

exercises corresponding to the lectures four and five

The exercises below are ordered chronologically. A good understanding of the lecture notes (what was written on the blackboard in class) should suffice to find the answers.

The programs we have seen in class are available on the class web site.

exercises after Lecture 4

- 4.0) Run the programs we have seen in class on the cluster.
- 4.1) Adjust hello world so that you type in your name and every node salutes you, using the name you typed in.

exercises after Lecture 5

- 5.1) Modify the program we have seen in class to sum 100 numbers to work with a variable number of processors. Instead of 100, add the first n positive natural numbers where $n = 10p$.
- 5.2) Rewrite the program to sum 100 numbers using MPI_Send and MPI_Recv instead of MPI_Scatter and MPI_Gather.
- 5.3) Rewrite the program to square p numbers using MPI_Scatter and MPI_Gather.