THE DEVELOPMENT OF SORTING STRING ALGORITHM USING PIGEONHOLE PRINCIPLE

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The study was done for the reason which is to developed new sorting algorithm based from the principle of pigeonhole. Majority of the sorting algorithm is based from the general purpose algorithm which to compare each element of a set by the use of logical operators such as >, < and = sign. In sorting string, one known algorithm like radix sort was the most efficient way of sorting large numbers and strings by using mixed principle of pigeonhole and other techniques. The Balangue, et al group created a new sorting algorithm for strings which only used pigeonhole principle without comparison based method. The use of pigeonhole allows one string to allocate directly in a space exactly what the key it represents to its location. The sorting algorithm require two dimensional array acting as hole of each pigeon and a conversion algorithm for strings to filter each key that represent also as a pigeon. The implementation of the algorithm is developed from c++ programming language to validate if the algorithm successful generates sorted data out from the unsorted list of data. The simulated program also tabulates the number of transitions of the algorithm and its duration to determine where and when the data traverse on each phase of the whole transition.

THE ENHANCEMENT OF THE SEARCHING ALGORITHM EMPLOYED IN COMPUTER-BASED DAMATH GAME USING NEGAMAX WITH ALPHA-BETA PRUNING ALGORITHM

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This study was done for the purpose of enhancing the searching algorithm of the computer based Damath game using the Negamax with alpha-beta pruning algorithm. The previous searching algorithm