<https://github.com/cs-ubbcluj-ro/lab-work-computer-science-2024-SzilagyiBotond/tree/main>

Lab4

For my Finite Automaton class I used:

* A string for the initialState;
* A list of strings in order to represent the states;
* A list of strings in order to represent the alphabet;
* A list of strings in order to represent the final states;
* A Map composed of Pair<String, String> and Set<String> in order to represent the transitions.

readFA(String filePath) – reads the FA from a file and initializes every element of the FA.

checkDeterministic() – checks if the FA is deterministic or not.

acceptsSequence(String sequence) – checks if a sequence is accepted by the FA or not.

How to write the FA

letter := ‘a’|’b’| .. | ’z’

bletter := ‘A’| … | ‘Z’

sign := ‘+’|’-’

digit := ‘0’ | .. | ‘9’

alphabetC := letter| bletter | sign | digit

alphabet := alphabetC {alphabetC }

state := bletter

listOfStates := state {state }

transition := state alphabet state

listOfTransition := transition\n{transition\n}

finalStates := state {state }

initialState := state

FA := listOfStates ‘\n’ initialstate ‘\n’ alphabet ‘\n’ finalStates