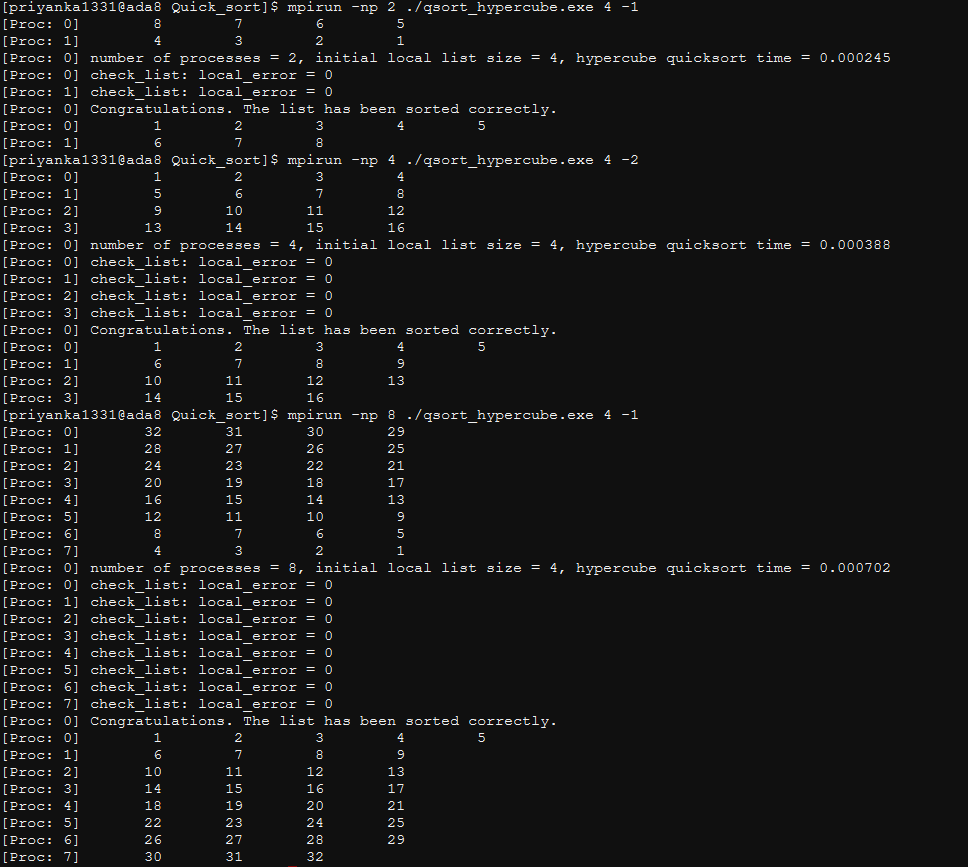
**Priyanka Karuppuch Samy**

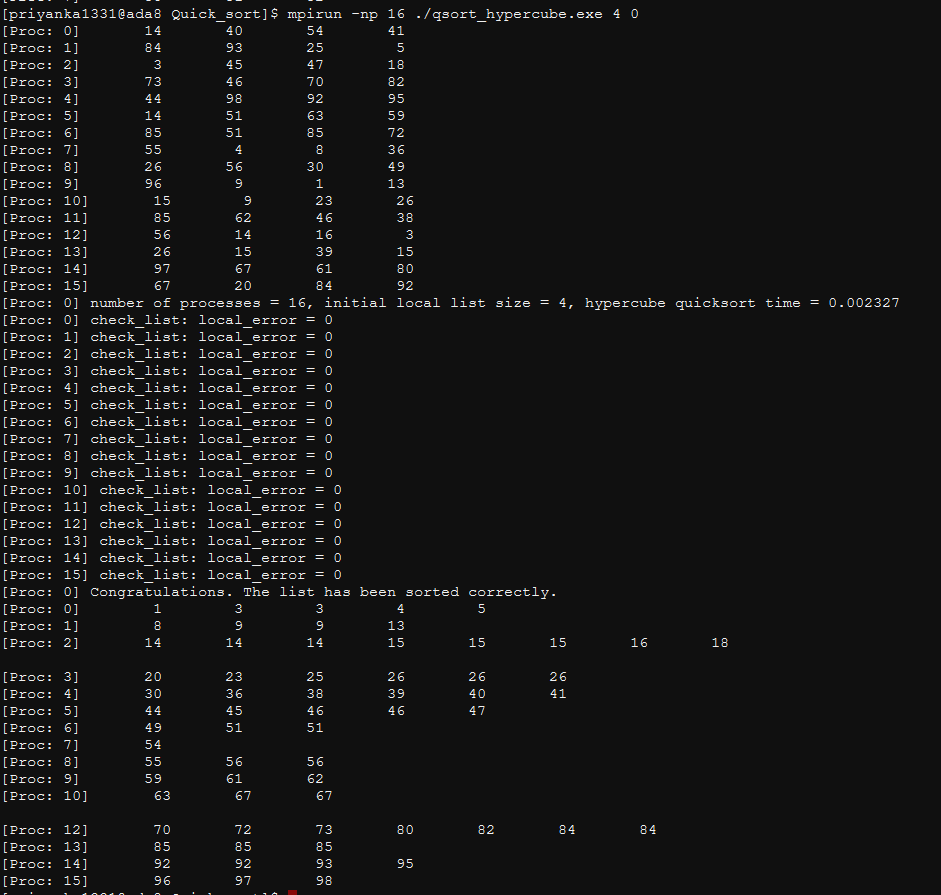
**729007151**

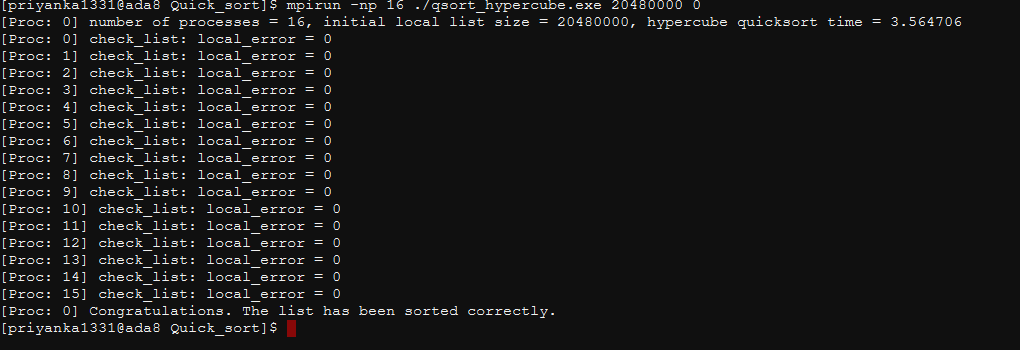
**HW4**

1. Compilation and execution

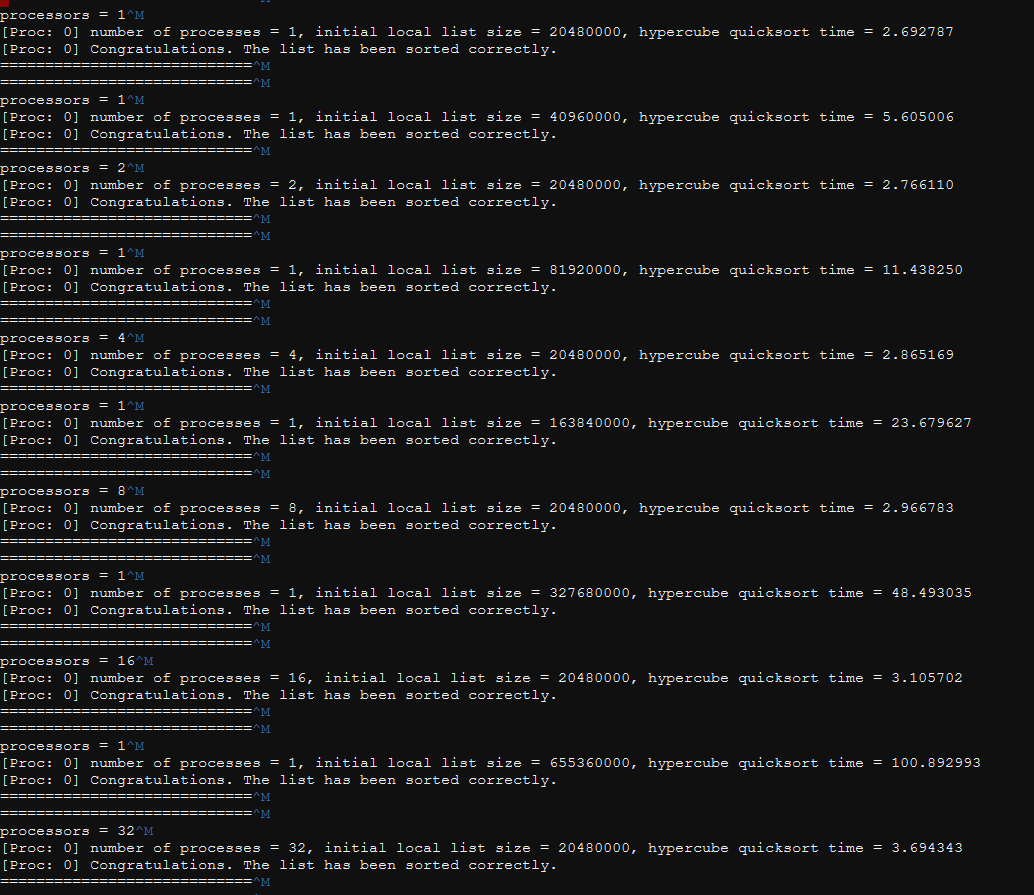
* The zip file contains a qsort\_hypercube.cpp, qsort\_hypercube\_descending.cpp and Sorting\_JOB.JOB files.
* Compilation is done using command mpiicpc -o qsort\_hypercube.exe qsort\_hypercube.cpp
* The output screenshots are as below.

