

# ECE 443 - Homework #2

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September 5, 2019

## 1 Findings

Observing the behavior of **LEDA** and **LEDB** shows that the kernel switches what task is *running* at a one millisecond interval. This is obvious because the 'on' LED alternates between A and B every millisecond – which is shown in Figure 1.

One facet of the task execution behavior that is not very well illustrated in this lab is how each task is technically being run *constantly* during the entirety of its corresponding one millisecond period. Just looking at Figure 1, it might be believed that each task executes just *once* before going idle and switching over to the next task at the next increment of a millisecond. However, what's actually happening here is that the task is rerunning constantly, except the **if** statement only evaluates to **true** on the first run, because afterwards the LED is on, and the statement is **false**.

## 2 Results

Below is the waveform captured using the **Waveforms** program. DIO 1 is **LEDA** and DIO 0 is **LEDB**. What should be clearly seen is that the 'active' LED alternates each millisecond.



Figure 1: Behavior of **LEDA** and **LEDB** in the project