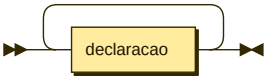


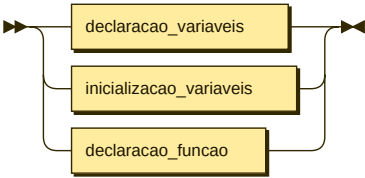
programa:



programa ::= declaracao+

no references

declaracao:

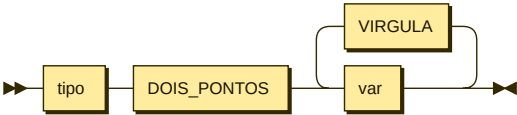


declaracao ::= declaracao_variaveis | inicializacao_variaveis | declaracao_funcao

referenced by:

- programa

declaracao_variaveis:

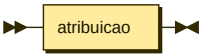


declaracao_variaveis ::= tipo DOIS_PONTOS var (VIRGULA var)*

referenced by:

- acao
- declaracao

inicializacao_variaveis:

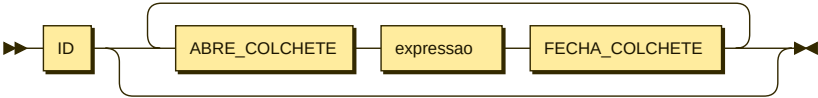


inicializacao_variaveis ::= atribuicao

referenced by:

- declaracao

var:

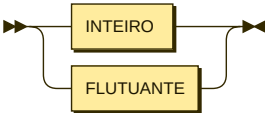


var ::= ID (ABRE_COLCHETE expressao FECHA_COLCHETE)*

referenced by:

- atribuicao
- declaracao_variaveis
- fator
- leia

tipo:

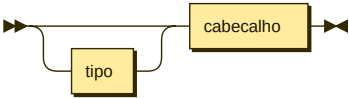


tipo ::= INTEIRO

referenced by:

- [declaracao_funcao](#)
- [declaracao_variaveis](#)
- [parametro](#)

declaracao_funcao:

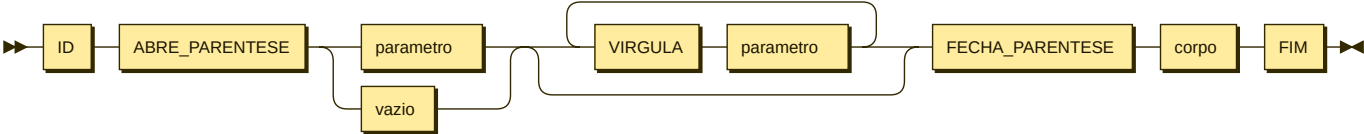


`declaracao_funcao ::= tipo? cabecalho`

referenced by:

- [declaracao](#)

cabecalho:

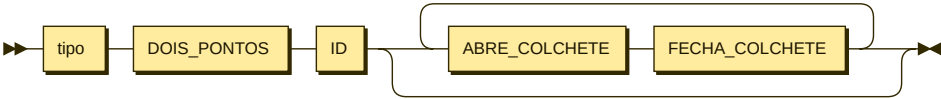


`cabecalho ::= ID ABRE_PARENTESE (parametro | vazio) (VIRGULA parametro)* FECHA_PARENTESE corpo FIM`

referenced by:

- [declaracao_funcao](#)

parametro:

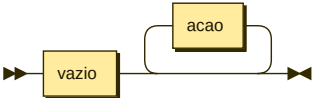


`parametro ::= tipo DOIS_PONTOS ID (ABRE_COLCHETE FECHA_COLCHETE)*`

referenced by:

- [cabecalho](#)

corpo:

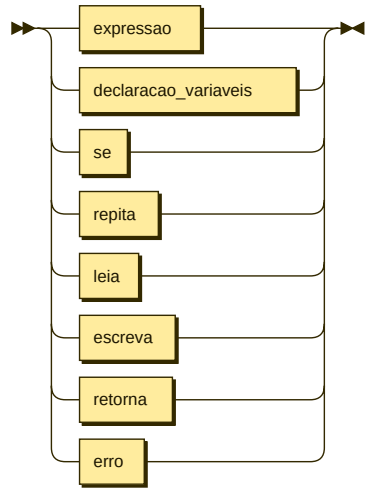


`corpo ::= vazio acao*`

referenced by:

- [cabecalho](#)
- [repita](#)
- [se](#)

acao:

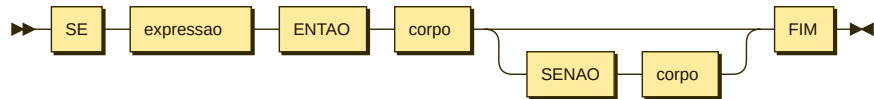


```
acao ::= expressao
      | declaracao_variaveis
      | se
      | repita
      | leia
      | escreva
      | retorna
      | erro
```

referenced by:

- [corpo](#)

se:



```
se ::= SE expressao ENTAO corpo ( SENAO corpo )? FIM
```

referenced by:

- [acao](#)

repita:



```
repita ::= REPITA corpo ATE expressao
```

referenced by:

- [acao](#)

atribuicao:

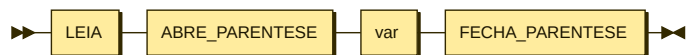


```
atribuicao ::= var ATRIBUICAO expressao
```

referenced by:

- [expressao](#)
- [inicializacao_variaveis](#)

leia:

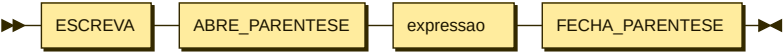


```
leia ::= LEIA ABRE_PARENTESE var FECHA_PARENTESE
```

referenced by:

- [acao](#)

escreva:

