Nume: Sabadus Alexandru-Bogdan

Git : https://github.com/SabaAlex/FLCD/tree/Lab-4/Lab%204

Lab 4

Implementation

UI – a class that hold all the operation regarding the display

FA – class that hold all the finite automata data(states, Alphabet, Transitions, Initial State, Final States and the name of the file of the FA)

Algorithm:

- Each file is read from the file and the FA class is computed(the format of the fill is described a bit bellow). Transition functions are split by | and each transition element is split by ,(from state, value, to state).

- `IsSequenceAccepted function checks a given sequence if is part of the given FA. While we still have elements, we check if we have a transition that can be made, if there is then we update the current state and slice the sequence. In the end we check if final product of the sequence computation is a final state`

Obs. Because of the implementation, it is required that the FA.in file be a DFA

File format:

languageChar = letter | digit | sign

letter = “A” | “B” | … | “Z” | “a” | “b” | … | “z”

digit = “0” | “1” | … | “9”

sign = “-”

state = letter

transition = state”,” languageChar”,”state

line1 = {state “ ”}

line2 = {languageChar “ ”}

line3 = {transition “ | ”}

line4 = state

line5 = {state “ ”}

file = line1\nline2\nline3\nline4\line5

line 1 – possible states

line 2 – alphabet

line 3 – transitions

line 4 – initial state

line 5 – final states