

#### Parsed Rules

- (1) program  $\rightarrow$  prolog FUNC func\_list\_pre MAIN '(' ')' '{' EOL body '}' EOL func\_list EOF
- (2) prolog  $\rightarrow$  PACKAGE MAIN EOL
- (3) func\_list\_pre  $\rightarrow \epsilon$
- (4) func\_list\_pre  $\rightarrow$  FUNC\_ID '(' param\_list ')' func\_def\_type EOL FUNC func\_list\_pre
- (5) func\_list  $\rightarrow \epsilon$
- (6) func\_list  $\rightarrow$  func\_def func\_list
- (7) func\_def  $\rightarrow$  FUNC FUNC\_ID '(' param\_list ')' func\_def\_type EOL
- (8) param\_list  $\rightarrow \epsilon$
- (9) param\_list  $\rightarrow$  VAR\_ID type next\_param
- (10) next\_param  $\rightarrow \epsilon$
- (11) next\_param  $\rightarrow$  ',' VAR\_ID type next\_param
- (12) func\_def\_type  $\rightarrow$  '{' EOL body '}'
- (13) func\_def\_type  $\rightarrow$  '(' func\_def\_ret
- (14) func\_def\_ret  $\rightarrow$  ')' '{' EOL body '}'
- (15) func\_def\_ret  $\rightarrow$  ret\_list ')' '{' EOL body '}'
- (16) ret\_list  $\rightarrow$  type next\_ret
- (17) next\_ret  $\rightarrow \epsilon$
- (18) next\_ret  $\rightarrow$  ',' type next\_ret
- (19) body  $\rightarrow \epsilon$
- (20) body  $\rightarrow$  command EOL body
- (21) command  $\rightarrow$  VAR\_ID var\_
- (22) command  $\rightarrow$  func\_call
- (23) command  $\rightarrow$  if
- (24) command  $\rightarrow$  cycle
- (25) command  $\rightarrow$  return
- (26) var\_  $\rightarrow$  var\_def
- (27) var\_  $\rightarrow$  var\_move
- (28) var\_def  $\rightarrow$  ':'=' EXPR
- (29) var\_move  $\rightarrow$  next\_id '=' expr\_list
- (30) next\_id  $\rightarrow \epsilon$
- (31) next\_id  $\rightarrow$  ',' VAR\_ID next\_id
- (32) if  $\rightarrow$  IF COND '{' EOL body '}' ELSE '{' EOL body '}'
- (33) cycle  $\rightarrow$  FOR for\_def ';' COND ';' for\_move '{' EOL body '}'
- (34) for\_def  $\rightarrow \epsilon$
- (35) for\_def  $\rightarrow$  VAR\_ID var\_def
- (36) for\_move  $\rightarrow \epsilon$
- (37) for\_move  $\rightarrow$  VAR\_ID var\_move
- (38) return  $\rightarrow$  RETURN expr\_list
- (39) func\_call  $\rightarrow$  FUNC\_ID '(' expr\_list ')'
- (40) expr\_list  $\rightarrow$  EXPR next\_expr
- (41) expr\_list  $\rightarrow$  func\_call
- (42) next\_expr  $\rightarrow \epsilon$
- (43) next\_expr  $\rightarrow$  ',' EXPR next\_expr
- (44) type  $\rightarrow$  INT
- (45) type  $\rightarrow$  FLOAT64
- (46) type  $\rightarrow$  STRING