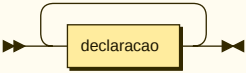


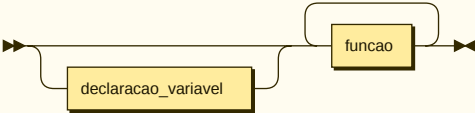
programa:



```
programa ::= declaracao+
```

no references

declaracao:

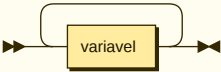


```
declaracao ::= declaracao_variavel? funcao+
```

referenced by:

- [programa](#)

declaracao_variavel:



```
declaracao_variavel ::= variavel+
```

referenced by:

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

variavel:

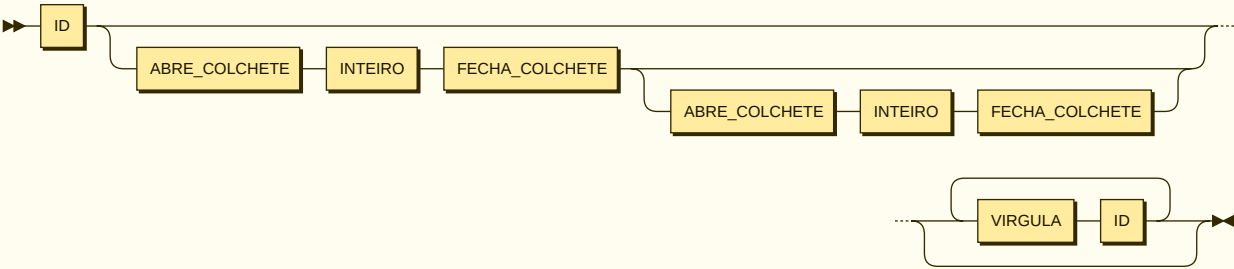


```
variavel ::= tipo DOISPONTOS var
```

referenced by:

- [declaracao_variavel](#)

var:

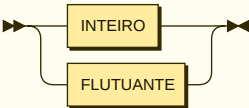


```
var ::= ID ( ABRE_COLCHETE INTEIRO FECHA_COLCHETE ( ABRE_COLCHETE INTEIRO FECHA_COLCHETE )? )? ( VIRGULA ID )*
```

referenced by:

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

tipo:

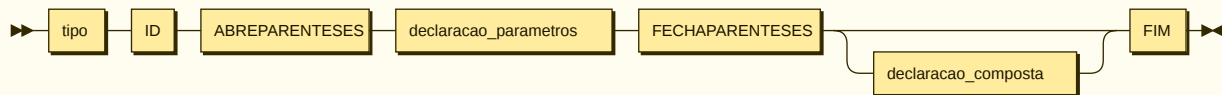


```
tipo ::= INTEIRO | FLUTUANTE
```

referenced by:

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

funcao:

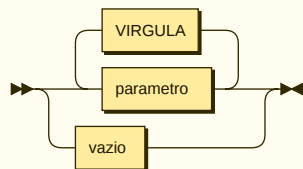


```
funcao ::= tipo ID ABREPARENTESSES declaracao_parametros FECHAPARENTESSES declaracao_composta? FIM
```

referenced by:

- [declaracao](#)

declaracao_parametros:

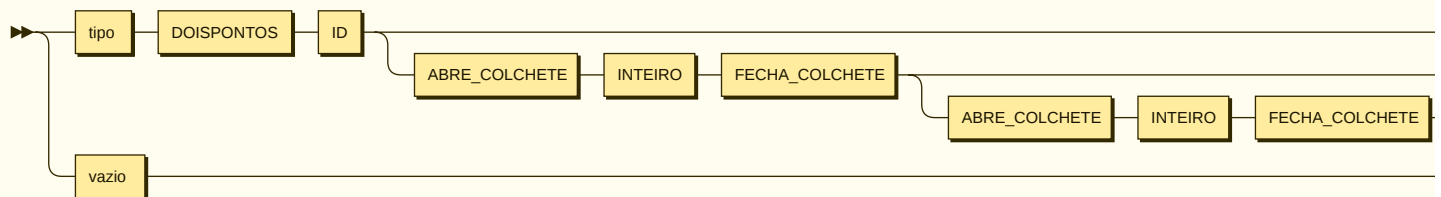


```
declaracao_parametros
  ::= parametro ( VIRGULA parametro )*
  | vazio
```

referenced by:

