET commands with Adafruit IO?
- What is the JSON format?
- What is the adafruit_io module?

Key takeaways

- Using a wifimanager object, you can communicate with Adafruit IO using GET and POST commands.
- Using an adafruit_io HTTP object, you can communicate with Adafruit IO using send_data and receive_data commands.
- JSON is a data structure which looks just like a Python dictionary.
- An AIO key must be added to the secrets.py file.
- Using HTTP to communicate requires a polling loop in your program.

Teaching Tips

Parts of Lab 10 are just like parts of Lab 8, except Wi-Fi and HTTP are used instead of the MQTT gateway on the Bluefruit LE Connect App.

HTTP requires a polling loop. The device must continually connect, check and disconnect.

This lab exposes students to another complete end to end IoT system. Data from the IoT device is sent for remote data storage and the remote service sends a command based on the data it receives.

Mention to students - an old cellphone with a Wi-Fi connection could run the Adafruit LE connect app and provide MQTT gateway access to Feather Sense devices. There are likely old cell phones lying around doing nothing that would get a new lease on life when combined with an IoT device.