CPE 403 ADV EMB SYS DES F 2019

TITLE: TIRTOS TIVAC Assignment

GOAL:

* Create ADC task to run every 10th instance of HWI
* Create UART diplay task to run every 20th instance of HWI
* Create Switch/Read Task to run every 30th instance of HWI
* Repeat the process above every 30 ms

DELIVERABLES:

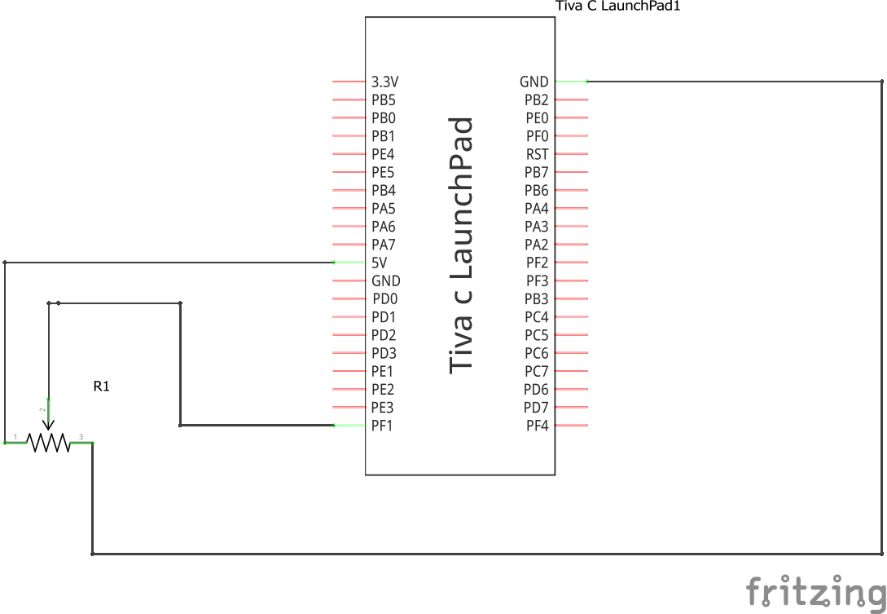
The project will show an LED that is affected by the PWM signal that takes the ADC value generated every 10th instance of the HWI. Also, a terminal will be shown that is connected to the same port as the TIVAC TM4C123GH6PM MCU to show the UART signals being transmitted/received. Every time SW0/SW1 is pressed, the duty cycle will change. Since the period of the PWM is very small, a logic analyzer will be shown which will convey when the switch is pressed to affect the PWM signal of the LED.

COMPONENTS:

