EE 2920

Dr. Johnson

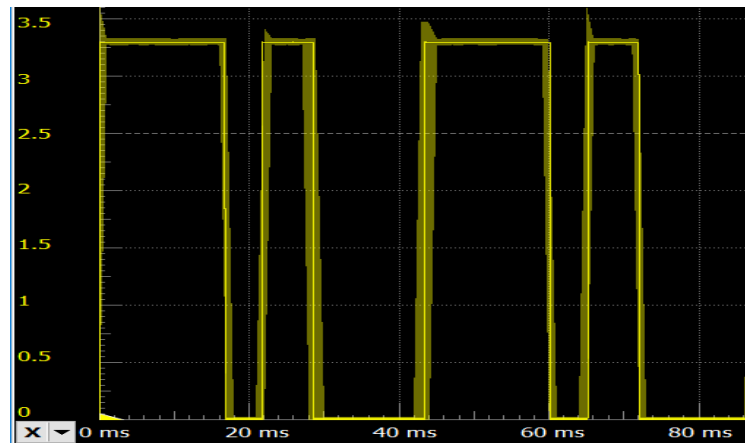# Homework 11

Use TimerA to create a 50Hz PWM waveform using the timer output on Pin 40 that alternates between 25% and 75% duty cycle every other period. Assume Mclk = 3MHz

You must setup the output pin appropriately

1) Calculate the required # of clocks for the waveform   10pts

Use TimerA to create a 50Hz PWM waveform using the timer output on Pin 40 that alternates between 25% and 75% duty cycle every other period. Assume Mclk = 3MHz

2) Write a function to setup timerA (including interrupts)   20pts

~ 3 lines for pin
~4 lines for setup
~4 lines for interrupts

Use TimerA to create a 50Hz PWM waveform using the timer output on Pin 40 that alternates between 25% and 75% duty cycle every other period. Assume Mclk = 3MHz

3) Write an ISR to create the waveform   20pts

~ 9 lines

Use TimerA to create a 50Hz PWM waveform using the timer output on Pin 40 that alternates between 25% and 75% duty cycle every other period. Assume Mclk = 3MHz

4) Complete the program and measure the output waveform   50pts

~ 9 lines of additional code