Homework 3
due Wednesday, 02/10/2010 at 5pm in ECE190 drop-box

Complete all parts of the following problems from the textbook: 4.8, 4.10, 5.6, 5.14, 5.19, 5.20, 5.24, 5.40

Be sure to check the errata page at
http://highered.mcgraw-hill.com/sites/0072467509/information_center_view0/errata_page.html
due to errors in the first print.

In addition, solve the following problem:

X1) In the programming studio we presented a FSM which detects a pattern inside a series of bits. However, one issue with the design we showed you is that overlapping patterns will be detected. For example, a FSM which looks for the pattern 1011 inside a string 1011011 will output 0001001.   Design a FSM which detects (outputs a 1) only for a non-overlapping bit pattern 101 in a series of bits. So, for an input 10101101 the FSM would output 00100001. To present your solution draw a complete state diagram with the proper transitions and input/output values.