- [funcao](#)

parametro:

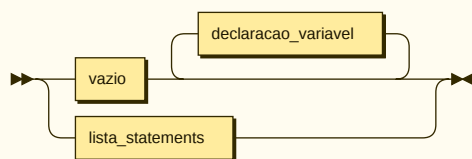


```
parametro
  ::= tipo DOISPONTOS ID ( ABRE_COLCHETE INTEIRO FECHA_COLCHETE ( ABRE_COLCHETE INTEIRO FECHA_COLCHETE )? )?
  | vazio
```

referenced by:

- [declaracao_parametros](#)

declaracao_composta:

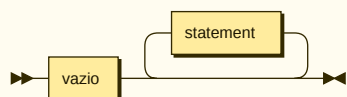


```
declaracao_composta
  ::= vazio declaracao_variavel*
  | lista_statements
```

referenced by:

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

lista_statements:

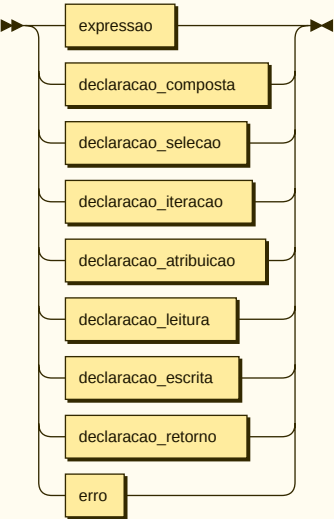


```
lista_statements
  ::= vazio statement*
```

referenced by:

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

statement:

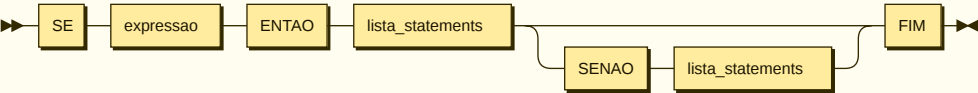


```
statement
    ::= expressao
       | declaracao_composta
       | declaracao_selecao
       | declaracao_iteracao
       | declaracao_atribuicao
       | declaracao_leitura
       | declaracao_escrita
       | declaracao_retorno
       | erro
```

referenced by:

- [lista_statements](#)

declaracao_selecao:



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

referenced by:

- [statement](#)

declaracao_iteracao:

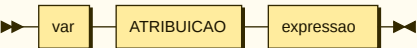


```
declaracao_iteracao
    ::= REPITA lista_statements ATE expressao
```

referenced by:

- [statement](#)

declaracao_atribuicao:

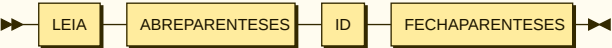


```
declaracao_atribuicao
    ::= var ATRIBUICAO expressao
```

referenced by:

- [statement](#)

declaracao_leitura:

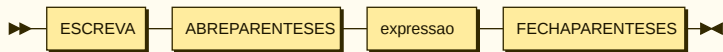


```
declaracao_leitura
::= LEIA ABREPARENTESES ID FECHAPARENTESES
```

referenced by:

- [statement](#)

declaracao_escrita:



```
declaracao_escrita
::= ESCRIVA ABREPARENTESES expressao FECHAPARENTESES
```

referenced by:

- [statement](#)

declaracao_retorno:

