

```

digit = '0' | '1' | '2' | '3' | '4' | '5' | '6' | '7' | '8' | '9' ;
lowercase = 'a' | 'b' | 'c' | 'd' | 'e' | 'f' | 'g' | 'h' | 'i' | 'j' | 'k' | 'l' | 'm' | 'n' | 'o' | 'p' | 'q' | 'r' | 's' | 't'
           | 'u' | 'v' | 'w' | 'x' | 'y' | 'z' ;
uppercase = 'A' | 'B' | 'C' | 'D' | 'E' | 'F' | 'G' | 'H' | 'I' | 'J' | 'K' | 'L' | 'M' | 'N' | 'O' | 'P' | 'Q' | 'R'
           | 'S' | 'T' | 'U' | 'V' | 'W' | 'X' | 'Y' | 'Z' ;
letter = lowercase | uppercase ;    spc = {' '} - ;
comma = ',' , [spc] ;    semicolon = ';' , [spc] ;    dot = '.' , [spc] ;    nat = { digit } - , [spc] ;
id = ( letter | '_' ) , { ( letter | digit | '_' ) } , [spc] ;    id list = [ nat ] , id , { spc , [ nat ] , id }
int = [ '-' | '+' ] , nat ;    value = [ '-' | '+' ] , { digit } - , [ '-' , nat ] ;
equal = '=' , [spc] ;    assign = ':=' , [spc] ;
left bracket = '(' , [spc] ;    right bracket = ')' , [spc] ;
unary op = ( 'not' | 'abs' ) , [spc] ;
binary op = ( '+' | '-' | '*' | '/' | '&' | '|' | '<' | '<=' | '=' | '>=' | '>' | '<>' ) , [spc] ;
expr = value | id | left bracket , expr , right bracket | unary op , expr | expr , binary op , expr ;
variable = ( 'variable:' | 'var:' ) , spc , id , equal , expr , { comma , id , equal , expr } ;
mutex = ( 'mutex:' | 'mtx:' ) , spc , id list ;
semsync = ( 'semaphore:' | 'sem:' | 'synchronization:' | 'sync:' ) , spc , [ int , spc ] , id list ;
cpvw = ( 'C' | 'P' | 'V' | 'W' ) , left bracket , id , right bracket ;
instruction = id , assign , expr | cpvw | sum | left bracket , [ sum ] , right bracket ;
sequence = instruction , { semicolon , instruction } ;
plus = '+' , [spc] ;    left square bracket = '[' , [spc] ;    right square bracket = ']' , [spc] ;
sum = sequence , { plus , [ left square bracket , expr , right square bracket , plus ] , sequence } ;
proc = ( 'process:' | 'proc:' ) , spc , id , equal , sequence , { comma , id , equal , sequence } ;
declaration = { variable | mutex | semsync | proc } ;
program = [ spc ] , declaration , [ 'init:' , spc , id list ] ;

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Figure 1: The Paml grammar – following EBNF standard