Assignment # 1 Theory of Automata (CS301)

Instructor: Subhash Sagar **Submission Deadline: 17/04/2018**

Write programs that simulate the given FAs

1. Give a DFA for the language {w : w contains 01 an odd number of times} over the alphabet {0, 1}.

2. Give a DFA for the language of words over the alphabet {0, 1} that contain the substring 01101.

3. Give a DFA for the language {w : w is an integer at least 23} over the alphabet {0, 1, . . . , 9}. Words in this language should not have max three leading 0s (i.e. 10000 is not valid).

4. $\Sigma = \{0,1\}$, $L = \{w \in \Sigma^* \mid |w| \bmod 4 = 1\}$

Deliverables:

1. The source code of your program. You may use any programming language of your choice.
2. A short report containing the source code and image of the result for the different input string.

SUBMISSION:

1. Submit the deliverables by hardcopy in the form of group (max. 3 members)
2. One report for each group.
3. Marks will be awarded on the basis of viva.