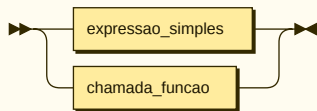


```
declaracao_retorno
::= RETORNA ABREPARENTESES expressao FECHAPARENTESES
```

referenced by:

- [statement](#)

expressao:

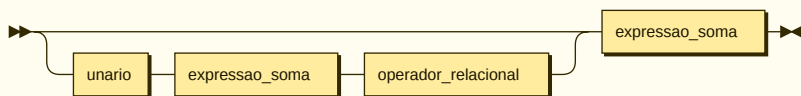


```
expressao
::= expressao_simples
| chamada_funcao
```

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:

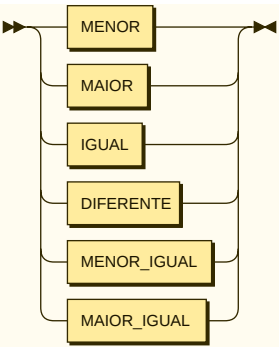


```
unario ::= operador_soma expressao
```

referenced by:

- [expressao_simples](#)

operador_relacional:

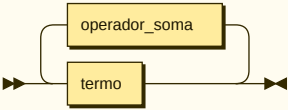


```
operador_relacional ::= MENOR  
                    | MAIOR  
                    | IGUAL  
                    | DIFERENTE  
                    | MENOR_IGUAL  
                    | MAIOR_IGUAL
```

referenced by:

- [expressao_simples](#)

expressao_soma:

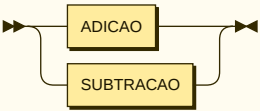


```
expressao_soma ::= termo ( operador_soma termo )*
```

referenced by:

- [expressao_simples](#)

operador_soma:

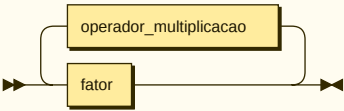


```
operador_soma ::= ADICAO  
              | SUBTRACAO
```

referenced by:

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

termo:

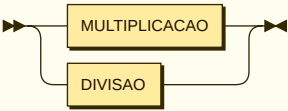


```
termo ::= fator ( operador_multiplicacao fator )*
```

referenced by:

- [expressao_soma](#)

operador_multiplicacao:

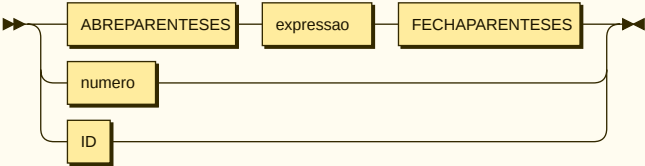


```
operador_multiplicacao ::= MULTIPLICACAO  
                       | DIVISAO
```

referenced by:

- [termo](#)

fator:

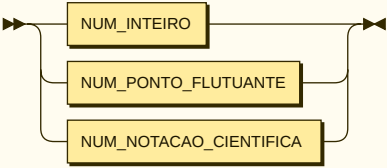


```
fator ::= ABREPARENTESES expressao FECHAPARENTESES
      | numero
      | ID
```

referenced by:

- [termo](#)

numero:

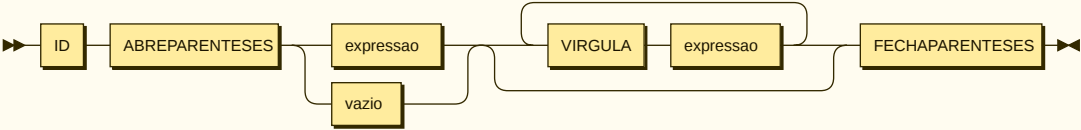


```
numero ::= NUM_INTEIRO
        | NUM_PONTO_FLUTUANTE
        | NUM_NOTACAO_CIENTIFICA
```

referenced by:

- [fator](#)

chamadafuncao:



```
chamadafuncao ::= ID ABREPARENTESES ( expressao | vazio ) ( VIRGULA expressao )* FECHAPARENTESES
```

no references