

AAD1 (CSE2631) LAB EXPERIMENT

Experiment-5

Objective: Implement the HEAP data structure to operate on the Priority Queue.

Task list:

- 1) Given a list of integers (Priority of a list of Objects), write a program to say whether the list is a MIN-Priority Queue or not.
Input: 1,3,2,7,4,6,5,8 Output: YES
Input: 1,3,4,7,2,5,6,8 Output: NO
- 2) Given a list of keys {8, 5, 7, 4, 1, 6, 3, 2}, for a MAX-Priority Queue. Write a method/algorithm to increase the key of a specific element in the MAX-Priority Queue.
- 3) Write a program to find the k^{th} largest element from a given list of n integers. Use the concept of CREATE-HEAP and Delete-Element from Heap.
- 4) Given an array of positive integers, sort it using the HEAP-SORT algorithm.