Lab 8

Write and run an MPI program to compute the following reduction:

for (int i = 0; i<n; i++) { t = t + a[i];

} print(t);

Use or write two versions of the reduction

1. Write a version using MPI collective communication. Look for the commented line in MPI_SR.

2. Write a version using send/recv or send/irecv that forms a fan-in tree such as used by the MPI reduction. Use the program in Lab5SR.c

Use **mpicc -std=c99 Lab8SR.c -lm** to compile the program (the last option uses the letter l, not the number 1.

Commented lines will tell you where to add MPI statements.

Time the two versions using arrays of size 10000, 100000 and 1000000. Run on one node with 16 processes.