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MATRIC NUMBER: 17/SCI01/019

COURSE CODE: CSC304

COURSE TITLE: Theory of Computing

ASSIGNMENT

1. What are Finite automata? How can finite automata be represented?
2. Construct the DFA accepting the Language of strings over {a,b} starting with bb.
3. Let L1 be the set of all strings over {a, b} ending in ab. Create the DFA and find the transition table.
4. Construct a DFA that accepts a language over all string {0,1} that begins with 110
5. Construct a DFA for all set of strings over {a,b} such that
6. The string contains only 2a’s.
7. w ∈{a,b}| |w|≅2 mod 3
8. w ∈{a,b}| |w|≅0 mod 2
9. Length of string is at most 3

Soln

1. This is a simple idealized machine used to recognize patterns within input taken from some character set (or alphabet).

Finite automata can be represented by input tape and finite control.

Input tape: it is a linear tape having some number of cells. Each input symbol is placed in each cell.

Finite control : it decides the next state on receiving particular input from input tape.

2.







