SIT210: Embedded Device Development

Task 2.2P Sending data from Photon to the web

Hardware Required

Particle Photon
Breadboard
Light/Temperature/Sound sensor

Software Required

Either Web IDE or Photon IDE

Pre-requisites: You must do the following before this task

1) Complete 2.1P
2) Read on the concept of webhook in Photon: https://docs.particle.io/guide/tools-and-features/webhooks/

Task Objective

This task will introduce you to the concept of sending data from your Photon to the web

Steps:

Note: this task requires you to document your development process. See Q1.

1. Complete a simple circuit board using Particle Photon from one of the following options:
    a. Read the light level in the room
    b. Read the ambient temperature of the room
    c. Sense the current noise level of the room
2. Write code for the Photon that save the light/temperature/noise level data into a single variable.
3. Create a data channel at ThinkSpeak, named appropriately, depending on the circuit board.
4. Open the Particle Build IDE, and write code to send update of variable every 30 seconds.

Task Submission Details

Q1. Submit a video that illustrates your development process for the embedded system. The aim for the video is to provide enough instructions for someone else to recreate your product.

Q2: Submit the graph of your ThinkSpeak chart over a period of 5 minutes (create some artificial change in the reading).

Q3: Create a repository named WebHook on Github. Upload your code to the repository. Include the link to your repository here.

Q4: Describe a real life usage scenario for your system.

Q5: How would you improve this task for the future?

Remember to submit this to Doubtfire, and check the status of any existing tasks. You may need to fix and resubmit some of your work. You want to check out why, so that you can learn from this and make it faster and easier to get later work to the required standard.