Theoretical Computerscience – Summary

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Contents

1 Words

A word w (also called String) has length l and consists of symbols $\sigma \in \Sigma$.
The empty word ε has length 0.

2 Regular Languages

3 Regular Expressions

A regular expression always describes a regular language. If we can build a regular expression E, then L(E) ∈ REG.

4 Common Proof Techniques

4.1 Pumping Lemma

4.1.1 Example

4.2 Myhill Nerode

4.2.1 Example

5 Useful Proofs

5.1 Language is Regular

5.1.1 Finite Set

5.1.2 Finite Automaton

5.1.3 Regular Expression

Index