

Github: <https://github.com/ddbl/FLCD/tree/main/Lab%204>

The Finite Automaton is structured as a class with 5 fields: Q , $E(\Sigma)$, q_0 , F , S , where each field is equivalent to its theoretical definition.

The transitions S are kept in a Python Dictionary, i.e. HashMap, where each pair (q, a) is mapped to a list of destination states, for example: $(q, 1) \rightarrow [p]$, meaning q goes to p with value 1.

Checking that the FA is a DFA is done by going through all the dictionary keys, and looking if there's any list with a length greater than 1

Checking that a sequence is accepted by the FA is done by going through each symbol from the given sequence and checking that the respective point can be reached by the FA transitions.