Alex Baret
CS5780 Lab 6 Postlab

Lab 6 GitHub project:
https://github.com/alex-baret/CS5780/tree/master/Labs/LAB6/CS5780_LAB6_Alex_Baret

To find *main.c* within the GitHub repo, click the commit link -> click 'Browse files -> navigate to: Labs/LAB6/CS5780_LAB6_Alex_Baret/Core/Src/main.c

'Part 1 working' contains the state of main.c for the first lab 6 checkoff (6.1)

'Part 2 checkoff complete' contains the state of main.c for the second lab 6 checkoff (6.2)

Post-Lab Questions

1. Consider a system where the DAC is updated every 4us (250 kHz) with a value from a 200- element wave table containing a single cycle of a waveform. What would be the frequency of the output wave?

    - 250kHz (1ms between updates) / 200 samples per cycle = **~1.25Hz**

2. Consider that the ADC in 12-bit mode divides the input voltage range (0-3V) into 4096 steps (where 0V is 0, and 3V is 4095).

    - What is the voltage/measurement resolution (how much does the voltage change per bit) of the ADC?
        - 3/4096 = 0.000732V per step

    - What would be the ADC output value (nearest integer) if the input voltage was 1.75V?
        - 1.75V/0.000732V = **2390 steps**

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6.2 Screenshot