1   Exercise 1

Write an MPI program with two processes in such a way that the process 0 reads an integer number using **scanf**. Process 0 sends the number to process 1, which calculates the factorial of the number and returns the results to process 0.

2   Exercise 2

Consider that process 0 have an array of integer numbers where we should compute the factorial of all the elements in the array. Modify the program in order to send the array to process 1 that computes all the factorials and return the results to process 0.

3   Exercise 3

Consider that we have n processes, modify the program in order to distribute the calculation over all available processes and measure the gain in execution time compared to exercise 2.