Note: this code is very very bad, but it illustrates the mechanism very well.

CODE FRAGMENT

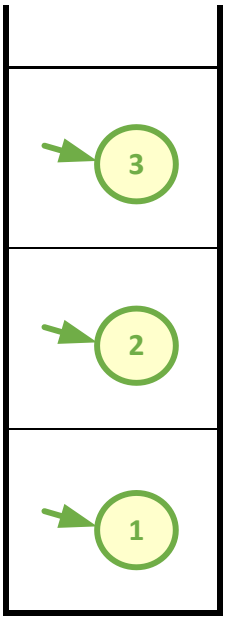
```
1    int start;
2    int f(int n){
3        int i, result;
4        void g(int n, int start) {
5            if n=start
6                return result+n;
7            else
8                return 1+g(n-1,start);
9            }
10       result = start;
11       for i=1 to n    g(i,0);
12       return result;
13       }
14   start = 10;
15   f(3);
```

IDENTIFIER TABLE

	lexeme	Scanned on line
0	"start"	1
1	"f"	2
2	"n"	2
3	"i"	3
4	"result"	3
5	"g"	4

PARSER CONSTRUCTION OF SYMBOL TABLES WITH SCOPE STACK

SCOPE STACK

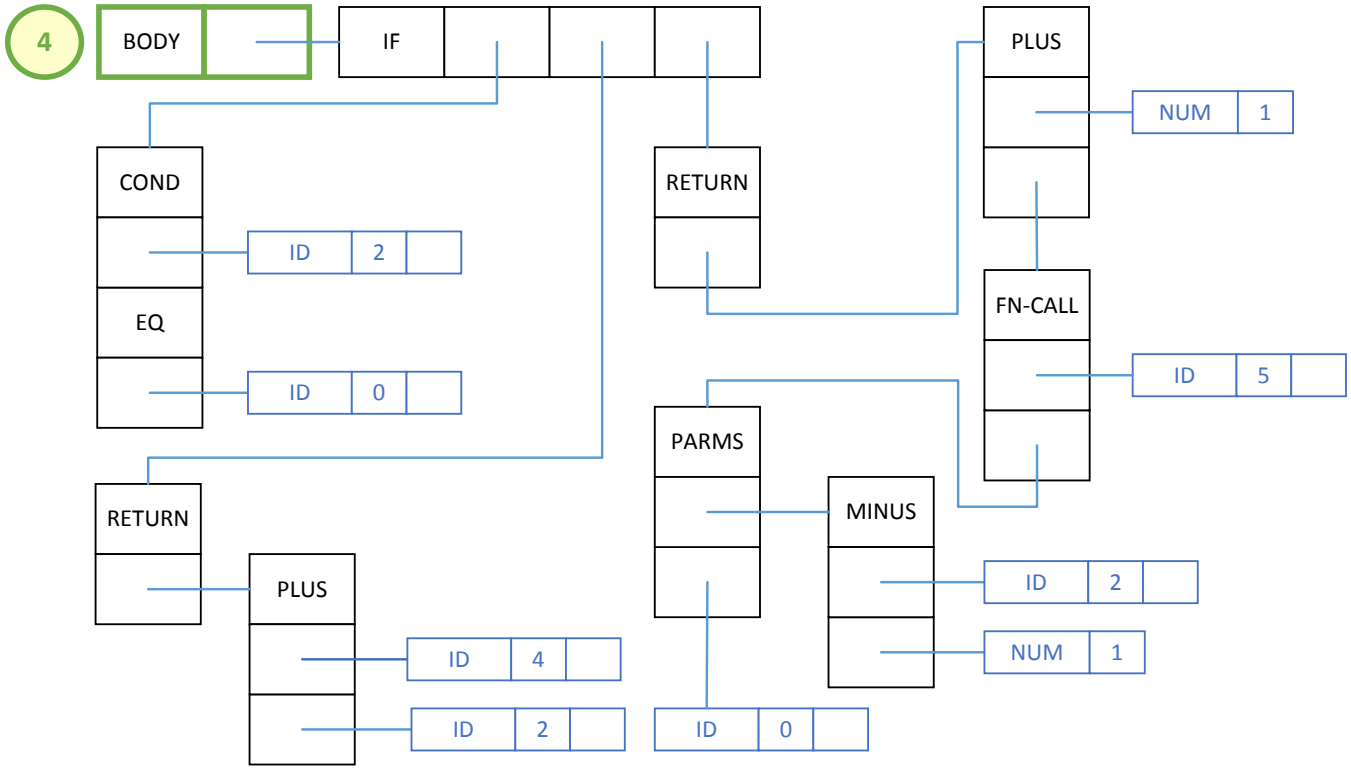


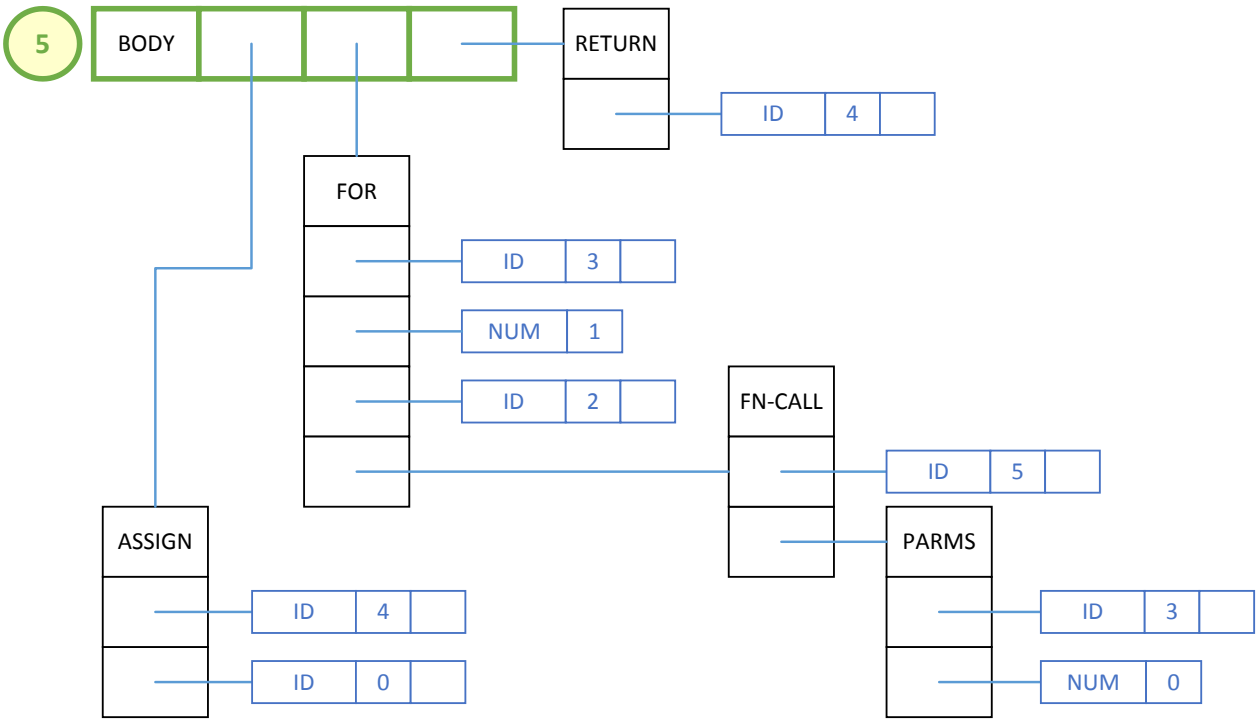
SYMBOL TABLES

parsed | ID | Complexity | Type | Params | Scope | Body

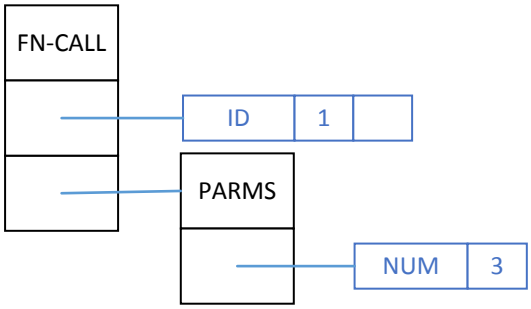
parsed	ID	Complexity	Type	Params	Scope	Body	
4	2	Primitive	Int				3
4	0	Primitive	Int				
2	2	Primitive	Int				2
3	3	Primitive	Int				
3	4	Primitive	Int				
4	5	Function	void				
1	0	Primitive	Int				1
2	1	Function	Int				

ASTS CONSTRUCTED: Note: body ASTs with only one statement have been simplified.