TIVAC TM4C123GH6PM MCU

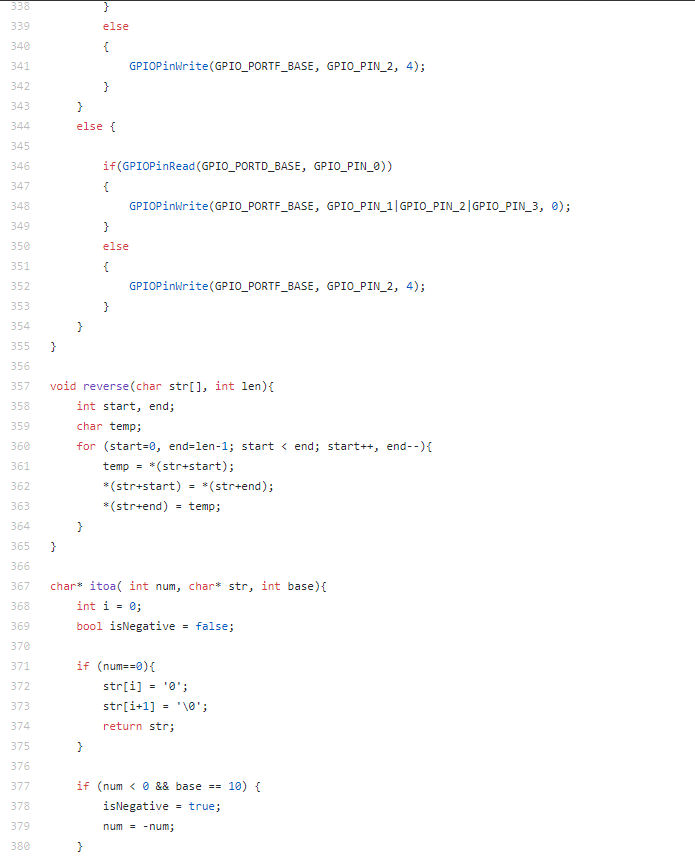
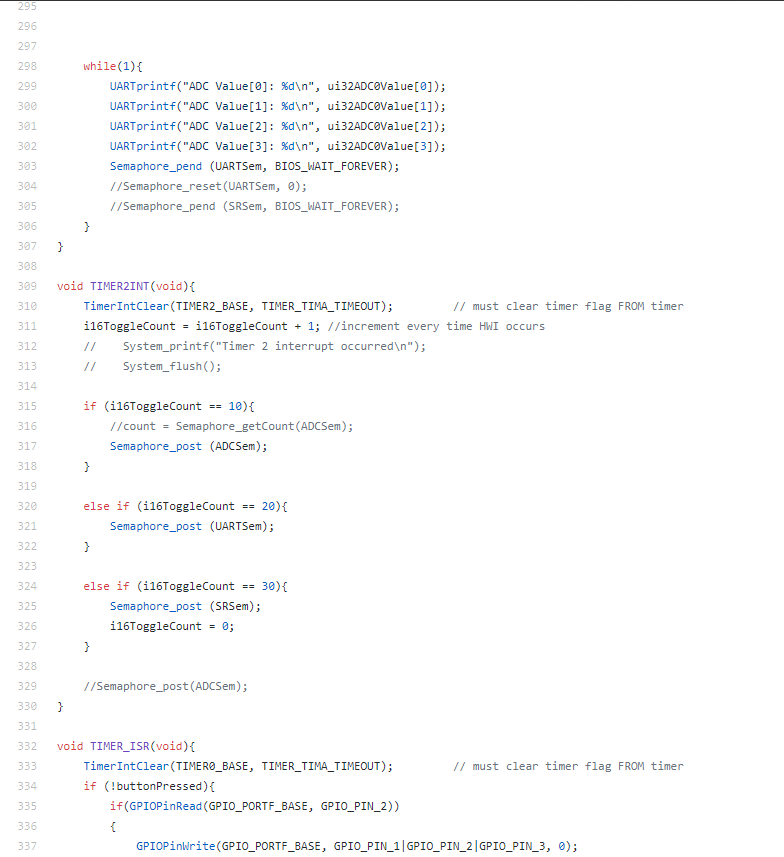
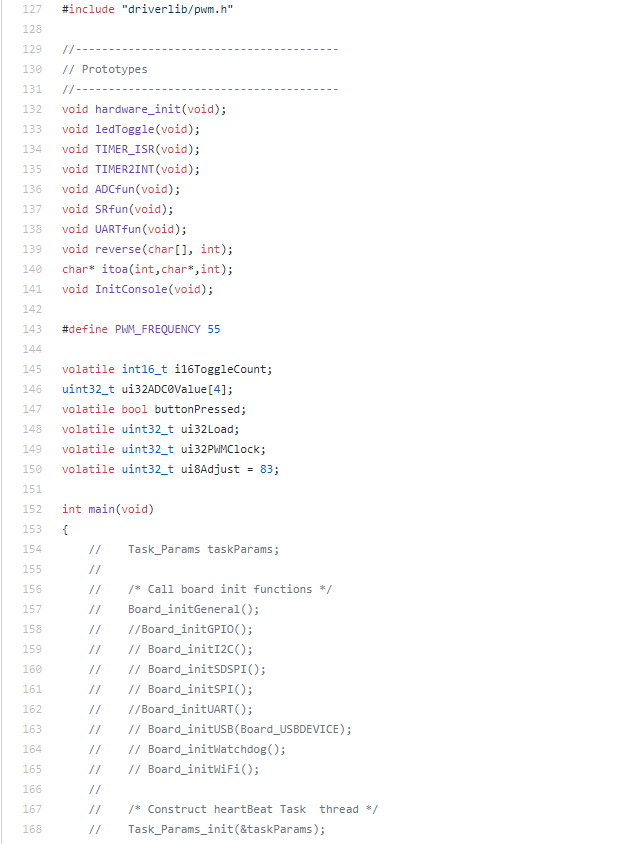
