Lab One

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1 Lab 1

1.1 *Crafting a Compiler*

1. 1.11 - MOSS

   The way that MOSS can detect for plagiarism is by looking for token matches, line matches, and overall similarity of two programs. This differs from traditional measures due to MOSS not comparing the actual code's direct wording similarity but instead by checking if it does the same things in the same places the same ways.

2. 3.1 - Token Sequence

   main, (,), {, const, float, payment, =, 384.00, ;, float, bal, ;, int, month, =, 0, ;, bal, =, 15000, ;, while, (, bal, >,0,), {, printf, (, “, M, o, n, t, h, :, , %,2, d, , B, a, l, a, n, c, e, :, , %,1, 0, ., 2, f, n, ”, ’,‘, month, ’,‘, bal,), ;, bal, =, bal, -, payment, +, 0.015, *, bal, ;, month, =, month, +, 1, ;, }, }
   The all tokens must include their line and position numbers in order to properly catch errors, however it would also make sense for variables to return their type in addition to their tokens or at least some identifier showing that the variable is a variable.

1.2 *Dragon*

1. 1.1.4 - Advantages of C as a Target Language

   C is a common language and can be compiled on most machines, making it a very versatile language and much easier to compile than other languages do to its popularity.

2. 1.6.1 - Variables in Block Structured Code

   $w = 13$
   $x = 11$
   $y = 13$
   $z = 11$