ECE 447 Lab Assignment #2: Interrupts (10 points)
Assigned week of 10/05/2009.

Due Dates:
1. A hardware demonstration of the assignment and your code is due before 10:00 PM of your lab section 1 week after it is assigned. Zip all your code and submit it in Blackboard.

2. The lab report is due in Blackboard by 9:00 PM the day following the hardware demonstration.

Objectives:
The student learns to implement interrupts and port code to assembly language.

Assignment:
For Lab2, implement Lab1 with the following changes:
   a. Change all button-related events to interrupt driven execution. The interrupt must occur on a button-press event.
   b. Change the display radix to 16 and adjust the maximum timer value to 0xFF.
   c. All code in assembly.
There are no hardware changes.

Additional Report Requirements:
1. Explain in detail what occurs during an interrupt request and servicing.
2. What is a ‘maskable’ interrupt? How is it different to a ‘non-maskable’ interrupt?
3. In assembly language, what are the code-structure differences between an interrupt service routine and a function?