

Using ϵ Value in Describe Regular Languages by Using Finite Automata, Operation on Languages and the Changing Algorithm Implementation

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Abstract : This paper aims at introducing nondeterministic finite automata with ϵ value which is used to perform some operations on languages. a program is created to implement the algorithm that converts nondeterministic finite automata with ϵ value (ϵ -NFA) to deterministic finite automata (DFA).The program is written in c++ programming language. The program inputs are FA 5-tuples from text file and then classifies it into either DFA/NFA or ϵ -NFA. For DFA, the program will get the string w and decide whether it is accepted or rejected. The tracking path for an accepted string is saved by the program. In case of NFA or ϵ -NFA automation, the program changes the automation to DFA to enable tracking and to decide if the string w exists in the regular language or not.

Keywords : DFA, NFA, ϵ -NFA, eclose, finite automata, operations on languages

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