Lab4 – Finite Automata

Link for github: https://github.com/ecaterinacatargiu/courses/tree/main/FLCD/Lab4FAfinal

Methods used:

- readFromFile(filename): read the content of a file (the file has the following format: on the first line there are the states, on the second line there is the alphabet, on the third line there are the transitions, on the fourth line there is the initial state and on the fifth line there are the final states
- getStates(): get all the states and prints them
- getAlphabet(): get the alphabet and prints it
- getFinalStates(): get all the final states and prints them
- getInitialState(): get the initial state
- getTansitions(): get the transitions and prints them
- getTransitionForState(state): gets all the trasitions for a state
- checkDFA(sequence) – check if a sequence is indeed a DFA

BNF:

states = state_{state}

state = letter{number}

letter = "a" | "b" | .. | "z"

number = nonzero_digit{"0" | nonzero_digit}

nonzero_digit = "1" | "2" | "3" | .. | "9"

alphabet = letter | number_{alphabet}

initialState = state

finalStates = state_{state}

transition = state_state letter | state_state number { transitions }