

Lexical Specification

Requirements:

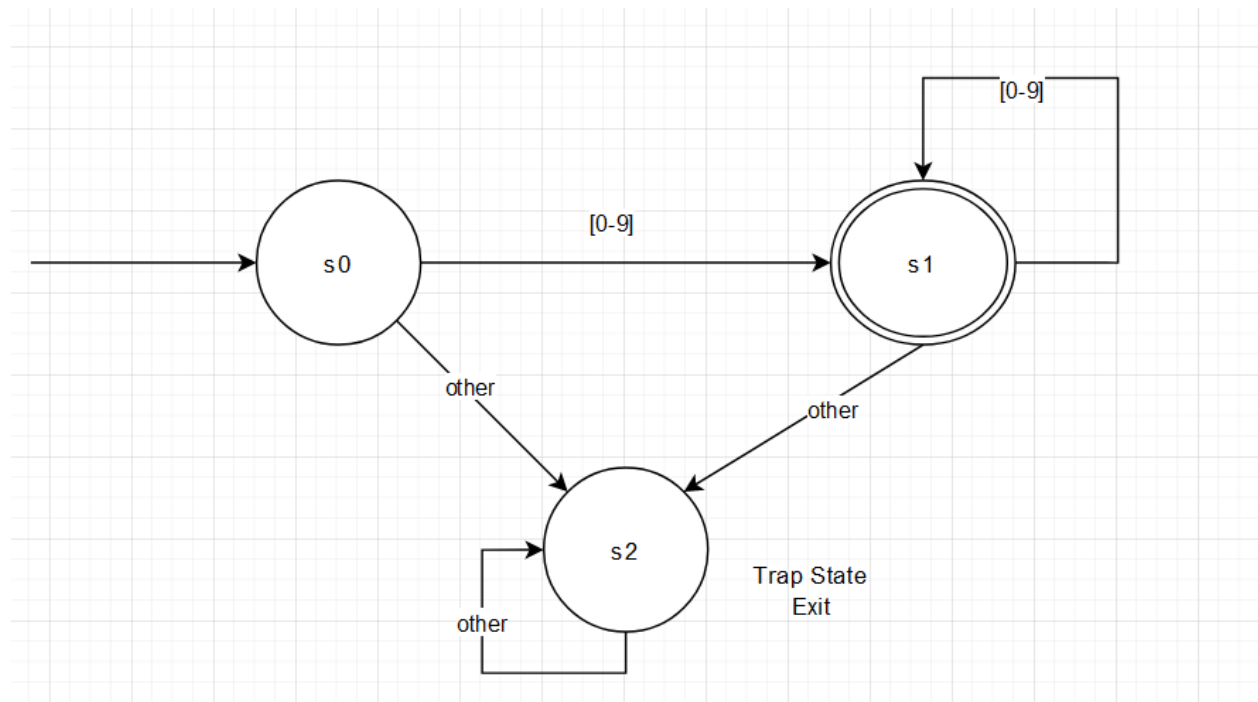
Token	Supported Language	Regular Expression
Identifier (required)	$\Sigma = \{ A-z, A-Z, _, 0-9 \}$ First char cannot be an Integer	RE = $[a-zA-Z_][a-zA-Z_ 0-9]^*$
Integer (required)	$\Sigma = \{ 0-9 \}$	RE = $[0-9][0-9]^*$
keyword	$\Sigma = \{ \text{"if", "else", "while", "for", "int", "float", "double", "char", "string", "bool", "void", "return", "cout", "cin"} \}$	
separator	$\Sigma = \{ "(", ")", "{", "}" \}$	
string	$\Sigma = \{ \text{"\""}, \text{"'"} \}$	
comment	Single line: <code>‘//’</code> Multi Line: starts with <code>‘/*’</code> and ends with <code>‘*/’</code>	
operators	$\Sigma = \{ "+", "++", "-", "*", "/", "\%", "=", "<", "<<", ">>", "!", "&", " " \}$	
punctuation	$\Sigma = \{ \text{";"}, \text{"."} \}$	

Token: Integer

Regular Expression: $[0-9][0-9]^*$

DFA

State	[0-9]	other
S0	S1	S2
<u>S1</u>	S1	S2
S2	\emptyset	\emptyset



Token: Identifier

Regular Expression

RE = $[a-zA-Z_][a-zA-Z_|0-9]^*$

DFA

State	$[a-zA-Z_]$	$[0-9]$	other
S0	S1	\emptyset	S2
<u>S1</u>	S1	S1	S2
S2	\emptyset	\emptyset	S2

C:\Users\defia\Documents\GitHub\CPSC471-Socket-Protocol\p1-group\cli_repli.py