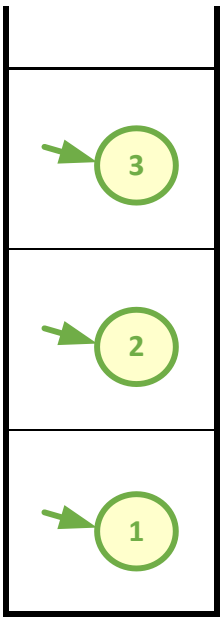
FUNCTION CALL EVALUATION (15)



Visit this AST to evaluate it

ACTIVATION STACK

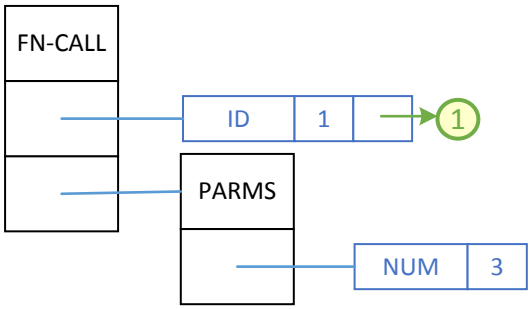
SCOPE STACK



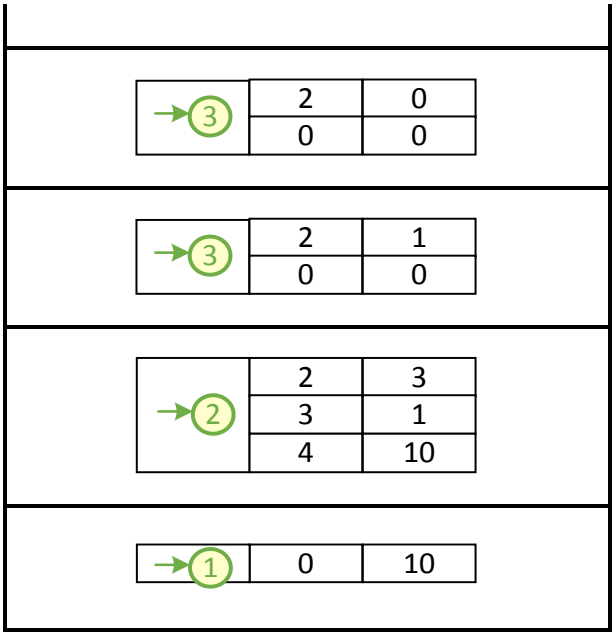
SYMBOL TABLES

parsed	ID	Complexity	Type	Params	Scope	Body	
4	2	Primitive	Int				3
4	0	Primitive	Int				
2	2	Primitive	Int				2
3	3	Primitive	Int				
3	4	Primitive	Int				
4	5	Function	void	2, 0	→ 3	→ 4	
1	0	Primitive	Int				1
2	1	Function	Int	2	→ 2	→ 5	

FUNCTION CALL EVALUATION (15)



ACTIVATION STACK



ASTS CONSTRUCTED: Note: body ASTs with only one statement have been simplified.