SIT210: Embedded Systems Development

Task 3.2C - Create IFTTT Trigger

For real-world projects, there would be number of times that you (or your project) requires to perform an action given certain conditions are true. The IF This Then That (IFTTT) is a free web service that provides a nice platform for services running on various devices and application to be monitored and triggered, hence enabling you to easily integrate multiple services.

Please note that this is a credit task. You should expect that the complexity of tasks and amount of research and time you have to put in each would increase the higher the level of each task gets. As such, the instructions on credit and above tasks will be less like step by step instructions, and more on setting the requirements and the submission.

Hardware Required

Particle device, Ambient Light sensor (if you do not have it, use mock up values in your code)

Software Required

IFTTT registered account

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

1) Complete all previous Particle tasks.
2) Research on use of IFTTT. Particle provides a very good documentation here: https://docs.particle.io/guide/tools-and-features/ifttt/
3) Set up an IFTTT account using your student email address https://ifttt.com/

Task Objective

This task requires you to build a trigger that work with IFTTT services.

Problem statement:

You just bought a beautiful terrarium for the house. You were advised to keep the terrarium in sunlight for an average of 2 hours a day. You aim to build an embedded device that uses the Particle device to measure the amount of sunlight exposure your terrarium has. You plan to use the IFTTT service which will provide you with a notification throughout the day when the sunlight hits your terrarium and another notification when it stops. The sunlight information is to be provided by your particle device. You can use any notification mechanism that is supported by IFTTT (mobile notification, email etc).

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Steps:

1) Design your embedded solution.
2) Build your embedded solution.
3) Test your embedded solution.
4) Submit your embedded solution.

Task Submission Details

Q1: Describe how your system works in writing and clearly outline the following: the schematic of the circuit board (breadboard), the overall infrastructure of the various parts of the system, the IFTTT trigger mechanism, and the notification mechanism.

Q2: Create a repository named SIT210-Task3.2C-ParticleIFTTT on Github. Upload your code to the repository. Include the link to your repository there.

Q3: Produce a video demonstrating your solution. Provide the link in your submission.

Q4: In less than two paragraphs, describe how you would test the system you have built?

Remember, anytime you submit a task to OnTrack, it is a good practice to check the status of any existing tasks, and the future tasks you are expected to complete. If you have got feedback on previous 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 accomplish later work to the required standard.