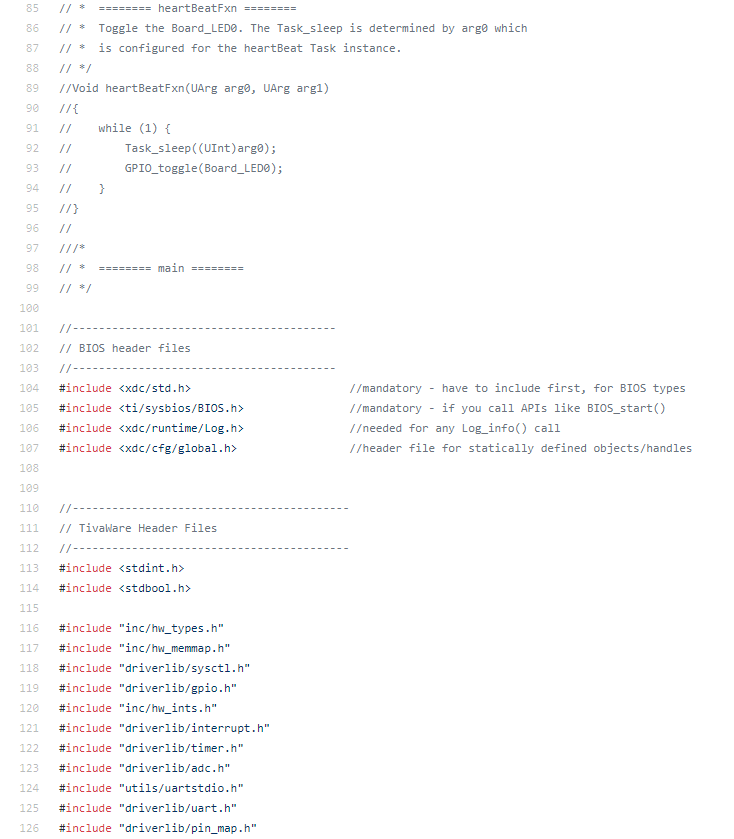
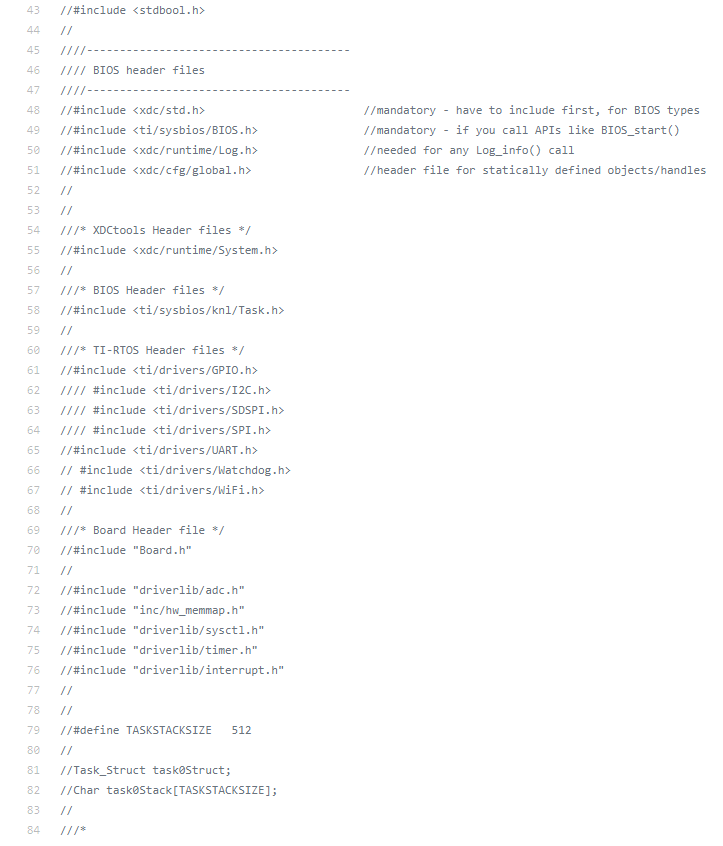
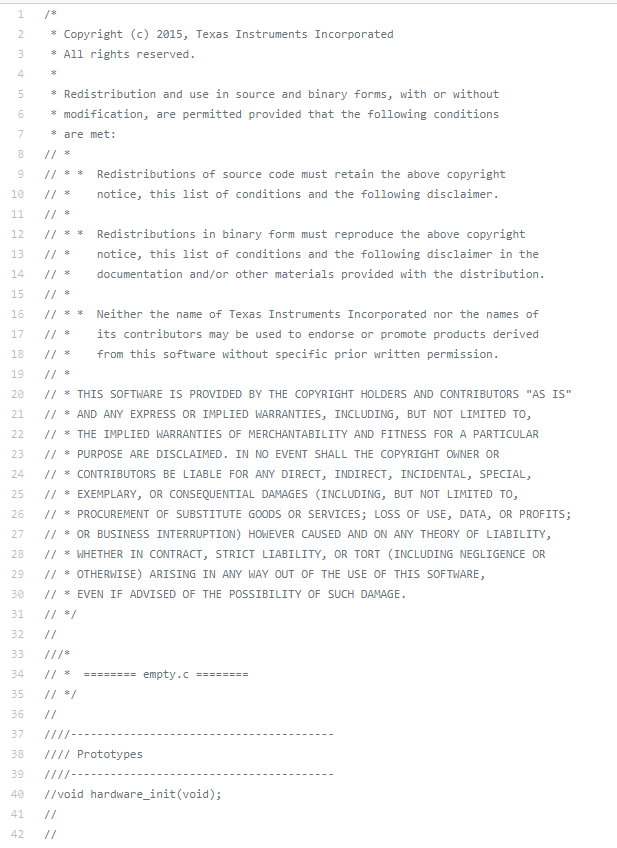
* Logic Analyzer
* Jumper Wires
* Potentiometer

