Khoa Nguyen - Lab 10 notes - 05/14/22

In both parts, my design for splitting the jobs among nodes in mpi is somewhat similar to the static scheduling in openmp. For example, in the lab10-curve program, if there are 10 traps and 3 nodes, the traps will be assigned to each node as demonstrated in the table below:

Trap	0	1	2	3	4	5	6	7	8	9
Node	0	1	2	0	1	2	0	1	2	0

Then, I will use a pragma omp for loop to further parallelize the tasks in each individual node. Take node 0 for instance: Node 0 needs to handle trap 0, 3, 6, and 9. If node 0 spawn 4 threads, thread 0, 1, 2, and 3 will calculate trap 0, 3, 6, and 9 respectively.

In the lab10-prime program, if the range is from 3 to 12 and there are 3 nodes, the numbers will be assigned to each node as demonstrated in the table below:

Num	3	4	5	6	7	8	9	10	11	12
Node	0	1	2	0	1	2	0	1	2	0

Then, I will use a pragma omp for loop with **static scheduling** to divide the tasks in each individual node as evenly as possible.