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### **RESEARCH ARTICLE**

# Insertion Sort with its Enhancement

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*Abstract— An algorithm is precise specification of a sequence of instruction to be carried out in order to solve a given problem. Sorting is considered as a fundamental operation in computer science as it is used as an intermediate step in many operations. Sorting refers to the process of arranging list of elements in a particular order. The elements are arranged in increasing or decreasing order of their key values. There are many sorting algorithms like Quick sort, Heap sort, Merge sort, Insertion sort, Selection sort, Bubble sort and Shell sort. However, efforts have been made to improve the performance of the algorithm in terms of efficiency, indeed a big issue to be considered. Major Emphasis has been placed on complexity by reducing the Number of comparisons, hence reducing complexity. This research paper presents the shell sort, insertion sort and its enhancement, also gives their performance analysis with respect to time complexity.*

*Keywords— Algorithm; Sorting; Insertion Sort; Shell sort; Complexity*

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