RNSIT-CSE Bengaluru

Season 4

For Fourth Semester Students

Day 2 (22-08-2023)

Find the inversion count in a given array !!!
Given an array of n integers A[ ], find the total number of inversion counts. An inversion occurs when there are two elements in the array such that i<j, and A[i] > A[j]. The pair (I,j) is called a inversion of A[ ] and the inversion count represents the count of such inversions present in the array.
Assume all elements are unique.

Examples
Input
A[ ]=[5,2,6,3]
Output
3
Hint: There are three inversions (5,2), (5,3), and (6,3)

Input
A[ ]= [3,2,1]
Output
3
Hint: There are three inversions (3,2), (3,1) and (2,1)

Input
A[ ]=[1,2,3]
Output
0

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Read the question carefully multiple times to understand and to decide the algorithmic paradigm to be approached.
Hint: Will divide and conquer paradigm enhances the time complexity ?

Happy Coding