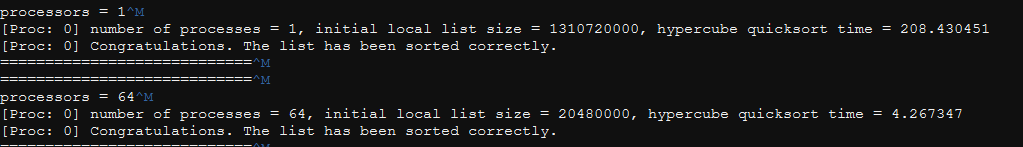




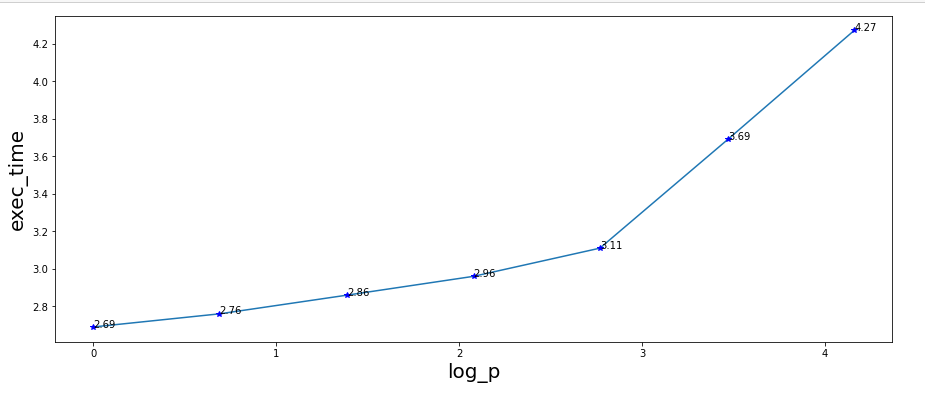


1. Weak Scalability Study:

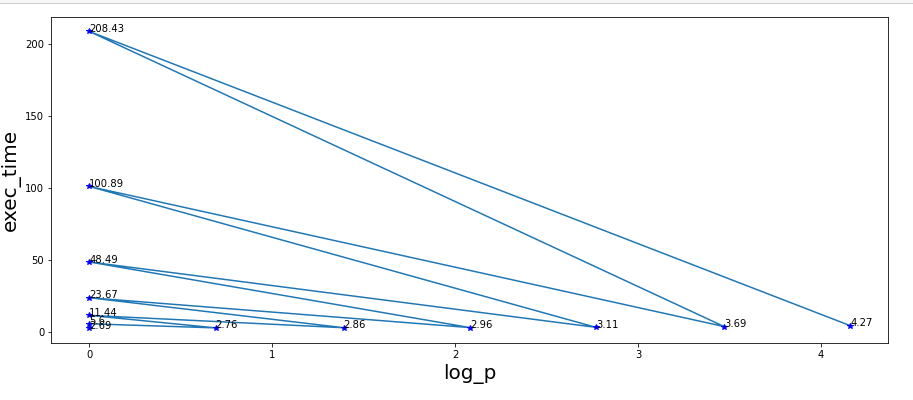


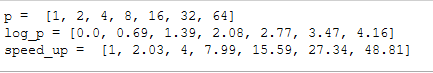


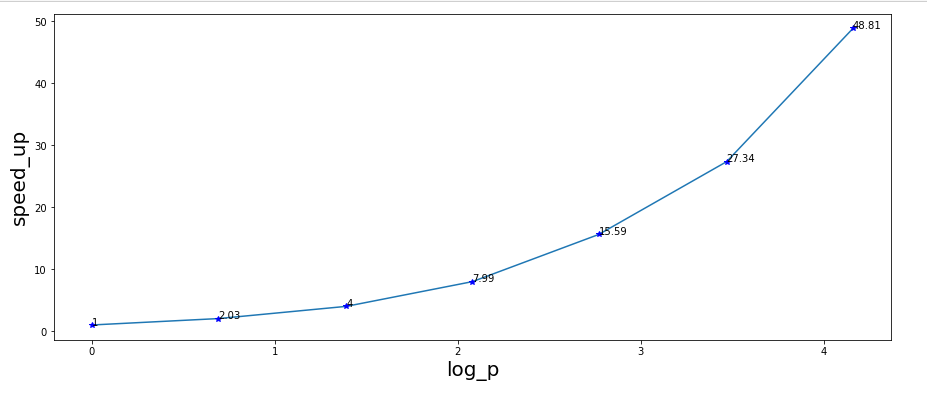




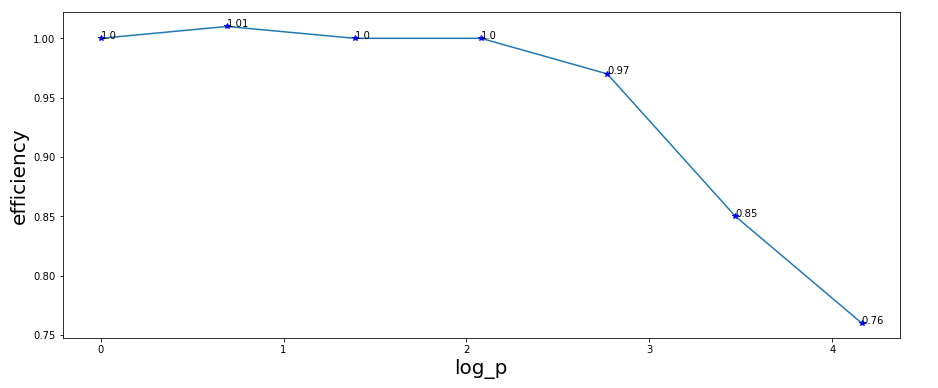
Execution time is increasing because n is doubling everytime. For plot, I have considered only p processors. If considering varying n and processors, then the plot is as below:



