Daniel Murga

Lab 6 Report

      For this lab, the purpose was to implement the missing functions in sym.c and sem_sym.c respectively to complete a program to build and print a symbol table for a C-like programming language. When the corresponding enter and exit function/block functions are called, we call enterblock() and leaveblock() to tell the csym compiler to begin a new scope or exit the current one and dump all variables in that scope. When leaving scope, the dump function looks at the hash table "id_table" and prints the variable name and scope level, then frees the memory and shifts the head of the hash table to the next identifier in the table. The biggest issue when designing this lab was understanding when to call the leaveblock() and how many times. Without the additional leaveblock call, the scope level would be one higher than expected, and the output would be missing variables. The level could also have been one too low and print out reserved keywords that are not part of the variables declared in scope.