

%start BEGGINING

BEGGINING: ENTRY EOF

| ERROR EOF

;

ENTRY: ENTRY ENTZERO

| ENTZERO

;

ENTZERO: FUNCTIONBODY

| METHODBODY

| RUNBODY

| DEC\_VAR

| DEC\_VECT

;

FUNCTIONBODY: IDENTIFIER PARENTHESIS\_THAT\_OPENS PARENTHESIS\_THAT\_CLOSSES TWO\_POINTS  
TYPE KEY\_THAT\_OPENS INSTRUCTION KEY\_THAT\_CLOSSES

| IDENTIFIER PARENTHESIS\_THAT\_OPENS PARENTHESIS\_THAT\_CLOSSES

TWO\_POINTS TYPE KEY\_THAT\_OPENS KEY\_THAT\_CLOSSES

| IDENTIFIER PARENTHESIS\_THAT\_OPENS PARAMETERS\_LIST

PARENTHESIS\_THAT\_CLOSSES TWO\_POINTS TYPE KEY\_THAT\_OPENS INSTRUCTION KEY\_THAT\_CLOSSES

| IDENTIFIER PARENTHESIS\_THAT\_OPENS PARAMETERS\_LIST

PARENTHESIS\_THAT\_CLOSSES TWO\_POINTS TYPE KEY\_THAT\_OPENS KEY\_THAT\_CLOSSES

;

FPRINTLN: PRINTLN PARENTHESIS\_THAT\_OPENS EXPRESSION PARENTHESIS\_THAT\_CLOSSES SEMICOLON

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        | PRINTLN PARENTHESIS_THAT_OPENS PARENTHESIS_THAT_CLOSSES SEMICOLON
        | PRINTLN ERROR SEMICOLON
;

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FROUND: TK_ROUND PARENTHESIS_THAT_OPENS EXPRESSION PARENTHESIS_THAT_CLOSSES
;

RUNBODY: TK_RUN IDENTIFIER PARENTHESIS_THAT_OPENS PARENTHESIS_THAT_CLOSSES SEMICOLON
        | TK_RUN IDENTIFIER PARENTHESIS_THAT_OPENS VALUES_LIST
PARENTHESIS_THAT_CLOSSES SEMICOLON
        | TK_RUN ERROR
;

FPRINT: PRINT PARENTHESIS_THAT_OPENS EXPRESSION PARENTHESIS_THAT_CLOSSES SEMICOLON
        | PRINT PARENTHESIS_THAT_OPENS PARENTHESIS_THAT_CLOSSES SEMICOLON
;

FTOLOWER: TK_TOLOWER PARENTHESIS_THAT_OPENS EXPRESSION PARENTHESIS_THAT_CLOSSES
;

FTOUPPER: TK_TOUPPER PARENTHESIS_THAT_OPENS EXPRESSION PARENTHESIS_THAT_CLOSSES
;

FLENGTH: TK_LENGTH PARENTHESIS_THAT_OPENS EXPRESSION PARENTHESIS_THAT_CLOSSES

PARAMETERS_LIST: PARAMETERS_LIST COMMA PARAMETROS
                  | PARAMETROS

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PARAMETROS: TYPE IDENTIFIER COR\_ABRE COR\_CIERRA

| TYPE IDENTIFIER

;

INSTRUCTION: INSTRUCTION INSZERO

| INSZERO

;

INSZERO: DEC\_VAR

| CONTROLSTATEMENT

| CYCLESTATEMENT

| DEC\_VECT

| TRANSFERENCESTATEMENT

| CALL SEMICOLON

| FPRINTLN

| FPRINT

| ERROR SEMICOLON

;

METHODBODY: IDENTIFIER PARENTHESIS\_THAT\_OPENS PARENTHESIS\_THAT\_CLOSSES TWO\_POINTS  
TK\_VOID KEY\_THAT\_OPENS INSTRUCTION KEY\_THAT\_CLOSSES

| IDENTIFIER PARENTHESIS\_THAT\_OPENS PARENTHESIS\_THAT\_CLOSSES

TWO\_POINTS TK\_VOID KEY\_THAT\_OPENS KEY\_THAT\_CLOSSES

| IDENTIFIER PARENTHESIS\_THAT\_OPENS PARAMETERS\_LIST

PARENTHESIS\_THAT\_CLOSSES TWO\_POINTS TK\_VOID KEY\_THAT\_OPENS INSTRUCTION  
KEY\_THAT\_CLOSSES

| IDENTIFIER PARENTHESIS\_THAT\_OPENS PARAMETERS\_LIST

PARENTHESIS\_THAT\_CLOSSES TWO\_POINTS TK\_VOID KEY\_THAT\_OPENS KEY\_THAT\_CLOSSES

| IDENTIFIER ERROR

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TRANSFERENCESTATEMENT: TK\_BREAK SEMICOLON

| TK\_RETURN EXPRESSION SEMICOLON

| TK\_CONTINUE SEMICOLON

| TK\_RETURN SEMICOLON

;