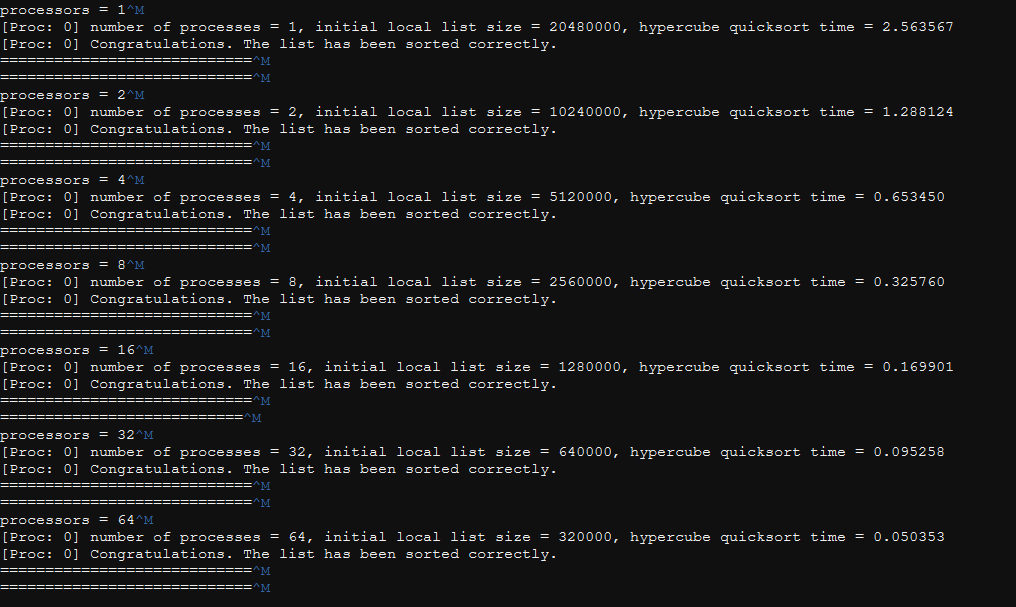


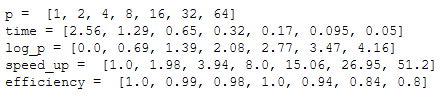


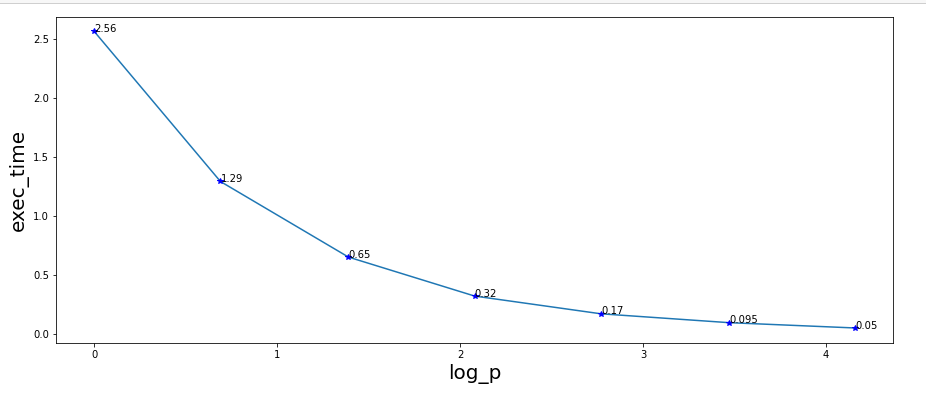


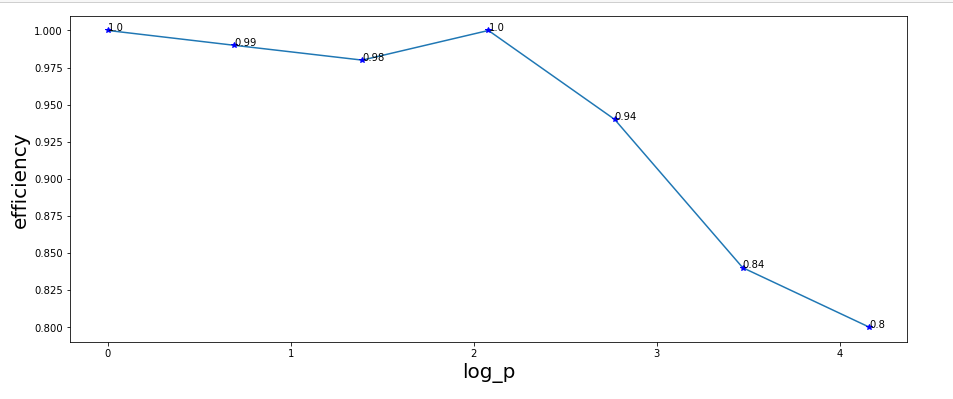
