SHIV NADAR UNIVERSITY

Course – CSD 303

LabSheet for Finite Automata and Regular Language

Dates for Evaluation: 6th, 7th and 8th March

(Slots will be provided accordingly)

1. Implement string matching using Finite Automata as given in Cormen book pg. no. 995. In the first step, you need to take pattern as an input, construct transition table using the algorithm. In second step, take a string as an input from user and see whether the pattern exists or not using the transition table created in first step.
2. Implement Thompson NFA algorithm (https://swtch.com/~rsc/regexp/regexp1.html and https://xysun.github.io/posts/regex-parsing-thompsons-algorithm.html) and refer to Thompson's regular expression search algorithm paper uploaded on blackboard for parsing Regular Expressions. In first step, create the NFA from given regular expression and in second step, feed a String to the NFA to check whether the String is accepted or not.
3. Simulate any one embedded system (Vending Machine, Washing Machine or Microwave) using moore or mealy machine. (https://www.cs.umd.edu/class/sum2003/cmsc311/Notes/Seq/impl.html)