CS3350 – PROJECT

Language: Java Programming Language
If you need accommodation regarding the choice of language, it is your responsibility to let your instructor know ASAP.

What should you do? Implement a system:

(1) Whose **input** is: any regular language in the form of a regular expression

(2) Whose **output** is: a minimized deterministic complete finite automaton that can be run to check whether it indeed recognizes strings of the original language (described by the regular expression given as input) and rejects invalid strings.

This system should implement at least all of the following functionalities:
- Each of the finite automata operators covered in class to be used to create an NFA; that is, union, concatenation, star, plus, complement, intersection;
- The algorithm presented in class that takes an NFA and returns an equivalent DFA;
- The algorithm presented in class that takes an incomplete DFA and returns an equivalent complete DFA; and
- The algorithm that takes a complete DFA and returns the equivalent minimized DFA.

Your software should be fully tested (provide the test cases you used and justify their choices) and fully described (in the required report).

Deadline
Due on March 20, 2015 at 11:59pm
Via email to mceberio@utep.edu and to your TA's email
Subject line: CS3350 –Project Submission – "your first and last names"

What to submit?

A zip file of the following:
- Source code of your project: properly indented and commented, with variables' names that make sense; and
- Report (in pdf) that describes your work, including a very clear and thorough description of the data structures and class structures you used.
The zip file should be named: LastName-FirstName-CS3350.zip