

Input: Assignment *code* in function *func* at WYIL level

Output: A *list* of optimised assignment code

```
1: Variables
2:   CopyAnalyser: Copy elimination analyser
3:   DeallocAnalyser: De-allocation analyser
4: end Variables
   // Produce optimised assignment code
5: procedure OPTIMISEASSIGNMENT(code, func)
6:   list = []
7:   lhs = left variable of code
8:   rhs = right variable of code
9:   list.append("PRE_DEALLOC(lhs)") // Pre-Deallocation Macro on lhs
10:  if CopyAnalyser.isCopyRemoved(rhs, code, func) then
11:    // Assignment without copy
12:    list.append(" lhs = rhs; lhs_size = rhs_size; ")
13:  else // Assignment with copy
14:    list.append(" lhs = COPY(rhs); lhs_size = rhs_size; ")
15:  end if
16:  macro ← DeallocAnalyser.choosePostDealloc(code, func)
17:  if macro == ADD_DEALLOC then
18:    list.append(" ADD_DEALLOC.POST(lhs, rhs) ")
19:  else // TRANSFER_DEALLOC
20:    list.append(" TRANSFER_DEALLOC.POST(lhs, rhs) ")
21:  end if
22:  return list
23: end procedure
```