Syntax

Grammar Rules

<program>	::=	{ <stmts><stmts> }
<stmts>	::=	ε | <decls> | <assigns> | <print>
<decls>	::=	<datatype> var_name ; | <datatype> var_name = constant ;
<assigns>	::=	<lhs> = <rhs> ;
<lhs>	::=	var_name
<rhs>	::=	constant | <expr>
<expr>	::=	<l> + <r> | <l> - <r> | <l> * <r> | <num>/<denom>
<l>	::=	<expr> | constant
<r>	::=	<expr> | constant
<num>	::=	constant
<denom>	::=	constant
<print>	::=	print var_name ;
<datatype>	::=	int | float | string | char

Rules for Variable Names

1. Lowercase and Uppercase alphabets allowed
2. Numbers allowed; cannot be first character
3. Underscores allowed; cannot be first character
4. No spaces allowed
5. No special characters: $, #, @, -, +, !, ?, %, *, (,)

<u>Constants</u>

1. Float values have a decimal with at least one number to the left and right of the decimal.
2. Integer values are whole numbers.
3. Char values are single characters, enclosed in single quotes.
4. String values are enclosed in double quotes.

<u>Built-in Functions</u>

sqr(var_name)
sqr(constant)