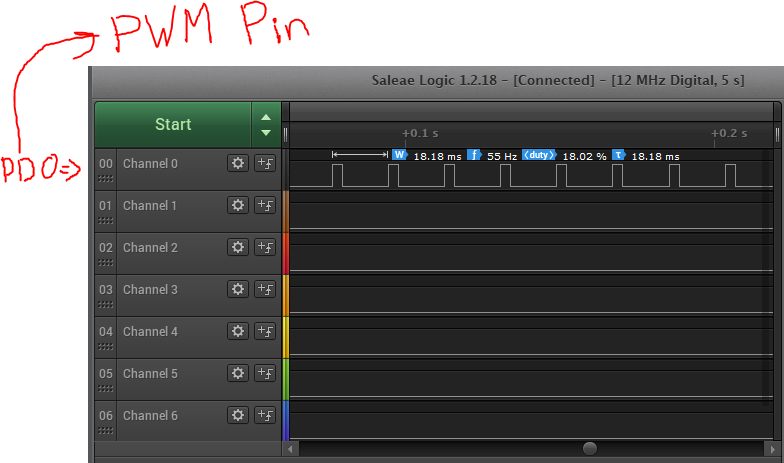
SCHEMATICS:



IIMPLEMENTATION:

UART and GPIO will be initialized as well as the ADC. This is the major initializations made for the assignment. The code below will show these initializations.

CODE:



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