Abstract

String matching is one of the most important concept used in computer science in various real life applications like as Intrusion detection system, Data mining, Plagiarism detection system. There are many string matching algorithms which help to find pattern from the text. These algorithms are categorized in single string matching and multiple string matching. The Wu-Manber (WM) algorithm is multiple patterns algorithm which is the finest string matching algorithm. The performance of WM depends on various table build in pre processing phase these are prefix table, shift table and hase table. We introduce a new algorithm namely the Efficient Wu Manber algorithm (EWM) algorithm which is advance version of Wu Manber algorithm with respect to time. Efficient Wu-Manber Algorithm eliminate the prefix table which is unused most of the cases in wu manber, construct two shift table instead of single shift table and uses nonlinear data structure i.e. AVL tree instead of linear data structure i.e. linked list used in WM in Hash table, which reduce the traversed number of nodes to find exact match. The experimental results and analysis show that EWM algorithm has better performance as compare to WM and its existing improved algorithm and also better from various string matching
tools.

References


Index Terms

Computer Science

Algorithms
Keywords

Wu-Manber, String Matching, Single pattern matching, Multiple pattern matching, Boyer Moore, KMP, Advance Wu Manber.