

Objective:

To learn and understand basic concepts of conversions of regular expression, deterministic finite automata and nondeterministic finite automata in building a Lexical analyzer.

Instructions:

It should be clear that your assignment will not get any credit (zero marks will be awarded) if:

- The assignment is submitted after due date.
- The submitted assignment does not open or file corrupt.
- The assignment is copied from other student or internet.
- Student ID is not mentioned in the assignment File or name of file is other than student ID.
- It is in some format other than .doc (MS Word Document).

For any query about the assignment, contact at cs606@vu.edu.pk

BEST OF LUCK

Question No 1:

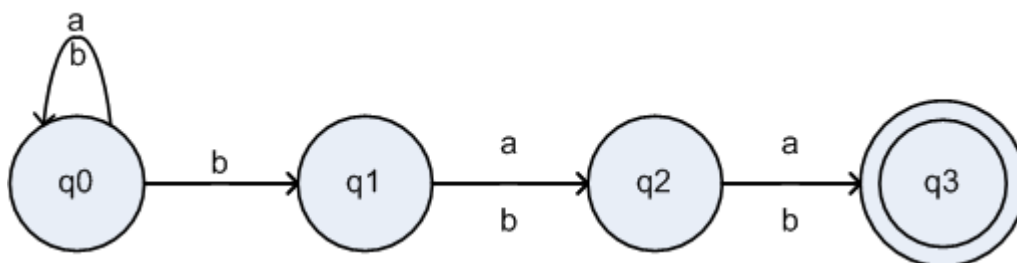
Marks 10

Construct Nondeterministic finite automata (NFA) for regular expression $(a^* | b^*)^*$ using Thompson's Construction Algorithm. Show the sequence of moves in processing the input string "ababbab".

Question No 2:

Marks 10

For the NFA given below, you are required to determine an equivalent DFA for it using subset construction. Where the alphabet is {a, b}.



Note: You must clearly mention the states of NFA which presents each and every state of DFA. Only draw required final DFA.