World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:8, No:06, 2014

The Different Ways to Describe Regular Languages by Using Finite Automata and the Changing Algorithm Implementation

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Abstract : This paper aims at introducing finite automata theory, the different ways to describe regular languages and create a program to implement the subset construction algorithms to convert nondeterministic finite automata (NFA) to deterministic finite automata (DFA). This program is written in c++ programming language. The program reads FA 5tuples from text file and then classifies it into either DFA or NFA. For DFA, the program will read the string w and decide whether it is acceptable or not. If accepted, the program will save the tracking path and point it out. On the other hand, when the automation is NFA, the program will change the Automation to DFA so that it is easy to track and it can decide whether the w exists in the regular language or not.

Keywords : finite automata, subset construction, DFA, NFA
Conference Title : ICTCM 2014 : International Conference on Theoretical and Computational Mechanics
Conference Location : Istanbul, Türkiye
Conference Dates : June 19-20, 2014

Open Science Index, Mathematical and Computational Sciences Vol:8, No:06, 2014 publications.waset.org/abstracts/11396.pdf