

**Problem Set 4**  
CSCE 411  
Andreas Klappenecker

**The assignment is due Friday, Sep 30, 2011, before class.**

**Exercise 1** (15 points). *Solve Exercise 15.2-1 on page 378 of our textbook. Use the algorithm given in class. Show the arrays, and explain how the solution is derived from these arrays.*

**Exercise 2** (15 points). *Solve Exercise 15.2-2 on page 378.*

**Exercise 3** (15 points). *Solve Exercise 15.4-1 on page 396. Show your work!*

**Exercise 4** (15 points). *Solve Exercise 15.4-2 on page 396.*

**Exercise 5** (20 points). *Solve Exercise 15.4-5 on page 397.*

**Exercise 6** (20 points). *Solve Problem 15-2 on page 405. [Hint: Suppose the sequence is represented by an array  $s$ . Consider the sub-arrays  $s[i..j]$ . Notice that  $s[i, j]$  contains a palindrome of length  $\geq 2$  when  $s[i] = s[j]$ . Let  $l[i, j]$  denote the length of a maximum length palindrom in  $s[i, j]$ . Relate  $l[i, j]$  to subproblems. ]*