Lab 3 Assignment

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Due 9/26 on Blackboard by 2 pm.

The binomial coefficient $\binom{n}{k}$ (read "n choose k") is defined as

$$\binom{n}{k} = \frac{n!}{(n-k)!k!}$$

where ! is the factorial symbol, (e.g., 4! = 4*3*2*1 = 24, 0! = 1! = 1) and n and k are non-negative integers with $n > k$.

(1) Write a function called `mybinomial.m` that calculates n choose k without using MATLAB's built-in binomial or factorial functions. This will involve multiple loops. Your script should include if-statements that return an error if n is less than k OR if either n or k is negative. You can assume that the user will use integers for n and k.

(2) Test your function with the following inputs.

$$n = 10, \quad k = 2$$
$$n = 5, \quad k = -3$$
$$n = 9, \quad k = 13$$

HW GUIDELINES

- Submit your PDF files containing successful execution of the code (using the tests given in the problem).
- Put your first and last name on the first line of the code.
- Remember that m-files should be commented so that a reader would know what the program/function does.
- Remember to suppress output and only show output where appropriate in the PDF file.