Semantic stack rules

1. **<prog>**

Input: -

Output: -

1. <**decl\_list>**

Input: -

Output: -

1. **<var\_decl>**

Input: -

Output: -

1. **<opt\_initialiser>**

Input: -

Output: Expression with type (NO\_INIT in type if no initialiser)

1. **<type>**

Input: -

Ouput: Read type (Integer, Double or String)

1. **<opt\_scope\_modifier>**Input: -

Output: Read scope modifier or NO\_MODIFIER

1. **<expr>**

Input: -

Output: Final expression resulting from the PSA algorithm

1. **<func\_decl>**

Input: -

Output: -

1. **<func\_def>**

Input: -

Output: -

1. **<param\_list>**

Input: -

Output: Number of parameters, followed by a reversed list of parameters

1. **<param>**

Input: -

Output: Type and name of the read parameter

1. **<param\_list\_cont>**

Input: Number of already read parameters

Output: Number of parameters, followed by a reversed list of parameters

1. **<cycle\_stat\_list>**

Input: list of cycle types with the caller on top (All only in non-recursive calls)

Output: Input

1. **<stat\_list>**

Input: list of cycle types with the caller on top (All only in non-recursive calls)

Output: Input

1. **<statement>**

Input: list of cycle types  
Output: Input

1. **<iteration\_control\_statement>**

Input: list of cycle types  
Output: Input

1. **<assigment>**

Input: -

Output: -

1. **<read\_statement>**

Input: -

Output: -

1. **<print\_statement>**

Input: -

Output: -

1. **<expr\_list>**

Input: Number of read expressions so far

Output: Number of read expressions, followed by a reversed list of these expressions

1. **<selection\_statement>**

Input: list of cycle types

Output: Input

1. **<iteration\_statement>**

Input: list of cycle types

Output: Input

1. **<empty\_statement>**

Input: -

Output: -

1. **<return\_statement>**

Input: -

Output: -

1. **<alternative\_statement>**

Input: list of cycle types (Only in non-recursive calls)

Output: Input

1. **<opt\_type\_decl>**

Input: -

Output: Read type or NO\_DECL

1. **<opt\_step>**

Input: -

Output: Step expression

1. **<opt\_id>**

Input: -

Output: Read identifier or NO\_ID

1. **<do\_cycle>**

Input: list of cycle types

Output: Input

1. **<opt\_cond>**

Input: -

Output: condition expression and do mode, or NO\_COND

1. **<cond>**

Input: -

Output: condition expression, do mode

1. **<do\_mode>**

Input: -

Output: do mode (Until or While)

1. **<control\_statement>**

Input: -

Output: Control statement (Continue or Exit)

1. **<cycle\_type\_list>**

Input: Initial cycle

Output: Cycle type with number of occurences

1. **<cycle\_type>**

Input: -

Output: Cycle type (For or Do)

1. **<built\_in\_func\_call>**

Input: -

Output: Result expression containing the return value of the function call

1. **<func\_call>**

Input: -

Output: Number of parameters, followed by a reversed list of expressions representing them

1. **<arg\_list>**

Input: -

Output: Number of parameters, followed by a reversed list of expressions representing them

1. **<more\_args\_list>**

Input: Number of already read parameters followed by a reversed list of expressions representing them

Output: Number of parameters, followed by a reversed list of expressions representing them

1. **<arg>**

Input: -

Output: Read argument expression