Homework 3

Run my "hello world" MPI and OpenMP executables on lux (batch only) and Hummingbird (batch) on (a) 1 node with 4 processes using MPI, (b) 2 nodes with 4 processes per node using MPI, (c) 1 node 4 threads using OpenMP, (d) 1 node 8 threads using OpenMP. You will have to write SLURM scripts to do the batch jobs! (← key exercise!)

The executables are already made for you already and are on HB in
`~brummell/AM250_Exercises/`

- `hello_mpi_lux`
- `hello_mpi_hb`
- `hello_omp_lux`
- `hello_omp_hb`

Submit a tarfile to Canvas containing:

- ✓ the scripts you write for the batch jobs
- ✓ output from your jobs
  - the standard error and output files of the job for batch

Total # of tests = 2 machines (lux, hb) * 2 types (mpi, openmp) * 2 node/procs distributions (a,b or c,d) = 8 jobs (see next page for summary/list)

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Summary of jobs:

Job#	Executable	Batch/Interactive	#nodes/procs
Job1:	`hello_mpi_lux`	batch	(a) 1 node, 4 procs total
Job2:	`hello_mpi_lux`	batch	(b) 2 nodes, 8 procs total
Job3:	`hello_mpi_hb`	batch	(a) 1 node, 4 procs total
Job4:	`hello_mpi_hb`	batch	(b) 2 nodes, 8 procs total
Job5:	`hello_omp_lux`	batch	(c) 1 node, 4 threads
Job6:	`hello_omp_lux`	batch	(d) 1 node, 8 threads
Job7:	`hello_omp_hb`	batch	(c)) 1 node, 4 threads
Job8:	`hello_omp_hb`	batch	(d)) 1 node, 8 threads