SIT315 Programming Paradigms

Module1 Real-time and Embedded Systems

Task1.T2P: Interrupt-driven Board

Overview of the task

To fulfill the requirements of this task, you will need to modify your implementation from Task M1.T1P to use interrupts instead of adding your code to the Loop function. If you have done this already in Task1.1P, please just resubmit your program here under this task name - i.e. Task1.2P.

As discussed in the lecture, interrupts give you the chance to handle high-priority inputs without having to wait for the system to finish the current task (if the current task is higher priority we might need to switch interrupts off until it is done).

In your implementation, you will need to review Arduino Interrupts here (http://playground.arduino.cc/code/interrupts). I also recommend watching this Youtube video (https://www.youtube.com/watch?v=J61_PKyWjxU). The first 10 minutes is all what you need to get this done.

Submission Details

Please make sure to provide the following:

- A screenshoot of your system monitoring log (from your screen), and
- The source code of your program.

Instructions

1. Read Adruino Interrupts page here: http://playground.arduino.cc/code/interrupts
2. Watch this Youtube video: https://www.youtube.com/watch?v=J61_PKyWjxU
3. Review the Arduino examples available on the Arduino IDE or online on how to read digital/analog data and how to print data on Serial port.
4. Add a new file to your Module1 called Task1.2P
5. Implement your program (save the file as Task1.2P) in the Module1 folder, upload it on Arduino and test it.
6. Submit your task as detailed on the submission details section above to OnTrack.