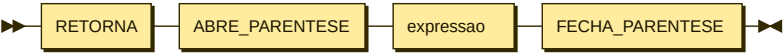


escreva ::= ESCREVA ABRE_PARENTESE expressao FECHA_PARENTESE

referenced by:

- [acao](#)

retorna:

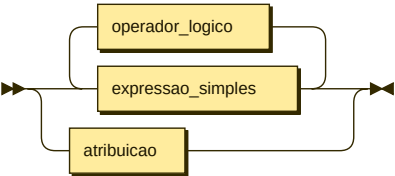


retorna ::= RETORNA ABRE_PARENTESE expressao FECHA_PARENTESE

referenced by:

- [acao](#)

expressao:

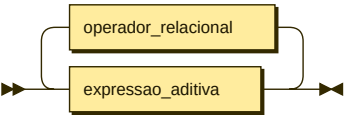


expressao ::= expressao_simples (operador_logico expressao_simples)*
 | atribuicao

referenced by:

- [acao](#)
- [atribuicao](#)
- [chamada_funcao](#)
- [escreva](#)
- [fator](#)
- [repita](#)
- [retorna](#)
- [se](#)
- [var](#)

expressao_simples:

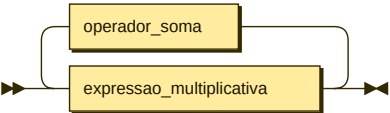


expressao_simples ::= expressao_aditiva (operador_relacional expressao_aditiva)*

referenced by:

- [expressao](#)

expressao_aditiva:

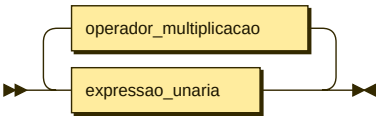


expressao_aditiva ::= expressao_multiplicativa (operador_soma expressao_multiplicativa)*

referenced by:

- [expressao_simples](#)

expressao_multiplicativa:

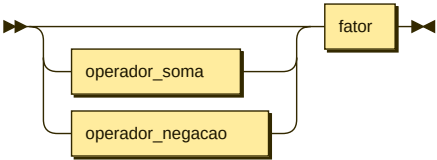


```
expressao_multiplicativa ::= expressao_unaria ( operador_multiplicacao expressao_unaria )*
```

referenced by:

- [expressao_aditiva](#)

expressao_unaria:

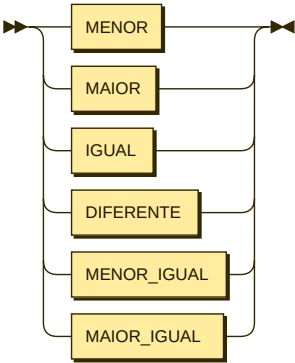


```
expressao_unaria ::= ( operador_soma | operador_negacao )? fator
```

referenced by:

- [expressao_multiplicativa](#)

operador_relacional:

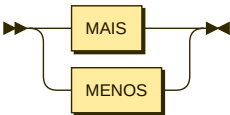


```
operador_relacional ::= MENOR | MAIOR | IGUAL | DIFERENTE | MENOR_IGUAL | MAIOR_IGUAL
```

referenced by:

- [expressao_simples](#)

operador_soma:

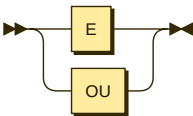


```
operador_soma ::= MAIS | MENOS
```

referenced by:

- [expressao_aditiva](#)
- [expressao_unaria](#)

operador_logico:



operador_logico
::= E
| OU

referenced by:

- expressao

operador_negacao:

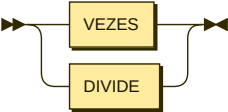


operador_negacao
::= NAO

referenced by:

- expressao_unaria

operador_multiplicacao:

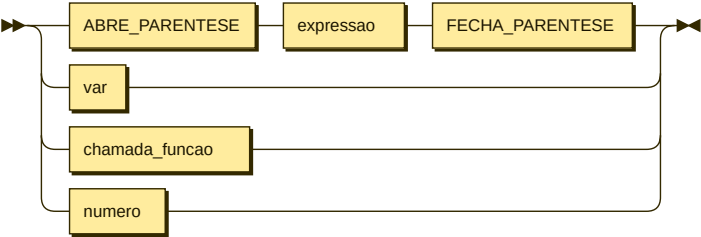


operador_multiplicacao
::= VEZES
| DIVIDE

referenced by:

- expressao_multiplicativa

fator:

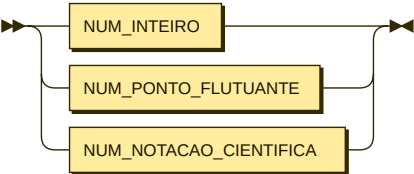


fator
::= ABRE_PARENTESE expressao FECHA_PARENTESE
| var
| chamada_funcao
| numero

referenced by:

- expressao_unaria

numero:

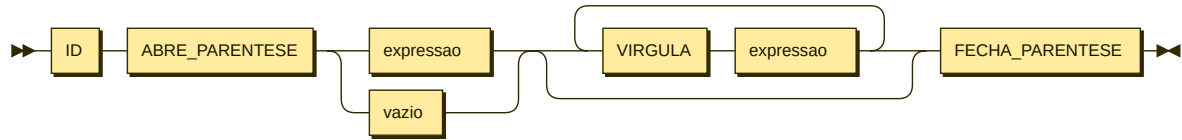


numero
::= NUM_INTEIRO
| NUM_PONTO_FLUTUANTE
| NUM_NOTACAO_CIENTIFICA

referenced by:

- fator

chamada_funcao:



```
chamada_funcao ::= ID ABRE_PARENTESE ( expressao | vazio ) ( VIRGULA expressao )* FECHA_PARENTESE
```

referenced by:

- [fator](#)