Homework Assignment 3
CSCI 2670 Introduction to Theory of Computing, Fall 2018
Due Monday September 17, 2018

This homework assignment is about the relationship between NFA and regular expressions.

1. create an NFA for the following regular expression:

   \[ 1((0 \cup 1)(0 \cup 1))^*(0 \cup 1) \]

   by first creating atomic NFA first and then recursively combining them to form the final NFA. Please show each of the construction steps.

2. Convert the following NFA to a regular expression. Please show every conversion step.

   Figure 1: NFA for Question 2.

3. Convert the following NFA to a regular expression. Please show every conversion step

   Figure 2: NFA for Question 3.
NOTE: All homework answers need to be word-processed or typed. Hand-writing only applies to figure or table drawings. A hard copy of answers should be received in classroom or in the instructor’s office by 5:00pm on the due date. Policy on late homework answers is given in the syllabus. Email submission will not be accepted unless a such a request has been approved.