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# HPC - Assignment - 02

**Aim:-** Parallel sorting algorithms -
For bubble sort & merge sort based on existing sequential algorithms, design & implement parallel algorithm utilizing all resources available.

**Objectives:-** ① To understand parallel bubble sort.
② To understand parallel merge sort.

**Outcomes:-** Understand parakell bubble sort & merge sort.

**S/W Requirement:-** C++ programming

**H/W Requirement:-** Mic lenovo Think center, M1000 Cis 6100, 6th Gen, H81, 4GB RAM, 500 GB HDD

**Theory:-**

① Bubble Sort:-

a> There are 2 phases in this alg. called as odd even phases. In this alg. n elements are sorted in n phases where n is even.

- Example - 4 2 7 8 5 1 3 6

Pass1 2 4 7 8 5 1 3 6

Pass 2 2 4 7 8 1 5 3 6

2 4 7 1 3 5 6

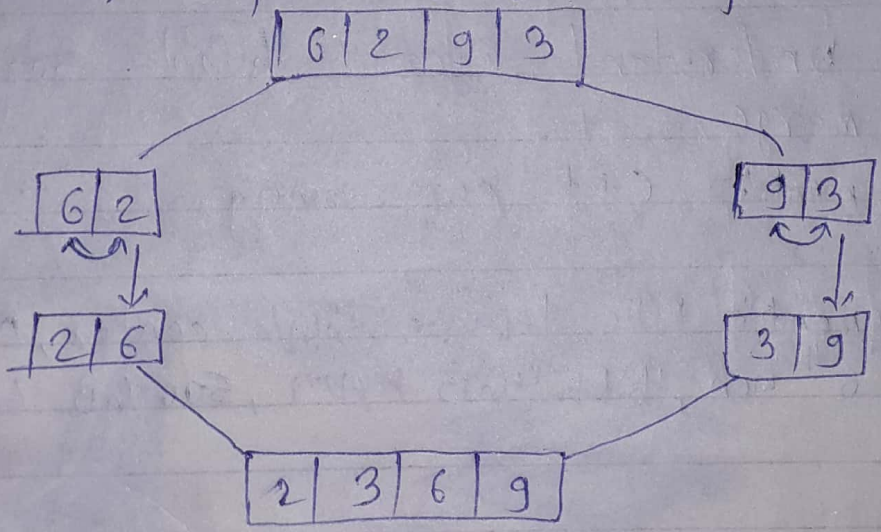
2 4 1 7 3 5 6

2 1 4 3 7 5 6

1 2 3 4 5 7 6

1 2 3 4 5 6 7

(2) Merge sort :- Merge sort first divides the unsorted list into smallest possible sublists, compares it with adjacent lists.




Conclusion :-
studied parallel sorting algorithm implementation in C++.