SWITCH: TK\_SWITCH PARENTHESIS\_THAT\_OPENS EXPRESSION PARENTHESIS\_THAT\_CLOSSES

KEY\_THAT\_OPENS CASESLIST DEFAULT KEY\_THAT\_CLOSSES

| TK\_SWITCH PARENTHESIS\_THAT\_OPENS EXPRESSION PARENTHESIS\_THAT\_CLOSSES  
KEY\_THAT\_OPENS CASESLIST KEY\_THAT\_CLOSSES

| TK\_SWITCH PARENTHESIS\_THAT\_OPENS EXPRESSION PARENTHESIS\_THAT\_CLOSSES  
KEY\_THAT\_OPENS DEFAULT KEY\_THAT\_CLOSSES

| TK\_SWITCH ERROR KEY\_THAT\_CLOSSES

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CASESLIST: CASESLIST TK\_CASE EXPRESSION TWO\_POINTS INSTRUCTION

| CASESLIST TK\_CASE EXPRESSION TWO\_POINTS

| TK\_CASE EXPRESSION TWO\_POINTS INSTRUCTION

| TK\_CASE EXPRESSION TWO\_POINTS

| TK\_CASE ERROR TWO\_POINTS

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CYCLESTATEMENT: WHILE

| FOR

| DOWHILE

;

WHILE: TK\_WHILE PARENTHESIS\_THAT\_OPENS EXPRESSION PARENTHESIS\_THAT\_CLOSSES

KEY\_THAT\_OPENS INSTRUCTION KEY\_THAT\_CLOSSES

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        | TK_WHILE PARENTHESIS_THAT_OPENS EXPRESSION PARENTHESIS_THAT_CLOSSES  
KEY_THAT_OPENS KEY_THAT_CLOSSES
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        | TK_WHILE ERROR KEY_THAT_CLOSSES
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FOR: TK_FOR PARENTHESIS_THAT_OPENS DEC_VAR EXPRESSION SEMICOLON ACTUALIZACION  
PARENTHESIS_THAT_CLOSSES KEY_THAT_OPENS INSTRUCTION KEY_THAT_CLOSSES
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        | TK_FOR PARENTHESIS_THAT_OPENS DEC_VAR EXPRESSION SEMICOLON ACTUALIZACION  
PARENTHESIS_THAT_CLOSSES KEY_THAT_OPENS KEY_THAT_CLOSSES
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        | TK_FOR ERROR KEY_THAT_CLOSSES
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DOWHILE: TK_DO KEY_THAT_OPENS INSTRUCTION KEY_THAT_CLOSSES TK_WHILE  
PARENTHESIS_THAT_OPENS EXPRESSION PARENTHESIS_THAT_CLOSSES SEMICOLON
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        | TK_DO KEY_THAT_OPENS KEY_THAT_CLOSSES TK_WHILE PARENTHESIS_THAT_OPENS  
EXPRESSION PARENTHESIS_THAT_CLOSSES SEMICOLON
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        | TK_DO ERROR SEMICOLON
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CONTROLSTATEMENT: CONTROLIF
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        | SWITCH
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CONTROLIF: IF
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        | IFELSE
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        | ELSEIF
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        | TK_IF ERROR KEY_THAT_CLOSSES
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IF: TK\_IF PARENTHESIS\_THAT\_OPENS EXPRESSION PARENTHESIS\_THAT\_CLOSES KEY\_THAT\_OPENS  
INSTRUCTION KEY\_THAT\_CLOSES

    | TK\_IF PARENTHESIS\_THAT\_OPENS EXPRESSION PARENTHESIS\_THAT\_CLOSES  
KEY\_THAT\_OPENS KEY\_THAT\_CLOSES

;

IFELSE: TK\_IF PARENTHESIS\_THAT\_OPENS EXPRESSION PARENTHESIS\_THAT\_CLOSES KEY\_THAT\_OPENS  
INSTRUCTION KEY\_THAT\_CLOSES TK\_ELSE KEY\_THAT\_OPENS INSTRUCTION KEY\_THAT\_CLOSES

    | TK\_IF PARENTHESIS\_THAT\_OPENS EXPRESSION PARENTHESIS\_THAT\_CLOSES  
KEY\_THAT\_OPENS KEY\_THAT\_CLOSES TK\_ELSE KEY\_THAT\_OPENS INSTRUCTION KEY\_THAT\_CLOSES

        | TK\_IF PARENTHESIS\_THAT\_OPENS EXPRESSION PARENTHESIS\_THAT\_CLOSES  
KEY\_THAT\_OPENS INSTRUCTION KEY\_THAT\_CLOSES TK\_ELSE KEY\_THAT\_OPENS KEY\_THAT\_CLOSES

        | TK\_IF PARENTHESIS\_THAT\_OPENS EXPRESSION PARENTHESIS\_THAT\_CLOSES  
KEY\_THAT\_OPENS KEY\_THAT\_CLOSES TK\_ELSE KEY\_THAT\_OPENS KEY\_THAT\_CLOSES

