Lab Week 7 Part 2: Breathing LED (10 points)

Implement a “breathing LED” with a period of four seconds using PWM signals. Starting from an unlit state, during the “inhale” phase, LED1 on the MSP432 must gradually increase in brightness until it reaches maximum brightness and then during the “exhale” phase, gradually decrease brightness until it reaches the unlit state. This process should repeat itself. The combination of one inhale phase and one exhale phase constitutes a period. Note: You may increase the PWM duty cycle in steps of 5% up to 100% and then decrement it in steps of 5% back to zero, and so on. Use the pwmConfig to start the PWM waveform at some duty cycle. Use Timer32 to set up interrupts at the required intervals as in Listing 7.8. In the T32 IRQ handler adjust the duty cycle as needed. Use a green LED from the kit for this project and connect it to pin 2.6 . You can clearly see the breathing effect on this type of LED. Name your CCS project breathing led when submitting it on BBLearn