Abstract

Parikh matrix is a numerical property of a word on an ordered alphabet. It is used for studying word in terms of its sub words. It was introduced by Mateescu et al. in 2000. Since then it has been being studied for various ordered alphabets. In this paper Parikh Matrices over tertiary alphabet are investigated. Algorithm is developed to display Parikh Matrices of words over tertiary alphabet. This algorithm proves a good tool for further investigation of Parikh Matrices of words over tertiary alphabet. A set of equations for finding tertiary words from the respective Parikh matrix is introduced. These equations are useful to find tertiary words from the respective Parikh matrix. Examples are given. Some examples of larger tertiary words are given with their Parikh matrices as result analysis. A distance is defined on classes of $M$-ambiguous words over tertiary ordered alphabet. It is named as stepping distance. One can compare words by this stepping distance.

References

Parikh Matrices and Words over Tertiary Ordered Alphabet

- C. Ding, A. Salomaa: On some problems of Mateescu concerning sub word occurrences, Fundamenta Informaticae 72(2006) 1-15.
- V. N. Serbanutia, Injectivity of the Parikh matrix mappings revisited, Fundamenta Informaticae XX (2006) 1–19, IOS Press.

Index Terms
Computer Science Algorithms
Keywords
  M-ambiguity  Parikh mapping  Parikh matrix  subword  word  Stepping distance