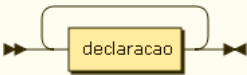


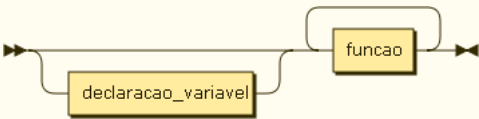
programa:



programa ::= declaracao+

no references

declaracao:



declaracao ::= declaracao_variavel? funcao+

referenced by:

- [programa](#)

declaracao_variavel:



declaracao_variavel ::= variavel+

referenced by:

- [declaracao](#)
- [declaracao_composta](#)

variavel:

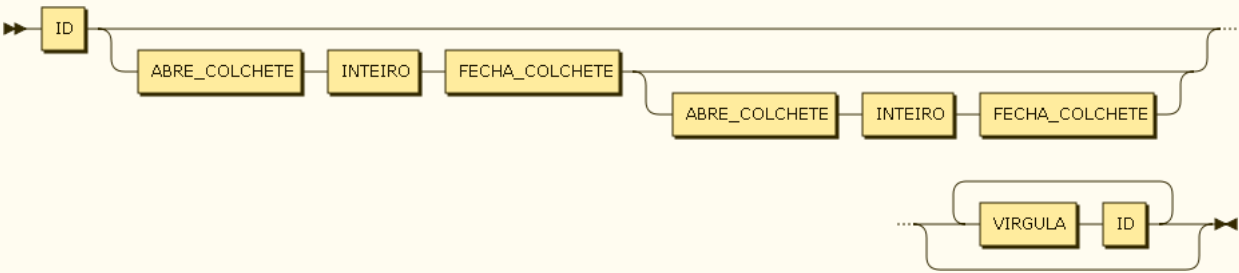


variavel ::= tipo DOISPONTOS var

referenced by:

- [declaracao_variavel](#)

var:



var ::= ID (ABRE_COLCHETE INTEIRO FECHA_COLCHETE (ABRE_COLCHETE INTEIRO FECHA_COLCHETE)?)? (VIRGULA ID)*

referenced by:

- [declaracao_atribuicao](#)
- [variavel](#)

tipo:

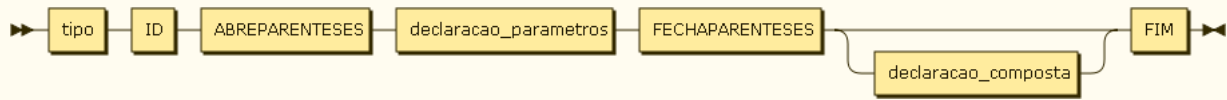


tipo ::= INTEIRO
| FLUTUANTE

referenced by:

- [funcao](#)
- [parametro](#)
- [variavel](#)

funcao:

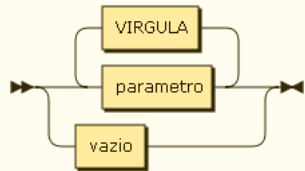


funcao ::= tipo ID ABREPARENTESES declaracao_parametros FECHAPARENTESES declaracao_composta? FIM

referenced by:

- [declaracao](#)

declaracao_parametros:

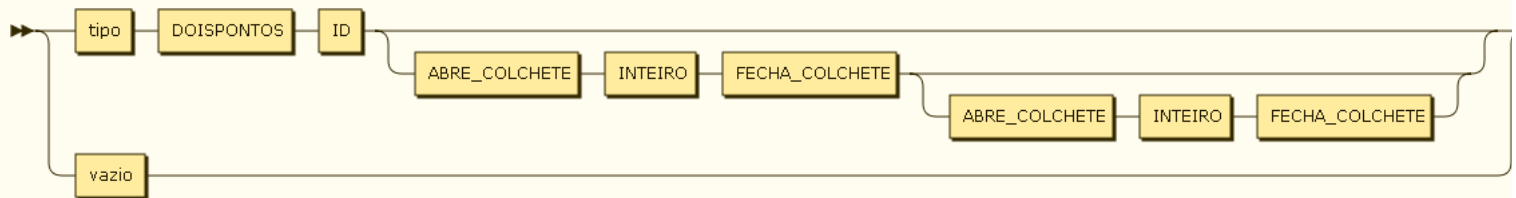


declaracao_parametros
::= parametro (VIRGULA parametro)*
| vazio

referenced by:

