

FA Documentation

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Finite Automaton: a class with its 5 classic fields: Q, E, q0, F, S and each field is equivalent to the theoretical definition

The transitions are kept in a HashMap, and each key with symbol is mapped to a list of destination states (e.g. (q, 1) -> [p] == q goes to p with value 1

Checking if the FA is a DFA: iterating through the dictionary keys and if any list has a length greater than 1, it returns false

Checking if a sequence is accepted by the FA -> iterate through each symbol from the given sequence and determine if the given point can be reached using the FA transitions

EX.

FA.in example for DFA + output

Q = A B C

E = 0 1

q0 = A

F = A C

S = (A,0) -> A

(A,1) -> C

(B,0) -> B

(B,1) -> A

(C,0) -> C

(C,1) -> B