Parallel Programming Practical Oral Exam

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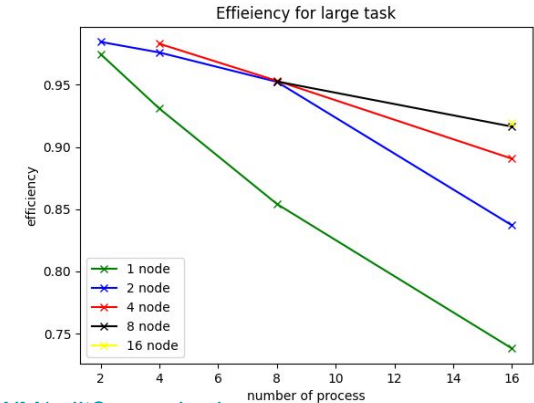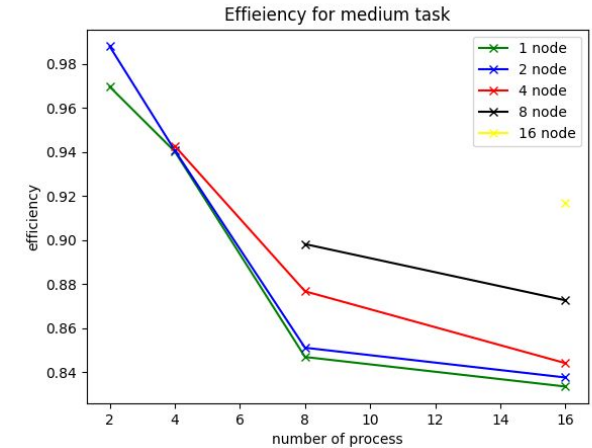
Overview of C-MPI Assignment

Highlights:

1. Latency hiding implemented
2. Computation and Communication times measured

Findings:

1. The efficiency drops when the number of processes increases
2. With same number of processes, the efficiency **drops** when the number of nodes increases
3. Latency hiding can slightly increase the efficiency
4. The result of bonus2(computation and communication times) also confirmed the result of Finding 2.

Report Link https://docs.google.com/document/d/1MGh-HBYUZI6XIWgw3-5sn7bsyhB7AHs-pzzN9ug-DWM/edit?usp=sharing

Effieiency for medium task

Effieiency for large task

Overview of Julia Assignment

Effieiency for medium task

Main Findings:

1. The efficiency drops when the number of processes increases, on both sizes of tasks
2. With same number of processes, the efficiency **increases** when the number of nodes increases (which is different from C-MPI assignment)
3. The efficiencies are far worse than that in C-MPI assignment, aka it is more difficult to achieve good efficiency without MPI

Effieiency for large task

Report Link https://docs.google.com/document/d/1tVC3ByNSrNyJtQWrDPPpzZqSDkFgSCPV84HrX_VjCWQ/edit?usp=sharing