Homework # 1

(Due March 13, 2008)

1. Make these matrixes using MATLAB. You should use 'if' and 'for'

$$
\mathbf{A} = \begin{bmatrix} 9 & 8 & 7 & 6 & 5 & 4 & 3 & 2 & 1 \\ 8 & 9 & 8 & 7 & 6 & 5 & 4 & 3 & 2 \\ 7 & 8 & 9 & 8 & 7 & 6 & 5 & 4 & 3 \\ 6 & 7 & 8 & 9 & 8 & 7 & 6 & 5 & 4 \\ 5 & 6 & 7 & 8 & 9 & 8 & 7 & 6 & 5 \\ 4 & 5 & 6 & 7 & 8 & 9 & 8 & 7 & 6 \\ 3 & 4 & 5 & 6 & 7 & 8 & 9 & 8 & 7 \\ 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 8 \\ 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \end{bmatrix}
\qquad
\mathbf{B} = \begin{bmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 8 \\ 3 & 4 & 5 & 6 & 7 & 8 & 9 & 8 & 7 \\ 4 & 5 & 6 & 7 & 8 & 9 & 8 & 7 & 6 \\ 5 & 6 & 7 & 8 & 9 & 8 & 7 & 6 & 5 \\ 6 & 7 & 8 & 9 & 8 & 7 & 6 & 5 & 4 \\ 7 & 8 & 9 & 8 & 7 & 6 & 5 & 4 & 3 \\ 8 & 9 & 8 & 7 & 6 & 5 & 4 & 3 & 2 \\ 9 & 8 & 7 & 6 & 5 & 4 & 3 & 2 & 1 \end{bmatrix}
$$

2. Find amicable numbers between 1 and 10000 using MATLAB. (Hint: There are five couples.)

3. Solve Ex.2.1 in MATLAB page 46 by using MATLAB. (The objective of this problem is to make students familiar with MATLAB). You should read Chapter 1 before you solve Ex. 2.1.

    (a) You should turn in your MATLAB code.
    (b) Plot Fig. 2.2.

* Remark:
   1) All homework should be turned in to the instructor every Thursday unless instructed otherwise.
   2) Delay penalty: On the same day after the class: -10%

        One-day delay: -20%

        Two-day delay: -50%

        Three-day delay: -100%

   Delayed homework must be submitted to TA (이일규, Room 301-1318, Tel: 880-1688).
   3) Do not use a cover sheet; just write your name and student ID number on the right upper corner of the first page.