

**Input:** *WyIL* file, compiled by Whiley compiler

**Output:** *RET* maps each function to a return set

// Collect return sets for all functions

```
1: procedure RETURN_ANALYSIS(WyIL)
2:   RET =  $\emptyset$ 
3:   for each func function in WyIL do
4:     RET(f) =  $\emptyset$ 
5:     for each code in func do
6:       if code is Return then
7:         ret  $\leftarrow$  Extract return variable from code
8:         if ret is NOT NULL then
9:           RET(f) = RET(f)  $\cup$  ret
10:        end if
11:      end if
12:    end for
13:  end for
14: end procedure
```