Parallel Odd-Even Transposition Sort

Description :

In this homework, you are required to write a parallel odd-even transposition sort by using MPI. A a parallel odd-even transposition sort is performed as follows:

/* Initially, *m* numbers are distributed to *n* processes, respectively.*/

1. For each process with odd rank *P*, send its number to the process with rank *P*-1.
2. For each process with rank *P*-1, compare its number with the number sent by the process with rank *P* and send the larger one back to the process with rank *P*.
3. For each process with even rank *Q*, send its number to the process with rank *Q*-1.
4. For each process with rank *Q*-1, compare its number with the number sent by the process with rank *Q* and send the larger one back to the process with rank *Q*.
5. Repeat 1-4 until the numbers are sorted.

Where and What to Turn in Your Homework :

1. Please turn in a report (at least 10 pages) includes
   - The design approaches
   - Performance analysis
   - The source code of your programs (sequential and parallel versions)
2. Send your source code to BB
3. No late homework assignment submission!!!