Comp. Prog.

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Factorial

- N! = N(N-1)...1
- Recursive Definition
  - N! = 1 If N =1
    = N*(N-1)! otherwise

Fibonnaci

- $F_n = F_{n-1} + F_{n-2}$ If $n > 1$
  $= 1$ If $n = 1$
  $= 0$ If $n = 0$

N choose k

HW: Print all permutations of the numbers between n and n+k-1.

- Input: n, k
- Output: for n = 4, k = 3, need to output

  4 5 6, 4 6 5, 5 6 4, 5 4 6, 6 4 5, 6 5 4

- Algorithm need to be fast! should work for n = 50, k = 10 in reasonable time.