

CS 4973 - Parallel Programming I

Programming Assignment #4 - 2015.11.03

Goal: To add some minor tweaks to the ‘guess my number’ game from HWs 2 and 3.

Details:

(a) The master node will generate a random number between 1 and N (where N is a run-time argument), and will announce that he has chosen his number.

(b) Each client node will, in sequence, try to guess the number. The guess should be random on a specified interval.

(c) If the number is not a match, the response from the master node to the client node will be ‘too high’, or ‘too low’.

(d) At this point, the node which guessed incorrectly will use a subgroup communication structure to “sneak” their information to at least the next node in the guessing group.

(e) With this new knowledge from the previous node, the new node will adjust its guessing range before randomly selecting a number.

(e) The process is repeated until a client node correctly guesses the number.

(f) At this point, the master node will announce that the number has been found by the specific client, and no more guesses are needed.

(g) The total number of guesses per node should be kept track of, as well as the total overall number of guesses.