Abstract

Recently the lower bound for integer sorting has considerably improved and achieved with comparison sorting $O(n \log n)$ to $O(n^{\sqrt{\log\log n}})$ [1] for a deterministic algorithms or to $O(n)$ for a radix sort algorithm in space that depends only on the number of input integers. Andersson et al. [2] presented signature sort in the expected linear time and space which gives very bad performance than randomized quick sort. We earlier presented in [14] that performance of
signature sort can be enhanced using hashing and bitwise operators. This paper gives the implementation of that idea and later we have compared the performance of algorithm with existing randomized signature sort and randomized quick Sort.

Reference

- Yijie Han and Mikkel Thorup. Integer sorting in \(O(n\sqrt{\log \log n})\) expected time and linear space. In IEEE Symp. on Foundations of Computer Science, volume 43, 2002.
- Mikkel Thorup. Randomized sorting in \(O(n \log \log n)\) time and linear space using addition, shift, & bit-wise boolean operations.
- B. Vandiver, A.Rolfe, Exploiting sleight-of model to achieve super-luminal sorting: 2003

Index Terms

Computer Science
Algorithms

Key words
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