

MiniCalc Finite State Automaton

Command	Action(s)
TOKEN [Token Type]	Add token to token list of that type Set FSA state to the token type
STATE [State]	Set FSA state to the specified state
COMPLETE	Process the token list into expression(s) Clear token list
VAL += Char	Add current character to last token's data
VAL Char	Set current character as last token's data
SYNTAX ERROR	Exit the FSA resulting from a syntax error

Notes:

- If the FSA finishes in a non-ending state, the error is INCOMPLETE
- SPC = after white space was encountered in this token
- NSP = no white space was encountered in this token
- Literal strings accept any character except line-breaks and the escape-related characters

To : From	Start	Number	Number. Exponent	Comma	Open Paren	Close Paren
0-9, .	TOKEN Number VAL += Char	NSP: VAL += Char SPC: SYNTAX ERROR	STATE Number VAL += Char	COMPLETE TOKEN Number VAL += Char	COMPLETE TOKEN Number VAL += Char	SYNTAX ERROR
,	SYNTAX ERROR	COMPLETE TOKEN Comma	SYNTAX ERROR	SYNTAX ERROR	SYNTAX ERROR	COMPLETE TOKEN Comma
(	TOKEN OpenParen	SYNTAX ERROR	SYNTAX ERROR	COMPLETE TOKEN OpenParen	COMPLETE TOKEN OpenParen	SYNTAX ERROR
)	SYNTAX ERROR	COMPLETE TOKEN CloseParen	SYNTAX ERROR	SYNTAX ERROR	COMPLETE TOKEN CloseParen	COMPLETE TOKEN CloseParen
e, E	TOKEN String VAL += Char	STATE Number.Exponent	SYNTAX ERROR	COMPLETE TOKEN String VAL += Char	COMPLETE TOKEN String VAL += Char	SYNTAX ERROR
a-z, A-Z, _						
+, -	TOKEN Sign VAL Char	COMPLETE TOKEN Operator VAL Char	STATE Number VAL += Char	COMPLETE TOKEN Sign VAL Char	COMPLETE TOKEN Sign VAL Char	COMPLETE TOKEN Operator VAL Char
+, -, *, /, ^	SYNTAX ERROR		SYNTAX ERROR	SYNTAX ERROR	SYNTAX ERROR	
"	TOKEN LiteralString	SYNTAX ERROR	SYNTAX ERROR	COMPLETE TOKEN LiteralString	COMPLETE TOKEN LiteralString	SYNTAX ERROR
\	SYNTAX ERROR	SYNTAX ERROR	SYNTAX ERROR	SYNTAX ERROR	SYNTAX ERROR	SYNTAX ERROR

To : From	String	Literal String	Literal String. End	Literal String. Escape	Operator	Sign
0-9, .	NSP: VAL += Char SPC: SYNTAX ERROR	VAL += Char	SYNTAX ERROR	SYNTAX ERROR	COMPLETE TOKEN Number VAL += Char	COMPLETE TOKEN Number VAL += Char
,	COMPLETE TOKEN Comma	VAL += Char	COMPLETE TOKEN Comma	SYNTAX ERROR	SYNTAX ERROR	SYNTAX ERROR
(	TOKEN OpenParen	VAL += Char	SYNTAX ERROR	SYNTAX ERROR	COMPLETE TOKEN OpenParen	COMPLETE TOKEN OpenParen
)	COMPLETE TOKEN CloseParen	VAL += Char	COMPLETE TOKEN CloseParen	SYNTAX ERROR	SYNTAX ERROR	SYNTAX ERROR
e, E	NSP: VAL += Char SPC: SYNTAX ERROR	VAL += Char	SYNTAX ERROR	SYNTAX ERROR	COMPLETE TOKEN String VAL += Char	COMPLETE TOKEN String VAL += Char
a-z, A-Z, _						
+, -	COMPLETE TOKEN Operator VAL Char	VAL += Char	COMPLETE TOKEN Operator VAL Char	SYNTAX ERROR	COMPLETE TOKEN Sign VAL Char	SYNTAX ERROR
+, -, *, /, ^					SYNTAX ERROR	
"	SYNTAX ERROR	COMPLETE TOKEN LiteralString.End	SYNTAX ERROR	VAL += Char TOKEN LiteralString	COMPLETE TOKEN LiteralString	SYNTAX ERROR
\	SYNTAX ERROR	STATE LiteralString.Escape	SYNTAX ERROR	VAL += Char TOKEN LiteralString	SYNTAX ERROR	SYNTAX ERROR