Exercise 8 – Factorial 5000

In mathematics, the factorial of a non-negative integer N, denoted by N!, is the product of all positive integers less than or equal to N.

For example, 5! = 5 x 4 x 3 x 2 x 1 = 120.

Write a program where the user can enter N, where N is a whole number from 1 to 5000, and it will display factorial N.

Since factorial N can result is a very long number, please display 80 digits per line.

Optional: Try to maximize the performance.