

Theory of Computation, CSCI 438 spring 2022
Quiz 1, Jan. 21

1. Using the alphabet $\Sigma = \{a, b\}$ create a DFA that accepts all strings except the empty string. (5 pts.)

2. Write the definition of the above machine using the linear format.
 $M = (\dots\dots)$ (5 pts.)

3. Give the signature of each of the following using the typical format:
Set of possible input values \rightarrow set of possible output values

Transitive function in a DFA δ (5 pts.)

Kleene closure of a transitive function, written δ^* , in a DFA (5 pts.)

4. Give the definition of a regular language which is given in the text and which we have been using in class. (5 pts.)