Embedded Homework 2
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4.3 Explain why the original program in problem 4.2 was not working, and what you did to fix it

The original program was not working because within the NewDelay function, one of the parameters was an unsigned char, and the variable i within the function was assigned type volatile unsigned char. This does not allow for mathematically correct statements that will allow for the LED to blink. In order to fix this issue, I changed the types of mSecondsApx and the variable i to unsigned long, and volatile unsigned long, respectively.

4.5 Explain why the original program in problem 4.4 was not working, and what you did to fix it.

The original program was not working because the variable j located within the NewDelay function was of type unsigned char. This did not allow for mathematically correct statements that would allow for the LED to blink. In order to fix this issue, I changed the type to an unsigned long. In addition, to better view the LED blinking, I set the mSecondsApx value to 1000 whenever the NewDelay function was called within the main loop.

4.7 Explain why the original program in problem 4.6 was not working, and what you did to fix it.

The original program was not working because within the while loop and if statement that are located in the NewDelay function, the variable j and the variable i were being compared using only one equal sign. In order to compare two variables to each other, two equal signs must be used, so I added an equal sign to the while loop and the if statement. In addition, to make the blinking more easily visible, I set the value mSecondsApx value to 1000 whenever the NewDelay function was called within the main loop.