- [funcao](#)

parametro:

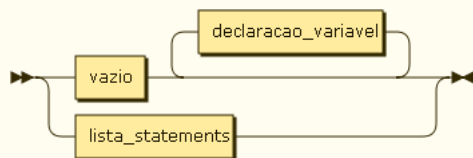


parametro
::= tipo DOISPONTOS ID (ABRE_COLCHETE INTEIRO FECHA_COLCHETE (ABRE_COLCHETE INTEIRO FECHA_COLCHETE)?)?
| vazio

referenced by:

- [declaracao_parametros](#)

declaracao_composta:

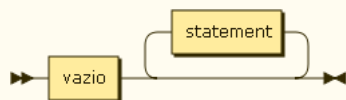


declaracao_composta
::= vazio declaracao_variavel*
| lista_statements

referenced by:

- [funcao](#)
- [statement](#)

lista_statements:

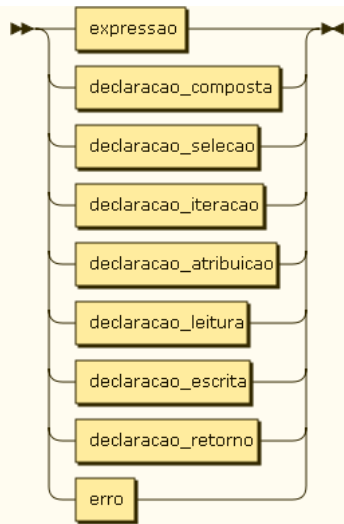


lista_statements
::= vazio statement*

referenced by:

- [declaracao_composta](#)
- [declaracao_iteracao](#)
- [declaracao_selecao](#)

statement:



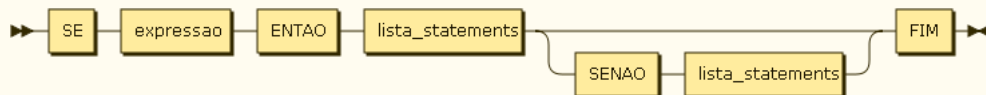
```

statement
    ::= expressao
       | declaracao_composta
       | declaracao_selecao
       | declaracao_iteracao
       | declaracao_atribuicao
       | declaracao_leitura
       | declaracao_escrita
       | declaracao_retorno
       | erro
  
```

referenced by:

- [lista_statements](#)

declaracao_selecao:



```

declaracao_selecao
    ::= SE expressao ENTAO lista_statements ( SENAO lista_statements )? FIM
  
```

referenced by:

- [statement](#)

declaracao_iteracao:



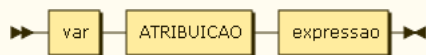
```

declaracao_iteracao
    ::= REPITA lista_statements ATE expressao
  
```

referenced by:

- [statement](#)

declaracao_atribuicao:



```

declaracao_atribuicao
    ::= var ATRIBUICAO expressao
  
```

referenced by:

- [statement](#)

declaracao_leitura:



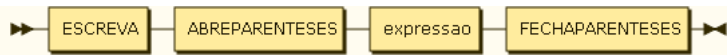
```

declaracao_leitura
    ::= LEIA ABREPARENTESES ID FECHAPARENTESES
  
```

referenced by:

- [statement](#)

declaracao_escrita:



```
declaracao_escrita  
    ::= ESCREVA ABREPARENTESES expressao FECHAPARENTESES
```

referenced by:

- [statement](#)

declaracao_retorno:

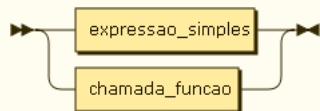


```
declaracao_retorno  
    ::= RETORNA ABREPARENTESES expressao FECHAPARENTESES
```

referenced by:

- [statement](#)

expressao:

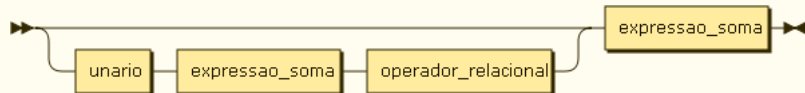


```
expressao  
    ::= expressao_simples  
       | chamada_funcao
```

referenced by:

