

A sublinear time string prefix square detection algorithm*

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Abstract

In this paper, an algorithm is proposed to detect the occurrence of a prefix square concurrently when a string is inputted. Some properties of certain variables are studied in order to show the correctness and the time complexity of this algorithm. The time complexity of this algorithm is proved to be not only linear but also sublinear.

Keywords : *Prefix square, matching algorithm, string, complexity, sublinear.*

1. Introduction

This paper presents a sublinear-time on-line algorithm which concerns the exact string matching problem: checking whether an input string has a prefix repetition. One is referred to [6] for a linear-time on-

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