;

ELSEIF: TK\_IF PARENTHESIS\_THAT\_OPENS EXPRESSION PARENTHESIS\_THAT\_CLOSES KEY\_THAT\_OPENS  
INSTRUCTION KEY\_THAT\_CLOSES TK\_ELSE CONTROLIF

    | TK\_IF PARENTHESIS\_THAT\_OPENS EXPRESSION PARENTHESIS\_THAT\_CLOSES  
KEY\_THAT\_OPENS KEY\_THAT\_CLOSES TK\_ELSE CONTROLIF}

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DEFAULT: TK\_DEFAULT TWO\_POINTS INSTRUCTION

    | TK\_DEFAULT TWO\_POINTS

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DEC\_VAR: TYPE IDENTIFIER IGUAL EXPRESSION SEMICOLON

    | TYPE IDENTIFIER SEMICOLON

    | IDENTIFIER IGUAL EXPRESSION SEMICOLON

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        | IDENTIFIER INCREMENTO SEMICOLON
        | IDENTIFIER DECREMENTO SEMICOLON
        | TYPE ERROR SEMICOLON
;

FTYPEOF: TK_TYPEOF PARENTHESIS_THAT_OPENS EXPRESSION PARENTHESIS_THAT_CLOSSES
;

FTOSTRING: TK_TOSTRING PARENTHESIS_THAT_OPENS EXPRESSION PARENTHESIS_THAT_CLOSSES
;

FTOCHARARRAY: TK_TOCHARARRAY PARENTHESIS_THAT_OPENS EXPRESSION
PARENTHESIS_THAT_CLOSSES
;

CALL: IDENTIFIER PARENTHESIS_THAT_OPENS VALUES_LIST PARENTHESIS_THAT_CLOSSES
      | IDENTIFIER PARENTHESIS_THAT_OPENS PARENTHESIS_THAT_CLOSSES
;

VALUES_LIST: VALUES_LIST COMMA VALUES
            | VALUES
;

VALUES: EXPRESSION
;

DEC_VECT: TYPE IDENTIFIER COR_ABRE COR_CIERRA IGUAL NEW TYPE COR_ABRE EXPRESSION
COR_CIERRA SEMICOLON
        | TYPE IDENTIFIER COR_ABRE COR_CIERRA IGUAL COR_ABRE VALUES_LIST COR_CIERRA
SEMICOLON
        | IDENTIFIER COR_ABRE EXPRESSION COR_CIERRA IGUAL EXPRESSION SEMICOLON
        | TYPE IDENTIFIER COR_ABRE COR_CIERRA IGUAL EXPRESSION SEMICOLON
        | TYPE COR_ABRE COR_CIERRA ERROR SEMICOLON

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TYPE: TIPODATO

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TIPODATO: STRING

| INTEGER

| DOUBLE

| CHAR

| BOOLEAN

;

EXPRESSION: EXPRESSION OP\_SUM EXPRESSION

| EXPRESSION OP\_MINUS EXPRESSION

| EXPRESSION OP\_MULTIPLICATION EXPRESSION

| EXPRESSION OP\_DIVISION EXPRESSION

| EXPRESSION OP\_EXPONENT EXPRESSION

| EXPRESSION OP\_MODULE EXPRESSION

| OP\_MINUS EXPRESSION %prec umenos

| PARENTHESIS\_THAT\_OPENS EXPRESSION PARENTHESIS\_THAT\_CLOSSES

| EXPRESSION EQUALS EXPRESSION

| EXPRESSION DIFERENTEA EXPRESSION

| EXPRESSION LESS EXPRESSION

| EXPRESSION LESS\_OR\_EQUAL EXPRESSION

| EXPRESSION GREATER EXPRESSION

| EXPRESSION GREATER\_OR\_EQUAL EXPRESSION

| EXPRESSION OR EXPRESSION

| EXPRESSION AND EXPRESSION

| NOT EXPRESSION



CAST: PARENTHESIS\_THAT\_OPENS TYPE PARENTHESIS\_THAT\_CLOSSES EXPRESSION

;

TERNARY: EXPRESSION OP\_TERNARY EXPRESSION TWO\_POINTS EXPRESSION

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RESERVEDFUNCTIONS: FTOLOWER

| FTOUPPER

| FLENGTH

| FROUND

| FTYPEOF

| FTOSTRING

| FTOCHARARRAY

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