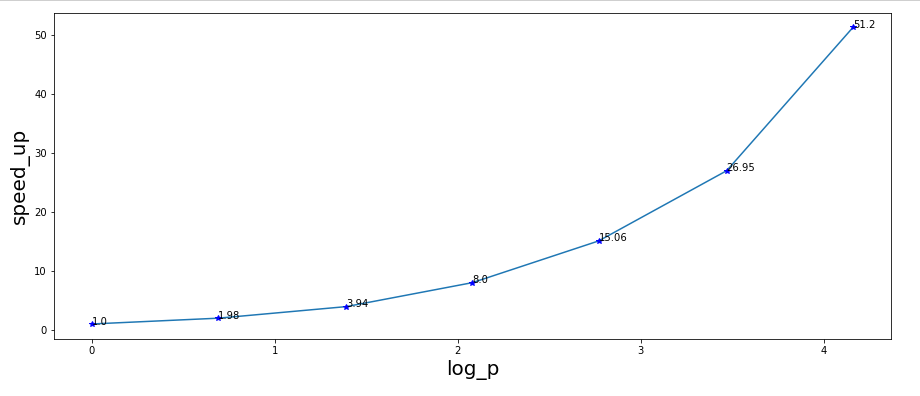


1. Strong scalability study:









1. The modified code runs as per expectations. The outputs are attached below:

