Homework #3   COSC 511/479 Algorithms
Distributed: 9/22/2011   Due: 9/29/2011

1. $|M| = |W| = 3$. The preference list of all m_i is the same : $\{w_1, w_2, w_3\}$, while the preference list of all w_j is the same: $\{m_3, m_2, m_1\}$

1. A. How many perfect matches are possible?

1. B. Extend your answer to 1.A. where $|M| = |W| = n$: how many perfect matches are possible?

1. C. List all the stable matches where $|M| = |W| = 3$.

1. D. Exercise Gale-Shapley where the elements of M control while loop (i.e., men pick)
        - What is the resulting match?
        - As a group, which is happier with the result, M or W?
        - How do you measure 'happiness'?)

1. E. Exercise Gale-Shapley where the elements of W control the while loop (i.e., women pick)
        - What is the resulting match?
        - As a group, which is happier with the result, M or W?
        - How do you measure 'happiness'?)

2. Do Exercise 1 (page 22).

3. Do Exercise 2 (page 22).

4. Do Exercise 4 (pp 23-4).