Assignment 1 for Theory (5%)
(Due June 22: during class time, must be hand written)

NO library function can be used to solve the following problems except the input/output related library functions.

1. Write down a program that computes the summation of the following series using for loop. Assume a and n are integers greater than 0. Show the loop analysis of your program for a = 3 and n = 5.

   $$a^0+a^1+a^2+\ldots\ldots\ldots\ldots\ldots\ldots+a^n$$

2. Write down a program that will calculate e^x where x is a positive integer and e = 2.71. x will be input to your program. Perform loop analysis for x = 6.

3. Write down a program that will find and print Lowest Common Multiplier (LCM) of two numbers x and y. The LCM is explained with an example below:
   Consider the numbers x = 12 and y = 15:
   The multiples of 12 are : **12, 24, 36, 48, 60, 72, 84, ...**.
   The multiples of 15 are : **15, 30, 45, 60, 75, 90, ...**.
   60 is a **common multiple** (a multiple of both 12 and 15), and there are no lower common multiples.

4. A number is called palindrome number if reversing the number does not change it. For example 12321 is a palindrome number. Write down a program that will take an integer as input and will determine whether the number is a palindrome number or not. You must use do-while loop to solve this problem.

Late marking policy: If you submit after the deadline you receive ZERO. However you may submit any time before the deadline, just put it under my office door (SAC 945).