1 Hands-on; Miscellaneous II

1. **The same example for send-receive pair with the previous one but now it uses a MPMD programming style**. See the files: code4.c, code5.c, code4-5defs.h, procgrp.
   Execute as;
   mpirun -p4pg procgrp code5

2. **Derived data types, SendRecv**. Study following programs. code34.c, code35.c, code36.c.

3. **Wait for an MPI request to complete**, code38.c. **Test for the completion of a request**, code37.c.

4. **Stack Management**, This code (code46.c) example demonstrates how to query and set a thread's stack size.

1.1 HOMEWORK - Due to January 10, 2011

1. Threads; Computing the value of π. The following program computes the value of the π number by a given number of threads;

   - Analyze the code for the possible synchronization issues.
   - Compile and execute the code by increasing the number of the threads and number of the intervals.
   - Make the following procedures:
     - Draw a figure as Execution Time vs Number of Threads.
       * If you increase the number of threads as the multiple of 2, then take the ln.
       * If you increase the number of threads as the multiple of 10, then take the log.
     - Make the Speed-Up and Efficiency analysis.

2. Modify the loop work-sharing OpenMP program as printing out

   - local sums of array C
   - global sum of array C using $reduction(+ : sum)$ clause