Programming 4

Haocheng Xiao

In this programming homework, I added the ***void nameanalyse(PrinterWriter p, SymTable a)*** function in every node to analyse the type of each identifier. This function traversed the AST and stored the type in each identifier node. After this finished, the ***unparse(PrinterWriter p, int indent)*** is called to traverse the AST again and print out the type for the previously defined identifiers in the statements.

To correctly translate the struct type, we first add the ***<struct name, hashmap<name, type>>*** into the local scope when we define a struct type. When we declare a varible of this struct type, we add the ***<id, struct type>*** into the local scope. When we encounter a dot node, we use ***Sym loc_analyse(PrintWriter p, SymTable a)*** to recursively translate the type.

The output for both test.wumbo and nameErrors.wumbo is same as expected. No error messages are printed for test.wumbo and all errors in nameErrors.wumbo are printed correctly.