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3/7/17

Programming Homework #3 Report

EE/CSCI 451

How to run my program:

To run the program, you navigate to the folder with all the files and type “make” from the command line. This should make all the programs. You can then run each program simply by typing its executable name:

p1_serial, p1_for, p1_section, p2_omp

To run p3, you need to use the mpicc compiler (source usr/usc/openmpi/default/setup.sh). To compile you type: mpicc –o p3 p3.c

You then submit the job by typing: qsub queue.pbs

Unfortunately I am receiving an error though and the program does not complete.

Problems:

P1_serial:

```
C:\Users\Kevin\Documents\Academic\USC\Y4S2\EE 451\PHW 3\workspace>p1_serial
Estimated pi is 3.140741, execution time = 0.455000 sec
```

P1_for:

```
C:\Users\Kevin\Documents\Academic\USC\Y4S2\EE 451\PHW 3\workspace>p1_for
Estimated pi is 3.140741, execution time = 0.431000 sec
```

P1_section:

```
C:\Users\Kevin\Documents\Academic\USC\Y4S2\EE 451\PHW 3\workspace>p1_section
Estimated pi is 3.140741, execution time = 0.180000 sec
```

P2_serial:

*Executed with array size of 16*1024

```
C:\Users\Kevin\Documents\Academic\USC\Y4S2\EE 451\PHW 3\workspace>p2_serial
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Execution time = 0.454000 sec
```

P2_omp:

*Executed with array size of 16*1024

```
C:\Users\Kevin\Documents\Academic\USC\Y4S2\EE 451\PHW 3\workspace>p2_omp
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Execution time = 0.081000 sec
```

P3:

*Error

```
--------------------------------------------
[hpc1726:24349] *** An error occurred in MPI_Send
[hpc1726:24349] *** reported by process [140288409796609,140286516789248]
[hpc1726:24349] *** on communicator MPI_COMM_WORLD
[hpc1726:24349] *** MPI_ERR_RANK: invalid rank
[hpc1726:24349] *** MPI_ERRORS_ARE_FATAL (processes in this communicator will no
w abort,
[hpc1726:24349] ***    and potentially your MPI job)
--------------------------------------------
```