Abstract

Bit Parallelism exploits bit level parallelism in hardware to perform operations. Bit Parallelism is a technique that is used to solve string matching problem, when the pattern to be searched for is less than or equal word size of a system. It is a technique that takes the advantage of intrinsic parallelism of the bit operations inside a system word. By using cleverly this fact, the number of operations that an algorithm performs can be cut down by a factor of at most \( w \), the number of bits in system word. Since in current architecture word size is 32 bits or 64 bits, the speedup is very significant in practice. It is a form of parallel computing and is used to have a solution to exact string matching problem. The approach is further extended for multiple patterns string matching problem.

References


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