<https://github.com/braneaa/University/tree/master/Formal%20Languages%20And%20Compiler%20Design/Labs/Lab4>

The set of states : Set<String>

The alphabet : Set<String>

The transitions : Map<Pair, String>

The set of final states : Set <String>

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932/1

Sintactical rules:

program ::= "START" decllist "." cmpdstmt "END"

decllist ::= declaration | declaration ";" decllist

declaration ::= IDENTIFIER "(" type ")" "."

type ::= type1|listdecl

type1 ::= "bool" | "char" | "str" | "float" | "int"

listdecl ::= "list" "(" type1 ")"

cmpdstmt ::= "[" {stmt} "]"

stmt ::= simplstmt | structstmt "."

simplstmt ::= iostmt | assignstmt

iostmt ::= "read" | "write" identifier "."

assignstmt ::= IDENTIFIER "=" expr "."

structstmt ::= cmpdstmt|ifstmt|whilestmt

whilestmt ::= "loop" ifstmt

ifstmt ::= "if" ":" condition "[" cmpdstmt "]" "."

condition ::= expr relation expr

expr ::= [exp("+"|"-"]term "."

term ::= term ("\*"|"/") factor | factor "."

factor ::= "(" expr")" | IDENTIFIER

relation ::= "<" | "<=" | "=" | "<>" | ">=" | ">"

operation ::= "+" | "-" | "\*" | "/"