Abstract

Data Structure is one of the fundamental areas of the computer science. Sorting is crucial in data structure, which creates the list of sequence items. In this paper, we present two techniques of sorting algorithm for natural numbers, which uses the array indexing methodology and insert that number into the proper index of the array without performing any element comparisons and swapping. The first algorithm improves Array-Indexed Sorting Algorithm for natural numbers [1] by adding negative numbers. The second algorithm is a new sorting algorithm that refers to Two Arrays-Indexed Sorting Algorithm for Natural Numbers (TAISN). The two techniques of sorting algorithm for natural numbers are efficient to give a much better performance than the existing sorting algorithms of the O(n^2) class, for large array size with same length of digits of input data.
Two Approaches of Natural Numbers Sorting: TAISN and Improved Array-Indexed Algorithms


Index Terms

Computer Science

Algorithms

Keywords

Sorting Natural Number Sorting.