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HPC - Assignment - 03

Aim:- Parallel search algorithm. Design and implement parallel algorithm utilizing all recourses available for
1. Binary search for sorted array.
2. Depth First search
3. Breadth First search
4. Best First search.

Objectives:- 1. To understand the parallel search algorithms.
2. To implement the nfs, BFS, BS & Breadth First Search algorithm.

Outcomes:- Understand the parallel search algorithms & implementation of search algorithms.

S/W Requirement:- C++ programming

H/W Requirement:- Mic lenovo Think centre, M100, Ci3, 6100, 6th gen, Hpi, 4GB RAM, 500 GB HDD.

Theory:-

1. Binary Search for sorted array:-
Binary search is fast search alg. with run time complexity of O(log n). This alg.

works on principle of Divide & Conquer. For this alg. to work properly the data collection should be in sorted form.

② Depth First Search :-

Depth ~~Sear~~ First Search (DFS) alg. traverses a graph in a depth ward motion, & uses a stack to remember to get the next vertex to start a search when end occurs to any iteration.

③ Best First search :-

Best First Search is search alg. which explores the search tree by expanding the most promising node chosen accordingly to hurristic values of nodes.

* Conclusion :-

Studied c++ program to implement parallel search alg. i.e. Binary search, DFS, BFS, etc.