

Title : Evaluate Performance enhancement of Parallel quicksort Algorithm using mpr

Theory :

Quicksort :

Quick sort is a divide & conquer algorithm. It picks an element as a pivot and partitions the array around the pivot.

MPI :

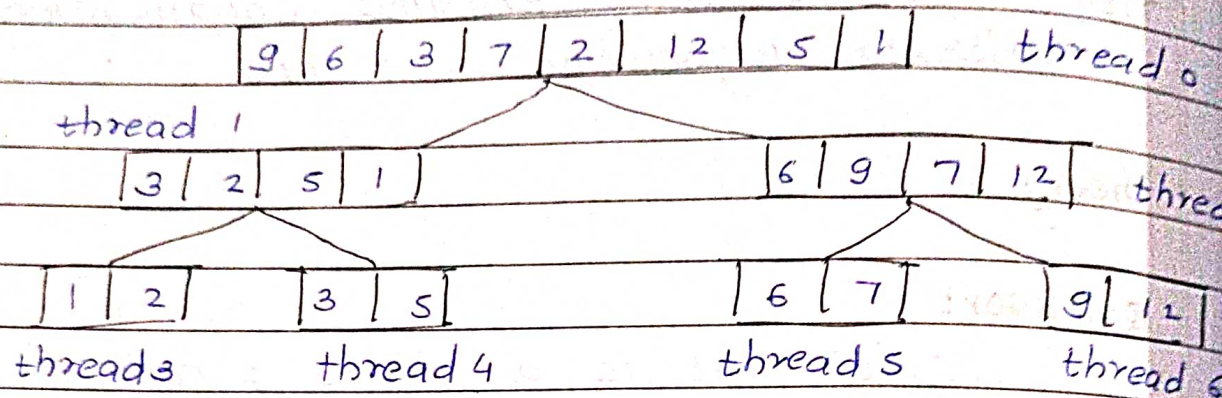
MPI stands for message passing interface. Here the message is data. MPI allows data to be passed processes in a distributed memory environment.

Parallel Quick sort

Algorithm :

- Step 1 - select n processes which will partition the list and sorting using selected pivot element.
- Step 2 - n processes will work on all partitions from the start of the algo till list is sorted.
- Step 3 - Each process finds a pivot and partitions the list based on selected pivot.
- Step 4 - Finally the list is merged forming a sorted list.

ex :



conclusion :

Hence, we have successfully evaluated performance of parallel quicksort using MPI.