- [chamadafuncao](#)
- [declaracao_atribuicao](#)
- [declaracao_escrita](#)
- [declaracao_iteracao](#)
- [declaracao_retorno](#)
- [declaracao_selecao](#)
- [fator](#)
- [statement](#)
- [unario](#)

expressao_simples:

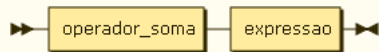


```
expressao_simples  
    ::= ( unario expressao_soma operador_relacional )? expressao_soma
```

referenced by:

- [expressao](#)

unario:

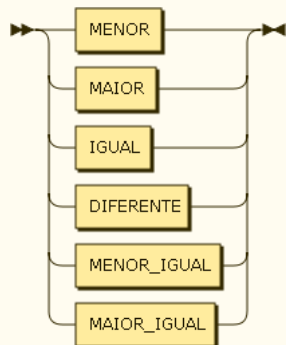


```
unario    ::= operador_soma expressao
```

referenced by:

- [expressao_simples](#)

operador_relacional:

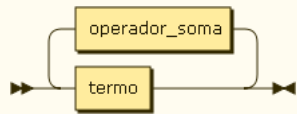


```
operador_relacional
 ::= MENOR
    | MAIOR
    | IGUAL
    | DIFERENTE
    | MENOR_IGUAL
    | MAIOR_IGUAL
```

referenced by:

- [expressao_simples](#)

expressao_soma:

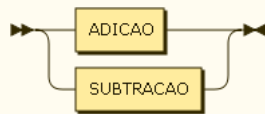


```
expressao_soma
 ::= termo ( operador_soma termo )*
```

referenced by:

- [expressao_simples](#)

operador_soma:

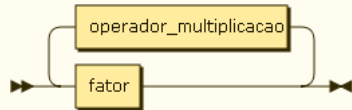


```
operador_soma
 ::= ADICAO
    | SUBTRACAO
```

referenced by:

- [expressao_soma](#)
- [unario](#)

termo:

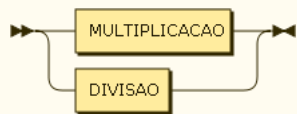


```
termo    ::= fator ( operador_multiplicacao fator )*
```

referenced by:

- [expressao_soma](#)

operador_multiplicacao:

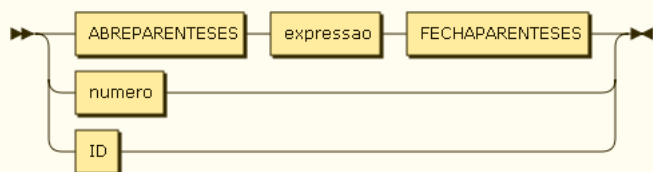


```
operador_multiplicacao
 ::= MULTIPLICACAO
    | DIVISAO
```

referenced by:

- [termo](#)

fator:

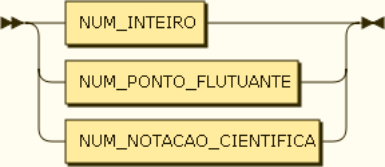


```
fator    ::= ABREPARENTESSES expressao FECHAPARENTESSES
           | numero
           | ID
```

referenced by:

- [termo](#)

numero:

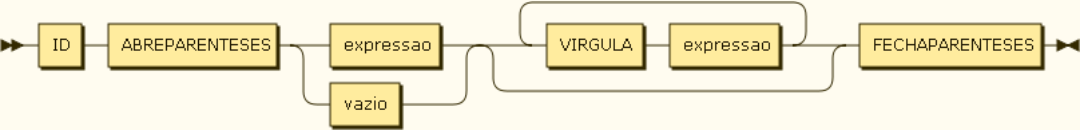


```
numero ::= NUM_INTEIRO
        | NUM_PONTO_FLUTUANTE
        | NUM_NOTACAO_CIENTIFICA
```

referenced by:

- fator

chamadafuncao:



```
chamadafuncao ::= ID ABREPARENTeses ( expressao | vazio ) ( VIRGULA expressao )* FECHAPARENTeses
```

no references