

Compilers

Exam Questions

Suppose we are given a deterministic finite automaton for a language L on Σ . For all words $w \in \Sigma^*$, we can use the automaton to determine whether $w \in L$ in time: $O(|w|)$
Suppose we are given a context free grammar for a language L on Σ .

For all words $w \in \Sigma^*$, we can use the grammar to determine whether $w \in L$ in time: polynomial in $|w|$

$S \rightarrow Aa|Bb$
 $A \rightarrow \epsilon$
 $B \rightarrow \epsilon$

Examples of grammars and languages

Give an example of an $LL(1)$ grammar that is not strongly $LL(1)$: