

Theory of Computations

Assignment 2

Finite Automata

Set 1 DFA Design

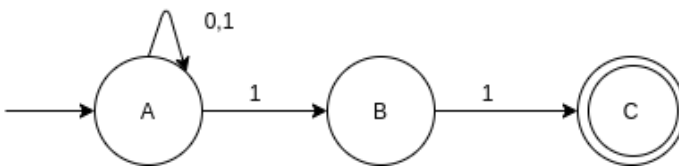
1. design DFA that accepts all strings over $\{0, 1\}$ and contain only one occurrence of 01
2. design DFA that accepts all strings over $\{0, 1\}$ and starts with 00 or 11
3. design a DFA that accepts all strings over $\{0, 1\}$ and contain an even number of 1's.
4. design a DFA that accepts all strings over $\{0, 1\}$ and do not end with 00.

Set 2 NFA Design

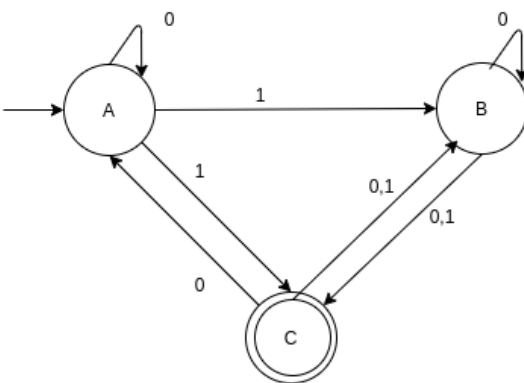
5. design an NFA that accepts the string over $\{0,1\}$ and contains 0101
6. design an NFA that accepts the string over $\{0,1\}$ and contains at least two 0s, or exactly two 1s
7. design an NFA that accepts all strings over $\{0, 1\}$ that contain "1" at the third or second position from the end.
8. design an NFA that accepts all strings over $\{0, 1\}$ that contain 01011.

Set 3 NFA to DFA

9. Convert the following NFA to DFA



10. Convert the following NFA to DFA



Submission :

- Deadline is Saturday 29-May @11:59PM
- The assignment is individual.
- Cheating could lead to serious consequences.