Tutorial - 7

In this tutorial, you will write MPI programs to send/recv strings, integers, and floating point numbers as described below.

1. Modify the given "Hello World" MPI program such that the host-process (designate this as process with rank = 0) sends a "Hello" message to all other processes available in the communicator and all the processes receive and print the message they received.

2. Write an MPI program in which the host-process (designated as process with rank = 0) receives a single integer value from all other processes and the host will receive the values and adds them and prints the final sum to the screen.

3. Write an MPI program in which the host-process with a floating point array a[n], will send consecutive a[n/p] values to each of the p processes. The processes perform a functional operation on the data received and re-send the modified data to the host-process which collects and prints them to the screen.