UCS415 – Design and Analysis of Algorithms

Lab Assignment 1

Write a program to implement iterative as well as recursive versions of the following algorithms:

- Binary search (https://www.geeksforgeeks.org/binary-search/),
- Merge sort (https://www.geeksforgeeks.org/iterative-merge-sort/), and
- Quick sort (https://www.geeksforgeeks.org/iterative-quick-sort/)
- Maximum sub-array sum (https://www.geeksforgeeks.org/maximum-subarray-sum-using-divide-and-conquer-algorithm/)

Additional Questions:

- https://www.hackerearth.com/practice/algorithms/searching/binary-search/tutorial/
- https://www.hackerearth.com/practice/algorithms/sorting/merge-sort/tutorial/
- https://www.codechef.com/problems/MYSITM
- https://www.hackerearth.com/practice/algorithms/sorting/merge-sort/practice-problems/algorithm/median-game-june-easy-19-3722be60/
- https://www.hackerearth.com/practice/algorithms/sorting/quick-sort/practice-problems/algorithm/lex-finds-beauty-0d0bc1b6/