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## Comp 301 Project 3

### Part 1

We put a counter and a list. Counter is for counting variable initializations. List aims to determine if a variable is initialized before. To be more clear, initialized variables putted on a list and everytime a variable will be initialized, program checks the list and look if list contains that variable. If so, it prints (variable name) has ben reinitialized, otherwise it prints # of variable initalization : count

### Part 2

We defined the new datatypes and procedues such as extend-env-rec-nested, nested-procedure, proc-nested-exp, call-nested-exp, proc-nested-exp. Then, we added nested-procedure to apply-procedure. It prints recursively the names and counts of procedures. Then we defined behaviors and translations of that new expressions.

### Part 3

We changed the names of nameless expressions on lang.scm and added them an extra field which is identifier, to display the variable name and count. We concatenate variable nammes and count of that variable with string operations on apply-senv-number function and we call that function as first parameter of function.

Workload: We did all parts together.